

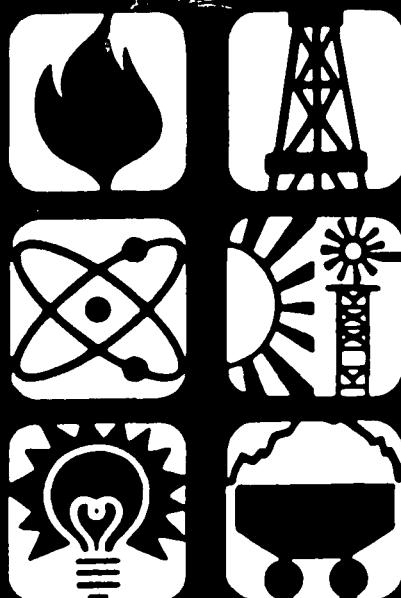
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# Monthly Energy Review

Energy Information Administration  
Washington, DC

March 1986

First Quarter 1986 Summaries





## ***Monthly Energy Review***

The *Monthly Energy Review* presents current data on production, consumption, stocks, imports, exports, and prices of the principal energy commodities in the United States. Also included are data on international production of crude oil, consumption of petroleum products, petroleum stocks, and production of electricity from nuclear-powered facilities.

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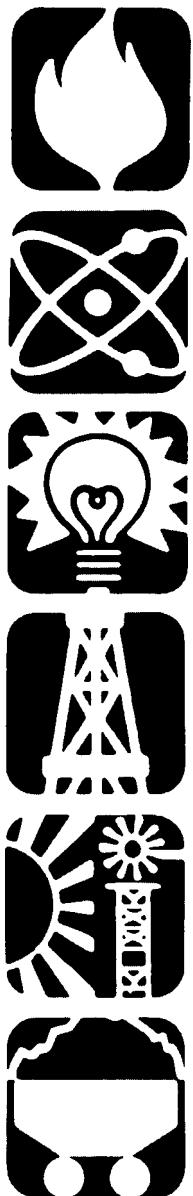
# **Monthly Energy Review**

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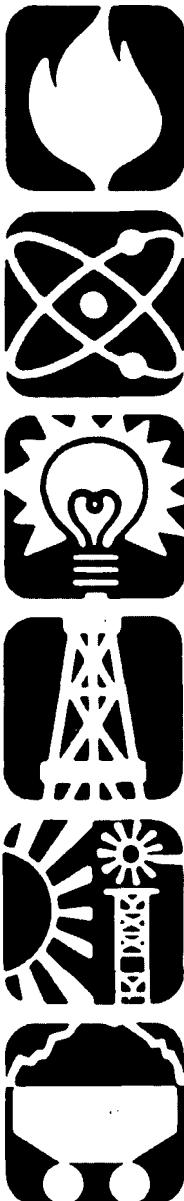
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## Articles

Feature articles on energy-related subjects are occasionally included in this publication. The following articles have appeared in issues since the beginning of 1981. A list of the articles included prior to 1981 may be found in any issue published from 1981 through 1983.

Changes in 1981 Petroleum Data Series .....	May	1981
Information Services of the Energy Information Administration .....	September	1981
An Overview of Natural Gas Markets .....	December	1981
The Interstate and Intrastate Natural Gas Markets.....	January	1982
Natural Gas Drilling and Production Under the Natural Gas Policy Act.....	February	1982
Impacts of Financial Constraints on the Electric Utility Industry.....	October	1982
The Effect of Weather on Energy Use .....	April	1983
Trends in U.S. Energy Since 1973 .....	May	1983
Data Series on Petroleum Use at Electric Utilities.....	July	1983
Residential Energy Consumption, 1978 Through 1981 .....	September	1983
Exploring for Oil and Gas.....	November	1983
The Influence of Federal Actions on Petroleum Exploration .....	December[2]	1983
Aggregate Statistics: Accurate or Misleading? .....	December[3]	1983
Estimating Well Completions .....	March	1985

## Highlights

Summaries of Energy Information Administration reports have appeared as "Highlights" in this publication since 1982. The following is a list of all the reports that have been summarized in previous issues.

<i>U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report .....</i>	September	1982
<i>Energy Company Development Patterns in the Postembargo Era, Volume One .....</i>	November	1982
<i>Residential Energy Consumption Survey: Consumption and Expenditures.....</i>	January	1983
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<i>Energy Price and Expenditure Data Report, 1970-1980.....</i>	July	1983
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<i>U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report .....</i>	September	1983
<i>Annual Energy Review 1983.....</i>	February	1984
<i>State Energy Data Report, Consumption Estimates, 1960-1982 .....</i>	March	1984
<i>Annual Energy Outlook 1983.....</i>	March	1984
<i>State Energy Price and Expenditure Report, 1970-1981 .....</i>	May	1984
<i>Solar Collector Manufacturing Activity 1983 .....</i>	June	1984
<i>Estimates of U.S. Wood Energy Consumption, 1980-1983 .....</i>	September	1984
<i>International Energy Annual 1983 .....</i>	September	1984
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<i>Performance Profiles of Major Energy Producers 1983 .....</i>	February	1985
<i>State Energy Price and Expenditure Report 1970-1982 .....</i>	March	1985
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<i>Annual Outlook for U.S. Electric Power 1985 .....</i>	June	1985
<i>Short-Term Energy Outlook, Volume 1, October 1985 .....</i>	August	1985
<i>Analysis of Growth in Electricity Demand, 1980-1984 .....</i>	August	1985
<i>Profiles of Foreign Direct Investment in U.S. Energy 1984 .....</i>	November	1985
<i>Performance Profiles of Major Energy Producers 1984 .....</i>	December	1985

# State Motor Gasoline Taxes, 1960-1985

Scott Sitzer\* and Laurie M. Williams\*

## Abstract

This article analyzes the contribution of State taxes to U.S. prices of motor gasoline for the 1960-to-1985 period. Adjustments were made for the effects of local taxes and then State taxes were weighted by consumption of motor gasoline in the transportation sector to yield a national average of the State taxes for each year. The authors examine changes in individual States' taxes and in the national average over the 26-year period.

## Introduction

Motor gasoline accounts for a major share of U.S. petroleum consumption and, consequently, the level of demand for motor gasoline can affect U.S. petroleum production and imports. As became especially evident following the Arab oil embargo of 1973-1974, demand for motor gasoline is responsive to price changes. In an atmosphere of uncertainty about the cost and availability of crude oil, it is important to understand the factors influencing the price of motor gasoline.

The retail price of motor gasoline can be thought of as consisting of several components: the refiners' crude oil acquisition costs; refining, wholesale, and retail margins; Federal excise taxes; and State and local taxes. Two of those components—crude oil acquisition costs and Federal excise taxes—are reasonably well documented and well understood in terms of their contributions to changes in motor gasoline prices over time. For example, the Federal excise tax was levied at the rate of 4 cents per gallon from 1960 (the first year of this analysis) until April 1, 1983, when it was increased to 9 cents per gallon. As

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a percentage of the average price of leaded regular gasoline at the pump, however, the Federal tax fell from 13 percent in 1960 to 8 percent in 1985.<sup>1</sup>

The other two components—margins and State and local taxes—have not been well documented in terms of their effects on national averages. Generally, they have been analyzed as the residual components after accounting for crude oil acquisition costs and Federal excise taxes.

This article examines the levels of motor gasoline taxes for each State<sup>2</sup> and how those levels changed from 1960 through 1985. In addition, national averages of State taxes over the 1960-to-1985 period are computed to provide an understanding of the role that average State motor gasoline taxes play in changes in the U.S. prices of motor gasoline.<sup>3</sup> Average State motor gasoline prices were weighted by State-level motor gasoline consumption in the transportation sector for 1960 through 1985. To the best of our knowledge, no such national series, weighted by consumption at the State level and including adjustments for county and other local taxes,<sup>4</sup> previously has appeared.

## Methodology

Information on State and local taxes on motor gasoline in each of the 50 States and the District of Columbia was collected from the American Automobile Association's (AAA's) *Digest of Motor Laws*.<sup>5</sup> The data were found not to be entirely consistent. In some cases, adjustments were required where additional county taxes were imposed, where taxes were defined as a percentage of the wholesale or retail price (rather than as a set amount per gallon), or

<sup>1</sup>The decline was not steady over the 26-year period, however. For example, the Federal excise tax fell to as low as 3 percent in 1981, the year pump prices of leaded regular gasoline peaked.

<sup>2</sup>In this article, "States" includes the 50 States plus the District of Columbia.

<sup>3</sup>Since diesel fuel tax data were incomplete, this report focuses strictly on motor gasoline.

<sup>4</sup>The Federal Highway Administration has published national average State taxes weighted by gallonage taxed. No adjustments were made for local variations. The series compares very closely to the series presented in Table 1 of this article.

<sup>5</sup>AAA, *Digest of Motor Laws*, 52d ed. (Falls Church, Virginia, 1986), and earlier editions.

where additional county taxes were levied on leaded versus unleaded gasoline:

- Where additional county taxes were shown, the taxes were weighted using 1980 population data.<sup>6</sup>
- Where taxes were described as a percentage of the price (either wholesale or retail), data on prices from the *Petroleum Marketing Monthly* (PMM)<sup>7</sup> were used.
- Where additional taxes were imposed on leaded gasoline, the estimated percentage of leaded gasoline consumed and data on State prices from the PMM were used. That situation occurred primarily in New York City.

After the adjustments were made, the Energy Information Administration's (EIA's) State Energy Data System<sup>8</sup> was used to produce an estimate of consumption-weighted average State gasoline taxes. Average taxes in real terms were calculated using the 1972-based gross national product implicit price deflators,<sup>9</sup> rebased to 1985 = 100 to yield taxes expressed in terms of real 1985 dollars.

### The National Average Tax

The most striking aspect of the annual statistics on the national average of State taxes<sup>10</sup> is their decline in real terms (Table 1 and Figure 1). The national average of State taxes declined 46 percent over the 1960-to-1985 period; in 1985, taxes were just over half of what they had been in 1960.

The decline in real taxes occurred while prices at the pump were increasing 6 percent. Statistics on the percentage of the leaded regular gasoline pump price attributed to State taxes for the years 1960 through 1985 reveal that the history of State gasoline taxes relative to the pump price over the past 26 years can be divided into three distinct periods. From 1960 through 1973, the percentage hovered in the 19-to-20 percent range. From 1974 through 1978, the percentage ranged from 12 percent to 14 percent. During the last period, from 1979 through 1985, State taxes dropped below 10

<sup>6</sup>County population data for 1980 were taken from U.S. Department of Commerce, Bureau of the Census, *1980 Census of Population, Volume I, United States Summary*, (Washington, DC, April 1983), Tables 17 and 25.

<sup>7</sup>For 1985, EIA, *Petroleum Marketing Monthly*, DOE/EIA-0380(85/08) (Washington, DC, October 1985); for earlier years, previous issues were used.

<sup>8</sup>EIA, State Energy Data System, April 1986.

<sup>9</sup>The implicit price deflator for 1985 was taken from EIA, *Annual Energy Outlook 1985*, DOE/EIA-0383(85) (Washington, DC, February 1986), p. 85. The implicit price deflators for 1960 through 1984 were taken from EIA, *Annual Energy Review 1984*, DOE/EIA-0384(84) (Washington, DC, April 1985), p. 265.

<sup>10</sup>From this point on, "State taxes" will refer to State and local taxes.

**Table 1. U.S. Average of State and Local Motor Gasoline Taxes, 1960-1986  
(Cents per Gallon)**

Year	Taxes			
	Real (1985 \$)	Nominal	Pump Price <sup>1</sup> Nominal	Percent of Pump Price <sup>2</sup>
1960	20.0	5.9	31.1	19.1
1961	20.6	6.2	30.8	20.0
1962	20.2	6.2	30.6	20.2
1963	20.3	6.3	30.4	20.7
1964	20.1	6.3	30.4	20.8
1965	20.1	6.4	31.2	20.7
1966	19.3	6.4	32.1	20.0
1967	19.3	6.6	33.2	19.9
1968	18.8	6.7	33.7	19.9
1969	18.8	7.0	34.8	20.2
1970	17.8	7.0	35.7	19.7
1971	17.4	7.2	36.4	19.8
1972	17.4	7.5	36.1	20.8
1973	16.5	7.5	38.8	19.4
1974	15.3	7.6	53.2	14.3
1975	14.2	7.7	56.7	13.6
1976	13.6	7.8	59.0	13.2
1977	12.9	7.8	62.2	12.5
1978	12.3	8.0	62.6	12.7
1979	11.5	8.1	85.7	9.4
1980	11.3	8.7	119.1	7.3
1981	10.3	8.7	131.1	6.6
1982	10.6	9.5	122.2	7.8
1983	10.7	9.9	115.7	8.6
1984	11.1	10.7	112.9	9.5
1985	10.9	10.9	111.5	9.8
1986 <sup>3</sup>	10.9	11.2	90.1	12.4

<sup>1</sup>The average pump price of leaded regular motor gasoline.

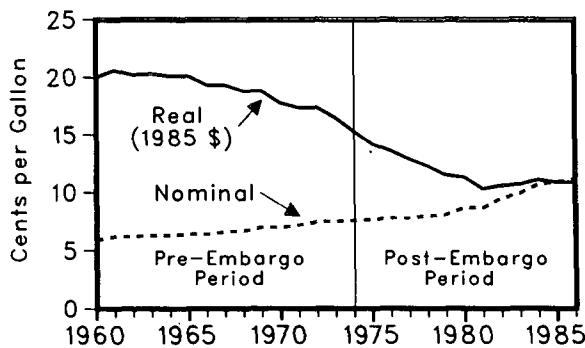
<sup>2</sup>Calculations are based on unrounded values for nominal taxes.

<sup>3</sup>1986 entries are EIA forecasts.

Note: U.S. averages are estimates derived from averaging State and local motor gasoline taxes weighted by consumption. Real taxes are expressed in terms of 1985 dollars.

Sources: EIA calculations based on the following: for 1985 tax data, the American Automobile Association, *Digest of Motor Laws*, 52d ed. (Falls Church, Virginia, 1986); for earlier years, previous editions were used. For consumption data, EIA, State Energy Data System, April 1986. For 1985 pump prices, EIA, *Monthly Energy Review*, DOE/EIA-0035(85/12) (Washington, DC, March 1986), p. 96; for 1960 through 1984, EIA, *Annual Energy Review 1984*, DOE/EIA-0384(85) (Washington, DC, April 1985), p. 127.

**Figure 1. U.S. Average of State and Local Motor Gasoline Taxes, 1960-1986**



percent of the pump price, to as low as 6.6 percent in 1981.

The primary reason for the changes in State taxes as a percent of pump price was their relative stability while the refiners' acquisition costs of crude oil escalated rapidly in 1974, 1979, and 1980. Most States traditionally set excise taxes as a flat cents-per-gallon rate rather than as a percentage of the price. States generally were reluctant to raise taxes simultaneously with increased prices at the pump. Interestingly, as crude oil acquisition costs fell after 1981, many States took the opportunity to raise taxes. The percentage of the pump price rose every year during the 1981-to-1985 period. By 1985, the percentage was 9.8 percent, the highest level in 7 years.

In 1986, EIA projects that the percentage will increase to over 12 percent, mainly due to sharply lower gasoline prices. The projection assumes that average State taxes will increase at the rate of inflation. There were reports in early 1986 that a majority of State legislatures were considering tax changes (mostly increases) for 1986.<sup>11</sup>

In nominal terms, State motor gasoline taxes in the United States increased gradually from 1960 through 1979 and then increased at a faster rate thereafter. From 1960 through 1979, the national average of State motor gasoline taxes rose at an average annual rate of 1.7 percent; from 1979 through 1985, the average annual increase was 5.1 percent.

### Federal and State Taxes Compared

In 1960, Federal and State taxes together accounted for 32 percent of the pump price of leaded regular motor gasoline. By 1985, the combined share had fallen to 18 percent. Although both Federal and State shares declined over the 26-year period, the State share fell much faster.

### The States' Taxes

Motor gasoline taxes in several States were significantly higher, in nominal terms, in 1985 than they had been in 1960. Taxes in Minnesota showed the greatest increase in 1985 compared with 1960, an increase of 12.0 cents per gallon. Washington's taxes rose 11.5 cents per gallon and Wisconsin's taxes were up 10.5 cents per gallon. In Connecticut and

<sup>11</sup>Lundberg Survey, Inc., *Lundberg Letter*, Vol. 13, No. 15 (Los Angeles, February 7, 1986), p. 1.

Nevada, taxes were higher by 10.0 cents and 9.5 cents per gallon, respectively, in 1985 than in 1960.

Although taxes in all States were higher, in nominal terms, in 1985 than in 1960, motor gasoline taxes in some States rose very little. In Oklahoma, taxes rose only 0.1 cent per gallon, the smallest increase recorded in any State. Taxes in Alaska, Florida, and Georgia were up by just 1.0 cent per gallon.

In some States, motor gasoline taxes exhibited year-to-year declines (although in no case was the decline severe enough to result in 1985 taxes falling below the level of 1960 taxes). The year-to-year decreases in nominal taxes were due to tax regimes that tied taxes to pump prices, which declined after 1981. That was true of New York, where New York City imposes a special leaded gasoline tax of 1.0 cent per gallon and State taxes fell each year from 1981 to 1985 concurrent with the decline in leaded gasoline consumption. In Massachusetts and Rhode Island, taxes fell each year from 1981 through 1984. (In 1985, taxes in those two States rose because of an increase in the wholesale price of motor gasoline.) Eight States—California, Colorado, Connecticut, Delaware, Illinois, Nevada, New Hampshire, and New York—recorded year-to-year declines prior to the 1980's.

### State Rankings

Differences in the States' approaches to levying motor gasoline taxes led to changes in the States' rankings relative to each other in 1985 compared with their rankings in 1960 (Table 2). Four States—Missouri, Illinois, New Jersey, and Wyoming—were among those States with the lowest taxes in both 1960 and 1985. Missouri's taxes were the lowest in 1960 and the second lowest, after Oklahoma, in 1985. Three States—Hawaii, Louisiana, and Nebraska—were among those States with the highest taxes in both years. Hawaii's taxes were the highest of any State in 1960 and ranked tenth highest in 1985.

In contrast, three States experienced drastic changes in their relative rankings. Minnesota, which had ranked as a low-tax State in 1960, recorded the second highest State tax in the Nation in 1985; Minnesota's motor gasoline tax rose from 5.0 cents per gallon to 17.0 cents per gallon. Oklahoma raised motor gasoline taxes by only 0.1 cent per gallon and Alaska, Florida, and Georgia raised taxes by only 1.0 cent per gallon over the 26-year period. By 1985, all four were ranked among the States with the lowest taxes.

**Table 2. States Ranked by Motor Gasoline Taxes,  
1960 and 1985  
(Cents per Gallon)**

State	1960		1985		Percent Increase
	Rank	Tax	Rank	Tax	
Alabama	2	7.0	13	13.0	86
Alaska	2	7.0	45	8.0	14
Arizona	42	5.0	13	13.0	160
Arkansas	18	6.5	36	9.5	46
California	23	6.0	38	9.0	50
Colorado	23	6.0	22	12.0	100
Connecticut	23	6.0	4	16.0	167
Delaware	42	5.0	26	11.0	120
District of Columbia	23	6.0	13	13.0	117
Florida	2	7.0	45	8.0	14
Georgia	18	6.5	49	7.5	15
Hawaii	1	8.5	10	14.5	71
Idaho	23	6.0	9	14.5	142
Illinois	42	5.0	43	8.9	78
Indiana	23	6.0	30	10.5	75
Iowa	23	6.0	13	13.0	117
Kansas	42	5.0	26	11.0	120
Kentucky	2	7.0	32	10.0	43
Louisiana	2	7.0	4	16.0	129
Maine	2	7.0	38	9.0	29
Maryland	23	6.0	12	13.5	125
Massachusetts	41	5.5	37	9.2	67
Michigan	23	6.0	7	15.0	150
Minnesota	42	5.0	2	17.0	240
Mississippi	2	7.0	38	9.0	29
Missouri	51	3.0	50	7.0	133
Montana	23	6.0	38	9.0	50
Nebraska	2	7.0	8	14.9	113
Nevada	23	6.0	6	15.5	158
New Hampshire	2	7.0	11	14.0	100
New Jersey	42	5.0	45	8.0	60
New Mexico	23	6.0	26	11.0	83
New York	23	6.0	44	8.1	35
North Carolina	2	7.0	21	12.2	74
North Dakota	23	6.0	13	13.0	117
Ohio	2	7.0	22	12.0	71
Oklahoma	18	6.5	51	6.6	2
Oregon	23	6.0	38	9.0	50
Pennsylvania	42	5.0	22	12.0	140
Rhode Island	2	7.0	35	9.7	39
South Carolina	2	7.0	13	13.0	86
South Dakota	23	6.0	13	13.0	117
Tennessee	2	7.0	32	10.0	43
Texas	42	5.0	32	10.0	100
Utah	23	6.0	26	11.0	83
Vermont	18	6.5	13	13.0	100
Virginia	2	7.0	25	11.4	63
Washington	18	6.5	1	18.0	177
West Virginia	2	7.0	30	10.5	50
Wisconsin	23	6.0	3	16.5	175
Wyoming	42	5.0	45	8.0	60
<b>U.S. Average</b>	<b>—</b>	<b>5.9</b>	<b>—</b>	<b>10.9</b>	<b>85</b>

Note: Taxes are expressed in nominal dollars.

Source: For 1985 data, the American Automobile Association, *Digest of Motor Laws*, 52d ed. (Falls Church, Virginia, 1986); for 1960 data, the 27th edition was used.

Despite the State diversity, certain relationships among State motor gasoline taxes appear to be fairly constant. For example, in both 1960 and 1985 the highest State tax was about three times as high as the lowest State tax. In 1960, taxes in Missouri, where motor gasoline taxes were lowest, were 3.0 cents per gallon, compared with 8.5 cents per gallon in Hawaii, where taxes were highest. Similarly, in 1985, taxes in Oklahoma were 6.6 cents per gallon, compared with 18.0 cents per gallon in Washington.

### Summary

Analysis of State motor gasoline taxes reveals a significantly different picture in 1985 than in 1960. In real terms, State motor gasoline taxes in 1985 had not kept up with the rate of inflation, and average State taxes as a percentage of the pump price of leaded regular gasoline had declined. State taxes accounted for a smaller share of the pump price relative to the Federal tax share in 1985 than they had in 1960. Motor gasoline taxes in nominal dollars did increase throughout the 26-year period and at a faster rate after 1979, but they did not keep pace with increases in other components of the pump price. The percentage of the price due to State taxes is projected to increase in 1986, due to much lower gasoline prices.

# Part 1 Energy Summary

## First Quarter 1986 Summary

U.S. energy production during the first quarter of 1986 was 16.4 quadrillion British thermal units (Btu), unchanged<sup>1</sup> from the level during the first quarter of 1985 (see summary table below). U.S. consumption of energy totaled 19.7 quadrillion Btu, down 1.7 percent from consumption during the first quarter of 1985 and well below the 22.2 quadrillion Btu consumed during 1979, when first-quarter consumption peaked (Figure 1).

The change in net imports of energy was more dramatic. Net imports totaled 2.0 quadrillion Btu in the first quarter of 1986, up 14.4 percent from the level during the first quarter of 1985. However, net imports remained significantly below the all-time high for first-quarter net imports (4.9 quadrillion Btu) reached in 1977.

<sup>1</sup>All statistics for 1986 are preliminary. Percentage changes are calculated using daily rates prior to rounding.

## Production

Despite substantial declines in most energy prices, production of two of the three major fossil fuels registered increases in the first quarter of 1986 compared with the first quarter of 1985. Coal production rose to 4.8 quadrillion Btu, up 2.1 percent. Petroleum production rose to 5.2 quadrillion Btu, up 0.3 percent, as increases in the production of natural gas plant liquids and Alaskan crude oil more than offset a decline in crude oil production in the Lower-48 States. In contrast, natural gas production declined 2.0 percent to 4.5 quadrillion Btu.

Petroleum consumption by electric utilities increased for the first time since 1978, reversing a 7-year decline, and nuclear-based generation rose to an all-time high. In contrast, coal consumption by electric utilities was down slightly from the record level attained in the first quarter of 1985.

## Energy Summary

(Quadrillion (10<sup>15</sup>) Btu)

	March			Cumulative January through March			
	1986	1985	Percent Change <sup>1</sup>	1986	1985	1985 Daily Rate	Percent Change <sup>1</sup>
<b>Total Production</b>	<b>5.558</b>	<b>5.605</b>	<b>-0.8</b>	<b>16.367</b>	<b>0.182</b>	<b>16.360</b>	<b>0.182</b>
Petroleum <sup>2</sup>	1.798	1.824	-1.4	5.243	0.058	5.226	0.058
Natural Gas (Dry)	1.490	1.465	1.7	4.451	0.049	4.541	0.050
Coal	1.624	1.706	-4.8	4.771	0.053	4.673	0.052
Other <sup>3</sup>	0.646	0.609	6.0	1.902	0.021	1.921	0.021
<b>Total Consumption</b>	<b>6.403</b>	<b>6.251</b>	<b>2.4</b>	<b>19.685</b>	<b>0.219</b>	<b>20.023</b>	<b>0.222</b>
Petroleum <sup>4</sup>	2.703	2.567	5.3	7.784	0.086	7.689	0.085
Natural Gas <sup>5</sup>	1.637	1.651	-0.8	5.477	0.061	5.927	0.066
Coal	1.382	1.387	-0.3	4.420	0.049	4.393	0.049
Other <sup>6</sup>	0.680	0.647	5.2	2.004	0.022	2.014	0.022
<b>Net Imports</b>	<b>0.629</b>	<b>0.654</b>	<b>-3.8</b>	<b>1.974</b>	<b>0.022</b>	<b>1.725</b>	<b>0.019</b>
Petroleum <sup>7</sup>	0.697	0.705	-1.0	2.103	0.023	1.833	0.020
Natural Gas	0.056	0.085	-34.1	0.211	0.002	0.279	0.003
Coal <sup>8</sup>	(0.159)	(0.174)	(-8.5)	(0.442)	(0.005)	(0.480)	(0.005)
Other <sup>9</sup>	0.034	0.037	-7.7	0.102	0.001	0.093	0.001

<sup>1</sup>Based on daily rates prior to rounding.

<sup>2</sup>Includes crude oil, lease condensate, and natural gas plant liquids.

<sup>3</sup>Other is hydroelectric and nuclear electric power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

<sup>4</sup>Includes petroleum products.

<sup>5</sup>Includes supplemental gaseous fuels.

<sup>6</sup>Other is hydroelectric and nuclear electric power; electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems; and net imports of electricity and coal coke.

<sup>7</sup>Includes crude oil, lease condensate, petroleum products, pentanes plus, unfinished oils, gasoline blending components, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>8</sup>(Parentheses indicate exports are greater than imports.)

<sup>9</sup>Other is net imports of electricity and coal coke.

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

## Consumption

Despite continued modest growth in the U.S. economy, total energy consumption declined in the first quarter of 1986, and energy consumption per dollar of gross national product fell to 20.3 thousand Btu per 1982 dollar. By comparison, the 1973 ratio was 27.1 thousand Btu per 1982 dollar.

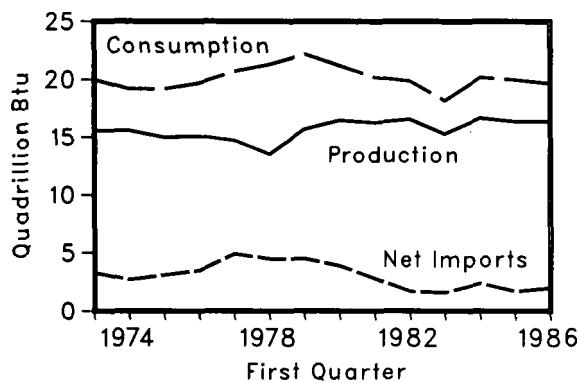
Natural gas consumption fell to 5.5 quadrillion Btu in the first quarter of 1986, down 7.6 percent from the level in the first quarter of 1985. The magnitude of the decrease more than offset smaller increases in consumption of the other two major fossil fuels. Petroleum consumption rose 1.2 percent to 7.8 quadrillion Btu, and coal consumption rose 0.6 percent to 4.4 quadrillion Btu.

## Trade

Energy net imports in the first quarter of 1986 were 14.4 percent higher than in the first quarter of 1985. The increase was due to a 14.7-percent increase in petroleum net imports and a 7.9-percent decrease in coal net exports, which more than offset a 24.5-percent fall in natural gas net imports.

The composite refiner acquisition cost of crude oil fell to \$14.87 per barrel in March 1986, compared with \$26.77 per barrel in March 1985. Because of the decline in oil prices, the proportional increase in the cost of energy net imports was not as great as the proportional increase in the quantity of net imports.

**Figure 1. U.S. Energy Production, Consumption, and Net Imports, First Quarters, 1973-1986**



Note: 1986 data are preliminary.

Source: Energy Information Administration calculations based on data reported elsewhere in Part 1 of this publication.

Nevertheless, an energy trade deficit of \$11.0 billion was recorded for the first quarter of 1986.

Net imports of petroleum reached 4.1 million barrels per day in the first quarter of 1986, up from 3.6 million barrels per day in the first quarter of 1985. The increase was due to an increase in crude oil net imports of from 2.4 million barrels per day to 2.9 million barrels per day. Petroleum product net imports declined from 1.2 million barrels per day in the first quarter of 1985 to 1.1 million barrels per day in the first quarter of 1986.

Petroleum net imports from all members of the Organization of Petroleum Exporting Countries (OPEC) averaged 2.0 million barrels per day, while petroleum net imports from Arab members alone averaged 0.8 million barrels per day.

As a percent of U.S. petroleum products supplied, petroleum net imports from all countries rose to 25.4 percent, up from 22.5 percent in the first quarter of 1985. OPEC net imports equaled 12.7 percent of U.S. petroleum products supplied in the first quarter of 1986, up from 8.6 percent in the first quarter of 1985. Similarly, petroleum net imports from Arab members of OPEC rose from 2.1 percent to 5.3 percent. However, U.S. dependence on foreign petroleum supplies remained well below the levels recorded during the 1970's.

## Costs to End Users

As the prices of crude oil and natural gas declined during the first quarter of 1986, the costs of energy to end users also declined. In constant (1972) dollars, the price of leaded regular motor gasoline averaged 39 cents per gallon, down from 42 cents per gallon in the first quarter of 1985. The constant-dollar price of residential heating oil declined from 42 cents per gallon to 37 cents per gallon. The constant-dollar price of natural gas sold to residential customers also declined, from \$2.35 per thousand cubic feet to \$2.17 per thousand cubic feet, while the constant-dollar price of electricity to end users remained essentially unchanged at 3 cents per kilowatthour.

At \$8.41 per million Btu (in 1972 dollars), electricity was one of the most expensive sources of energy in the first quarter of 1986. By comparison, leaded regular motor gasoline cost \$3.09 per million Btu, residential heating oil cost \$2.67 per million Btu, and natural gas sold to residential users cost \$2.10 per million Btu.

# Energy Summary

## Production of Energy by Source—Quarterly Summary

		Coal	Crude Oil <sup>1</sup>	NGPL <sup>2</sup>	Natural Gas (Dry)	Hydro- electric Power <sup>3</sup>	Nuclear Electric Power	Other <sup>4</sup>	Total
Quadrillion (10 <sup>18</sup> ) Btu									
1973	Total	13.993	19.493	2.569	22.187	2.861	0.910	0.046	62.060
1974	Total	14.074	18.575	2.471	21.210	3.177	1.272	0.056	60.835
1975	Total	14.990	17.729	2.374	19.640	3.155	1.900	0.072	59.860
1976	Total	15.654	17.262	2.327	19.480	2.976	2.111	0.081	59.891
1977	Total	15.755	17.454	2.327	19.565	2.333	2.702	0.082	60.219
1978	Total	14.910	18.434	2.245	19.485	2.937	3.024	0.068	61.103
1979	1st Quarter	4.028	4.455	0.550	5.084	0.756	0.849	0.020	15.742
	2nd Quarter	4.583	4.502	0.570	4.953	0.831	0.539	0.021	15.998
	3rd Quarter	4.262	4.524	0.571	4.889	0.660	0.727	0.023	15.654
	4th Quarter	4.667	4.623	0.595	5.151	0.684	0.661	0.025	16.406
	Total	17.539	18.104	2.286	20.076	2.931	2.776	0.089	63.800
1980	1st Quarter	4.619	4.588	0.578	5.287	0.746	0.644	0.024	16.486
	2nd Quarter	4.753	4.552	0.571	4.885	0.864	0.605	0.028	16.258
	3rd Quarter	4.449	4.549	0.547	4.706	0.666	0.752	0.031	15.701
	4th Quarter	4.776	4.559	0.558	5.029	0.624	0.738	0.032	16.316
	Total	18.597	18.249	2.254	19.907	2.900	2.739	0.114	64.761
1981	1st Quarter	4.799	4.481	0.581	4.995	0.678	0.743	0.033	16.310
	2nd Quarter	3.032	4.519	0.570	4.942	0.754	0.679	0.031	14.527
	3rd Quarter	5.233	4.569	0.575	4.881	0.683	0.821	0.033	16.795
	4th Quarter	5.313	4.577	0.581	4.880	0.644	0.765	0.030	16.790
	Total	18.377	18.146	2.307	19.699	2.758	3.008	0.127	64.422
1982	1st Quarter	4.943	4.502	0.547	4.916	0.879	0.760	0.023	16.570
	2nd Quarter	4.813	4.561	0.537	4.572	0.884	0.747	0.025	16.137
	3rd Quarter	4.479	4.623	0.541	4.385	0.749	0.840	0.030	15.647
	4th Quarter	4.405	4.624	0.566	4.382	0.745	0.785	0.030	15.536
	Total	18.639	18.309	2.191	18.255	3.256	3.131	0.108	63.890
1983	1st Quarter	4.241	4.550	0.541	4.215	0.922	0.776	0.028	15.273
	2nd Quarter	4.121	4.587	0.526	3.851	0.970	0.747	0.026	14.828
	3rd Quarter	4.385	4.642	0.553	4.040	0.798	0.838	0.041	15.297
	4th Quarter	4.503	4.613	0.564	4.424	0.812	0.842	0.039	15.796
	Total	17.250	18.392	2.184	16.530	3.502	3.203	0.133	61.194
1984	1st Quarter	4.911	4.646	0.555	4.682	R0.908	R0.923	0.039	R16.664
	2nd Quarter	5.068	4.693	0.560	4.393	R0.934	R0.818	0.041	R16.507
	3rd Quarter	5.385	4.746	0.576	4.342	R0.758	R0.943	0.044	R16.793
	4th Quarter	4.359	4.763	0.582	4.515	R0.711	R0.870	0.050	R15.849
	Total	19.723	18.848	2.274	17.931	R3.312	R3.553	0.174	R65.814
1985	1st Quarter	4.673	R4.672	R0.554	4.541	R0.806	R1.063	0.052	R16.360
	2nd Quarter	5.006	R4.785	R0.551	4.056	R0.772	R0.932	0.048	R16.151
	3rd Quarter	4.886	R4.750	R0.553	4.018	R0.621	R1.133	R0.053	R16.013
	4th Quarter	4.823	R4.785	R0.578	R4.323	R0.705	R1.032	0.060	R16.305
	Total	19.388	R18.992	R2.235	R16.937	R2.903	R4.160	0.213	R64.829
1986	1st Quarter	4.771	4.667	0.576	4.451	0.759	1.081	0.062	16.367

<sup>1</sup>Includes lease condensate.

<sup>2</sup>Natural gas plant liquids.

<sup>3</sup>Includes industrial and utility production of hydroelectric power.

<sup>4</sup>Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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

• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

# Energy Summary

## Consumption of Energy by Source—Quarterly Summary

		Coal	Natural Gas <sup>1</sup>	Petroleum	Hydro-electric Power <sup>2</sup>	Nuclear Electric Power	Other <sup>3</sup>	Total
Quadrillion (10 <sup>12</sup> ) Btu								
1973	Total	12.971	22.512	34.840	3.010	0.910	0.039	74.282
1974	Total	12.663	21.732	33.455	3.309	1.272	0.112	72.543
1975	Total	12.663	19.948	32.731	3.219	1.900	0.086	70.546
1976	Total	13.584	20.345	35.175	3.066	2.111	0.081	74.362
1977	Total	13.922	19.931	37.122	2.515	2.702	0.097	76.289
1978	Total	13.765	20.000	37.965	3.141	3.024	0.193	78.088
1979	1st Quarter	3.769	6.648	10.072	0.808	0.849	0.029	22.174
	2nd Quarter	3.572	4.423	8.837	0.883	0.539	0.046	18.300
	3rd Quarter	3.876	4.085	8.879	0.713	0.727	0.047	18.326
	4th Quarter	3.823	5.510	9.337	0.737	0.661	0.030	20.098
	<b>Total</b>	<b>15.039</b>	<b>20.666</b>	<b>37.123</b>	<b>3.141</b>	<b>2.776</b>	<b>0.152</b>	<b>78.898</b>
1980	1st Quarter	3.995	6.606	9.143	0.800	0.644	0.023	21.212
	2nd Quarter	3.546	4.255	8.177	0.919	0.605	0.014	17.516
	3rd Quarter	4.020	3.977	8.123	0.721	0.752	0.019	17.612
	4th Quarter	3.861	5.553	8.759	0.678	0.738	0.023	19.612
	<b>Total</b>	<b>15.423</b>	<b>20.391</b>	<b>34.202</b>	<b>3.118</b>	<b>2.739</b>	<b>0.079</b>	<b>75.952</b>
1981	1st Quarter	4.069	6.237	8.391	0.763	0.743	0.029	20.232
	2nd Quarter	3.677	4.337	7.732	0.841	0.679	0.025	17.291
	3rd Quarter	4.191	3.997	7.785	0.770	0.821	0.032	17.596
	4th Quarter	3.971	5.355	8.023	0.731	0.765	0.025	18.870
	<b>Total</b>	<b>15.908</b>	<b>19.926</b>	<b>31.931</b>	<b>3.105</b>	<b>3.008</b>	<b>0.111</b>	<b>73.989</b>
1982	1st Quarter	4.046	6.396	7.745	0.948	0.760	0.019	19.915
	2nd Quarter	3.556	3.841	7.535	0.937	0.747	0.018	16.634
	3rd Quarter	3.990	3.532	7.419	0.834	0.840	0.023	16.638
	4th Quarter	3.730	4.738	7.532	0.842	0.785	0.027	17.653
	<b>Total</b>	<b>15.322</b>	<b>18.507</b>	<b>30.232</b>	<b>3.561</b>	<b>3.131</b>	<b>0.086</b>	<b>70.840</b>
1983	1st Quarter	3.737	5.369	7.311	1.008	0.776	0.025	18.226
	2nd Quarter	3.569	3.572	7.293	1.048	0.747	0.021	16.251
	3rd Quarter	4.440	3.317	7.626	0.901	0.838	0.038	17.160
	4th Quarter	4.152	5.093	7.824	0.914	0.842	0.034	18.859
	<b>Total</b>	<b>15.898</b>	<b>17.352</b>	<b>30.054</b>	<b>3.871</b>	<b>3.203</b>	<b>0.118</b>	<b>70.495</b>
1984	1st Quarter	4.314	6.031	7.909	R0.996	R0.923	0.041	R20.214
	2nd Quarter	4.009	3.980	7.675	R1.027	R0.818	0.038	R17.546
	3rd Quarter	4.490	3.579	7.755	R0.877	R0.943	0.040	R17.684
	4th Quarter	4.260	4.918	7.712	R0.816	R0.870	0.044	R18.620
	<b>Total</b>	<b>17.074</b>	<b>18.507</b>	<b>31.051</b>	<b>R3.717</b>	<b>R3.553</b>	<b>0.163</b>	<b>R74.064</b>
1985	1st Quarter	R4.393	5.927	R7.689	R0.896	R1.063	0.054	R20.023
	2nd Quarter	R4.136	3.552	R7.592	R0.871	R0.932	0.043	R17.126
	3rd Quarter	4.573	3.355	R7.700	R0.748	R1.133	0.048	R17.556
	4th Quarter	R4.384	R4.983	R7.942	R0.806	R1.032	0.055	R19.201
	<b>Total</b>	<b>R17.487</b>	<b>R17.817</b>	<b>R30.922</b>	<b>R3.321</b>	<b>R4.160</b>	<b>R0.199</b>	<b>R73.906</b>
1986	1st Quarter	4.420	5.477	7.784	0.862	1.081	0.061	19.685

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes industrial and utility production and net imports of electricity.

<sup>3</sup>Other is net imports of coal coke and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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

• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

# Energy Summary

## Net Imports<sup>1</sup> of Energy by Source—Quarterly Summary

		Coal	Crude Oil <sup>2</sup>	Refined Petroleum Products <sup>3</sup>	Natural Gas	Electricity	Coal Coke	Total
Quadrillion (10 <sup>15</sup> ) Btu								
1973	Total	(1.422)	6.883	6.097	0.981	0.148	(0.007)	12.680
1974	Total	(1.568)	7.389	5.273	0.907	0.133	0.056	12.190
1975	Total	(1.738)	8.708	3.800	0.904	0.064	0.014	11.752
1976	Total	(1.567)	11.221	3.982	0.922	0.089	0.000	14.648
1977	Total	(1.401)	13.921	4.321	0.981	0.182	0.015	18.018
1978	Total	(1.004)	13.125	3.932	0.941	0.204	0.125	17.323
1979	1st Quarter	(0.277)	3.311	1.051	0.307	0.052	0.009	4.453
	2nd Quarter	(0.452)	3.252	0.787	0.307	0.052	0.025	3.972
	3rd Quarter	(0.455)	3.417	0.826	0.295	0.053	0.024	4.159
	4th Quarter	(0.517)	3.348	0.939	0.333	0.053	0.005	4.160
	Total,	(1.702)	13.328	3.603	1.243	0.211	0.063	16.745
1980	1st Quarter	(0.363)	3.021	0.902	0.326	0.054	0.000	3.940
	2nd Quarter	(0.652)	2.696	0.625	0.203	0.054	(0.014)	2.913
	3rd Quarter	(0.678)	2.446	0.626	0.174	0.055	(0.011)	2.611
	4th Quarter	(0.698)	2.423	0.760	0.254	0.055	(0.009)	2.783
	Total	(2.391)	10.586	2.912	0.957	0.217	(0.035)	12.247
1981	1st Quarter	(0.578)	2.368	0.729	0.244	0.086	(0.004)	2.846
	2nd Quarter	(0.529)	2.127	0.552	0.185	0.087	(0.005)	2.416
	3rd Quarter	(0.883)	2.239	0.628	0.184	0.088	(0.001)	2.254
	4th Quarter	(0.929)	2.119	0.613	0.242	0.088	(0.006)	2.128
	Total	(2.918)	8.854	2.522	0.855	0.347	(0.016)	9.644
1982	1st Quarter	(0.668)	1.524	0.569	0.257	0.070	(0.004)	1.748
	2nd Quarter	(0.826)	1.672	0.466	0.190	0.053	(0.007)	1.549
	3rd Quarter	(0.655)	1.970	0.536	0.181	0.086	(0.008)	2.111
	4th Quarter	(0.619)	1.751	0.557	0.268	0.097	(0.004)	2.050
	Total	(2.768)	6.917	2.128	0.896	0.306	(0.022)	7.457
1983	1st Quarter	(0.392)	1.224	0.373	0.285	0.086	(0.003)	1.572
	2nd Quarter	(0.525)	1.686	0.539	0.186	0.079	(0.005)	1.959
	3rd Quarter	(0.572)	2.110	0.743	0.170	0.103	(0.003)	2.551
	4th Quarter	(0.524)	1.711	0.696	0.243	0.101	(0.004)	2.223
	Total	(2.013)	6.731	2.351	0.883	0.369	(0.016)	8.306
1984	1st Quarter	(0.393)	1.575	0.924	0.220	R0.088	0.002	R2.417
	2nd Quarter	(0.620)	1.820	0.712	0.184	R0.092	(0.003)	R2.185
	3rd Quarter	(0.656)	1.747	0.675	0.152	R0.119	(0.003)	R2.034
	4th Quarter	(0.451)	1.775	0.659	0.231	R0.105	(0.007)	R2.313
	Total	(2.119)	6.918	2.970	0.787	R0.405	(0.011)	R8.949
1985	1st Quarter	(0.480)	R1.243	R0.590	0.279	R0.091	0.002	R1.725
	2nd Quarter	(0.624)	R1.702	R0.709	0.194	R0.099	(0.005)	R2.075
	3rd Quarter	(0.664)	R1.590	R0.589	0.163	R0.127	(0.006)	R1.799
	4th Quarter	(0.621)	R1.846	R0.683	0.240	R0.101	(0.005)	R2.244
	Total	(2.389)	R6.381	R2.570	0.876	R0.418	(0.013)	R7.843
1986	1st Quarter	(0.442)	1.542	0.561	0.211	0.103	(0.001)	1.974

<sup>1</sup>Net imports equals imports minus exports. Parentheses indicate exports are greater than imports.

<sup>2</sup>Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>3</sup>Includes refined petroleum products, unfinished oils, natural gasoline, and plant condensate.

R=Revised data.

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

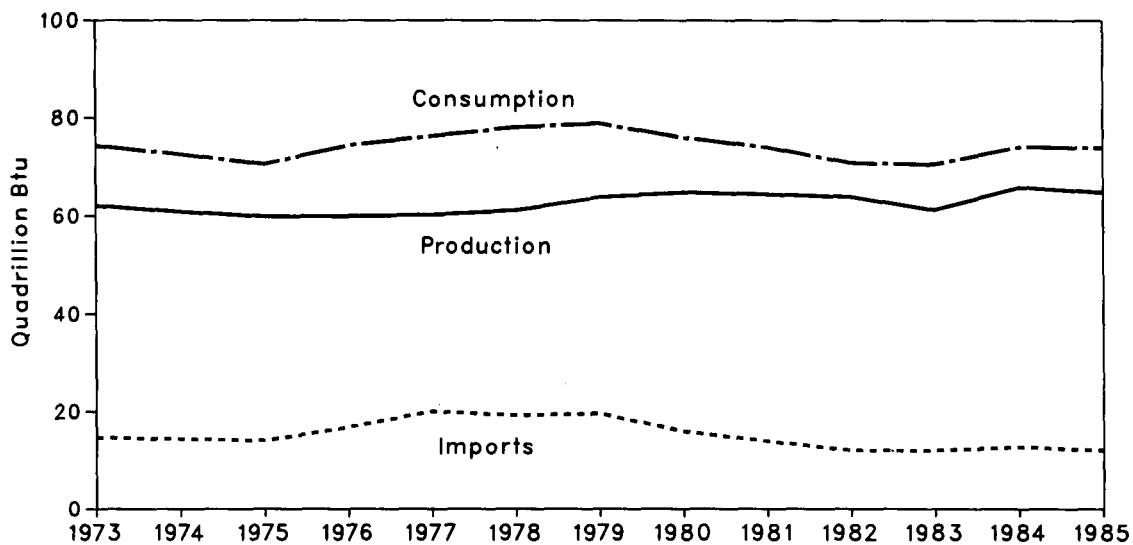
• Totals may not equal sum of components due to independent rounding.

Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

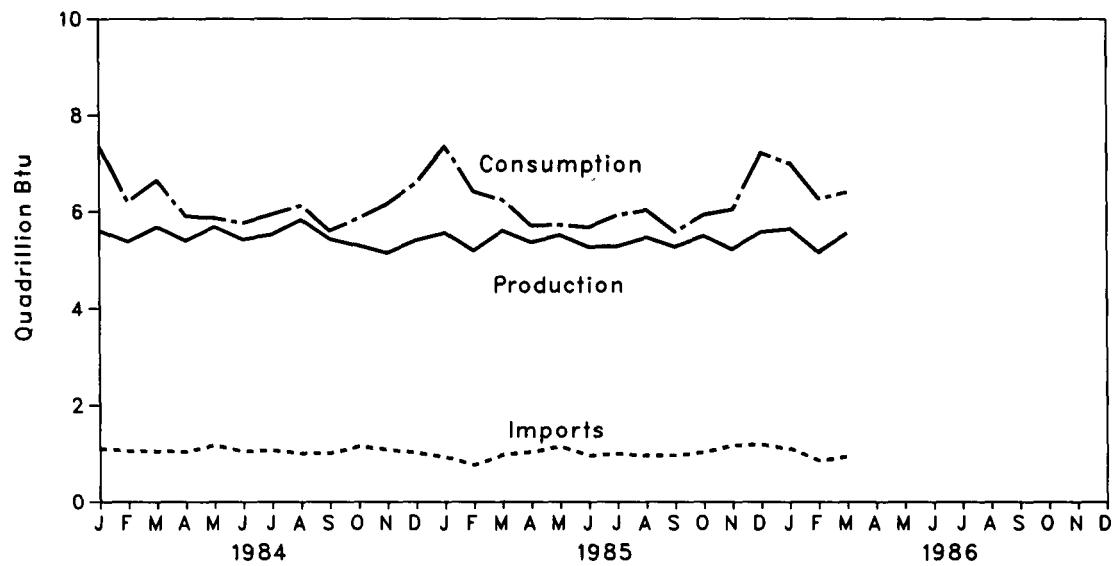
# Energy Summary

## Overview

### Yearly



### Monthly



# Energy Summary

## Overview<sup>1</sup>

		Production <sup>2</sup>	Consumption <sup>2</sup>	Imports <sup>2</sup>	Exports	Net Imports
Quadrillion (10 <sup>15</sup> ) Btu						
1973	Total	62.060	74.282	14.731	2.051	12.680
1974	Total	60.835	72.543	14.412	2.223	12.190
1975	Total	59.860	70.546	14.111	2.359	11.752
1976	Total	59.891	74.362	16.837	2.189	14.648
1977	Total	60.219	76.289	20.090	2.072	18.018
1978	Total	61.103	78.088	19.254	1.931	17.323
1979	Total	63.800	78.898	19.616	2.871	16.745
1980	Total	64.761	75.952	15.971	3.724	12.247
1981	Total	64.422	73.989	13.974	4.329	9.644
1982	Total	63.890	70.840	12.093	4.636	7.457
1983	Total	61.194	70.495	12.024	3.719	8.306
1984	January	R5.606	R7.360	R1.101	0.247	0.854
	February	R5.376	R6.206	R1.052	0.221	R0.831
	March	R5.682	R6.648	1.047	0.315	0.732
	April	R5.397	R5.908	R1.034	0.327	0.708
	May	R5.687	R5.868	R1.169	0.365	R0.804
	June	R5.423	R5.770	1.040	0.367	0.673
	July	R5.525	R5.948	1.065	0.326	0.739
	August	R5.835	R6.129	R1.004	0.359	R0.645
	September	R5.434	R5.608	1.005	0.355	R0.650
	October	R5.298	R5.866	R1.143	0.295	0.848
	November	R5.147	R6.161	R1.084	0.271	0.814
	December	R5.405	R6.593	1.012	0.360	0.652
	Total	R65.814	R74.064	R12.757	3.808	R8.949
1985	January	R5.562	R7.349	R0.926	0.305	R0.621
	February	R5.193	R6.423	R0.755	0.305	R0.450
	March	R5.605	R6.251	R0.969	R0.315	R0.654
	April	R5.367	R5.716	R1.033	0.332	R0.701
	May	R5.513	R5.727	R1.142	0.384	R0.758
	June	R5.270	R5.683	R0.958	0.342	R0.616
	July	R5.278	R5.933	R0.995	0.328	R0.667
	August	R5.464	R6.034	R0.954	0.420	R0.535
	September	R5.271	R5.589	R0.961	0.363	R0.598
	October	R5.499	R5.938	R1.023	0.364	R0.659
	November	R5.225	R6.050	R1.169	0.405	R0.764
	December	R5.581	R7.214	R1.188	0.367	R0.821
	Total	R64.829	R73.906	R12.073	4.230	R7.843
1986	January	R5.644	R7.000	1.093	0.318	R0.775
	February	R5.164	R6.282	0.854	0.284	R0.570
	March	5.558	6.403	0.930	0.301	0.629
	Year to Date	16.367	19.685	2.877	0.903	1.974

<sup>1</sup>For definitions, see Notes on the last page of this section.

<sup>2</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.

R=Revised data.

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

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

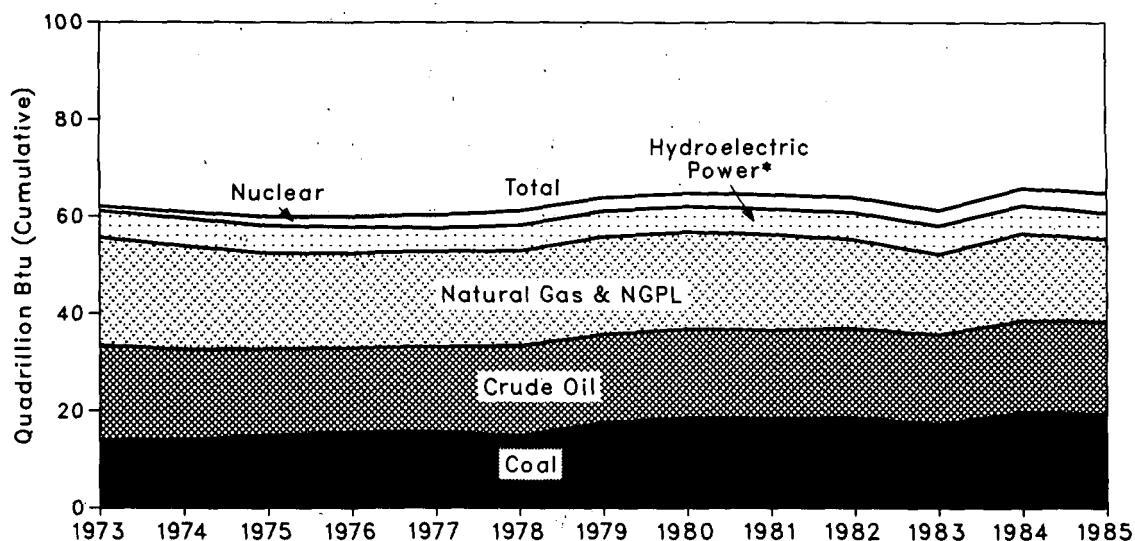
• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

Source: • Energy Information Administration calculations based on data appearing elsewhere in this publication.

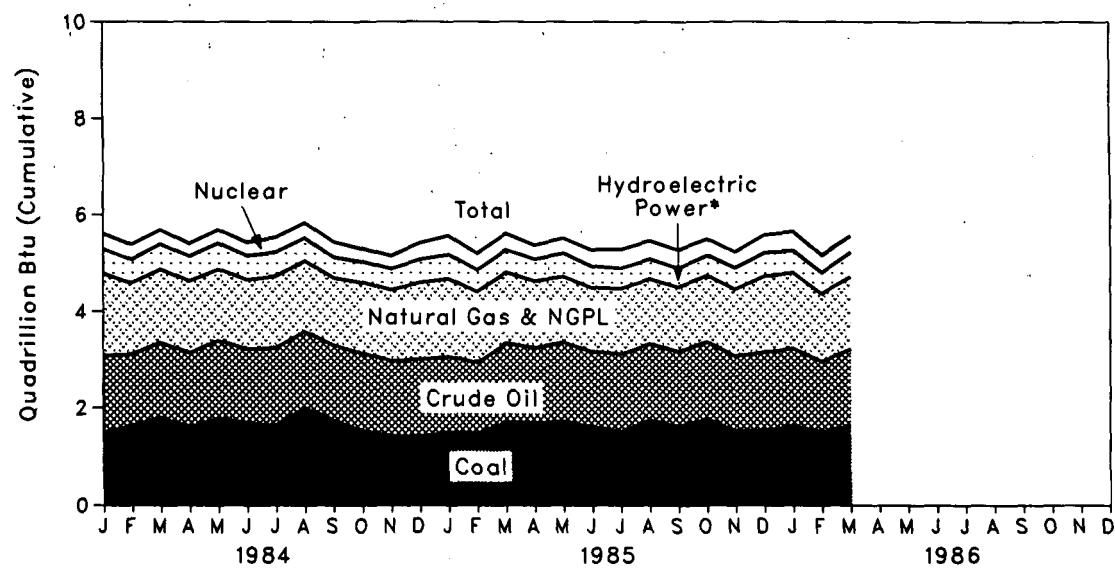
# Energy Summary

## Production of Energy by Source

Yearly



Monthly



\*Includes other.

# Energy Summary

## Production of Energy by Source

		Coal	Crude Oil <sup>1</sup>	NGPL <sup>2</sup>	Natural Gas (Dry)	Hydro-electric Power <sup>3</sup>	Nuclear Electric Power	Other <sup>4</sup>	Total	Year to Date
Quadrillion (10 <sup>12</sup> ) Btu										
1973	Total	13.993	19.493	2.569	22.187	2.861	0.910	0.046	62.060	
1974	Total	14.074	18.575	2.471	21.210	3.177	1.272	0.056	60.835	
1975	Total	14.990	17.729	2.374	19.640	3.155	1.900	0.072	59.860	
1976	Total	15.654	17.262	2.327	19.480	2.976	2.111	0.081	59.891	
1977	Total	15.755	17.454	2.327	19.565	2.333	2.702	0.082	60.219	
1978	Total	14.910	18.434	2.245	19.485	2.937	3.024	0.068	61.103	
1979	Total	17.539	18.104	2.286	20.076	2.931	2.776	0.089	63.800	
1980	Total	18.597	18.249	2.254	19.907	2.900	2.739	0.114	64.761	
1981	Total	18.377	18.146	2.307	19.699	2.758	3.008	0.127	64.422	
1982	Total	18.639	18.309	2.191	18.255	3.256	3.131	0.106	63.890	
1983	Total	17.250	18.392	2.184	16.530	3.502	3.203	0.133	61.194	
1984	January	1.495	1.594	0.186	1.695	R0.307	R0.318	0.011	R5.606	R5.606
	February	1.622	1.493	0.181	1.472	R0.287	R0.308	0.013	R5.376	R10.982
	March	1.795	1.559	0.189	1.515	R0.314	R0.296	0.015	R5.682	R16.664
	April	1.601	1.542	0.185	1.483	R0.309	R0.263	0.014	R5.397	R22.061
	May	1.785	1.610	0.191	1.478	R0.328	R0.280	0.014	R5.687	R27.748
	June	1.682	1.540	0.184	1.432	R0.297	R0.274	0.013	R5.423	R33.172
	July	1.646	1.598	0.193	1.485	R0.284	R0.307	0.013	R5.525	R38.696
	August	1.999	1.584	0.193	1.463	R0.259	R0.320	0.016	R5.835	R44.531
	September	1.739	1.565	0.190	1.394	R0.216	R0.316	0.015	R5.434	R49.965
	October	1.536	1.601	0.195	1.465	R0.215	R0.269	0.016	R5.298	R55.263
	November	1.417	1.562	0.192	1.463	R0.230	R0.266	0.016	R5.147	R60.409
	December	1.405	1.600	0.195	1.587	R0.266	R0.335	0.018	R5.405	R65.814
	Total	19.723	18.848	2.274	17.931	R3.312	R3.553	0.174	R65.814	
1985	January	1.494	R1.571	R0.192	1.610	R0.284	R0.392	0.018	R5.562	R5.562
	February	1.473	R1.466	R0.173	1.465	R0.267	R0.334	0.016	R5.193	R10.755
	March	1.706	R1.635	R0.189	1.465	R0.254	R0.337	0.018	R5.605	R16.360
	April	1.680	R1.574	R0.181	1.378	R0.252	R0.287	0.016	R5.367	R21.727
	May	1.719	R1.642	R0.188	1.363	R0.273	R0.311	0.016	R5.513	R27.240
	June	1.607	R1.570	R0.182	1.315	R0.247	R0.334	0.016	R5.270	R32.511
	July	1.517	R1.609	R0.185	1.348	R0.220	R0.382	0.018	R5.278	R37.789
	August	1.746	R1.583	R0.188	1.344	R0.206	R0.377	0.018	R5.464	R43.253
	September	1.622	R1.558	R0.180	1.326	R0.194	R0.374	0.018	R5.271	R48.524
	October	1.761	R1.613	0.190	1.373	R0.207	R0.338	0.017	R5.499	R54.023
	November	1.523	R1.549	R0.190	1.379	R0.237	R0.327	0.021	R5.225	R59.248
	December	1.539	R1.624	R0.198	1.570	R0.261	R0.366	0.022	R5.581	R64.829
	Total	19.388	R18.992	R2.235	16.937	R2.903	R4.160	0.213	R64.829	
1986	January	1.631	1.608	R0.203	1.562	R0.226	R0.393	0.023	R5.644	R5.644
	February	1.516	1.452	R0.182	1.399	R0.241	R0.355	0.019	R5.164	R10.809
	March	1.624	1.607	0.191	1.490	0.292	0.334	0.020	5.558	16.367
	Year to Date	4.771	4.667	0.576	4.451	0.759	1.081	0.062	16.367	

<sup>1</sup>Includes lease condensate.

<sup>2</sup>Natural gas plant liquids.

<sup>3</sup>Includes industrial and utility production of hydroelectric power.

<sup>4</sup>Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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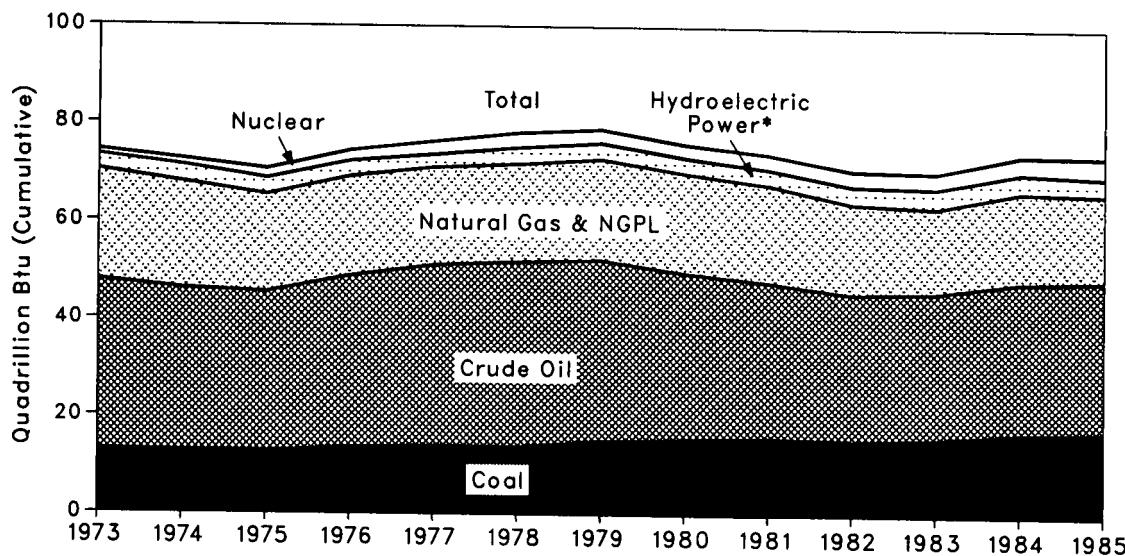
• Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

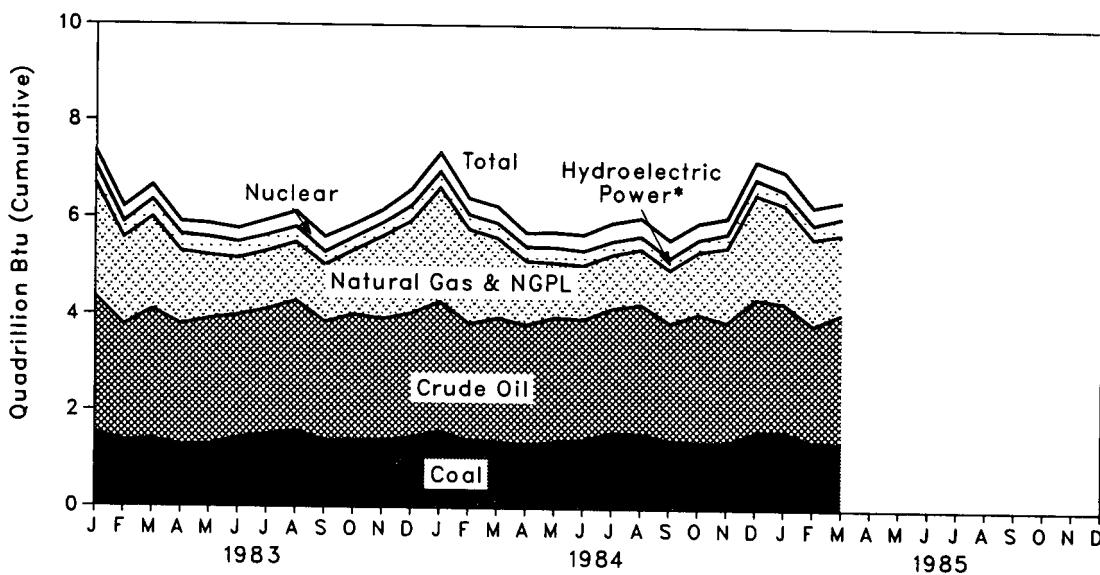
# Energy Summary

## Consumption of Energy by Source

Yearly



Monthly



\*Includes other.

# Energy Summary

## Consumption of Energy by Source

		Coal	Natural Gas <sup>1</sup>	Petro-leum	Hydro-electric Power <sup>2</sup>	Nuclear Electric Power	Other <sup>3</sup>	Total	Year to Date
Quadrillion (10 <sup>18</sup> ) Btu									
1973	Total	12.971	22.512	34.840	3.010	0.910	0.039	74.282	
1974	Total	12.663	21.732	33.455	3.309	1.272	0.112	72.543	
1975	Total	12.663	19.948	32.731	3.219	1.900	0.086	70.546	
1976	Total	13.584	20.345	35.175	3.066	2.111	0.081	74.362	
1977	Total	13.922	19.931	37.122	2.515	2.702	0.097	76.289	
1978	Total	13.765	20.000	37.965	3.141	3.024	0.193	78.088	
1979	Total	15.039	20.666	37.123	3.141	2.776	0.152	78.898	
1980	Total	15.423	20.391	34.202	3.118	2.739	0.079	75.952	
1981	Total	15.908	19.926	31.931	3.105	3.008	0.111	73.989	
1982	Total	15.322	18.507	30.232	3.561	3.131	0.086	70.840	
1983	Total	15.898	17.352	30.054	3.871	3.203	0.118	70.495	
1984	January	1.552	2.330	2.810	R0.338	R0.318	0.012	R7.360	R7.360
	February	1.359	1.793	2.415	R0.315	R0.308	0.015	R6.206	R13.566
	March	1.403	1.908	2.684	R0.342	R0.296	0.014	R6.648	R20.214
	April	1.272	1.501	2.520	R0.339	R0.263	0.014	R5.908	R26.122
	May	1.298	1.303	2.612	R0.360	R0.280	0.013	R5.868	R31.990
	June	1.439	1.175	2.542	R0.328	R0.274	0.011	R5.770	R37.760
	July	1.519	1.197	2.592	R0.321	R0.307	0.012	R5.948	R43.708
	August	1.587	1.208	2.695	R0.304	R0.320	0.014	R6.129	R49.837
	September	1.384	1.173	2.468	R0.253	R0.316	0.014	R5.608	R55.444
	October	1.395	1.322	2.612	R0.256	R0.269	0.013	R5.866	R61.310
	November	1.394	1.695	2.529	R0.262	R0.266	0.014	R6.161	R67.471
	December	1.470	1.901	2.571	R0.298	R0.335	0.017	R6.593	R74.064
	Total	17.074	18.507	31.051	R3.717	R3.553	0.163	R74.064	
1985	January	1.600	2.334	R2.690	R0.314	R0.392	0.018	R7.349	R7.349
	February	1.406	1.942	R2.432	R0.291	R0.334	0.017	R6.423	R13.772
	March	1.387	1.651	R2.567	R0.292	R0.337	0.018	R6.251	R20.023
	April	1.320	1.311	R2.500	R0.281	R0.287	0.016	R5.716	R25.739
	May	1.385	1.122	R2.589	R0.307	R0.311	0.013	R5.727	R31.466
	June	1.432	1.119	R2.502	R0.283	R0.334	0.014	R5.683	R37.149
	July	1.585	1.109	R2.577	R0.264	R0.382	0.016	R5.933	R43.082
	August	1.563	1.142	R2.682	R0.253	R0.377	0.017	R6.034	R49.117
	September	1.425	1.103	R2.440	R0.231	R0.374	0.015	R5.589	R54.705
	October	1.390	R1.290	R2.663	R0.241	R0.338	0.016	R5.938	R60.643
	November	1.386	R1.543	R2.505	R0.270	R0.327	0.018	R6.050	R66.693
	December	1.607	R2.150	R2.774	R0.295	R0.366	0.021	R7.214	R73.906
	Total	17.487	R17.817	R30.922	R3.321	R4.160	R0.199	R73.906	
1986	January	1.626	R2.040	R2.659	R0.260	R0.393	0.023	R7.000	R7.000
	February	1.412	R1.799	R2.422	R0.275	R0.355	0.019	R6.282	R13.282
	March	1.382	1.637	2.703	0.328	0.334	0.019	6.403	19.685
	Year to Date	4.420	5.477	7.784	0.862	1.081	0.061	19.685	

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes industrial and utility production and net imports of electricity.

<sup>3</sup>Other is net imports of coal coke and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

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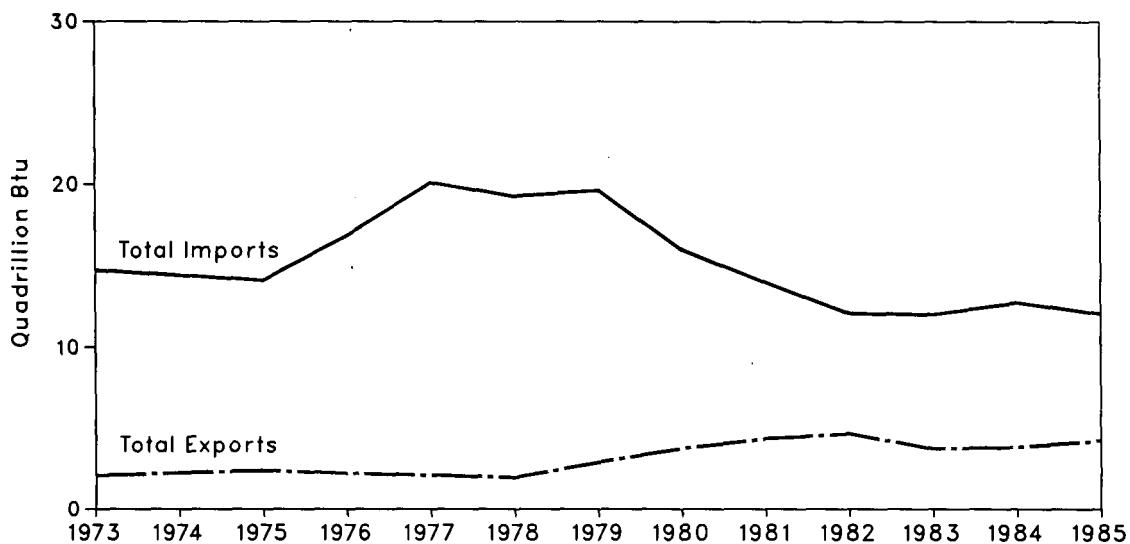
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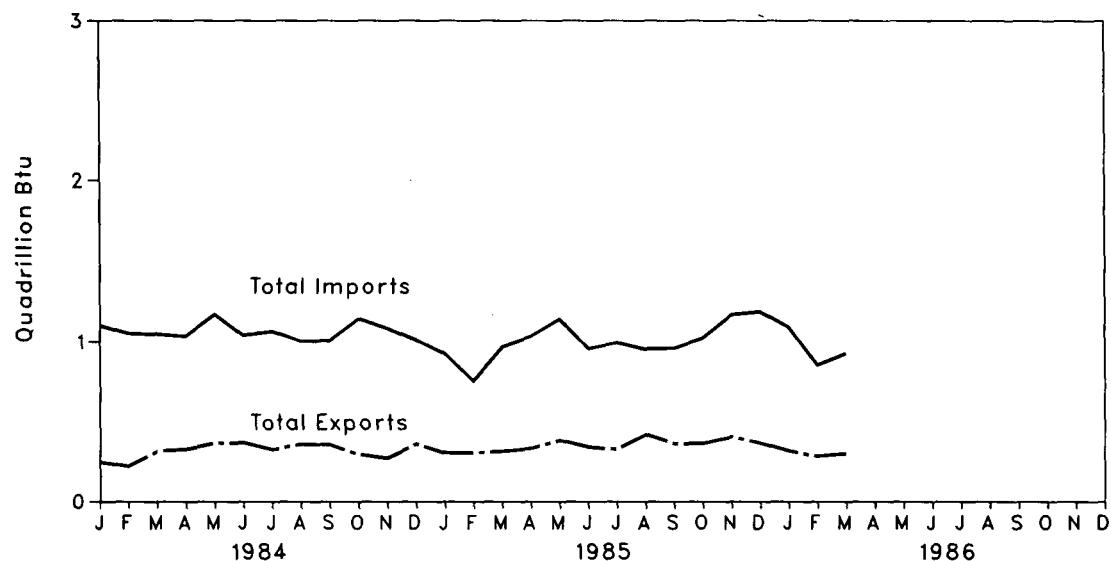
# Energy Summary

## Energy Imports and Exports

Yearly



Monthly



# Energy Summary

## Net Imports<sup>1</sup> of Energy by Source

		Coal	Crude Oil <sup>2</sup>	Petro- leum Products <sup>3</sup>	Natural Gas	Electric- ity	Coal Coke	Total	Year to Date
Quadrillion (10 <sup>18</sup> ) Btu									
1973	Total	(1.422)	6.883	6.097	0.981	0.148	(0.007)	12.680	
1974	Total	(1.568)	7.389	5.273	0.907	0.133	0.056	12.190	
1975	Total	(1.738)	8.708	3.800	0.904	0.064	0.014	11.752	
1976	Total	(1.567)	11.221	3.982	0.922	0.089	0.000	14.648	
1977	Total	(1.401)	13.921	4.321	0.981	0.182	0.015	18.018	
1978	Total	(1.004)	13.125	3.932	0.941	0.204	0.125	17.323	
1979	Total	(1.702)	13.328	3.603	1.243	0.211	0.063	16.745	
1980	Total	(2.391)	10.586	2.912	0.957	0.217	(0.035)	12.247	
1981	Total	(2.918)	8.854	2.522	0.855	0.347	(0.016)	9.644	
1982	Total	(2.768)	6.917	2.128	0.896	0.306	(0.022)	7.457	
1983	Total	(2.013)	6.731	2.351	0.883	0.369	(0.016)	8.306	
1984	January	(0.132)	0.524	0.336	0.092	0.032	0.001	0.854	0.854
	February	(0.109)	0.467	0.379	0.064	0.028	0.002	R0.831	R1.685
	March	(0.152)	0.584	0.209	0.063	0.029	(0.001)	0.732	R2.417
	April	(0.199)	0.567	0.244	0.066	0.030	0.000	0.708	R3.124
	May	(0.215)	0.672	0.255	0.061	0.032	(0.001)	R0.804	R3.929
	June	(0.205)	0.581	0.213	0.056	0.031	(0.002)	0.673	R4.602
	July	(0.215)	0.639	0.228	0.050	0.037	(0.001)	0.739	R5.341
	August	(0.214)	0.552	0.214	0.049	R0.045	(0.002)	R0.645	R5.986
	September	(0.228)	0.556	0.233	0.052	0.037	0.000	R0.650	R6.636
	October	(0.173)	0.652	0.269	0.062	R0.040	(0.003)	0.848	R7.483
	November	(0.109)	0.591	0.223	0.079	0.033	(0.003)	0.814	R8.297
	December	(0.169)	0.533	0.167	0.089	R0.032	(0.001)	0.652	R8.949
	Total	(2.119)	6.918	2.970	0.787	R0.405	(0.011)	R8.949	
1985	January	(0.150)	R0.465	R0.177	0.099	R0.029	0.000	R0.621	R0.621
	February	(0.156)	R0.308	R0.178	0.094	R0.024	0.001	R0.450	R1.071
	March	(0.174)	R0.470	R0.235	0.085	R0.037	0.000	R0.654	R1.725
	April	(0.181)	R0.554	R0.228	0.070	R0.029	0.001	R0.701	R2.426
	May	(0.239)	R0.629	R0.271	0.065	R0.033	(0.003)	R0.758	R3.184
	June	(0.205)	R0.519	R0.210	0.058	R0.036	(0.002)	R0.616	R3.800
	July	(0.188)	R0.551	R0.208	0.054	R0.043	(0.002)	R0.667	R4.467
	August	(0.268)	R0.520	R0.185	0.052	R0.046	(0.001)	R0.535	R5.002
	September	(0.208)	R0.519	R0.196	0.056	0.038	(0.003)	R0.598	R5.599
	October	(0.227)	R0.563	R0.223	0.066	0.035	(0.001)	R0.659	R6.258
	November	(0.211)	R0.650	R0.223	0.072	0.033	(0.003)	R0.764	R7.023
	December	(0.183)	R0.633	R0.237	0.101	R0.033	(0.001)	R0.821	R7.843
	Total	(2.389)	R6.381	R2.570	0.876	R0.418	(0.013)	R7.843	
1986	January	(0.152)	R0.573	0.230	0.090	E0.034	0.000	R0.775	R0.775
	February	(0.131)	0.464	R0.138	0.064	RE0.034	0.000	R0.570	R1.345
	March	(0.159)	0.504	0.193	0.056	E0.035	(0.001)	0.629	1.974
	Year to Date	(0.442)	1.542	0.561	0.211	E0.103	(0.001)	1.974	

<sup>1</sup>Net imports equals imports minus exports. Parentheses indicate exports are greater than imports.

<sup>2</sup>Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>3</sup>Includes petroleum products, unfinished oils, pentanes plus, and gasoline blending components.

R=Revised data. E=Estimated value.

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

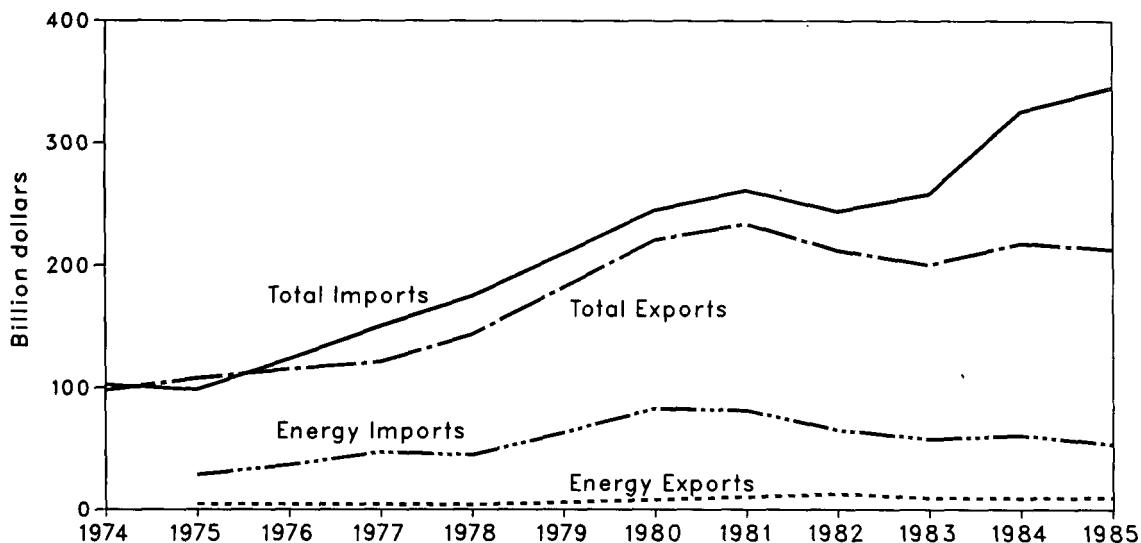
• Totals may not equal sum of components due to independent rounding.

Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

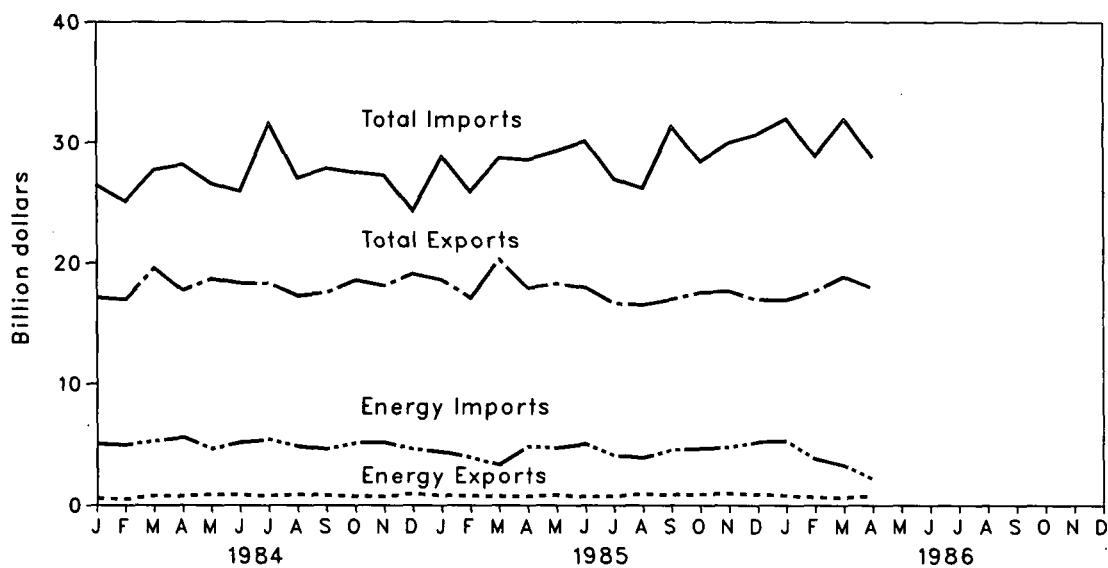
# Energy Summary

## Merchandise Trade Value

Yearly



Monthly



# Energy Summary

## Merchandise Trade Value

		Exports			Imports			Trade Balance		
		All		Total	All		Total	All		Total
		Energy	Other		Energy	Other		Energy	Other	
Million dollars										
1974	Total	NA	NA	98,092	NA	NA	102,559	NA	NA	-4,467
1975	Total	4,470	103,182	107,652	28,325	70,178	98,503	-23,855	33,004	9,149
1976	Total	4,226	110,997	115,223	36,384	87,093	123,477	-32,158	23,904	-8,254
1977	Total	4,184	117,048	121,232	47,153	103,237	150,390	-42,969	13,811	-29,158
1978	Total	3,882	139,799	143,681	44,763	129,994	174,757	-40,881	9,805	-31,076
1979	Total	5,675	176,185	181,860	63,077	146,381	209,458	-57,402	29,803	-27,599
1980	Total	7,982	212,644	220,626	82,924	161,947	244,871	-74,942	50,698	-24,244
1981	Total	10,279	223,398	233,677	81,360	179,622	260,982	-71,081	43,776	-27,305
1982	Total	12,729	199,464	212,193	65,409	178,543	243,952	-52,680	20,921	-31,759
1983	Total	9,500	190,986	200,486	57,952	200,096	258,048	-48,452	-9,110	-57,562
1984	January	582	R16,584	R17,166	5,089	R21,408	R26,497	-4,507	R-4,824	R-9,331
	February	502	R16,513	R17,015	5,006	R20,112	R25,118	-4,504	R-3,599	R-8,103
	March	790	R18,818	R19,608	5,323	R22,408	R27,731	-4,533	R-3,590	R-8,123
	April	759	R17,024	R17,783	5,629	R22,531	R28,160	-4,870	R-5,507	R-10,377
	May	901	R17,837	R18,738	4,696	R21,911	R26,607	-3,795	R-4,075	R-7,870
	June	872	R17,509	R18,381	5,206	R20,758	R25,964	-4,334	R-3,249	R-7,583
	July	765	R17,598	R18,363	5,434	R26,131	R31,565	-4,669	R-8,533	R-13,202
	August	878	R16,434	R17,312	4,886	R22,157	R27,043	-4,008	R-5,723	R-9,731
	September	820	R16,781	R17,601	4,663	R23,190	R27,853	-3,843	R-6,409	R-10,252
	October	757	R17,855	R18,612	5,168	R22,362	R27,530	-4,411	R-4,508	R-8,919
	November	712	R17,463	R18,175	5,207	R22,089	R27,296	-4,495	R-4,626	R-9,121
	December	973	R18,163	R19,136	4,672	R19,691	R24,363	-3,699	R-1,528	R-5,227
	Total	9,311	R208,577	R217,888	60,980	264,746	325,726	-51,669	R-56,169	R-107,838
1985	January	804	17,869	18,673	R4,434	R24,402	28,836	R-3,630	R-6,533	-10,163
	February	786	16,357	17,143	R3,989	R21,952	25,941	R-3,203	R-5,595	-8,798
	March	754	19,576	20,330	R3,351	R25,374	28,725	R-2,597	R-5,798	-8,395
	April	738	17,235	17,973	R4,876	R23,696	28,572	R-4,138	R-6,461	-10,599
	May	837	17,500	18,337	R4,748	R24,554	29,302	R-3,911	R-7,054	-10,965
	June	708	17,304	18,012	R5,088	R25,048	30,136	R-4,380	R-7,744	-12,124
	July	760	15,967	16,727	R4,146	R22,854	27,000	R-3,386	R-6,888	-10,274
	August	934	15,650	16,584	R3,937	R22,310	26,247	R-3,003	R-6,660	-9,663
	September	868	16,166	17,034	R4,597	R26,752	31,349	R-3,729	R-10,586	-14,315
	October	903	16,715	17,618	R4,699	R23,730	28,429	R-3,796	R-7,015	-10,811
	November	991	16,730	17,721	R4,824	R25,186	30,010	R-3,833	R-8,457	-12,290
	December	888	16,106	16,994	R5,228	R25,500	30,728	R-4,340	R-9,394	-13,734
	Total	9,971	203,175	213,146	R53,917	R291,359	345,276	R-43,946	R-88,183	-132,129
1986	January	812	16,194	17,006	R5,344	R26,661	32,005	R-4,532	R-10,467	-14,999
	February	676	17,059	17,735	R3,874	R25,041	28,895	R-3,198	R-7,963	-11,161
	March	622	18,291	18,913	R3,331	R28,641	31,972	R-2,709	R-10,350	-13,059
	April	791	17,174	17,965	2,176	26,586	28,762	-1,385	-9,412	-10,797
	Year to Date	2,900	68,719	71,619	14,725	106,909	121,634	-11,825	-38,190	-50,015
								-19,22		12,842
								-2,601		12,694
										-16,397

In accordance with current Bureau of the Census procedures, monthly data for 1984 have been revised to remove adjustments for seasonal variation. Monthly data for 1985 and 1986 were revised to remove adjustments for seasonal variation beginning with the December 1985 *Monthly Energy Review*.

\$16.4 billion

R=Revised data. NA=Not available.

Notes: • In accordance with current Bureau of the Census procedures, monthly data are not adjusted for seasonal variations.

• The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which is comprised of the 50 States, the District of Columbia, and Puerto Rico) and the Virgin Islands.

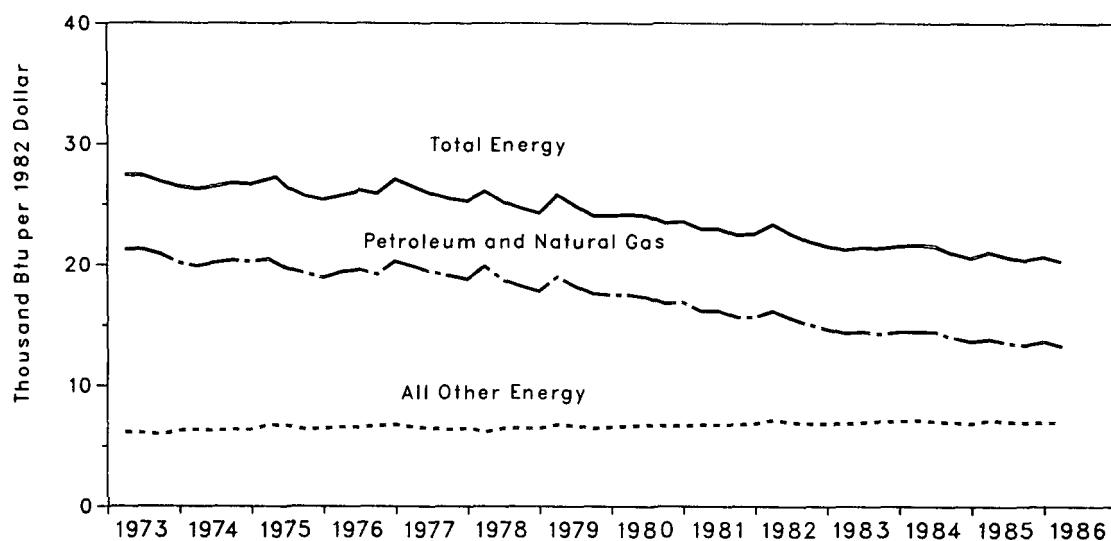
Additional Notes and Sources: • See the last page of this section.

## Energy Summary

### Energy Indicator—Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted)

	Annual Rate of Energy Consumption	Gross National Product (GNP)	Energy Consumption per Dollar of GNP (Seasonally Adjusted)		
			Trillion 1982 dollars	Total Energy	Petroleum and Natural Gas
				Quadrillion Btu	All Other Energy
1973	Year	74.282	2.744	27.1	20.9
1974	Year	72.543	2.729	26.6	20.2
1975	Year	70.546	2.695	26.2	19.6
1976	Year	74.362	2.827	26.3	19.6
1977	Year	76.289	2.959	25.8	19.3
1978	Year	78.088	3.115	25.1	18.6
1979	Year	78.898	3.192	24.7	18.1
1980	Year	75.952	3.187	23.8	17.1
1981	Year	73.989	3.249	22.8	16.0
1982	Year	70.840	3.166	22.4	15.4
1983	Year	70.495	3.278	21.5	14.5
1984	1st Quarter <sup>1</sup>	R74.837	3.449	21.7	14.5
	2nd Quarter <sup>1</sup>	R75.513	3.493	R21.6	14.5
	3rd Quarter <sup>1</sup>	R73.570	3.510	21.0	14.0
	4th Quarter <sup>1</sup>	R72.361	3.516	20.6	13.7
	Year	R74.064	3.492	21.2	14.2
1985	1st Quarter <sup>1</sup>	R74.833	3.548	21.1	13.9
	2nd Quarter <sup>1</sup>	R73.554	3.557	20.7	13.6
	3rd Quarter <sup>1</sup>	R72.936	3.584	20.4	13.4
	4th Quarter <sup>1</sup>	R74.321	3.591	20.7	R13.7
	Year	R73.906	3.570	20.7	R13.7
1986	1st Quarter <sup>1</sup>	73.641	3.624	20.3	13.3

Quarterly Energy Consumption per Dollar of Gross National Product<sup>1</sup>  
(Seasonally Adjusted)



<sup>1</sup>Quarterly data are seasonally adjusted and shown at annual rates.

R=Revised data.

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

• Yearly data may not equal average of quarters due to seasonality adjustments and independent rounding.

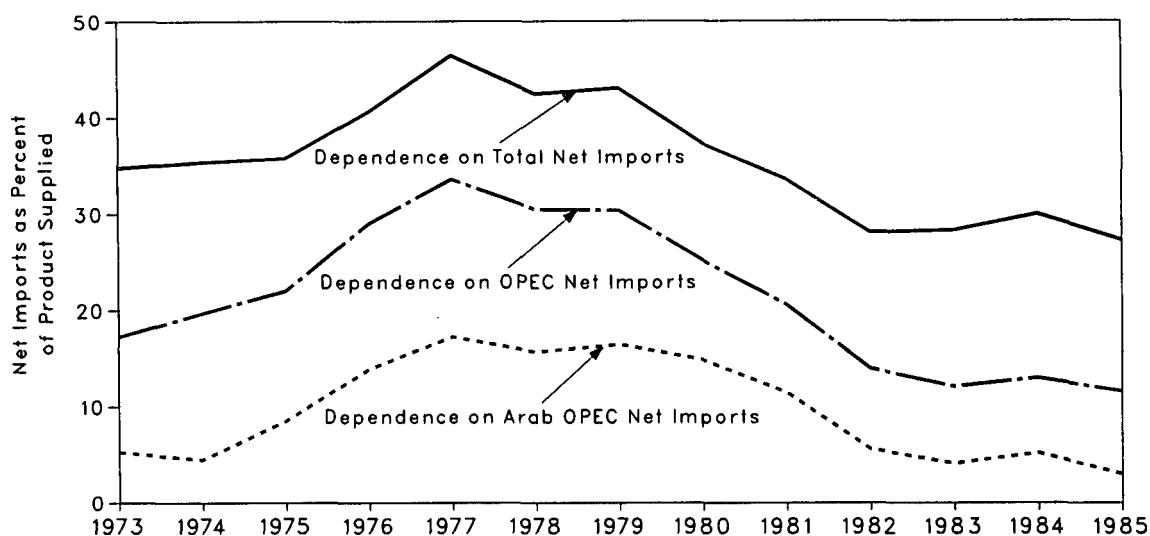
Sources: • See the last page of this section.

## Energy Summary

### Energy Indicator—U.S. Dependence on Petroleum Net Imports<sup>1</sup>

		Net Imports <sup>2</sup>			Net Imports as Percent of U.S. Petroleum Products Supplied			
		From Arab OPEC <sup>3</sup> Countries	From All OPEC <sup>4</sup> Countries	From All Countries	Petroleum Products Supplied	From Arab OPEC <sup>3</sup> Countries	From All OPEC <sup>4</sup> Countries	From All Countries
<b>Annual Rate</b>		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	3,054	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	1st Quarter	769	1,878	4,802	16,110	4.8	11.7	29.8
	2nd Quarter	907	2,278	4,853	15,632	5.8	14.6	31.0
	3rd Quarter	877	2,080	4,590	15,625	5.6	13.3	29.4
	4th Quarter	715	1,912	4,618	15,538	4.6	12.3	29.7
	Average	817	2,037	4,715	15,726	5.2	13.0	30.0
1985	1st Quarter	R331	R1,371	R3,570	R15,859	2.1	8.6	22.5
	2nd Quarter	R529	R1,857	R4,625	R15,486	R3.4	R12.0	R29.9
	3rd Quarter	R288	R1,780	R4,135	R15,536	1.9	R11.5	R26.6
	4th Quarter	R730	R2,266	R4,803	R16,025	4.6	R14.1	R30.0
	Average	R470	R1,821	R4,286	R15,726	3.0	11.6	R27.3
1986	1st Quarter	843	2,038	4,083	16,055	5.3	12.7	25.4

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



<sup>1</sup>Beginning in October 1977, Strategic Petroleum Reserves are included.

<sup>2</sup>Net imports equals imports minus exports. Imports from OPEC countries exclude indirect imports which are petroleum products imported primarily from Caribbean and West European areas and refined from crude oil produced in OPEC countries.

<sup>3</sup>Includes Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

<sup>4</sup>Includes Arab OPEC countries plus Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela.

R=Revised data.

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

• Annual averages may not equal average of quarters due to independent rounding.

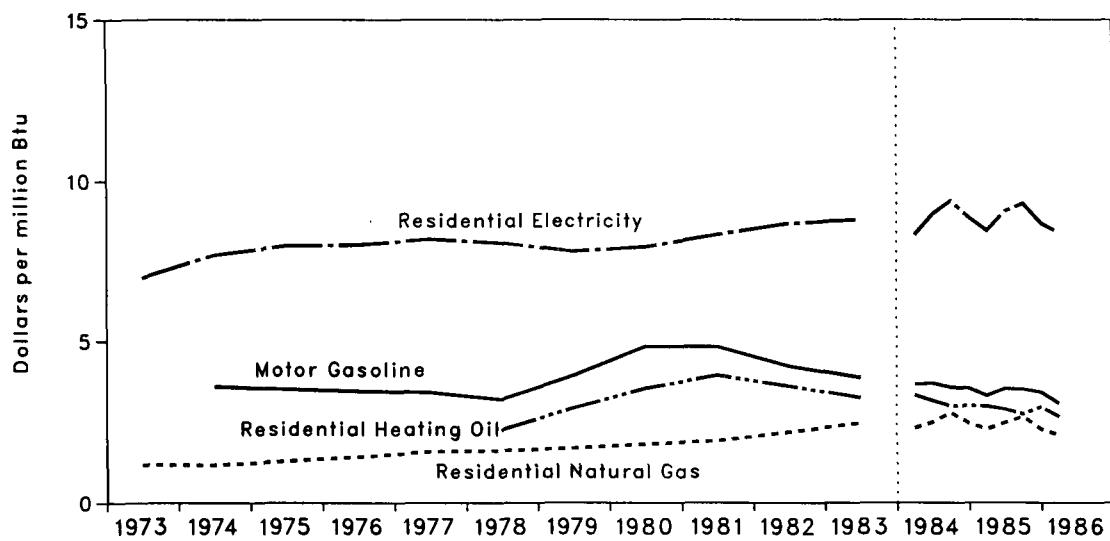
Sources: • See the last page of this section.

## Energy Summary

### Energy Indicator—Cost of Fuels to End Users in Constant (1972) Dollars<sup>1</sup>

		Leaded Regular Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
		Cent/gal	\$/MMBtu	Cent/gal	\$/MMBtu	Cent/Mcf	\$/MMBtu	Cent/kWh	\$/MMBtu
1973	Average	NA	NA	NA	NA	121.4	1.19	2.39	7.00
1974	Average	45.1	3.61	NA	NA	121.3	1.18	2.63	7.71
1975	Average	44.1	3.53	NA	NA	132.9	1.30	2.73	8.00
1976	Average	43.4	3.47	NA	NA	145.5	1.43	2.74	8.03
1977	Average	42.9	3.43	NA	NA	162.2	1.59	2.80	8.21
1978	Average	40.1	3.21	31.4	2.26	164.2	1.62	2.76	8.09
1979	Average	49.4	3.95	40.6	2.93	171.8	1.69	2.67	7.83
1980	Average	60.5	4.84	49.4	3.56	186.8	1.82	2.72	7.97
1981	Average	60.4	4.83	54.9	3.96	197.3	1.92	2.85	8.35
1982	Average	53.0	4.24	50.3	3.63	224.1	2.19	2.97	8.70
1983	Average	48.6	3.89	45.3	3.27	254.5	2.47	3.01	8.82
1984	1st Quarter	46.1	3.69	46.4	3.35	239.2	2.32	2.85	8.35
	2nd Quarter	46.5	3.72	43.9	3.17	256.1	2.49	3.07	9.00
	3rd Quarter	44.9	3.59	41.6	3.00	286.9	2.79	3.21	9.41
	4th Quarter	44.5	3.56	41.7	3.01	253.5	2.46	3.03	8.88
	Average	45.5	3.64	43.9	3.17	246.5	2.39	3.04	8.91
1985	1st Quarter	41.7	3.33	41.5	2.99	234.9	2.28	2.89	8.47
	2nd Quarter	44.4	3.55	40.2	2.90	255.5	2.48	3.10	9.09
	3rd Quarter	44.2	3.53	38.1	2.75	275.3	2.67	3.18	9.32
	4th Quarter	43.0	3.44	41.2	2.97	234.9	2.28	2.97	8.70
	Average	43.4	3.47	41.0	2.96	238.4	2.31	3.03	8.88
1986	1st Quarter	38.7	3.09	37.1	2.67	216.7	2.10	2.87	8.41

### Average Cost of Fuels to End Users in Constant (1972) Dollars<sup>1</sup>



<sup>1</sup>Fuel costs shown on this page are calculated using the Urban Consumer Price Index developed by the Bureau of Labor Statistics. See the Conversion Factors section of this report.

NA=Not available.

Notes: • Geographic coverage is the 50 States and the District of Columbia.  
• Annual averages may not equal average of quarters due to independent rounding.

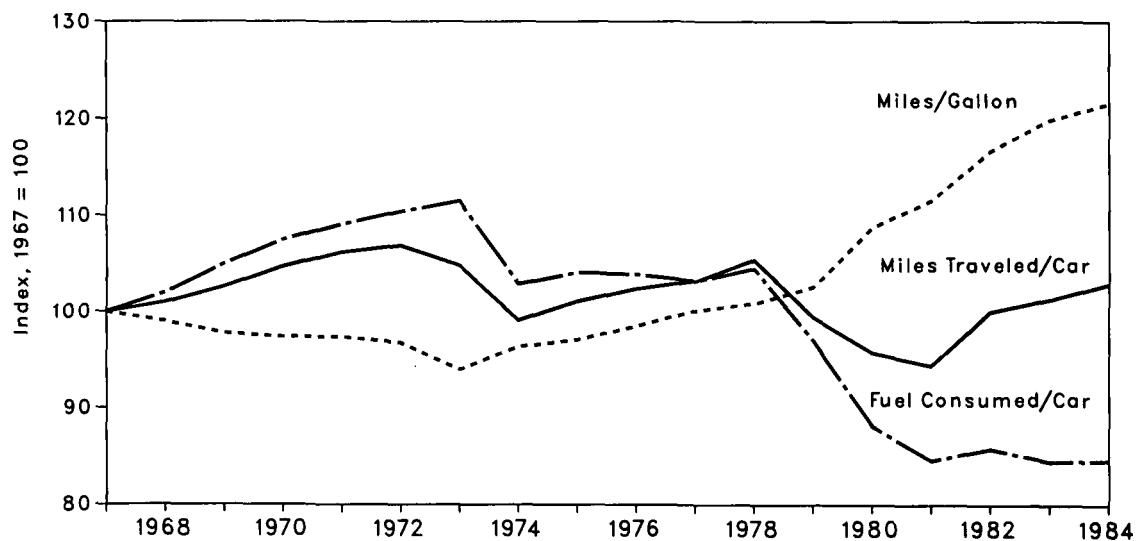
Sources: • See the last page of this section.

## Energy Summary

### Energy Indicator—U.S. Passenger Car Efficiency

	Average Fuel Consumed per Car		Average Miles Traveled per Car		Average Miles Traveled per Gallon of Fuel Consumed	
	Gallons	Index	Miles	Index	Miles	Index
1967	684	100.0	9,531	100.0	13.93	100.0
1968	698	102.0	9,627	101.0	13.79	99.0
1969	718	105.0	9,782	102.6	13.63	97.8
1970	735	107.5	9,978	104.7	13.57	97.4
1971	746	109.1	10,121	106.2	13.57	97.4
1972	755	110.4	10,184	106.9	13.49	96.8
1973	763	111.5	9,992	104.8	13.10	94.0
1974	704	102.9	9,448	99.1	13.43	96.4
1975	712	104.1	9,634	101.1	13.53	97.1
1976	711	103.9	9,763	102.4	13.72	98.5
1977	706	103.2	9,839	103.2	13.94	100.1
1978	715	104.5	10,046	105.4	14.06	100.9
1979	664	97.1	9,485	99.5	14.29	102.6
1980	603	88.2	9,135	95.8	15.15	108.8
1981	579	84.6	9,002	94.4	15.54	111.6
1982	587	85.8	9,533	100.0	16.25	116.7
1983	578	84.5	9,654	101.3	16.70	119.9
1984†	579	84.6	9,809	102.9	16.94	121.6

U.S. Passenger Car Efficiency Index



†Preliminary data.

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

Sources: • See the last page of this section.

# Energy Summary

## Population-Weighted Cooling Degree-Days<sup>1</sup>

Census Divisions	May 1 through May 31			Cumulative January 1 through May 31						
				Percent Change					Percent Change	
	Normal <sup>2</sup>	1985	1986	Normal to 1986	1985 to 1986	Normal <sup>2</sup>	1985	1986	Normal to 1986	1985 to 1986
New England CT, ME, MA, NH, RI, VT	0	10	27	0.0	170.0	0	12	27	(*)	(*)
Middle Atlantic NJ, NY, PA	19	36	60	215.8	66.7	19	50	60	(*)	(*)
Eastern North Central IL, IN, MI, OH, WI	43	47	49	14.0	4.3	43	82	67	(*)	(*)
Western North Central IA, KS, MN, MO, NE, ND, SD	90	61	54	-40.0	-11.5	103	91	78	-24.3	-14.3
South Atlantic DE, FL, GA, MD and DC, NC, SC, VA, WV	181	183	191	5.5	4.4	329	375	343	4.3	-8.5
Eastern South Central AL, KY, MS, TN	154	135	165	7.1	22.2	202	211	208	3.0	-1.4
Western South Central AR, LA, OK, TX	261	274	251	-3.8	-8.4	400	445	434	8.5	-2.5
Mountain AZ, CO, ID, MT, NV, NM, UT, WY	67	103	100	49.3	-2.9	88	144	158	(*)	(*)
Pacific Coast CA, OR, WA	2	13	28	1,300.0	115.4	2	19	30	(*)	(*)
U.S. Average <sup>4</sup>	89	95	102	14.6	7.4	133	163	157	18.0	-3.7

<sup>1</sup>See Note 6 on the last page of this section for explanation of degree-days.

<sup>2</sup>Normal is based on calculations of data from 1951 through 1980.

<sup>3</sup>Percent change not meaningful.

<sup>4</sup>Excludes Alaska and Hawaii.

Source: • See Note 6 on the last page of this section.

## Notes and Sources for the Energy Summary Section

### 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, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. The volumetric data are converted to approximate heat contents (Btu values) of these energy sources using the conversion factors provided in the Conversion Factors section of this publication.

**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 produced from hydroelectric power, net imports of coal coke, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. Approximate heat contents (Btu values) are derived using the conversion factors provided in the Conversion Factors section of this publication.

**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 produced from hydroelectric power, and coal coke. Approximate heat contents (Btu values) are derived using the conversion factors provided in the Conversion Factors section of this publication. For further information on electricity, see the note and sources for imports and exports of electricity in Note 7 of the Notes and Sources for the Consumption Section.

**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 using the conversion factors provided in the Conversion Factors section of this publication. For more information on electricity, see the note and sources for imports and exports of electricity in Note 7 of the Notes and Sources for the Consumption Section.

**5. Merchandise Trade Value:** The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which includes the 50 States, the District of Columbia, and Puerto Rico) and the Virgin Islands. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions, as well as shipments between the United States and Puerto Rico and the Virgin Islands, between the United States and other U.S. possessions, and between any of these outlying areas. From January 1981 forward, import data presented are on a customs value basis. All other values are on a free alongside ship (f.a.s.) basis. Statistics include nonmonetary gold and Department of Defense Military Program Grant-Aid shipments. "All Other" and "Total" columns include foreign exports (i.e., reexports). The "Energy" columns include mineral fuels, lubricants, and related material. "Imports" represent general imports (i.e., entries for immediate consumption, entries into customs bonded warehouses, and entries for the Strategic Petroleum Reserve). "Trade Balance" is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. The "All Other" columns are calculated by subtracting "Energy" from "Total."

**6. Degree-Days:** Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65 °F by convention. Heating degree-days are deviations of the mean daily

temperature below 65 °F. For example, if a weather station recorded a mean daily temperature of 78 °F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40 °F would report 25 heating degree-days (and 0 cooling degree-days).

There are several degree-day data bases maintained by the National Oceanic and Atmospheric Administration. The information published in the *Monthly Energy Review* (MER) is developed by the National Weather Service Climate Analysis Center, Camp Springs, Maryland. 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 these 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 1980 by the U.S. Department of Commerce, Bureau of the Census. The data shown in the MER are available sooner than the Historical Climatology Series 5-1 and 5-2 developed by the National Climatic Center, Asheville, NC, which compiles data from some 8,000 weather stations.

### Sources

**Merchandise Trade Value:** • 1974 through 1980: U.S. Department of Commerce, Bureau of the Census, "Highlights of U.S. Export and Import Trade," FT990 (January 1982), Appendix for total imports and exports. Energy imports and exports from U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December issues, plus Bureau of the Census reports EA691 "Exports from the Virgin Islands to Foreign Countries," and IA245V "U.S. Imports for Consumption and General Imports into the Virgin Islands."

• 1981 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," most recent monthly issue.

**Gross National Product:** • U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

**U.S. Dependence on Petroleum Net Imports:** • Imports and products supplied—Part 3 of this publication.

• Exports—1973 through 1976: Bureau of Mines, *Mineral Industry Surveys*; 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual"; 1981-1984: EIA, *Petroleum Supply Annual*; 1985: EIA, *Petroleum Supply Monthly*.

**Cost of Fuels to End Users in Constant (1972) Dollars:**

• Leaded Regular Motor Gasoline—Bureau of Labor Statistics (BLS).

• Residential Heating Oil—EIA, 1983 forward: EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA Form-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to 1983 are EIA estimates using data from FEA Form P112-M1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9-A, "No. 2 Distillate Price Monitoring Report." See Note 8 in the Notes and Sources for the Price Section for additional information.

• Residential Natural Gas—EIA, Annual data from Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." Monthly data from Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

• Residential Electricity—Federal Energy Regulatory Commission (FERC), 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

• Deflator (The Urban Consumer Price Index)—BLS.

**U.S. Passenger Car Efficiency:** • Indices prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

# Part 2 Consumption

## Consumption

Total U.S. energy consumption in March 1986 was 6.4 quadrillion Btu, 2.4 percent above the March 1985 level. Petroleum products accounted for 42.2 percent of the energy consumed in March 1986, while natural gas accounted for 25.6 percent and coal accounted for 21.6 percent. The transportation sector used 61.1 percent of the petroleum products consumed in March 1986 and the industrial sector used 25.3 percent. Of natural gas consumed, the residential and commercial sector used 56.6 percent; the industrial sector, 29.6 percent; and electric utilities, 10.8 percent. Most of the coal used (81.8 percent) was consumed by electric utilities. The residential and commercial sector used 63.9 percent of total electricity sales, while the industrial sector used 35.9 percent.

Residential and commercial sector consumption was 2.5 quadrillion Btu in March 1986, up 3.2 percent from the March 1985 level. This sector consumed 39.7 percent of the March 1986 total, slightly more than its 39.4-percent share in March 1985.

Industrial sector consumption was 2.2 quadrillion Btu in March 1986, up 0.5 percent from the March 1985 level. The industrial sector accounted for 33.8 percent of the March 1986 total consumption, down from the industrial sector's 34.4-percent share of March 1985 total consumption.

Transportation sector consumption of energy was 1.7 quadrillion Btu in March 1986, up 4.0 percent from the March 1985 level. This sector consumed 26.6 percent of the March 1986 total, slightly above the sector's 26.2-percent share in March 1985.

The electric utilities consumption of energy was an estimated 2.1 quadrillion Btu in March 1986, 0.4 percent higher than in March 1985. Coal contributed 54.0 percent of the energy consumed by electric utilities in March 1986, while nuclear electric power contributed 16.0 percent; hydroelectric power, 15.5 percent; natural gas, 8.4 percent; petroleum products, 5.1 percent; and geothermal, wood, waste, wind, photovoltaic, and solar thermal energy, 1.0 percent.

## Consumption Summary for March 1986

(Quadrillion (10<sup>15</sup>) Btu)

Energy Source	Sector				
	Residential and Commercial	Industrial	Transportation	Electric Utilities	Total
Coal	0.014	0.241	0.000	1.130	1.382
Natural Gas <sup>1</sup>	0.927	0.485	0.048	0.176	1.637
Petroleum Products	0.260	0.684	1.652	0.107	2.703
Hydroelectric Power	0.000	0.003	0.000	0.325	0.328
Nuclear Electric Power	0.000	0.000	0.000	0.334	0.334
Net Imports of Coal Coke	0.000	(0.001)	0.000	0.000	(0.001)
Other <sup>2</sup>	0.000	0.000	0.000	0.020	0.020
<b>Primary Consumption</b>	<b>1.201</b>	<b>1.413</b>	<b>1.700</b>	<b>2.092</b>	<b>6.403</b>
Electricity	0.411	0.231	0.001	(0.643)	
<b>Net Energy Consumption</b>	<b>1.612</b>	<b>1.643</b>	<b>1.701</b>		<b>4.955</b>
Electrical System Energy Losses	0.927	0.520	0.002	(1.449)	1.449
<b>Total Energy Consumption</b>	<b>2.539</b>	<b>2.163</b>	<b>1.704</b>		<b>6.403</b>

<sup>1</sup>Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.

<sup>2</sup>Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

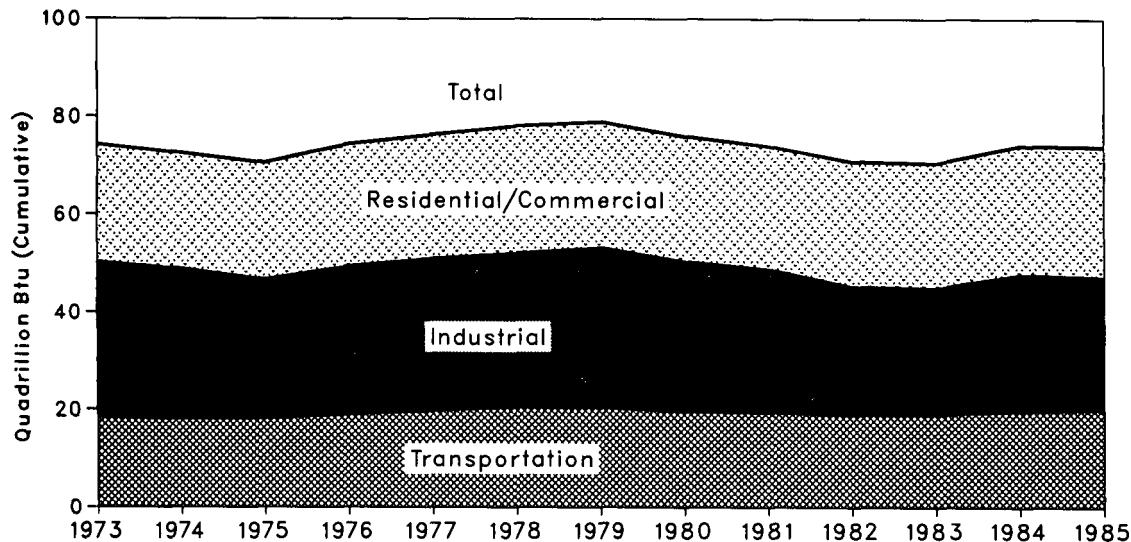
Notes: • Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors.

• Additional notes and sources are provided on the last four pages of this section.

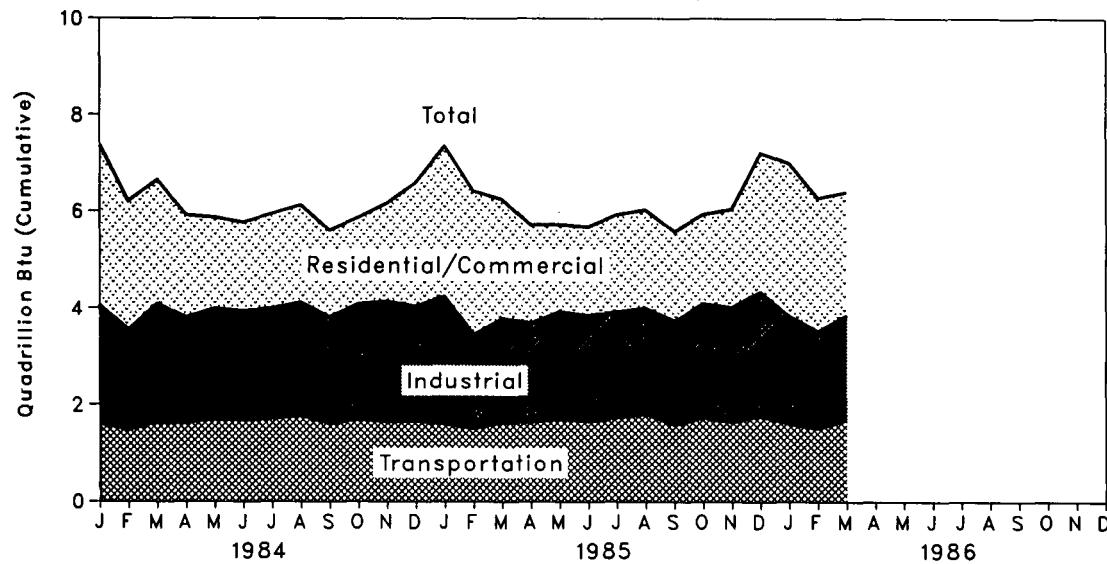
# Consumption

## Consumption of Energy by End-Use Sector

Yearly



Monthly



# Consumption

## Consumption of Energy by End-Use Sector

		Residential and Commercial	Industrial	Transportation	Total
Quadrillion (10 <sup>12</sup> ) Btu					
1973	Total	24.142	31.537	18.596	74.282
1974	Total	23.726	30.697	18.113	72.543
1975	Total	23.899	28.407	18.240	70.546
1976	Total	25.018	30.243	19.093	74.362
1977	Total	25.384	31.089	19.808	76.289
1978	Total	26.084	31.414	20.589	78.088
1979	Total	25.808	32.624	20.464	78.898
1980	Total	25.655	30.605	19.693	75.952
1981	Total	25.241	29.251	19.495	73.989
1982	Total	25.630	26.140	19.066	70.840
1983	Total	25.615	25.746	19.132	70.495
1984	January	R3.298	R2.450	1.610	R7.360
	February	R2.650	R2.075	1.482	R6.206
	March	R2.555	R2.450	1.644	R6.648
	April	R2.112	R2.178	1.625	R5.908
	May	R1.879	R2.285	1.708	R5.868
	June	R1.829	R2.251	1.689	R5.770
	July	R1.948	R2.279	1.718	R5.948
	August	R2.005	R2.342	1.778	R6.129
	September	R1.784	R2.210	1.614	R5.608
	October	R1.778	R2.390	1.696	R5.866
	November	R2.023	R2.490	1.646	R6.161
	December	R2.551	R2.372	1.669	R6.593
	Total	<b>R26.411</b>	<b>R27.773</b>	<b>19.878</b>	<b>R74.064</b>
1985	January	R3.103	R2.635	R1.607	R7.349
	February	R2.963	1.942	R1.518	R6.423
	March	R2.461	R2.152	R1.639	R6.251
	April	R2.023	R2.047	R1.651	R5.716
	May	R1.801	R2.220	R1.708	R5.727
	June	R1.823	R2.192	R1.667	R5.683
	July	R2.005	R2.187	R1.739	R5.933
	August	R2.024	R2.198	R1.810	R6.034
	September	R1.848	R2.143	R1.597	R5.589
	October	R1.839	R2.358	R1.741	R5.938
	November	2.024	R2.372	R1.653	R6.050
	December	R2.867	R2.564	R1.780	R7.214
	Total	<b>R26.782</b>	<b>R27.011</b>	<b>R20.111</b>	<b>R73.906</b>
1986	January	R3.157	R2.230	1.612	R7.000
	February	R2.746	R2.016	1.521	R6.282
	March	2.539	2.163	1.704	6.403
	Year to Date	<b>8.441</b>	<b>6.408</b>	<b>4.836</b>	<b>19.685</b>

R=Revised data.

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

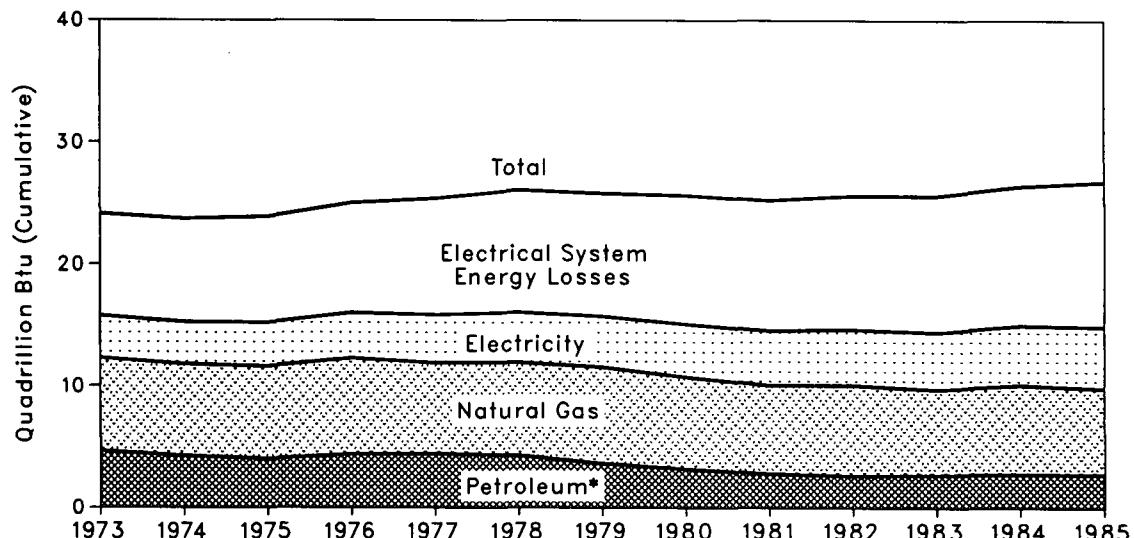
• Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1981.

Additional Notes and Sources: • See the last four pages of this section.

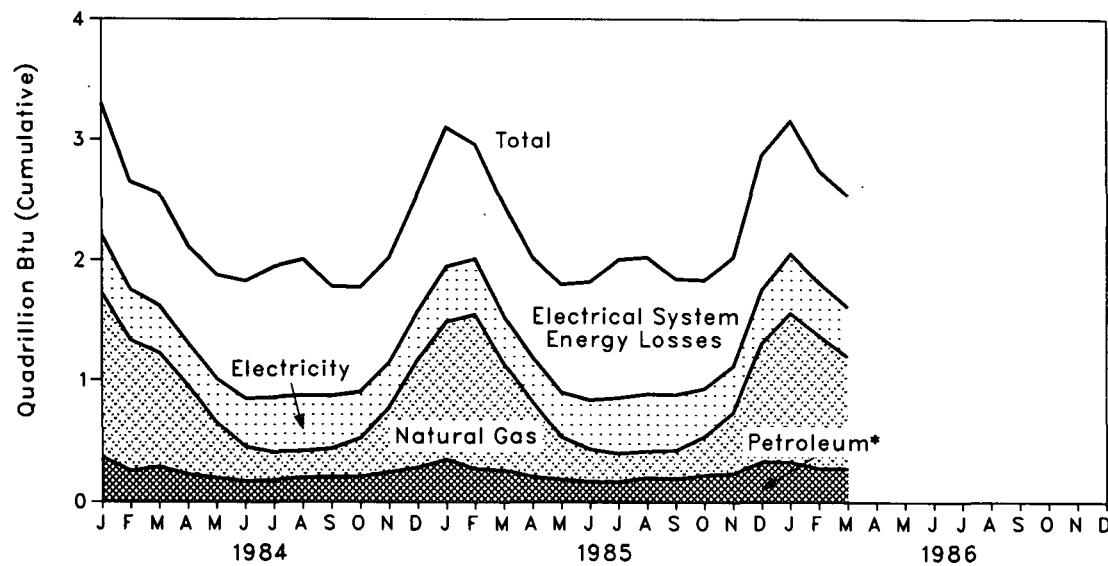
# Consumption

## Consumption of Energy by the Residential and Commercial Sector

Yearly



Monthly



\*Includes coal.

# Consumption

## Consumption of Energy by the Residential and Commercial Sector

		Coal	Natural Gas <sup>1</sup>	Petroleum	Electricity	Electrical System Energy Losses	Total	Year to Date
Quadrillion (10 <sup>12</sup> ) Btu								
1973	Total	0.254	7.626	4.391	3.495	8.377	24.142	
1974	Total	0.257	7.518	3.996	3.475	8.480	23.726	
1975	Total	0.209	7.581	3.805	3.604	8.700	23.899	
1976	Total	0.203	7.866	4.181	3.747	9.021	25.018	
1977	Total	0.205	7.461	4.206	3.955	9.556	25.384	
1978	Total	0.214	7.624	4.070	4.116	10.061	26.084	
1979	Total	0.187	7.891	3.448	4.184	10.100	25.808	
1980	Total	0.145	7.539	3.035	4.355	10.580	25.655	
1981	Total	0.168	7.242	2.634	4.497	10.700	25.241	
1982	Total	0.188	7.433	2.449	4.566	10.993	25.630	
1983	Total	0.196	7.025	2.499	4.680	11.214	25.615	
1984	January	0.024	1.363	0.339	0.476	R1.096	R3.298	R3.298
	February	0.021	1.086	0.230	0.418	R0.895	R2.650	R5.947
	March	0.015	0.943	0.270	0.394	R0.932	R2.555	R8.502
	April	0.022	0.727	0.201	0.360	R0.802	R2.112	R10.614
	May	0.013	0.460	0.182	0.355	R0.869	R1.879	R12.493
	June	0.010	0.286	0.158	0.395	R0.979	R1.829	R14.322
	July	0.016	0.232	0.161	0.449	R1.091	R1.948	R16.270
	August	0.015	0.222	0.181	0.456	R1.131	R2.005	R18.275
	September	0.020	0.235	0.183	0.433	R0.913	R1.784	R20.060
	October	0.016	0.320	0.190	0.377	R0.874	R1.778	R21.838
	November	0.017	0.531	0.225	0.372	R0.877	R2.023	R23.860
	December	0.022	0.886	0.261	0.410	R0.973	R2.551	R26.411
	Total	0.212	7.292	2.582	4.894	R11.431	R26.411	
1985	January	0.019	1.145	R0.329	0.457	R1.153	R3.103	R3.103
	February	0.017	1.281	R0.254	0.458	R0.952	R2.963	R6.066
	March	0.012	0.881	R0.248	0.400	R0.921	R2.461	R8.527
	April	0.018	0.620	R0.187	0.371	R0.827	R2.023	R10.550
	May	0.011	0.353	R0.173	0.366	R0.899	R1.801	R12.352
	June	0.008	0.268	0.158	R0.405	R0.984	R1.823	R14.175
	July	0.012	0.234	R0.153	0.457	R1.149	R2.005	R16.180
	August	0.011	0.220	R0.186	0.470	R1.137	R2.024	R18.204
	September	0.015	0.236	R0.174	0.457	R0.966	R1.848	R20.052
	October	0.017	0.323	R0.202	0.389	R0.908	R1.839	R21.891
	November	0.018	0.504	R0.215	0.381	R0.907	2.024	R23.915
	December	0.023	0.984	R0.307	0.445	R1.109	R2.867	R26.782
	Total	0.181	7.049	R2.584	R5.055	R11.913	R26.782	
1986	January	0.022	1.237	0.306	0.489	R1.103	R3.157	R3.157
	February	0.019	1.104	0.257	0.436	R0.930	R2.746	R5.902
	March	0.014	0.927	0.260	0.411	0.927	2.539	8.441
	Year to Date	0.055	3.268	0.823	1.336	2.960	8.441	

<sup>1</sup>Includes supplemental gaseous fuels.

R=Revised data.

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

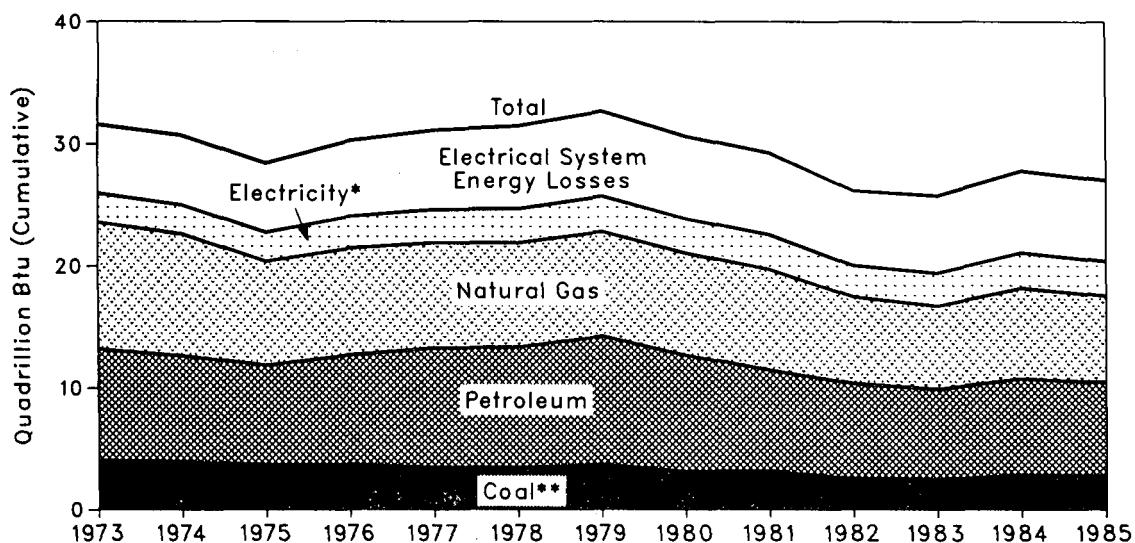
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Additional Notes and Sources: • See the last four pages of this section.

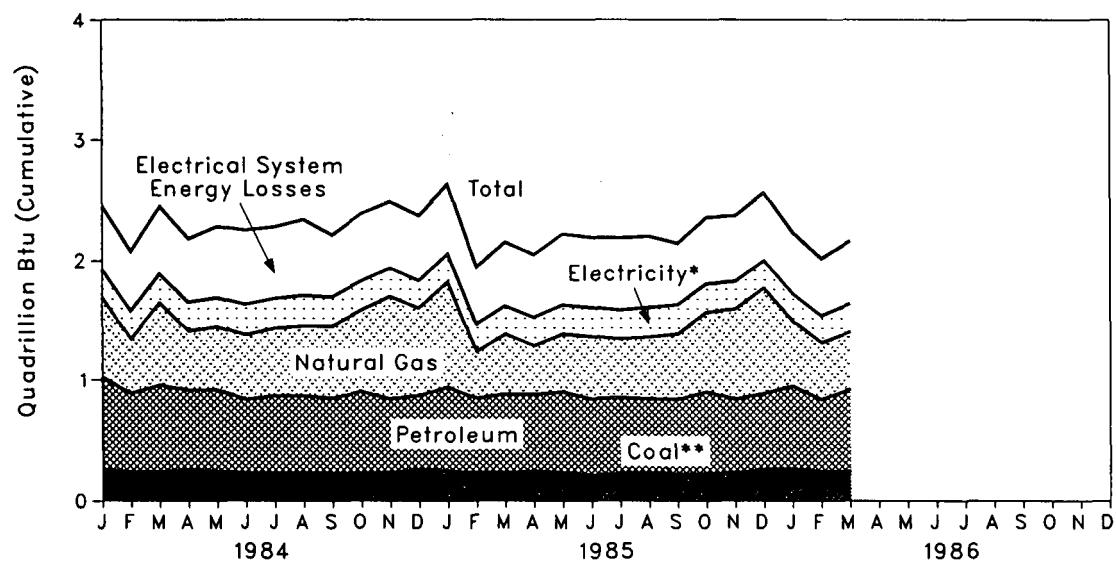
## Consumption

### Consumption of Energy by the Industrial Sector

Yearly



Monthly



\*Includes hydroelectric power.

\*\*Includes net imports of coal coke.

# Consumption

## Consumption of Energy by the Industrial Sector

		Coal	Natural Gas <sup>1</sup>	Petro-leum	Hydro-electric Power	Net Imports of Coal Coke	Electricity	Electrical System Energy Losses	Total	Year to Date
Quadrillion (10 <sup>14</sup> ) Btu										
1973	Total	4.057	10.388	9.113	0.035	(0.007)	2.341	5.611	31.537	
1974	Total	3.870	10.003	8.698	0.033	0.056	2.337	5.700	30.697	
1975	Total	3.867	8.532	8.151	0.032	0.014	2.346	5.665	28.407	
1976	Total	3.661	8.761	9.018	0.033	0.000	2.573	6.198	30.243	
1977	Total	3.454	8.636	9.786	0.033	0.015	2.682	6.484	31.089	
1978	Total	3.314	8.539	9.890	0.032	0.125	2.761	6.755	31.414	
1979	Total	3.593	8.549	10.576	0.034	0.063	2.873	6.936	32.624	
1980	Total	3.155	8.394	9.524	0.033	(0.035)	2.781	6.752	30.605	
1981	Total	3.157	8.257	8.295	0.033	(0.016)	2.817	6.707	29.251	
1982	Total	2.552	7.116	7.798	0.033	(0.022)	2.542	6.121	26.140	
1983	Total	2.490	6.821	7.421	0.033	(0.016)	2.648	6.349	25.746	
1984	January	0.256	0.675	0.764	0.003	0.001	0.228	R0.524	R2.450	R2.450
	February	0.237	0.460	0.651	0.003	0.002	0.230	R0.493	R2.075	R4.525
	March	0.238	0.694	0.716	0.003	(0.001)	0.238	R0.562	R2.450	R6.975
	April	0.253	0.502	0.660	0.003	0.000	0.236	R0.525	R2.178	R9.153
	May	0.245	0.531	0.673	0.003	(0.001)	0.241	R0.592	R2.285	R11.438
	June	0.225	0.546	0.613	0.003	(0.002)	0.249	R0.617	R2.251	R13.688
	July	0.227	0.570	0.640	0.003	(0.001)	0.245	R0.595	R2.279	R15.968
	August	0.230	0.588	0.638	0.002	(0.002)	0.254	R0.631	R2.342	R18.310
	September	0.223	0.604	0.625	0.002	0.000	0.243	R0.513	R2.210	R20.520
	October	0.222	0.683	0.683	0.002	(0.003)	0.242	R0.561	R2.390	R22.910
	November	0.232	0.860	0.611	0.002	(0.003)	0.234	R0.553	R2.490	R25.400
	December	0.255	0.734	0.615	0.002	(0.001)	0.227	R0.540	R2.372	R27.773
	Total	2.842	7.448	7.889	R0.032	(0.011)	2.868	R6.705	R27.773	
1985	January	0.245	0.884	R0.694	0.003	0.000	0.229	R0.579	R2.635	R2.635
	February	0.226	0.394	R0.618	0.003	0.001	0.227	R0.473	1.942	R4.577
	March	0.227	0.506	0.655	0.003	0.000	0.230	R0.530	R2.152	R6.729
	April	0.240	0.411	R0.637	0.003	0.001	0.234	R0.521	R2.047	R8.776
	May	0.232	0.491	R0.669	0.003	(0.003)	0.239	0.588	R2.220	R10.996
	June	0.213	0.526	R0.631	0.003	(0.002)	0.239	R0.581	R2.192	R13.188
	July	0.223	0.495	R0.631	0.003	(0.002)	0.238	R0.598	R2.187	R15.375
	August	0.226	0.522	R0.617	0.002	(0.001)	0.244	R0.589	R2.198	R17.573
	September	0.219	0.551	R0.622	0.002	(0.003)	0.241	R0.510	R2.143	R19.717
	October	0.221	R0.670	R0.680	0.002	(0.001)	0.236	0.551	R2.358	R22.074
	November	0.231	R0.756	R0.611	0.002	(0.003)	0.229	R0.546	R2.372	R24.447
	December	0.254	R0.884	R0.634	0.002	(0.001)	0.226	R0.564	R2.564	R27.011
	Total	2.757	R7.091	R7.700	R0.032	(0.013)	2.813	R6.631	R27.011	
1986	January	0.261	R0.552	R0.686	0.003	0.000	0.224	R0.505	R2.230	R2.230
	February	0.240	R0.479	R0.598	0.003	0.000	0.222	R0.474	R2.016	R4.246
	March	0.241	0.485	0.684	0.003	(0.001)	0.231	0.520	2.163	6.408
	Year to Date	0.742	1.516	1.968	0.008	(0.001)	0.677	1.498	6.408	

<sup>1</sup>Includes supplemental gaseous fuels.

R=Revised data.

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

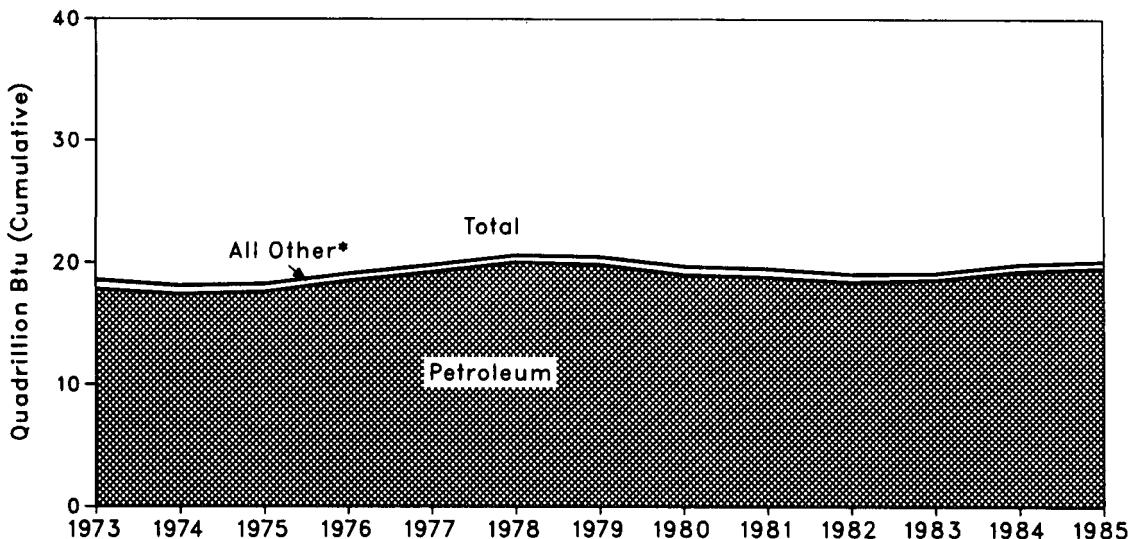
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Additional Notes and Sources: • See the last four pages of this section.

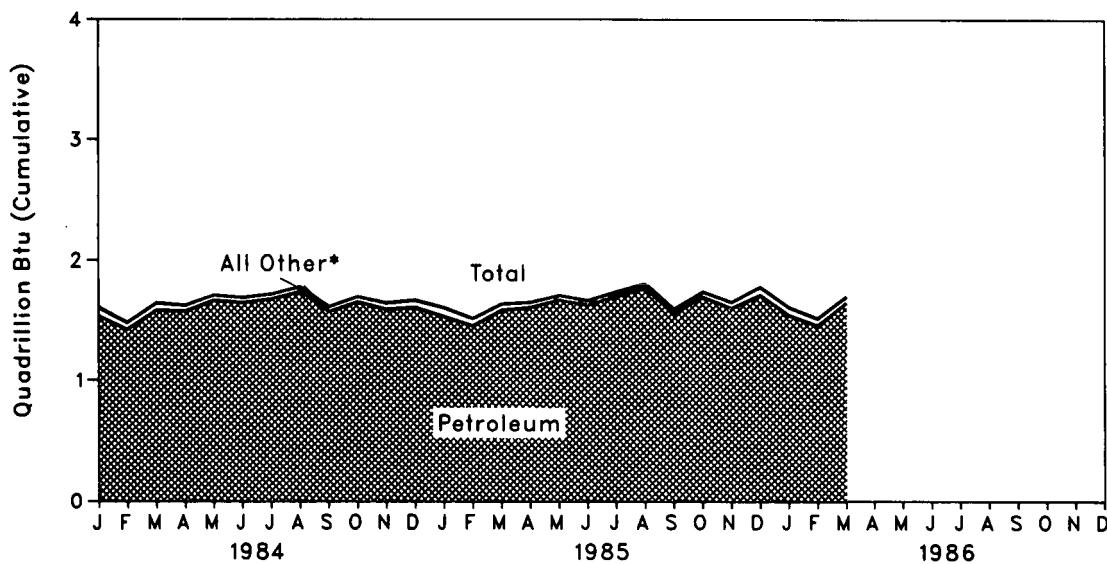
## Consumption

## **Consumption of Energy by the Transportation Sector**

Yearly



## **Monthly**



\*Includes coal, natural gas, electricity, and electrical system energy losses.

# Consumption

## Consumption of Energy by the Transportation Sector

		Coal	Natural Gas <sup>1</sup>	Petroleum	Electricity	Electrical System Energy Losses	Total	Year to Date
Quadrillion (10 <sup>12</sup> ) Btu								
1973	Total	0.003	0.743	17.821	0.009	0.020	18.596	
1974	Total	0.002	0.685	17.396	0.009	0.022	18.113	
1975	Total	0.001	0.595	17.610	0.010	0.025	18.240	
1976	Total	( <sup>2</sup> )	0.559	18.499	0.010	0.025	19.093	
1977	Total	( <sup>2</sup> )	0.543	19.230	0.010	0.025	19.808	
1978	Total	( <sup>2</sup> )	0.539	20.019	0.009	0.022	20.589	
1979	Total	( <sup>2</sup> )	0.612	19.817	0.010	0.025	20.464	
1980	Total	( <sup>2</sup> )	0.648	19.009	0.011	0.026	19.693	
1981	Total	( <sup>2</sup> )	0.657	18.800	0.011	0.026	19.495	
1982	Total	( <sup>2</sup> )	0.613	18.417	0.011	0.026	19.066	
1983	Total	( <sup>2</sup> )	0.504	18.591	0.011	0.026	19.132	
1984	January	( <sup>2</sup> )	0.069	1.538	0.001	0.002	1.610	1.610
	February	( <sup>2</sup> )	0.053	1.427	0.001	0.002	1.482	3.093
	March	( <sup>2</sup> )	0.057	1.584	0.001	0.002	1.644	4.737
	April	( <sup>2</sup> )	0.044	1.578	0.001	0.002	1.625	6.361
	May	( <sup>2</sup> )	0.038	1.667	0.001	0.002	1.708	8.070
	June	( <sup>2</sup> )	0.035	1.650	0.001	0.002	1.689	9.758
	July	( <sup>2</sup> )	0.035	1.679	0.001	0.002	1.718	11.476
	August	( <sup>2</sup> )	0.036	1.738	0.001	0.002	1.778	13.254
	September	( <sup>2</sup> )	0.034	1.577	0.001	0.002	1.614	14.867
	October	( <sup>2</sup> )	0.039	1.654	0.001	0.002	1.696	16.563
	November	( <sup>2</sup> )	0.049	1.593	0.001	0.002	1.646	18.209
	December	( <sup>2</sup> )	0.056	1.610	0.001	0.002	1.669	19.878
	<b>Total</b>	( <sup>2</sup> )	<b>0.545</b>	<b>19.295</b>	<b>0.011</b>	<b>0.027</b>	<b>19.878</b>	
1985	January	( <sup>2</sup> )	0.069	R1.535	0.001	0.003	R1.607	R1.607
	February	( <sup>2</sup> )	0.057	R1.459	0.001	0.002	R1.518	R3.126
	March	( <sup>2</sup> )	0.048	R1.587	0.001	0.002	R1.639	R4.764
	April	( <sup>2</sup> )	0.038	R1.610	0.001	0.002	R1.651	R6.416
	May	( <sup>2</sup> )	0.033	R1.672	0.001	0.002	R1.708	R8.124
	June	( <sup>2</sup> )	0.033	R1.631	0.001	0.002	R1.667	R9.791
	July	( <sup>2</sup> )	0.033	R1.703	0.001	0.003	R1.739	R11.530
	August	( <sup>2</sup> )	0.034	R1.772	0.001	0.002	R1.810	R13.340
	September	( <sup>2</sup> )	0.032	R1.562	0.001	0.002	R1.597	R14.937
	October	( <sup>2</sup> )	0.038	1.699	0.001	0.002	R1.741	R16.678
	November	( <sup>2</sup> )	0.045	R1.605	0.001	0.002	R1.653	R18.331
	December	( <sup>2</sup> )	0.063	R1.713	0.001	0.003	R1.780	R20.111
	<b>Total</b>	( <sup>2</sup> )	<b>0.523</b>	<b>R19.547</b>	<b>0.012</b>	<b>0.028</b>	<b>R20.111</b>	
1986	January	( <sup>2</sup> )	0.060	1.549	0.001	0.002	1.612	1.612
	February	( <sup>2</sup> )	0.053	1.465	0.001	0.002	1.521	3.133
	March	( <sup>2</sup> )	0.048	1.652	0.001	0.002	1.704	4.836
	<b>Year to Date</b>	( <sup>2</sup> )	<b>0.161</b>	<b>4.666</b>	<b>0.003</b>	<b>0.006</b>	<b>4.836</b>	

<sup>1</sup>Pipeline fuel only, including supplemental gaseous fuels.

<sup>2</sup>Since 1976, the amount of coal consumed by the transportation sector has been negligible.

R=Revised data.

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

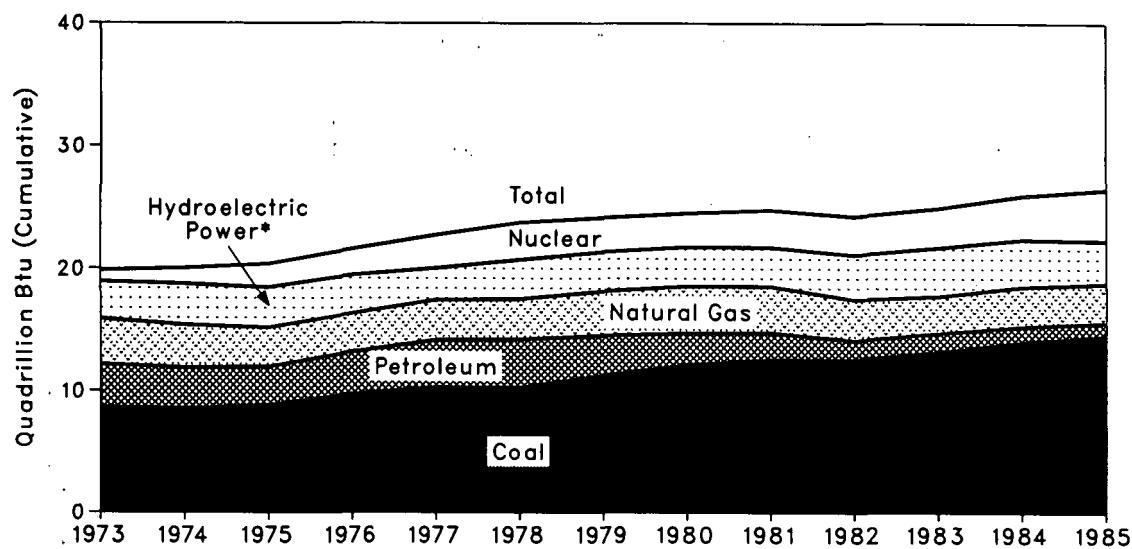
• Totals may not equal sum of components due to independent rounding.

Additional Notes and Sources: • See the last four pages of this section.

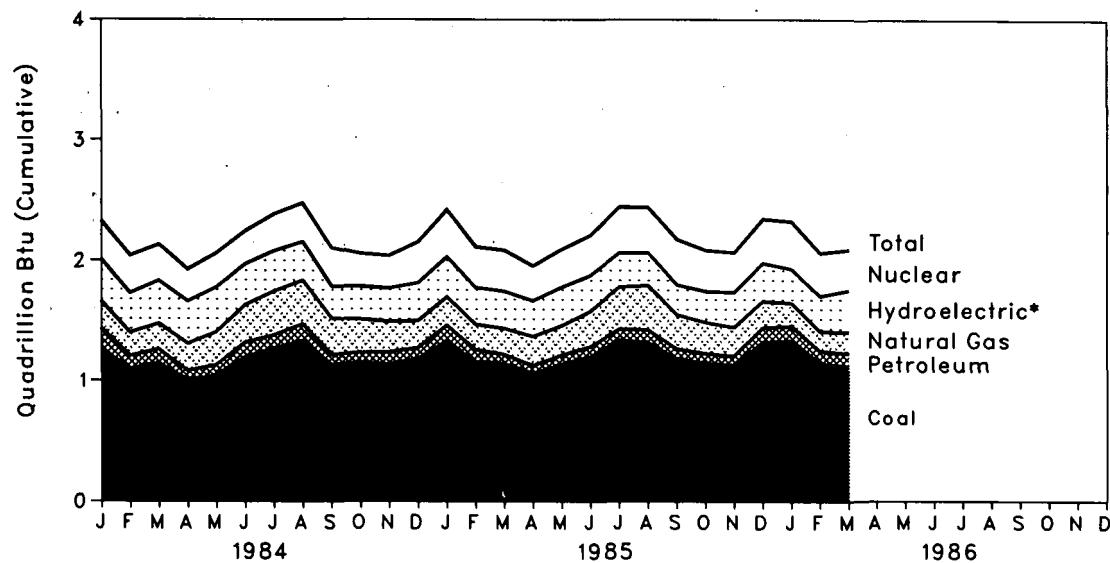
# Consumption

## Energy Input at Electric Utilities

Yearly



Monthly



\*Includes other.

# Consumption

## Energy Input at Electric Utilities

		Coal	Natural Gas <sup>1</sup>	Petro-leum <sup>2</sup>	Hydro-electric Power <sup>3</sup>	Nuclear Electric Power	Other <sup>4</sup>	Total	Year to Date
Quadrillion (10 <sup>12</sup> ) Btu									
1973	Total	8.658	3.748	3.515	2.975	0.910	0.046	19.852	
1974	Total	8.534	3.519	3.365	3.276	1.272	0.056	20.022	
1975	Total	8.786	3.240	3.166	3.187	1.900	0.072	20.350	
1976	Total	9.720	3.152	3.477	3.032	2.111	0.081	21.574	
1977	Total	10.262	3.284	3.901	2.482	2.702	0.082	22.713	
1978	Total	10.238	3.297	3.987	3.110	3.024	0.068	23.724	
1979	Total	11.260	3.613	3.283	3.107	2.776	0.089	24.128	
1980	Total	12.123	3.810	2.634	3.085	2.739	0.114	24.505	
1981	Total	12.583	3.768	2.202	3.072	3.008	0.127	24.760	
1982	Total	12.582	3.342	1.568	3.528	3.131	0.108	24.259	
1983	Total	13.213	2.998	1.544	3.838	3.203	0.133	24.929	
1984	January	1.271	0.223	0.169	R0.335	R0.318	0.011	R2.327	R2.327
	February	1.103	0.194	0.108	R0.313	R0.308	0.013	R2.039	R4.365
	March	1.151	0.213	0.115	R0.340	R0.296	0.015	R2.130	R6.495
	April	1.004	0.228	0.081	R0.336	R0.263	0.014	R1.925	R8.420
	May	1.045	0.274	0.090	R0.357	R0.280	0.014	R2.060	R10.480
	June	1.202	0.308	0.121	R0.325	R0.274	0.013	R2.243	R12.723
	July	1.274	0.361	0.111	R0.318	R0.307	0.013	R2.383	R15.107
	August	1.338	0.362	0.137	R0.302	R0.320	0.016	R2.475	R17.582
	September	1.140	0.301	0.083	R0.250	R0.316	0.015	R2.106	R19.687
	October	1.155	0.279	0.084	R0.254	R0.269	0.016	R2.057	R21.745
	November	1.144	0.253	0.100	R0.260	R0.266	0.016	R2.040	R23.784
	December	1.193	0.225	0.086	R0.296	R0.335	0.018	R2.153	R25.937
	Total	14.020	3.220	1.286	R3.684	R3.553	0.174	R25.937	
1985	January	1.335	0.234	0.132	R0.311	R0.392	0.018	R2.421	R2.421
	February	1.164	0.210	0.101	R0.289	R0.334	0.016	R2.113	R4.534
	March	1.149	0.215	0.077	R0.289	R0.337	0.018	R2.084	R6.618
	April	1.067	0.242	0.066	R0.278	R0.287	0.016	R1.956	R8.574
	May	1.145	0.244	0.075	R0.303	R0.311	0.016	R2.095	R10.670
	June	1.208	0.292	0.083	R0.280	R0.334	0.016	R2.213	R12.883
	July	1.347	0.348	0.090	R0.261	R0.382	0.018	R2.446	R15.328
	August	1.323	0.367	0.107	R0.250	R0.377	0.018	R2.443	R17.771
	September	1.191	0.284	0.082	R0.229	R0.374	0.018	R2.178	R19.949
	October	1.153	0.258	0.082	R0.239	R0.338	0.017	R2.088	R22.037
	November	1.139	0.238	0.075	R0.267	R0.327	0.021	R2.067	R24.104
	December	1.329	0.218	0.120	R0.292	R0.366	0.022	R2.348	R26.452
	Total	14.549	3.151	1.090	R3.289	R4.160	0.213	R26.452	
1986	January	1.343	0.190	0.119	R0.257	R0.393	0.023	R2.324	R2.324
	February	1.154	0.163	0.101	R0.272	R0.355	0.019	R2.064	R4.388
	March	1.130	0.176	0.107	0.325	0.334	0.020	2.092	6.480
	Year to Date	3.627	0.529	0.327	0.854	1.081	0.062	6.480	

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes petroleum products reported as "oil consumed in steam plants" through 1979 and "heavy oil" from 1980 forward, which are assumed to be residual fuel oil; petroleum products reported as "oil consumed in gas turbine and internal combustion engine plants" through 1979 and "light oil" from 1980 forward, which are assumed to be distillate fuel oil and kerosene; and petroleum coke.

<sup>3</sup>Includes net imports of electricity.

<sup>4</sup>Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

R=Revised data.

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

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

Additional Notes and Sources: • See the last four pages of this section.

## Notes and Sources for the Consumption Section

**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, electricity generated from nuclear power, and electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems. Data do not include geothermal, wood, waste, wind, photovoltaic, or solar thermal energy sources except that consumed by electric utilities.

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

- Residential and Commercial Sector—private household establishments (which consume energy primarily for space heating, water heating, air conditioning, lighting, refrigeration, cooking, and clothes drying); non-manufacturing business establishments, including hotels, motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; health, social, and educational institutions; and Federal, State, and local governments. Street lights, pumps, bridges, and public swimming pools are also included.
- Industrial Sector—manufacturing, construction, mining, agriculture, fishing, and forestry establishments.
- Transportation Sector—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 Sector—privately and publicly owned establishments that generate electricity primarily for use by the public.

**3. Conversion Factors:** See the Conversion Factors section of this publication.

**4. Coal:** Coal is anthracite, bituminous coal, (including sub-bituminous coal), and lignite.

*Sources:*

- 1973 through 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), EIA Form 759 (formerly FPC Form 4), "Monthly Power Plant Report."
- Other Industrial—October 1977 through December 1979: EIA, EIA Form 3, "Monthly Fuel Consumption Report - Manufacturing Plants"; January 1980 forward: EIA, EIA Form 3, "Quarterly Fuel Consumption Report - Manufacturing Plants" and EIA Form 6, "Coal Distribution Report."
- Coke Plants—October 1977 through December 1980: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981 forward: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Quarterly/Annual."
- Residential and Commercial—October 1977 through December 1979: EIA, EIA Form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks"; January 1980 forward: EIA, EIA Form 6, "Coal Distribution Report."

**5. Natural Gas:** Natural gas consumption by end-use sector is based on data presented in the table titled "Natural Gas Consumption" in Part 4. For the Part 2 consumption section, lease and plant fuel consumption are added to the industrial sector deliveries and pipeline fuel represents the transportation sector's use of natural gas. Values in Btu are derived using the conversion factors provided in the Conversion Factors section of this publication.

*Sources:*

- 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
- 1976 through 1978: EIA, *Energy Data Reports*, "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979*.
- 1980 through 1984: EIA, *Natural Gas Annual*.

- 1985 forward: EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and EIA computations.
- Electric utilities consumption—1973 through 1976: FPC Form 4, "Monthly Power Plant Report."
- 1977 through 1981: Federal Energy Regulatory Commission (FERC), FPC Form 4, "Monthly Power Plant Report."
- 1982 forward: EIA, EIA Form 759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report."

**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* is the series called "petroleum products supplied" in Part 3.

*Sources for petroleum products supplied by individual products are:*

- 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
- 1976 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
- 1981 through 1984: EIA, *Petroleum Supply Annual*.
- 1985 forward: 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**

*— Electric Utility Sector, All Periods.*

Monthly and annual consumption in 1973 through 1979 is assumed to be the amount of oil (minus small amounts of kerosene and kerosene-type jet fuel deliveries) reported as consumed in internal combustion and gas turbine engine plants. From January 1980, electric utility consumption of distillate fuel is assumed to be the petroleum products reported as "light oil" (minus small amounts of kerosene deliveries through 1982) consumed at utilities.

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

*— Non-Electric Utility Sectors, Annual Estimates Through 1984.*

The aggregate non-electric utility use of distillate fuel is total distillate 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 distillate fuel delivered to end users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172) as follows:

- Residential sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;

(Notes and Sources for the Consumption Section are continued on the next page.)

## Notes and Sources for the Consumption Section (continued)

### 6. Petroleum (continued):

#### • Distillate Fuel (continued)

##### — Non-Electric Utility Sectors, Annual Estimates Through 1984 (cont'd).

- Commercial sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
- Industrial sector deliveries for 1979 through 1984 are the sum of deliveries for industrial, farm, oil company, off-highway, diesel, and all other uses. Prior to 1979, each year's deliveries 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; and
- Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

##### — Non-Electric Utility Sectors, Monthly Estimates Through 1984.

- Residential and commercial sector monthly consumption is estimated by allocating the annual sector estimates to months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation from 1973 through 1980, the American Petroleum Institute for 1981 and 1982, and the Form EIA-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," for 1983 and 1984.
- The transportation sector 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 sector monthly estimates are made by subtracting the residential and commercial, transportation, and electric utility sector estimates from each month's total distillate fuel supplied.

##### — Non-Electric Utility Sectors, 1985 Forward.

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 1984.

- Jet Fuel—Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric utility sector. Kerosene-type jet fuel deliveries to electric utilities as reported on the FERC-423 (formerly FPC-423) were used as estimates of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.
- Kerosene—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual deliveries grouped into end-use sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172) as follows:
  - Residential sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Deliveries for 1984 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares;

— Commercial sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Deliveries for 1984 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares; and

— Industrial sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Deliveries for 1984 are used as estimates for succeeding periods. Prior to 1979, each year's deliveries 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 that is consumed in internal combustion engines is allocated between the transportation and industrial sectors according to a 5-year moving average of the percentage of carburetors sold to each end-use category. The proportions range from 31 percent transportation and 69 percent industrial in 1973 to 60 percent transportation and 40 percent industrial in 1984.
- LPG consumed annually by the industrial sector is estimated as the difference between LPG's total supplied and the estimated consumption 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 for use 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 through 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 estimates because the collection of data under Form EIA-174 was discontinued after data year 1982.
- 1984: American Petroleum Institute (API), '1984 Sales of Natural Gas Liquids and Liquefied Refinery Gases' (October 1985) based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association.
- Succeeding periods: The 1984 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 those 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.

(Notes and Sources for the Consumption Section are continued on the next page.)

## Notes and Sources for the Consumption Section (continued)

### 6. Petroleum (continued):

- **Motor Gasoline**—Total product supplied monthly is allocated to the major end-use sectors in proportion to aggregations of annual sales categories formed from 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, miscellaneous use, and unclassified use;
  - Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics*; and
  - 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 the electric utility sector is from EIA Form 759, "Monthly Power Plant Report" (formerly FPC Form 4). The remaining petroleum coke is assigned to the industrial sector.
- **Residual Fuel**
  - **Electric Utility Sector, All Periods.** Monthly and annual consumption 1973 through 1979 is assumed to be the amount of oil reported as consumed in steam-electric power plants. From January 1980, electric utility consumption of residual fuel is assumed to be the petroleum products reported as "heavy oil" consumed at utilities.  
Sources: 1973 through September 1977—FPC Form 4, "Monthly Power Plant Report;" October 1977 through 1981—FERC, FPC Form 4, "Monthly Power Plant Report;" 1982 forward—EIA, Form EIA-759, "Monthly Power Plant Report."
  - **Non-Electric Utility Sectors, Annual Estimates Through 1984.** 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 delivered to end users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" ("Deliveries") reports (based primarily on data collected by Form EIA-821, previously Form EIA-172) as follows:
    - Commercial sector deliveries are directly from the "Deliveries" reports for 1979 through 1984. Prior to 1979, each year's deliveries subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares;
    - Industrial sector deliveries for 1979 through 1984 are the sum of deliveries for industrial, oil company, and all other uses. Prior to 1979, each year's deliveries 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; and
    - Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, and military uses for all years.
  - **Non-Electric Utility Sectors, Monthly Estimates Through 1984.** Commercial sector monthly consumption is estimated by allocating the annual commercial sector estimates to months in proportion to each month's share of the year's sales of No. 2 fuel oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation for 1973 through 1980, the American Petroleum Institute for 1981 and 1982, and the Form EIA-782A, "Refiners/Gas Plant Operators' Monthly

Petroleum Product Sales Report," for 1983 and 1984.

- Transportation sector monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusted for the number of days per month.
- Industrial sector monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month's total residual fuel supplied.

#### — **Non-Electric Utility Sectors, 1985 Forward.**

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 1984.

- **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. 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 hydroelectricity in the electric utilities sector.

#### *Sources for electric utilities sector:*

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

#### *Sources for industrial sector:*

- 1973 through 1978: FPC Forms 4 and 12-C.
- 1979: FPC Form 4 and EIA estimates.
- 1980 forward: EIA estimates.

Note: For 1977 forward, monthly data are not available from above sources and were estimated by seasonalizing the annual numbers in proportion to each month's hydroelectricity generation in the electric utility sector.

#### *Note for imports and exports of electricity:*

- Monthly electricity imports and exports estimates for 1982 forward were revised in the May 1984 *Monthly Energy Review*. The revisions do not cause discontinuity in the annual data series: the data continue to come from the same source. The monthly data series, however, are discontinuous because monthly data from January 1982 forward are now available from the same source as the annual data. Estimates for monthly values prior to 1982, published in previous issues, were developed by converting the annual value to a daily rate and multiplying by the number of days in the month. Accordingly, month-to-month analyses are not comparable when taken across the transition date of January 1982. Monthly analyses on either side of that date will be comparable. There is no known bias in either the annual data or the monthly data since January 1982.

#### *Sources for imports and exports of electricity:*

- 1973 through 1980: DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico."
- 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 through 1984: DOE, Economic Regulatory Administration, ERA-781, "Annual Report of International Electric Import/Export Data."
- 1985 forward: EIA estimates.

(Notes and Sources for the Consumption Section are continued on the next page.)

## Notes and Sources for the Consumption Section (continued)

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

#### Sources:

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

### 9. Net Imports of Coal Coke:

Net imports means imports minus exports, and the parentheses indicate that exports are greater than imports.

#### Sources:

- 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals," chapter.
- 1976 through 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:

Sales of electricity represent consumption. From the sources cited below the following electricity sales categories are available: residential, commercial, industrial, and other. For the end-use estimates in this section, the "other" category (which is primarily sales for use in government buildings) is added to the commercial sector except for approximately 4 percent, which represents the transportation sector use of electricity, primarily by railroads and railways. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatthour.

#### Sources of sales data:

- 1973 through 1976: FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- 1977 through February 1980: EIA, FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- March 1980 through December 1982: EIA, FERC Form 5, "Electric Utility Company Monthly Statement."
- January 1983 forward: EIA, EIA Form 826, "Electric Utility Company Monthly Statement."

### 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 these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. This loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses are a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring these 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 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.

# Part 3 Petroleum

## Petroleum\*

Domestic crude oil production during May 1986 was estimated to be 8.8 million barrels per day, slightly lower than the April rate and 3.6 percent lower than the May 1985 rate.

Total petroleum imports averaged 6.0 million barrels per day in May 1986, 12.4 percent more than the April 1986 rate and 3.4 percent more than the May 1985 rate.

In May 1986, 15.9 million barrels per day of petroleum products were supplied for domestic use, 0.9 percent above the level in April 1986 and 2.5 percent above the level of the previous May. Motor gasoline accounted for 43.5 percent of the total; distillate fuel oil, 17.3 percent; and residual fuel oil, 7.5 percent.

Motor gasoline supplied during May 1986 averaged 6.9 million barrels per day, 2.4 percent below the rate in April 1986 and 2.1 percent below the rate of the previous May. Stocks of motor gasoline totaled 219 million

barrels at the end of May 1986, 10 million barrels above the level at the end of April 1986 and 4 million barrels above the stocks level 1 year earlier.

In May 1986, 2.7 million barrels of distillate fuel oil were supplied per day, 6.6 percent lower than the April 1986 rate but 5.3 percent higher than the May 1985 rate. Distillate fuel oil ending stocks for May 1986 were 98 million barrels, 3 million barrels higher than the stocks level in the previous month but 6 million barrels lower than the May 1985 ending stocks level.

Residual fuel oil supplied in May 1986 averaged 1.2 million barrels per day, 10.5 percent lower than the April 1986 rate but 2.6 percent higher than the May 1985 rate. Residual fuel oil stocks measured 38 million barrels at the end of May 1986, 2 million barrels higher than the level in the previous month but 3 million barrels lower than the stocks level 1 year earlier.

\*Estimates for the most current month are based on Energy Information Administration (EIA) weekly data (except crude production) 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 February 1986. The total import data above include imports into the Strategic Petroleum Reserve.

# Petroleum

## Crude Oil<sup>1</sup> and Petroleum Products Overview

	Field Production			Stock Withdrawal <sup>2</sup>		Ending Stocks <sup>3</sup>		
	Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Liquids	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oils <sup>6</sup> and Petroleum Products	
	Thousand barrels per day						Million barrels	
1973	Average	10,975	9,208	1,738	11	-146	17,308	1,008
1974	Average	10,498	8,774	1,688	-62	-117	16,653	*1,074
1975	Average	10,045	8,375	1,633	*-17	*-145	16,322	1,133
1976	Average	9,774	8,132	1,603	-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	*1,392
1981	Average	10,230	8,572	1,609	*-290	*130	16,058	1,484
1982	Average	10,252	8,649	1,550	-136	283	15,296	*1,430
1983	Average	10,299	8,688	1,559	*-214	*234	15,231	1,454
1984	January	10,477	8,868	1,572	-328	1,115	16,801	1,429
	February	10,565	8,874	1,635	197	-1,374	15,437	1,463
	March	10,319	8,672	1,599	-25	641	16,050	1,444
	April	10,531	8,862	1,619	-476	-106	15,568	1,462
	May	10,623	8,955	1,614	-677	-434	15,620	1,496
	June	10,507	8,852	1,613	-104	-109	15,709	1,503
	July	10,587	8,885	1,634	-169	-169	15,498	1,513
	August	10,478	8,809	1,637	250	252	16,116	1,498
	September	10,692	8,993	1,660	260	-769	15,247	1,513
	October	10,608	8,906	1,649	-759	-246	15,616	1,544
	November	10,689	8,979	1,678	-236	-177	15,627	1,556
	December	10,578	8,897	1,649	-290	293	15,375	1,556
	Average	10,554	8,879	1,630	-199	-81	15,726	
1985	January	R10,412	R8,740	R1,628	R76	R1,351	R16,109	R1,512
	February	R10,692	R9,025	R1,623	R425	R1,347	R16,121	R1,462
	March	R10,748	R9,095	R1,600	R-309	R403	R15,373	R1,460
	April	R10,673	R9,043	R1,582	R-520	R56	R15,472	R1,473
	May	R10,770	R9,132	R1,594	R-700	R-399	R15,504	1,508
	June	R10,664	R9,022	R1,597	R264	R-382	R15,483	R1,511
	July	R10,550	R8,949	R1,568	R326	R-496	R15,434	R1,516
	August	R10,485	R8,803	R1,594	R159	R568	R16,060	R1,494
	September	R10,584	R8,954	R1,575	R-34	R-255	R15,099	R1,502
	October	R10,637	R8,970	R1,610	R98	R124	R15,944	R1,496
	November	R10,640	R8,902	R1,660	R-295	R-634	R15,503	R1,523
	December	R10,777	R9,030	1,680	R-58	R207	R16,611	R1,519
	Average	R10,636	R8,971	R1,609	R-50	R153	R15,726	
1986	January	10,716	8,942	1,721	-461	-228	15,923	1,538
	February	10,686	8,940	1,710	-35	847	16,056	1,515
	March	10,596	8,939	1,617	-338	1,178	16,188	1,489
	April	10,413	8,815	1,561	R27	R265	R15,743	R1,480
	May†	NA	8,805	NA	270	-973	15,887	1,492
	Average	NA	8,888	NA	-110	205	15,959	

<sup>1</sup>Includes lease condensate.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Stocks are totals as of end of period.

<sup>4</sup>Includes crude oil, natural gas plant liquids, other hydrocarbons, and alcohol.

<sup>5</sup>Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup>Includes crude oil for storage in the Strategic Petroleum Reserve.

†Net imports equals imports minus exports.

In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stocks withdrawal calculations. See Note 5 on the last page of this section.

Footnotes continued on following page.

# Petroleum

## Crude Oil<sup>1</sup> and Petroleum Products Overview (continued)

	Imports			Exports			Net Imports <sup>2</sup>	
	Total	Crude Oil <sup>3</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	471	235	236	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	January	5,430	3,055	2,375	575	153	422	4,855
	February	5,693	2,950	2,743	582	185	397	5,111
	March	5,301	3,470	1,832	840	236	605	4,461
	April	5,372	3,417	1,955	655	172	483	4,717
	May	5,979	3,942	2,036	766	219	548	5,212
	June	5,482	3,546	1,936	864	222	642	4,618
	July	5,407	3,646	1,761	536	108	429	4,871
	August	5,044	3,248	1,796	732	190	542	4,312
	September	5,252	3,342	1,909	664	162	502	4,588
	October	5,779	3,751	2,028	599	141	458	5,179
	November	5,587	3,583	2,004	854	202	652	4,733
	December	4,933	3,136	1,796	986	185	801	3,947
	Average	5,437	3,426	2,011	722	181	541	4,715
1985	January	R4,415	R2,717	R1,698	792	144	647	R3,623
	February	R3,913	R2,108	R1,805	857	221	636	R3,056
	March	R4,673	R2,786	R1,887	694	189	505	R3,979
	April	R5,316	3,401	R1,915	764	236	528	R4,553
	May	R5,776	R3,730	R2,046	705	250	455	R5,071
	June	R4,929	R3,188	R1,741	692	226	467	R4,237
	July	R4,950	R3,203	R1,747	675	154	521	R4,274
	August	R4,718	R3,114	R1,603	749	241	508	R3,969
	September	R4,970	R3,155	R1,816	806	188	618	R4,164
	October	R5,121	R3,238	R1,883	690	123	567	R4,431
	November	R6,116	R3,999	R2,118	1,036	286	750	R5,080
	December	R5,831	R3,696	R2,135	925	197	728	R4,905
	Average	R5,067	R3,201	R1,866	781	204	577	R4,286
1986	January	5,386	3,329	2,057	853	159	694	4,533
	February	4,622	3,005	1,617	866	162	704	3,756
	March	4,638	3,000	1,637	710	212	498	3,927
	April	R5,310	R3,709	R1,601	827	94	733	4,483
	May†	5,971	4,125	1,846	NA	NA	NA	NA
	Average	5,196	3,440	1,755	NA	NA	NA	NA

Footnotes continued.

†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.

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

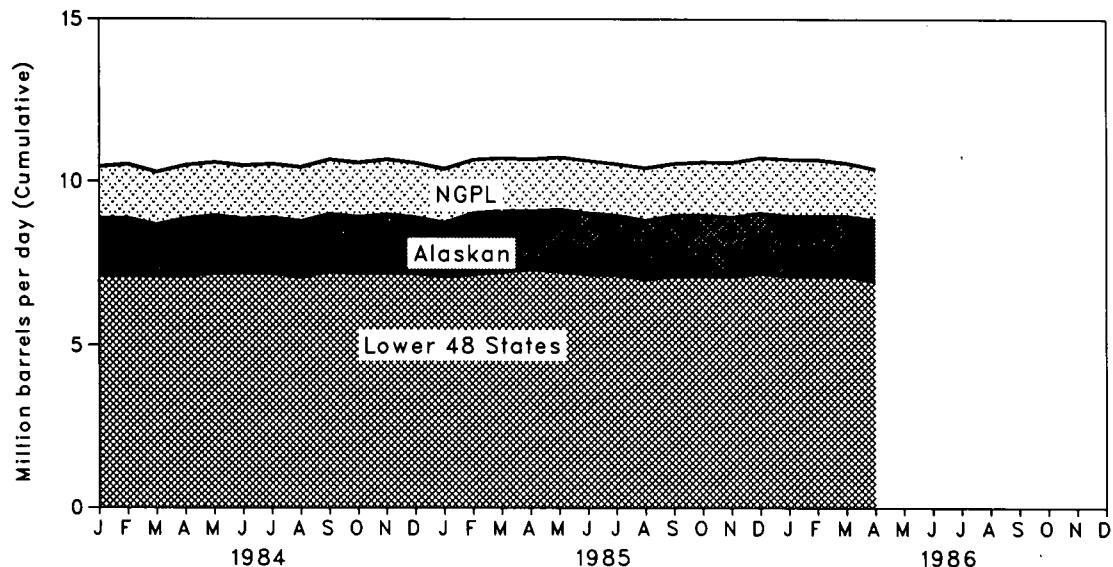
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

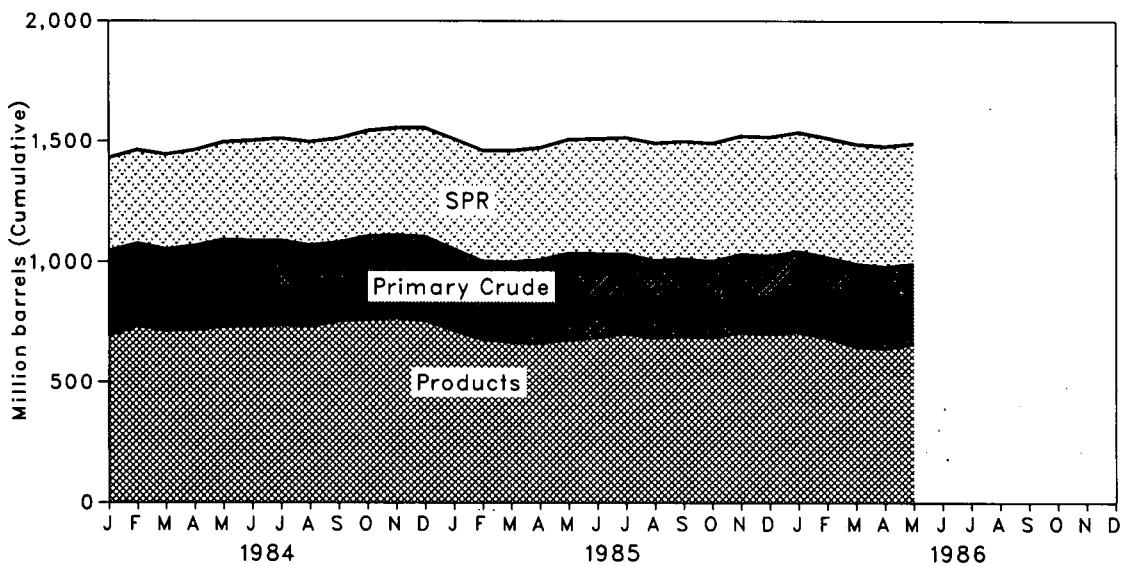
# Petroleum

## Overview

### Production of Crude Oil and Natural Gas Plant Liquids



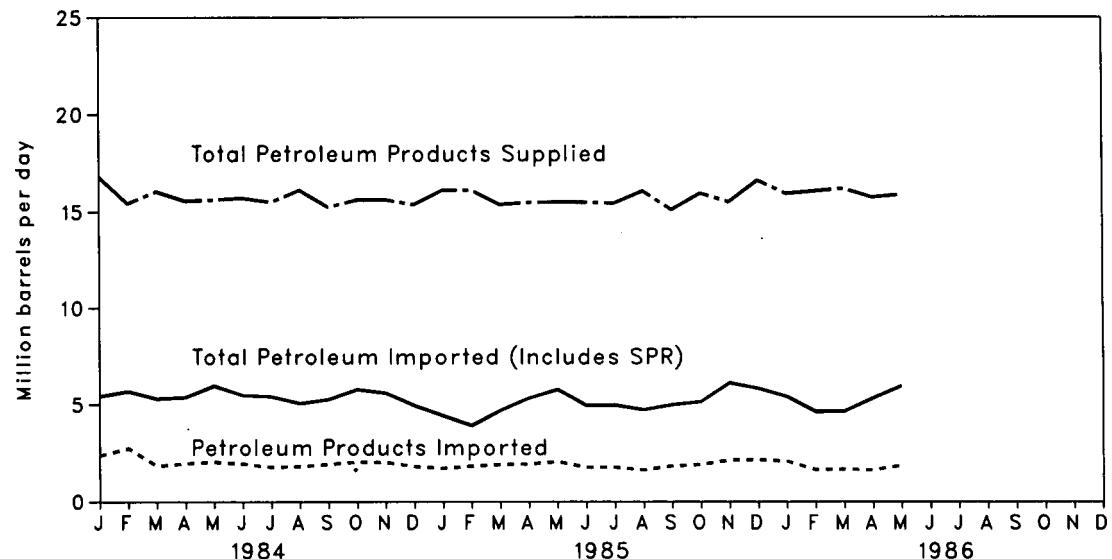
### Ending Stocks



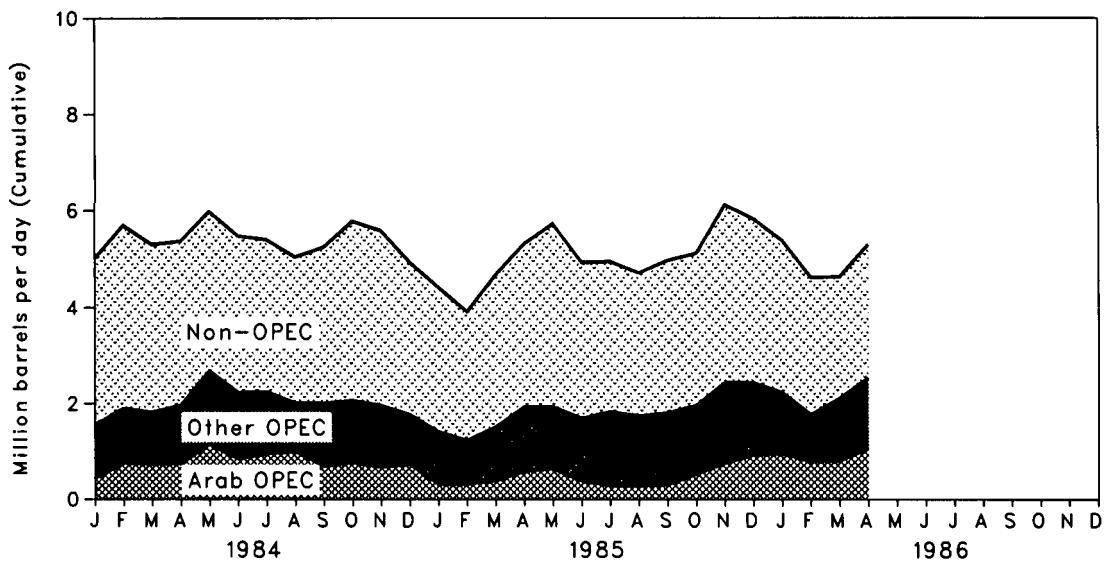
# Petroleum

## Overview

### Products Supplied and Imports



### Petroleum Imports by Source



# Petroleum

## Crude Oil<sup>1</sup> Supply and Disposition

Supply								
	Field Production		Imports		Stock Withdrawal <sup>2</sup>		Unaccounted for Crude Oil	
	Total Domestic	Alaskan	Total	SPR <sup>4</sup>	Other	SPR <sup>4</sup>	Other	
Thousand barrels per day								
1973	Average	9,208	198	3,244	3,244	-20	11	3
1974	Average	8,774	193	3,477	3,477	-163	-62	-25
1975	Average	8,375	191	4,105	4,105	-67	-17	17
1976	Average	8,132	173	5,287	5,287	-45	-39	77
1977	Average	8,245	464	6,615	21	6,594	-20	-6
1978	Average	8,707	1,229	6,356	162	6,195	-163	-57
1979	Average	8,552	1,401	6,519	67	6,452	-67	-11
1980	Average	8,597	1,617	5,263	44	5,219	-52	34
1981	Average	8,572	1,609	4,396	256	4,141	-336	83
1982	Average	8,649	1,696	3,488	165	3,323	-174	71
1983	Average	8,688	1,714	3,329	234	3,096	-234	114
1984	January	8,868	1,752	3,055	200	2,855	-173	211
	February	8,874	1,749	2,950	85	2,866	-96	386
	March	8,672	1,570	3,470	148	3,322	-147	110
	April	8,862	1,770	3,417	170	3,248	-170	325
	May	8,955	1,764	3,942	246	3,696	-245	309
	June	8,852	1,659	3,546	309	3,237	-309	246
	July	8,885	1,695	3,646	329	3,317	-328	-164
	August	8,809	1,722	3,248	180	3,068	-179	293
	September	8,993	1,761	3,342	53	3,289	-53	-94
	October	8,906	1,732	3,751	187	3,565	-186	291
	November	8,979	1,781	3,583	219	3,364	-207	47
	December	8,897	1,720	3,136	229	2,907	-241	262
	Average	8,879	1,722	3,426	197	3,229	-195	185
1985	January	R8,740	R1,647	R2,717	223	R2,494	-223	R298
	February	R9,025	R1,877	R2,108	98	R2,010	-97	R522
	March	R9,095	R1,866	R2,786	48	R2,738	-48	R262
	April	R9,043	R1,784	3,401	108	3,293	-111	R409
	May	R9,132	R1,888	R3,730	222	R3,508	-225	R475
	June	R9,022	R1,871	R3,188	155	R3,034	-155	R419
	July	R8,949	R1,809	R3,203	226	R2,977	-225	R551
	August	R8,803	R1,795	R3,114	116	R2,999	-116	R274
	September	R8,954	R1,867	R3,155	71	R3,084	-71	R37
	October	R8,970	R1,850	R3,238	20	R3,218	-20	R119
	November	R8,902	R1,804	R3,999	53	R3,946	-53	R242
	December	R9,030	R1,852	R3,696	74	R3,621	-60	R2
	Average	R8,971	R1,825	R3,201	118	R3,083	-117	R67
1986	January	8,942	1,822	3,329	51	3,277	-35	-426
	February	8,940	1,823	3,005	24	2,981	-35	(s)
	March	8,939	1,824	3,000	59	2,941	-49	-289
	April	8,815	1,862	R3,709	R63	R3,646	R-63	R90
	May†	8,805	1,862	4,125	33	4,092	-33	303
	Average	8,888	1,839	3,440	46	3,394	-43	NA
							-67	NA

<sup>1</sup>Includes lease condensate.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>Strategic Petroleum Reserve.

<sup>5</sup>Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.

<sup>6</sup>Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis stock levels. See Notes 5 and 6 on the last page of this section.

Footnotes continued on following page.

# Petroleum

## Crude Oil<sup>1</sup> Supply and Disposition (continued)

	Supply	Disposition				Ending Stocks <sup>2</sup>		
		Crude Used Directly <sup>3</sup>	Crude Losses	Refinery Inputs	Exports	Product Supplied <sup>3</sup>	Total	SPR <sup>4</sup>
Thousand barrels per day								
1973	Average	-19	13	12,431	2		242	
1974	Average	-15	13	12,133	3		265	
1975	Average	-17	13	12,442	6		271	
1976	Average	-18	15	13,416	8		285	
1977	Average	-14	16	14,602	50		348	7
1978	Average	-14	16	14,739	158		376	67
1979	Average	-13	16	14,648	235		430	91
1980	Average	-13	15	13,481	287		466	108
1981	Average	-58	5	12,470	228		594	230
1982	Average	-59	3	11,774	236		644	294
1983	Average	NA	2	11,685	164	66	723	379
1984	January	NA	1	11,587	153	64	733	384
	February	NA	1	12,157	185	65	727	387
	March	NA	2	11,926	236	62	728	392
	April	NA	1	11,891	172	64	742	397
	May	NA	2	12,247	219	62	763	404
	June	NA	2	12,255	222	61	767	414
	July	NA	2	12,028	108	60	772	424
	August	NA	1	12,346	190	63	764	429
	September	NA	3	12,271	162	66	756	431
	October	NA	1	11,978	141	69	780	437
	November	NA	(s)	12,108	202	62	787	443
	December	NA	(s)	11,755	185	64	796	451
	Average	NA	2	12,044	181	64		
1985	January	NA	1	R11,445	144	R63	R794	457
	February	NA	1	R11,367	221	R63	R782	460
	March	NA	1	R11,372	189	69	791	462
	April	NA	R1	R11,805	236	67	807	465
	May	NA	1	R12,094	250	R65	R829	472
	June	NA	1	R12,292	226	56	R821	477
	July	NA	1	R12,445	154	55	R811	484
	August	NA	(s)	R12,045	241	55	R806	487
	September	NA	(s)	R11,925	188	55	R807	489
	October	NA	(s)	12,209	123	55	804	490
	November	NA	R(s)	R12,410	286	59	R812	491
	December	NA	1	R12,570	197	63	R814	493
	Average	NA	1	R12,002	204	R60		
1986	January	NA	3	12,375	159	62	826	494
	February	NA	(s)	11,921	162	68	827	495
	March	NA	1	11,648	212	56	838	497
	April	NA	2	R12,483	94	51	837	499
	May†	NA	NA	13,222	NA	NA	829	500
	Average	NA	NA	12,337	NA	NA		329

Footnotes continued.

†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

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

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

Sources: • See the last page of this section.

# Petroleum

## Crude Oil and Petroleum Product Imports

### Imports from OPEC Sources<sup>1</sup>

		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
Thousand barrels per day												
1973	Average	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	Average	190	4	461	74	300	469	713	979	88	3,280	752
1975	Average	282	232	715	117	390	280	762	702	122	3,601	1,383
1976	Average	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	Average	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	Average	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	Average	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	Average	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	Average	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	Average	170	26	552	92	248	35	514	412	97	2,146	854
1983	Average	240	0	337	30	338	48	302	422	144	1,862	632
1984	January	242	0	477	114	289	0	243	549	51	1,965	842
	February	369	7	324	33	267	0	244	478	174	1,896	751
	March	285	0	310	112	283	67	269	358	127	1,811	723
	April	280	0	320	95	226	0	288	593	158	1,962	735
	May	471	0	329	240	479	0	289	627	242	2,677	1,146
	June	302	0	411	46	415	0	243	640	171	2,227	838
	July	332	0	429	112	384	0	204	539	242	2,241	946
	August	404	0	438	82	281	0	114	475	216	2,009	993
	September	359	0	159	113	333	17	160	715	147	2,002	688
	October	333	0	287	114	421	0	208	585	115	2,062	754
	November	298	0	183	124	424	24	163	564	173	1,954	668
	December	204	0	224	211	314	12	166	459	174	1,765	723
	Average	323	1	325	117	343	10	216	548	166	2,049	819
1985	January	R112	0	106	60	R296	0	262	481	89	R1,405	R305
	February	174	0	108	0	232	0	R119	524	64	R1,220	307
	March	R247	0	85	52	283	0	R164	R588	84	R1,505	R385
	April	286	8	R201	70	313	0	280	R684	86	R1,928	R575
	May	R255	0	R41	128	R265	0	381	R552	354	R1,976	R635
	June	178	5	26	81	R438	0	357	R452	152	R1,690	R378
	July	R125	10	44	13	R390	42	R381	R573	248	R1,825	R286
	August	135	0	46	17	377	R100	R207	R568	R289	R1,740	280
	September	147	0	27	57	206	43	R285	R808	R230	R1,802	302
	October	177	20	251	17	R277	41	R305	R676	196	R1,958	520
	November	R164	11	430	34	356	R99	R325	R727	R294	R2,440	R752
	December	R244	0	642	15	R324	0	R432	625	149	R2,430	R925
	Average	R187	4	R168	45	R314	27	R293	R605	R187	R1,830	R472
1986	January	183	0	664	11	285	0	241	629	216	2,229	944
	February	161	0	600	0	277	(s)	199	464	64	1,766	788
	March	260	0	482	0	163	0	328	762	117	2,112	798
	April	275	0	722	0	282	0	311	802	139	2,532	1,061
	Average	221	0	617	3	251	(s)	271	668	136	2,166	899

<sup>1</sup>Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced in OPEC countries.

<sup>2</sup>Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup>Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

Footnotes continued on following page.

# Petroleum

## Crude Oil and Petroleum Product Imports (continued)

Imports from Non-OPEC Sources <sup>a</sup>												
		Bahamas	Canada	Mexico	Nether- lands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non- OPEC	Total Non- OPEC	Total Imports
Thousand barrels per day												
1973	Average	174	1,325	16	585	255	15	99	329	465	3,263	6,256
1974	Average	164	1,070	8	511	251	8	90	391	340	2,832	6,112
1975	Average	152	846	71	332	242	14	90	406	300	2,454	6,056
1976	Average	118	599	87	275	274	31	88	422	353	2,247	7,313
1977	Average	171	517	179	211	289	126	105	466	550	2,614	8,807
1978	Average	160	467	318	229	253	180	94	429	484	2,613	8,363
1979	Average	147	538	439	231	190	202	92	431	548	2,819	8,456
1980	Average	78	455	533	225	176	176	88	388	491	2,609	6,909
1981	Average	74	447	522	197	133	375	62	327	534	2,672	5,996
1982	Average	65	482	685	175	112	456	50	316	627	2,968	5,113
1983	Average	125	547	826	189	96	382	40	282	701	3,189	5,051
1984	January	159	635	710	279	54	382	53	390	804	3,465	5,430
	February	156	620	748	289	77	344	58	418	1,087	3,797	5,693
	March	90	694	716	169	93	434	34	248	1,013	3,490	5,301
	April	95	705	869	207	91	282	37	257	869	3,410	5,372
	May	31	722	676	192	57	429	38	336	819	3,302	5,979
	June	52	506	754	234	104	345	53	268	939	3,255	5,482
	July	14	577	740	99	120	362	27	292	934	3,166	5,407
	August	57	547	640	206	98	388	34	236	829	3,035	5,044
	September	98	550	780	133	103	490	38	250	808	3,249	5,252
	October	151	682	827	112	122	486	37	321	979	3,717	5,779
	November	88	640	841	181	115	544	44	283	897	3,633	5,587
	December	75	675	686	161	98	337	46	235	855	3,168	4,933
	Average	88	630	748	188	94	402	42	294	902	3,388	5,437
1985	January	R92	R616	R767	R132	113	345	32	235	R678	R3,010	R4,415
	February	37	730	R652	R52	119	R151	50	213	R689	R2,693	R3,913
	March	R36	R909	R923	R49	R115	R133	29	235	R739	R3,168	R4,673
	April	R4	R890	950	18	107	R213	42	205	R959	R3,388	R5,316
	May	R74	R823	R929	R28	126	419	37	252	R1,112	R3,800	R5,776
	June	R24	R720	R726	30	92	481	23	271	R872	R3,240	R4,929
	July	R38	610	R814	R36	133	R324	14	236	R918	R3,124	R4,950
	August	R11	R664	859	18	121	336	28	241	R699	R2,978	R4,718
	September	R47	R783	852	R40	R129	R303	26	173	R815	R3,169	R4,970
	October	R35	R825	R745	5	R99	R352	21	260	R821	R3,163	R5,121
	November	R22	R766	R887	30	100	R376	26	325	R1,143	R3,676	R6,116
	December	R54	R902	R676	R44	96	273	12	314	R1,029	R3,400	R5,831
	Average	R40	R770	R816	R40	R113	R310	28	247	R873	R3,237	R5,067
1986	January	66	826	680	58	108	348	21	326	724	3,157	5,386
	February	15	688	571	11	85	218	20	309	939	2,855	4,622
	March	13	741	616	27	79	178	25	186	661	2,526	4,638
	April	5	775	693	13	111	188	23	209	762	2,779	5,310
	Average	25	759	641	28	96	234	22	257	767	2,829	4,995

Footnotes continued.

<sup>a</sup>Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced in OPEC countries.

R=Revised data. (s)=Less than 500 barrels per day.

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

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

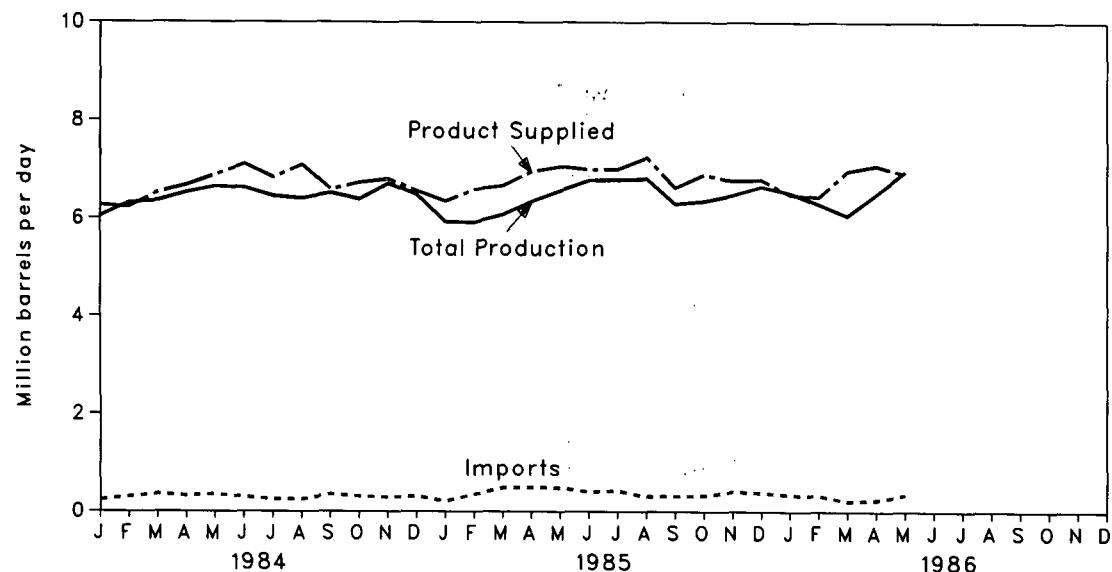
• Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Sources: • See the last page of this section.

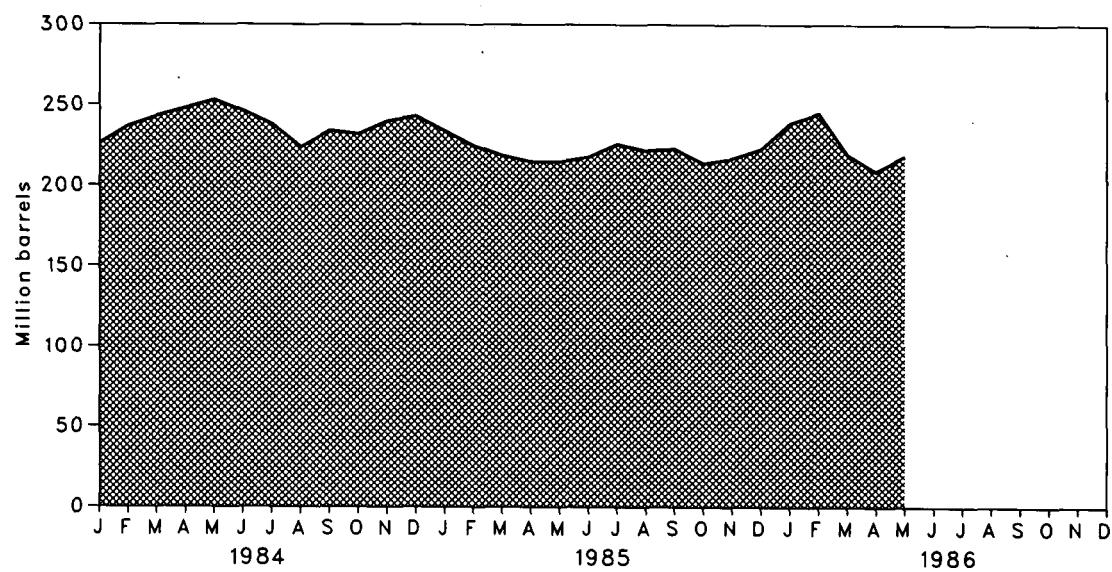
## Petroleum

## **Finished Motor Gasoline Supply and Disposition**

### **Products Supplied, Total Production, and Imports**



## Ending Stocks



# Petroleum

## Finished Motor Gasoline Supply and Disposition

	Supply			Disposition			Ending Stocks <sup>1</sup>		
	Total Production	Imports <sup>2</sup>	Stock Withdrawal <sup>3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>5</sup>	Finished Motor Gasoline
					Total	Unleaded <sup>4</sup>	Unleaded Percent of Total	Million barrels	Million barrels
Thousand barrels per day									
1973	Average	6,535	134	9	4	6,674		209	
1974	Average	6,360	204	-24	2	6,537		218	
1975	Average	6,520	184	-28	2	6,675		235	
1976	Average	6,841	131	10	3	6,978		231	
1977	Average	7,033	217	-72	2	7,177	1,976	27.5	258
1978	Average	7,169	190	54	1	7,412	2,521	34.0	238
1979	Average	6,852	181	2	(s)	7,034	2,798	39.8	237
1980	Average	6,506	140	-66	1	6,579	3,067	46.6	261
1981	Average <sup>6</sup>	6,405	157	-28	2	6,588	3,264	49.5	253
1982	Average	6,338	197	25	20	6,539	3,409	52.1	235
1983	Average	6,340	247	-45	10	6,622	3,647	55.1	222
1984	January	6,036	231	-1	1	6,265	3,605	57.5	186
	February	6,317	299	-383	2	6,231	3,585	57.5	197
	March	6,359	355	-176	9	6,528	3,750	57.4	202
	April	6,525	319	-167	(s)	6,676	3,857	57.8	207
	May	6,650	346	-105	(s)	6,890	4,004	58.1	210
	June	6,619	296	209	17	7,107	4,214	59.3	204
	July	6,450	247	142	9	6,830	4,057	59.4	200
	August	6,405	242	447	1	7,093	4,283	60.4	186
	September	6,516	349	-275	2	6,588	3,973	60.3	194
	October	6,388	308	34	1	6,729	4,093	60.8	193
	November	6,709	286	-183	11	6,800	4,245	62.4	199
	December	6,478	308	-215	16	6,555	4,168	63.6	205
	Average	6,453	299	-54	6	6,693	3,987	59.6	
1985	January	R5,926	204	R220	2	R6,348	R4,016	R63.3	198
	February	R5,914	R348	R327	2	R6,587	R4,126	R62.6	R225
	March	R6,072	R481	R115	3	R6,664	R4,202	R63.1	R219
	April	R6,344	R494	R128	11	R6,956	R4,396	R63.2	R215
	May	R6,564	R480	R23	8	R7,060	R4,445	R63.0	R215
	June	R6,780	R396	R-172	7	R6,997	R4,482	R64.1	R218
	July	R6,788	426	R-188	18	R7,008	R4,545	64.8	R226
	August	R6,814	R305	R127	4	R7,242	R4,755	65.7	R222
	September	R6,299	R314	R22	6	R6,629	R4,357	R65.7	R223
	October	R6,356	R324	R235	19	R6,897	R4,485	R65.0	214
	November	R6,480	R410	R-104	17	R6,770	R4,477	66.1	217
	December	R6,651	R386	R-227	18	R6,792	R4,561	R67.1	223
	Average	R6,419	R381	R41	10	R6,831	R4,406	64.5	
1986	January	6,522	341	-376	0	6,487	4,404	67.9	239
	February	6,297	325	-185	0	6,438	4,341	67.4	245
	March	6,060	211	699	0	6,970	4,706	87.5	220
	April	R6,497	R241	R346	0	R7,083	4,813	67.9	R209
	May†	6,965	346	-401	NA	6,911	NA	NA	219
	Average	6,471	293	19	NA	6,782	NA	NA	185

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>Beginning in 1981, excludes blending components.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>Includes gasohol.

<sup>5</sup>Includes motor gasoline blending components.

<sup>6</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>7</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

<sup>†</sup>Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

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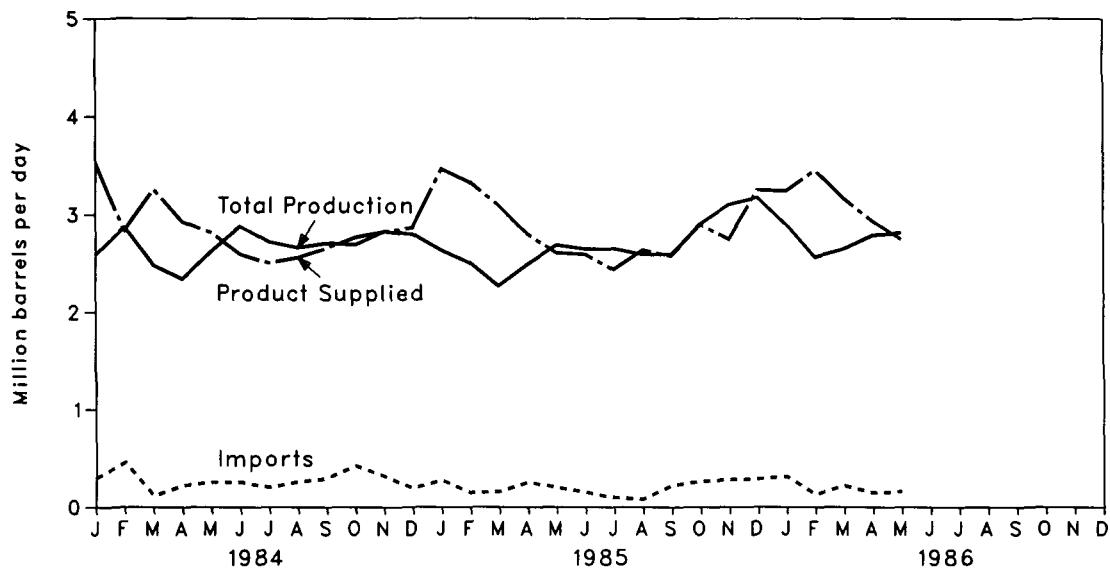
• Totals may not equal sum of components due to independent rounding.

Sources: • See the last page of this section.

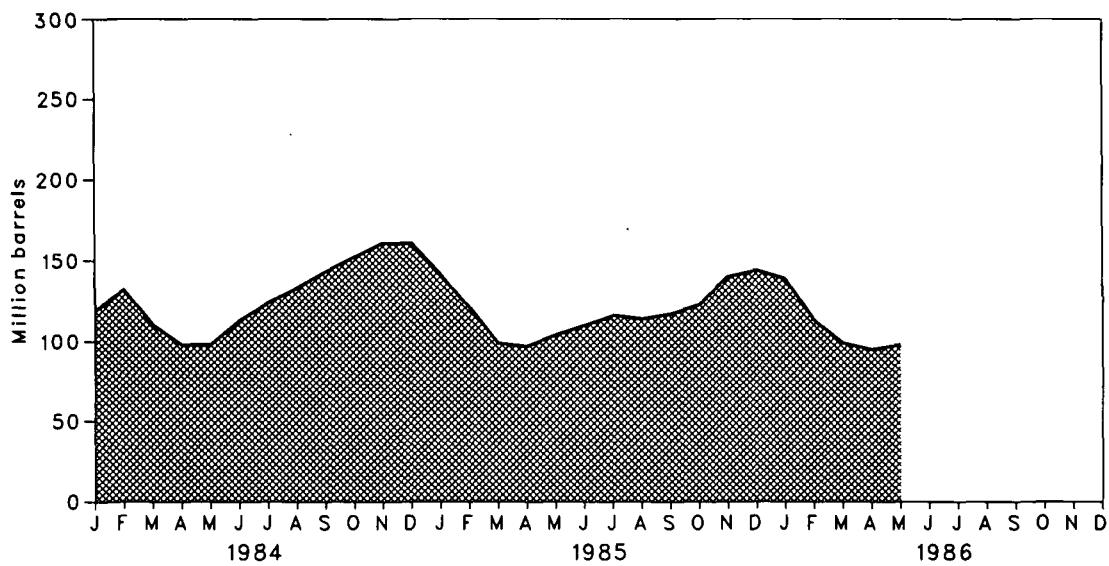
# Petroleum

## **Distillate Fuel Oil Supply and Disposition**

### **Product Supplied, Total Production, and Imports**



## **Ending Stocks**



# Petroleum

## Distillate Fuel Oil Supply and Disposition

		Supply			Disposition		Ending Stocks <sup>1</sup>	
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>4</sup>	
		Thousand barrels per day						
1973	Average	2,822	392	-115	2	9	3,092	196
1974	Average	2,669	289	-9	2	2	2,948	200
1975	Average	2,654	155	'40	2	1	2,851	209
1976	Average	2,924	146	62	1	1	3,133	186
1977	Average	3,278	250	-176	1	1	3,352	250
1978	Average	3,167	173	93	1	3	3,432	216
1979	Average	3,153	193	-34	1	3	3,311	229
1980	Average	2,662	142	64	1	3	2,866	205
1981	Average <sup>5</sup>	2,613	173	'38	10	5	2,829	192
1982	Average	2,606	93	35	10	74	2,671	179
1983	Average	2,456	174	'124	NA	64	2,690	140
1984	January	2,591	299	676	NA	40	3,525	119
	February	2,867	454	-446	NA	41	2,834	132
	March	2,479	115	731	NA	66	3,259	110
	April	2,342	220	396	NA	32	2,926	98
	May	2,624	253	-15	NA	48	2,814	98
	June	2,880	256	-490	NA	53	2,593	113
	July	2,719	199	-373	NA	40	2,504	124
	August	2,661	259	-287	NA	74	2,559	133
	September	2,707	291	-321	NA	22	2,654	143
	October	2,691	421	-300	NA	47	2,765	152
	November	2,826	316	-291	NA	24	2,827	161
	December	2,798	190	-3	NA	120	2,865	161
	Average	2,681	272	-57	NA	51	2,845	
1985	January	R2,631	R272	R603	NA	41	R3,465	142
	February	R2,504	R143	R748	NA	64	R3,330	R121
	March	R2,267	R156	R714	NA	44	R3,093	99
	April	R2,490	R253	R82	NA	27	R2,798	97
	May	R2,686	R197	R-245	NA	31	R2,607	R104
	June	R2,647	R152	R-175	NA	30	R2,594	110
	July	R2,646	95	R-193	NA	112	R2,436	R116
	August	R2,592	R81	R62	NA	100	R2,636	114
	September	R2,594	R222	R-120	NA	121	R2,575	117
	October	2,902	R262	R-195	NA	67	R2,901	R123
	November	R3,102	R280	R-543	NA	92	R2,747	R140
	December	3,176	R287	R-128	NA	81	R3,254	144
	Average	R2,687	R200	R48	NA	67	R2,868	
1986	January	2,899	312	157	NA	126	3,243	139
	February	2,563	129	938	NA	176	3,455	113
	March	2,647	217	436	NA	131	3,168	99
	April	R2,788	R146	R132	NA	128	R2,939	R95
	May†	2,814	159	-74	NA	NA	2,746	98
	Average	2,745	194	307	NA	NA	3,105	

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.

<sup>4</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>5</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

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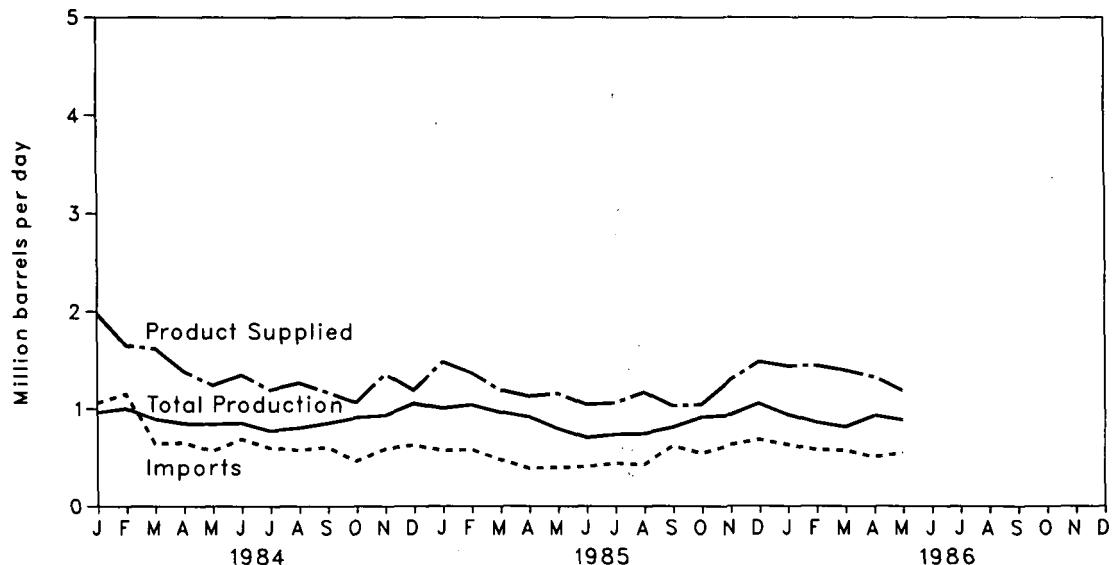
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Sources: • See the last page of this section.

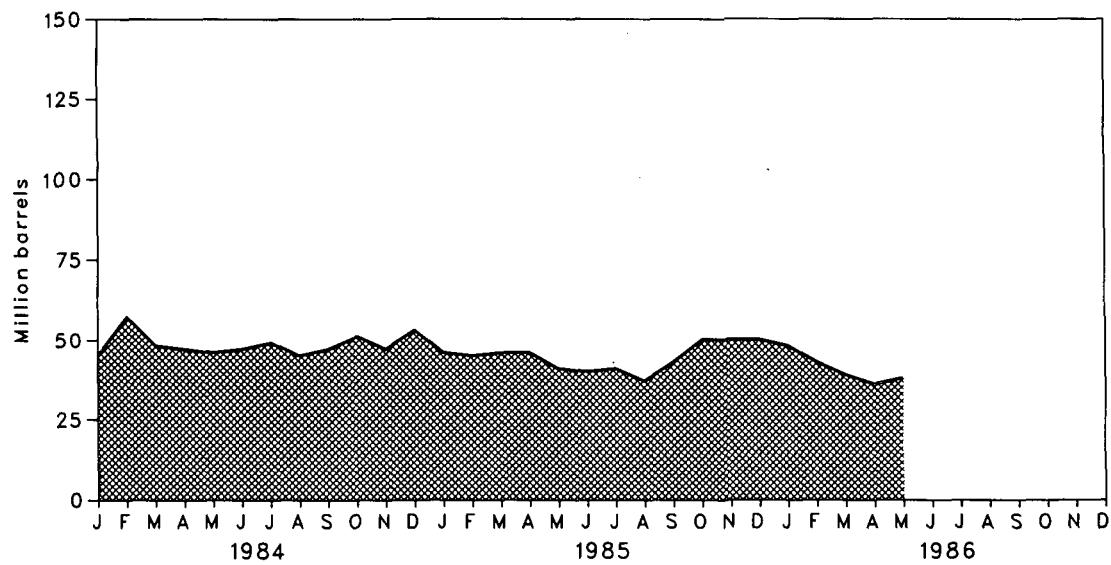
# Petroleum

## Residual Fuel Oil Supply and Disposition

### Product Supplied, Total Production, and Imports



### Ending Stocks



# Petroleum

## Residual Fuel Oil Supply and Disposition

		Supply			Disposition		Ending Stocks <sup>1</sup>	
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Product Supplied <sup>3</sup>	
		Thousand barrels per day						
1973	Average	971	1,853	5	17	23	2,822	53
1974	Average	1,070	1,587	-17	13	14	2,639	60
1975	Average	1,235	1,223	-2	15	15	2,462	74
1976	Average	1,377	1,413	5	17	12	2,801	72
1977	Average	1,754	1,359	-48	13	6	3,071	90
1978	Average	1,667	1,355	-1	13	13	3,023	90
1979	Average	1,687	1,151	-15	12	9	2,826	96
1980	Average	1,580	939	10	12	33	2,508	92
1981	Average <sup>4</sup>	1,321	800	37	48	118	2,088	78
1982	Average	1,070	776	32	48	209	1,716	66
1983	Average	852	699	55	NA	185	1,421	49
1984	January	961	1,059	110	NA	151	1,979	45
	February	1,003	1,151	-416	NA	87	1,651	57
	March	889	636	298	NA	204	1,619	48
	April	847	651	15	NA	130	1,384	47
	May	840	565	32	NA	200	1,237	46
	June	849	685	-15	NA	176	1,344	47
	July	770	597	-76	NA	99	1,192	49
	August	800	572	149	NA	260	1,261	45
	September	850	606	-74	NA	214	1,168	47
	October	907	461	-127	NA	174	1,066	51
	November	928	585	125	NA	286	1,352	47
	December	1,053	627	-193	NA	299	1,189	53
	Average	891	681	-12	NA	190	1,369	
1985	January	R1,004	R568	R219	NA	312	R1,480	R46
	February	R1,040	R580	R41	NA	295	R1,366	R45
	March	R963	R477	R-35	NA	216	R1,190	46
	April	R912	R383	R-2	NA	167	R1,126	R46
	May	R793	R394	R155	NA	185	R1,156	R41
	June	R702	R400	R59	NA	118	R1,043	40
	July	R732	R437	R-29	NA	83	R1,058	41
	August	R742	R424	R108	NA	106	R1,168	37
	September	R808	R617	R-207	NA	188	R1,031	43
	October	912	R541	R-228	NA	184	R1,042	50
	November	R932	R627	R5	NA	275	R1,290	R50
	December	1,055	R681	R-4	NA	250	R1,483	R50
	Average	R882	R510	7	NA	197	R1,202	
1986	January	933	629	83	NA	211	1,435	48
	February	856	577	193	NA	183	1,443	43
	March	810	571	125	NA	113	1,393	39
	April	R927	R504	R96	NA	202	R1,325	R36
	May†	881	540	-89	NA	NA	1,186	38
	Average	882	564	79	NA	NA	1,355	

<sup>1</sup>Stocks are totals as of end of period.

<sup>2</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup>Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.

<sup>4</sup>In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

<sup>5</sup>Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.

<sup>†</sup>Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.

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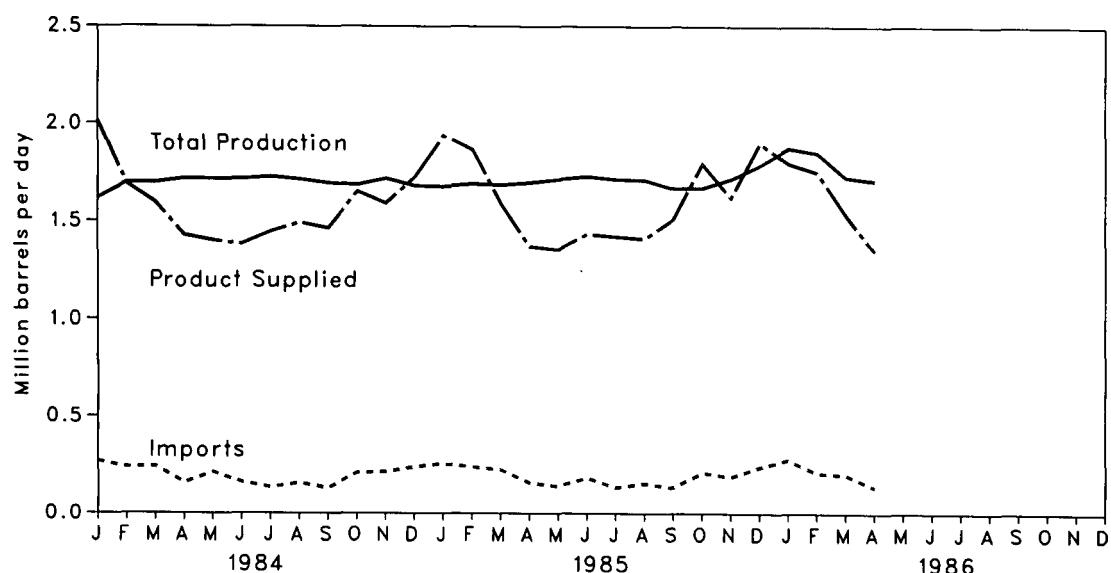
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Sources: • See the last page of this section.

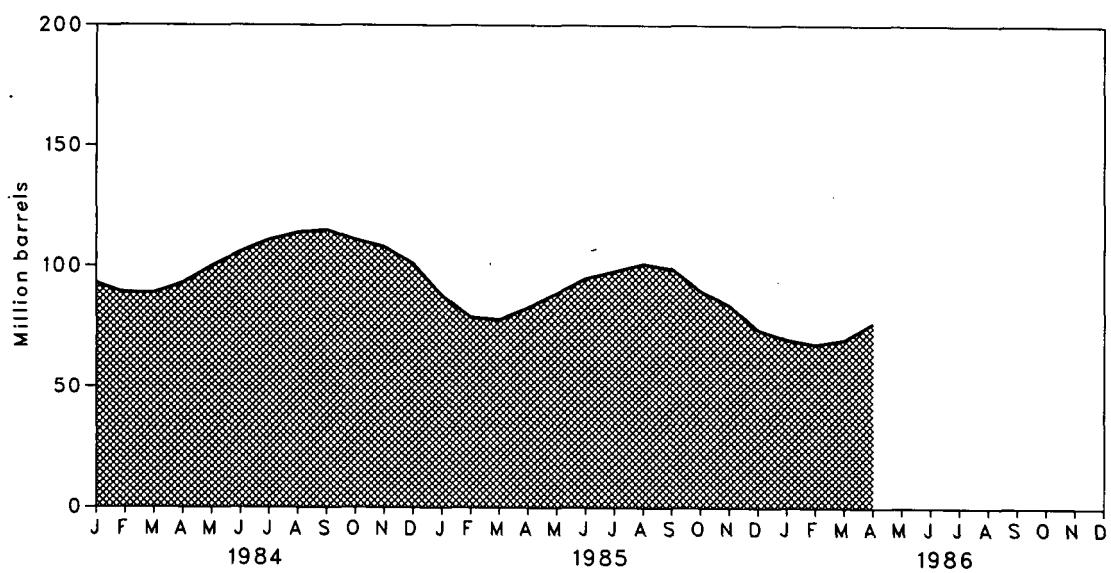
# Petroleum

## Liquefied Petroleum Gases Supply and Disposition

### **Product Supplied, Total Production, and Imports**



## Ending Stocks



# Petroleum

## Liquefied Petroleum Gases<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</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	113
1975	Average	1,527	112	-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	132
1979	Average	1,556	217	70	236	15	1,592	111
1980	Average	1,535	216	-27	233	21	1,469	120
1981	Average	1,571	244	-18	289	42	1,466	135
1982	Average	1,528	226	111	300	65	1,499	94
1983	Average	1,642	190	4	253	73	1,509	101
1984	January	1,615	269	-494	340	23	2,015	93
	February	1,696	237	122	324	41	1,690	89
	March	1,696	241	12	288	68	1,593	89
	April	1,716	155	-139	253	54	1,426	93
	May	1,714	211	-240	244	42	1,399	100
	June	1,714	158	-201	237	53	1,380	106
	July	1,725	132	-139	232	43	1,444	111
	August	1,711	154	-100	241	34	1,490	114
	September	1,693	128	-50	283	26	1,462	115
	October	1,684	207	138	322	56	1,650	111
	November	1,716	212	89	376	52	1,588	108
	December	1,679	237	239	349	82	1,724	101
	Average	1,697	195	19	291	48	1,572	
1985	January	R1,676	255	R399	R322	70	R1,937	R88
	February	R1,689	237	R330	R320	72	R1,865	R79
	March	R1,684	223	R29	R297	52	R1,588	R78
	April	R1,696	156	R-143	R262	78	R1,368	R83
	May	R1,713	138	R-219	R239	40	R1,353	R89
	June	R1,728	181	R-175	R250	51	R1,432	R95
	July	R1,713	131	-107	R249	68	R1,420	R98
	August	R1,710	R153	R-98	R277	80	R1,409	R101
	September	R1,667	132	R61	R321	29	R1,510	R99
	October	R1,669	209	R304	R340	47	R1,794	R90
	November	R1,716	188	R192	R387	88	R1,620	84
	December	R1,786	239	R337	R386	75	R1,901	R74
	Average	1,704	187	R75	R304	62	R1,599	
1986	January	1,874	277	75	382	47	1,797	70
	February	1,850	208	98	330	75	1,752	68
	March	1,726	199	-90	252	47	1,536	70
	April	1,708	134	-203	259	33	1,347	77
	Average	1,789	205	-32	305	50	1,606	

<sup>1</sup>Includes ethane, propane, normal butane, and isobutane.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

R=Revised data.

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

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

Sources: • See the last page of this section.

# Petroleum

## Other Petroleum Products<sup>1</sup> Supply and Disposition

	Supply			Disposition			Ending Stocks <sup>2</sup> Million barrels	
	Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Product Supplied		
	Thousand barrels per day							
1973 Average	3,693	502	-9	750	166	3,270	208	
1974 Average	3,558	432	-28	665	174	3,123	218	
1975 Average	3,424	277	-2	537	160	3,002	219	
1976 Average	3,643	206	-5	524	175	3,145	220	
1977 Average	3,912	205	-27	514	165	3,410	230	
1978 Average	4,046	166	14	492	167	3,568	225	
1979 Average	4,153	195	-37	352	209	3,749	238	
1980 Average	3,956	210	-23	311	198	3,634	247	
1981 Average	3,739	226	46	723	199	3,088	282	
1982 Average	3,453	334	80	787	211	2,869	253	
1983 Average	3,460	411	6	712	242	2,923	256	
1984	January	3,376	517	-163	570	207	2,953	253
	February	3,595	602	-250	754	225	2,966	261
	March	3,512	485	-227	527	258	2,988	268
	April	3,584	610	-211	623	268	3,092	274
	May	3,683	662	-105	764	257	3,218	277
	June	3,869	541	391	1,232	343	3,223	265
	July	3,864	587	277	1,022	238	3,467	257
	August	3,848	569	41	637	172	3,650	256
	September	3,759	536	-50	699	238	3,308	257
	October	3,585	632	10	709	180	3,336	257
	November	3,532	606	81	945	279	2,997	254
	December	3,379	434	464	1,016	284	2,977	240
	Average	3,632	565	23	791	245	3,183	
1985	January	3,258	R400	R-88	R556	223	R2,815	243
	February	R3,422	R498	R-101	R707	204	R2,910	R245
	March	R3,464	R550	R-421	R633	190	R2,769	259
	April	R3,618	R628	R-7	R836	245	R3,158	R259
	May	R3,721	R837	R-113	R991	191	R3,263	R262
	June	R3,924	R612	R80	R995	261	R3,360	R260
	July	R3,994	R658	R19	R975	241	R3,455	R259
	August	R4,087	R640	R372	R1,328	218	R3,549	R248
	September	R3,878	R529	R-10	R823	274	R3,299	R248
	October	R3,810	R548	9	R861	250	R3,255	R248
	November	R3,772	R612	R-183	R906	277	R3,016	R253
	December	R3,658	R542	R226	R1,006	305	R3,118	R246
	Average	R3,721	R588	R-17	R886	240	R3,166	
1986	January	3,805	498	-165	925	311	2,899	252
	February	3,759	377	-197	768	270	2,901	258
	March	3,646	440	7	822	208	3,066	257
	April	3,658	576	-108	759	369	2,998	261
	Average	3,716	474	-114	820	289	2,967	

<sup>1</sup>Includes pentanes plus, other hydrocarbons and alcohol, unfinished oil, gasoline blending components, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup>Stocks are totals as of end of period.

<sup>3</sup>A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup>In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.

R=Revised data.

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

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

Sources: • See the last page of this section.

## Notes and Sources for the Petroleum Section

### Notes

**1. During 1981 the listing (frame) of operators of all facilities required to complete each monthly survey was updated.** The refinery frame was found to be complete and accurate, although the frames for bulk terminals, pipelines, and crude oil stocks facilities were found to be outdated. A variety of sources (published directories, listings, and exploratory surveys) were researched for potential new respondents. As a result of this research, a significant number of respondents were added to the frames. The increase in the respondents for the frames affects the stocks of crude oil and petroleum products. For further details, see the Energy Information Administration (EIA), *Petroleum Supply Monthly*.

**2. Research conducted by the EIA in the latter half of 1980 indicated changes had taken place in the petroleum industry that were not being adequately reflected in the EIA survey forms.** First, the flows of unfinished oils and the redesignation of finished products were not being accurately described on the EIA survey forms. Second, a substantial amount of motor gasoline was being produced at non-refinery "downstream blending stations" but was not being reported. Although empirical information is not available to precisely measure the historical effects, estimates of the magnitude of the differences in the major series affected are shown in the EIA, *Petroleum Supply Monthly*. Beginning in January 1981, the EIA modified its survey forms, changed definitions of gasoline (motor and aviation), and added the non-refinery blenders previously not reported.

**3. Motor Gasoline:** Beginning in January 1981, the EIA expanded its universe to include non-refinery blenders; redefined motor gasoline into two categories (finished leaded and finished unleaded); and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately. For further details, see the EIA, *Petroleum Supply Monthly*.

**4. Distillate and Residual Fuel Oils:** The requirement to report crude oil burned on leases and pipelines as either distillate or residual fuel oil has been eliminated. Prior to January 1981, the refinery input of unfinished oils number typically exceeded the number for available supply of unfinished oils. This was assumed to be due to the redesignation of distillate and residual fuel oils received as such, but used as an unfinished oil input by the receiving refinery. This imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of this 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. For further details, see the EIA, *Petroleum Supply Monthly*.

**5. New Stock Basis:** In January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and

pipeline surveys affecting subsequent stocks reported and stock withdrawal 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—1,420; and 1982—1,462.
- Motor Gasoline: 1974—225; 1980—263; 1982—244 (Total) and 203 (Finished).
- Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
- Residual Fuel Oil: 1974—75; 1980—91; and 1982—68.
- Liquefied Petroleum Gases: 1974—113; 1980—128; and 1982—103.
- Other Petroleum Products: 1974—220; 1980—249; and 1982—259.
- Stock withdrawal calculations beginning in 1975, 1981, and 1983, were made 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 "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 will now appear in the "Liquefied Petroleum Gases Supply and Disposition" table. This change will affect stocks reported and stock withdrawals in each table. Under new basis, end-of-year 1983 stocks, in million barrels would have been:

- Liquefied Petroleum Gases: 1983—108.
- Other Petroleum Products: 1983—248.

**6. 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 withdrawal calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Other Primary).

### Sources

- 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
- 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual" and unleaded gasoline data from *Monthly Petroleum Statistics Report*.
- January 1981 through December 1984: EIA, *Petroleum Supply Annual*.
- January 1985 through April 1986: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly* (except domestic crude oil production).
- May 1986: Estimates based on EIA weekly data (except domestic crude oil production).
- January 1985 through May 1986: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey.

# Part 4 Natural Gas

## Natural Gas

Total dry natural gas production in the United States during April 1986 was an estimated 1.4 trillion cubic feet. This was 2.8 percent more than in April 1985.

Consumption of natural and supplemental gas in April 1986 was an estimated 1.3 trillion cubic feet. This was 4.1 percent higher than in April 1985.

Deliveries to residential consumers during March 1986 (latest data available) were 601 billion cubic feet, 6.2 percent higher than in March 1985. Total deliveries to industrial consumers during March 1986 were an estimated 381 billion cubic feet. This was 5.7 percent lower than in March 1985.

Imports of natural gas in April 1986 were an estimated 49 billion cubic feet, 34.7 percent lower than in the previous April. There were no imports of Algerian liquefied natural gas (LNG) during April 1986.

Stocks of working gas\* in underground natural gas storage reservoirs at the end of April 1986 totaled 1,838 billion cubic feet. This was 1.1 percent below stocks available a year earlier. Net injections to storage during April 1986 were 75 billion cubic feet, 33.6 percent less than during the previous April.

\*Gas available for withdrawal.

# Natural Gas

## Production Summary

		Gross Wet Gas Withdrawals <sup>1</sup>	Used for Repressuring <sup>2</sup>	Nonhydro- carbon Gas Removed <sup>3</sup>	Vented and Flared	Marketed Production (Wet) <sup>4</sup>	Extraction Loss <sup>5</sup>	Total Dry Gas Production <sup>6</sup>
Billion cubic feet								
1973	Total	24,067	1,171	NA	248	22,648	917	21,731
1974	Total	22,850	1,080	NA	169	21,601	887	20,713
1975	Total	21,104	861	NA	134	20,109	872	19,236
1976	Total	20,944	859	NA	132	19,952	854	19,098
1977	Total	21,097	935	NA	137	20,025	863	19,163
1978	Total	21,309	1,181	NA	153	19,974	852	19,122
1979	Total	21,883	1,245	NA	167	20,471	808	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	20,210	1,388	208	93	18,520	762	17,758
1983	Total	18,597	1,458	222	95	16,822	790	16,033
1984	January	1,887	135	21	9	1,723	79	1,644
	February	1,650	127	17	8	1,497	69	1,428
	March	1,693	125	19	9	1,540	71	1,469
	April	1,666	132	18	9	1,507	69	1,438
	May	1,668	138	19	9	1,503	69	1,434
	June	1,619	135	18	9	1,456	67	1,389
	July	1,676	137	20	10	1,509	69	1,440
	August	1,653	137	19	9	1,487	68	1,419
	September	1,574	132	16	9	1,417	65	1,352
	October	1,661	143	19	9	1,490	69	1,421
	November	1,656	142	17	10	1,487	68	1,419
	December	1,789	146	21	8	1,613	74	1,539
	Total	20,192	1,630	224	108	18,230	838	17,392
1985	January	1,788	124	20	7	1,637	75	1,562
	February	1,635	122	18	6	1,489	68	1,421
	March	1,651	137	19	6	1,490	69	1,421
	April	1,563	137	18	6	1,401	64	1,337
	May	1,545	133	19	7	1,386	64	1,322
	June	1,487	126	17	6	1,336	61	1,275
	July	1,531	133	20	7	1,370	63	1,307
	August	1,520	127	19	7	1,367	63	1,304
	September	1,503	133	17	6	1,348	62	1,286
	October	1,553	132	19	6	1,396	64	1,332
	November	1,565	136	20	7	1,402	64	1,338
	December	1,770	144	23	6	1,596	73	1,523
	Total	19,111	1,584	229	77	17,218	790	16,428
1986	January	1,759	144	20	6	1,588	73	1,515
	February	1,578	131	19	6	1,422	65	1,357
	March	1,682	140	21	6	1,515	70	1,445
	April	1,598	132	19	6	1,441	66	1,375
	Year to Date	6,617	547	79	24	5,966	274	5,692

<sup>1</sup>Gas withdrawn from gas and oil wells.

<sup>2</sup>Gas returned to formations for repressuring, pressure maintenance, and cycling.

<sup>3</sup>For definitions and further explanations, see Notes on the last two pages of this section.

<sup>4</sup>Equal to gross withdrawals minus volumes used for repressuring, volumes of nonhydrocarbon gases removed, and volumes vented and flared. See Note 2 on the last two pages of this section for further explanation.

<sup>5</sup>Equal to marketed production (wet) minus extraction loss.

<sup>6</sup>May include unknown quantities of nonhydrocarbon gases.

NA=Not available.

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

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

• Italics denote estimated data. Data for 1973 through 1984 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the last page of this section.

# Natural Gas

## Supply and Disposition of Natural Gas

		Supply				Disposition			
		Total Dry Gas Production	With-drawals from Storage <sup>1</sup>	Supplemental Gaseous Fuels <sup>2</sup>	Imports <sup>2</sup>	Total Supply/Disposition <sup>3</sup>	Additions to Storage <sup>1</sup>	Exports <sup>2</sup>	Consumption <sup>2</sup>
Billion cubic feet									
1973	Total	21,731	1,533	NA	1,033	24,297	1,974	77	22,049
1974	Total	20,713	1,701	NA	959	23,373	1,784	77	21,223
1975	Total	19,236	1,760	NA	953	21,949	2,104	73	19,538
1976	Total	19,098	1,921	NA	964	21,983	1,756	65	19,946
1977	Total	19,163	1,750	NA	1,011	21,924	2,307	56	19,521
1978	Total	19,122	2,158	NA	966	22,245	2,278	53	19,627
1979	Total	19,663	2,047	NA	1,253	22,964	2,295	56	20,241
1980	Total	19,403	1,972	155	985	22,515	1,949	49	19,877
1981	Total	19,181	1,930	176	904	22,191	2,228	59	19,404
1982	Total	17,758	2,164	145	933	21,000	2,472	52	18,001
1983	Total	16,033	2,270	132	920	19,354	1,822	55	16,835
1984	January	1,644	580	13	97	2,334	55	5	2,260
	February	1,428	310	10	69	1,817	61	5	1,739
	March	1,469	371	10	69	1,919	49	6	1,851
	April	1,438	102	8	71	1,619	147	5	1,456
	May	1,434	31	7	66	1,538	259	5	1,264
	June	1,389	28	7	59	1,483	329	3	1,140
	July	1,440	29	7	55	1,531	353	5	1,161
	August	1,419	31	8	54	1,512	324	5	1,172
	September	1,352	31	8	57	1,448	295	5	1,138
	October	1,421	48	8	67	1,544	247	5	1,282
	November	1,419	231	11	84	1,745	85	5	1,644
	December	1,539	309	13	94	1,955	94	5	1,844
	Total	17,392	2,098	110	843	20,443	2,295	55	17,951
1985	January	1,562	659	16	104	2,341	35	5	2,264
	February	1,421	437	14	98	1,970	48	4	1,884
	March	1,421	213	13	89	1,736	97	4	1,601
	April	1,337	94	10	75	1,516	207	5	1,272
	May	1,322	25	8	70	1,425	300	5	1,088
	June	1,275	33	10	63	1,381	260	5	1,085
	July	1,307	45	10	60	1,422	309	6	1,076
	August	1,304	50	10	57	1,421	277	5	1,108
	September	1,286	20	9	60	1,375	270	4	1,070
	October	1,332	69	12	R71	R1,484	197	4	R1,251
	November	1,338	201	10	R77	R1,626	93	4	R1,497
	December	1,523	526	R13	R107	R2,169	43	4	R2,085
	Total	16,428	2,373	134	R931	R19,866	2,135	55	R17,281
1986	January	1,515	447	R15	95	R2,072	52	5	R1,979
	February	1,357	400	R14	R71	R1,842	59	5	R1,745
	March	1,445	237	14	R52	R1,748	120	5	R1,588
	April	1,375	80	12	49	1,516	155	4	1,324
	Year to Date	5,692	1,164	55	267	7,178	386	19	6,636
									137

<sup>1</sup>Monthly and annual data for 1980 through 1984 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 on the last two pages of this section.

<sup>2</sup>For definitions and further explanations, see Notes on the last two pages of this section.

<sup>3</sup>Data for 1978 through 1982 do not include intratransit receipts and deliveries.

\*May include unknown quantities of nonhydrocarbon gases.

<sup>a</sup>See Note 7 on the last two pages of this section.

R=Revised data. NA=Not available.

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

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

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Sources: • See the last page of this section.

# Natural Gas

## Natural Gas<sup>1</sup> Consumption

		Lease and Plant Fuel	Pipeline Fuel	Delivered to Consumers					Total Consumption	
				Residential	Commercial <sup>2</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	January	102	67	886	437	553	215	2,091	2,260	
	February	88	51	700	354	359	187	1,600	1,739	
	March	91	55	605	311	583	206	1,705	1,851	
	April	89	43	463	243	398	220	1,324	1,456	
	May	89	37	287	160	426	265	1,138	1,264	
	June	86	34	170	108	444	298	1,020	1,140	
	July	89	34	128	97	464	349	1,038	1,161	
	August	88	35	118	98	483	350	1,049	1,172	
	September	84	33	127	101	502	291	1,021	1,138	
	October	88	38	183	128	575	270	1,156	1,282	
	November	88	48	323	193	747	245	1,508	1,644	
	December	95	54	566	294	618	217	1,695	1,844	
	Total	1,077	529	4,555	2,524	6,153	3,111	16,345	17,951	
1985	January	97	67	742	370	762	226	2,100	2,264	
	February	88	55	836	408	294	203	1,741	1,884	
	March	88	47	566	289	404	207	1,466	1,601	
	April	83	37	397	205	316	234	1,152	1,272	
	May	82	32	213	130	395	236	974	1,088	
	June	79	32	157	103	432	282	974	1,085	
	July	81	32	130	97	399	337	963	1,076	
	August	81	33	119	95	425	355	994	1,108	
	September	80	31	129	100	455	275	959	1,070	
	October	83	37	189	125	R567	250	R1,131	R1,251	
	November	83	44	306	183	R651	230	R1,370	R1,497	
	December	94	61	627	328	R765	210	R1,930	R2,085	
	Total	1,019	R508	4,412	2,432	R5,865	3,044	R15,754	R17,281	
1986	January	94	58	804	397	R442	184	R1,827	R1,979	
	February	84	51	714	358	R381	157	R1,610	R1,745	
	March	90	47	601	299	381	170	1,451	1,588	
	Year to Date	268	156	2,119	1,054	1,204	511	4,888	5,312	

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Includes deliveries to local, State, and Federal agencies engaged in nonmanufacturing activities.

R=Revised data.

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

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

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Sources: • See the last page of this section.

# Natural Gas

## Underground Natural Gas Storage—All Operators

	Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity			
	Base Gas	Working Gas	Total <sup>1</sup>	Volume	Percent	Injections	Withdrawals	Net <sup>2</sup>	
Volumes in billion cubic feet									
1973 Total	2,864	2,034	4,898	305	17.6	1,974	1,533	441	
1974 Total	2,912	2,050	4,962	16	0.8	1,784	1,701	83	
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	January	3,847	2,091	5,937	-553	-20.9	54	571	-517
	February	3,828	1,876	5,704	-480	-20.4	60	305	-244
	March	3,824	1,572	5,396	-575	-26.8	48	365	-317
	April	3,822	1,620	5,442	-454	-21.9	144	100	44
	May	3,827	1,843	5,670	-379	-17.1	254	30	244
	June	3,828	2,141	5,969	-313	-12.7	323	27	296
	July	3,829	2,456	6,285	-239	-8.9	346	28	317
	August	3,829	2,740	6,569	-168	-5.8	318	30	288
	September	3,829	2,996	6,825	-144	-4.6	289	30	259
	October	3,837	3,175	7,011	-95	-2.9	242	47	195
	November	3,900	3,015	6,915	-160	-5.0	83	227	-145
	December	3,830	2,876	6,706	281	10.8	92	304	-213
	<b>Total</b>						<b>2,252</b>	<b>2,064</b>	<b>188</b>
1985	January	3,841	2,242	6,083	151	7.2	35	659	-623
	February	3,841	1,853	5,694	-23	-1.2	48	437	-389
	March	3,835	1,743	5,578	171	10.8	97	213	-116
	April	3,831	1,859	5,691	239	14.8	207	94	113
	May	3,837	2,129	5,965	286	15.5	300	25	275
	June	3,839	2,351	6,191	211	9.8	260	33	227
	July	3,849	2,605	6,454	149	6.1	309	45	264
	August	3,849	2,832	6,681	92	3.4	277	50	227
	September	3,849	3,082	6,931	85	2.9	270	20	250
	October	3,851	3,207	7,059	33	1.0	197	69	128
	November	3,847	3,087	6,934	72	2.4	93	201	-108
	December	3,842	2,609	6,451	-267	-9.3	43	526	-483
	<b>Total</b>						<b>2,135</b>	<b>2,373</b>	<b>-238</b>
1986	January	3,842	2,213	6,055	-29	-1.3	52	447	-395
	February	3,842	1,872	5,714	18	1.0	59	400	-341
	March	3,838	1,759	5,597	16	0.9	120	237	-117
	April	3,834	1,838	5,672	-21	-1.1	155	80	75

<sup>1</sup>Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1978—6,890; 1979—6,929; 1980—7,434; 1981—7,805; 1982—7,915; 1983—7,985; 1984—8,043; and 1985—8,087. Current total capacity is 8,127.

<sup>2</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 on the last two pages of this section.

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

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

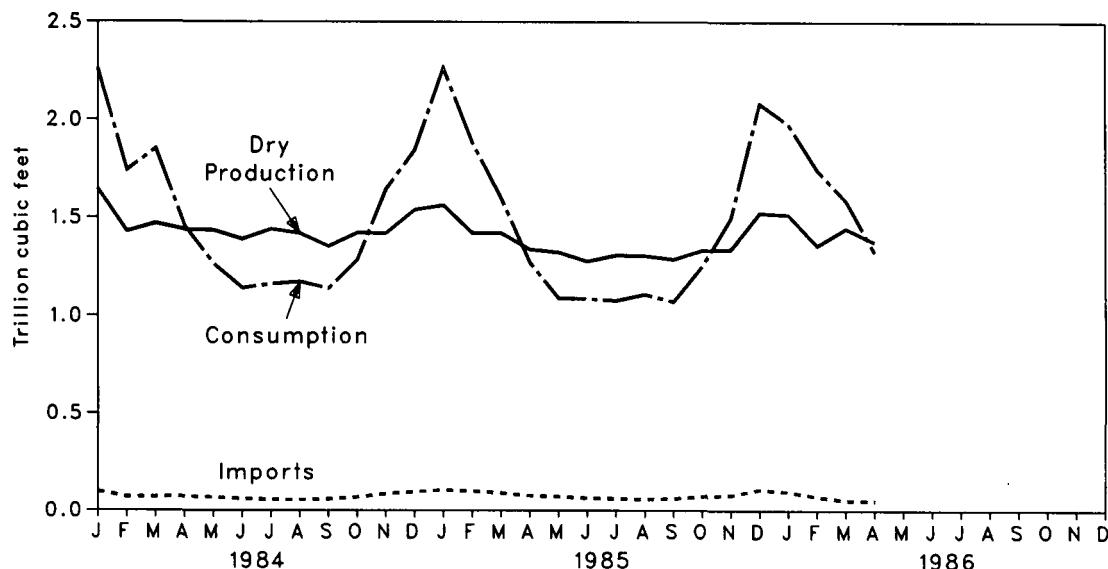
• Data for 1978 through 1984 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the last page of this section.

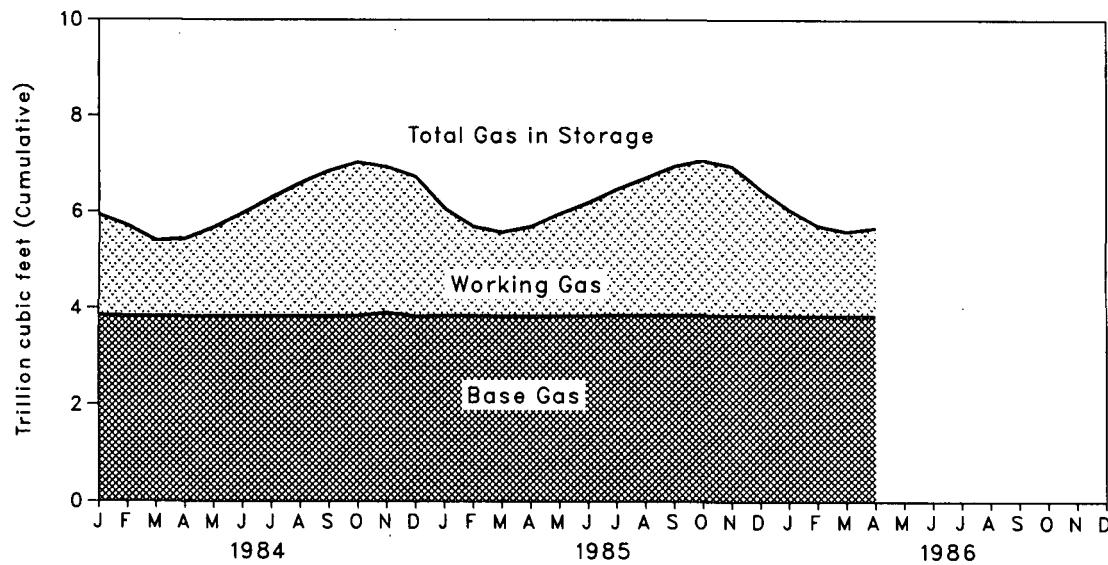
# Natural Gas

## Overview

### Consumption, Dry Production, and Imports



### Gas in Storage at End of Period



## Notes and Sources for the Natural Gas Section

### 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 1984*. These data are not available for periods prior to 1980. For 1984, of the 32 producing States, 24 reported data on nonhydrocarbon gases removed. These 24 States accounted for 57 percent of total 1984 gross withdrawals. In addition, gross withdrawals data from two States, which together accounted for 39 percent of the 1984 total production, did not include all or most of the nonhydrocarbon gases removed on leases. No estimates are made for the two States not reporting nonhydrocarbon gases removed. For further information, see the EIA *Natural Gas Monthly*.

Monthly data are reported by two States and computed for seven States. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual* for that year. For further information on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly*.

Monthly data are revised and considered final after publication of the EIA *Natural Gas Annual* by proportionally allocating the differences between annual data published in the EIA *Natural Gas Annual* and the sum of the preliminary monthly data (January–December).

**2. Production:** Annual data. Final annual data are from the EIA *Natural Gas Annual 1984*.

Estimated Monthly Data. All 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 *Natural Gas Monthly*.

Preliminary monthly data. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual* for that year. Preliminary monthly data are gathered from reports from the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary to a standard 14.73 psia pressure base. Unless there are major changes, data are not revised until after publication of the EIA *Natural Gas Annual*.

Final monthly data. The difference between annual production data published in the EIA *Natural Gas Annual 1984* and the sum of preliminary monthly data (January–December) is allocated proportionally to the preliminary 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 for extraction loss are from the EIA *Natural Gas Annual* for which they have been estimated based on 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 *Natural Gas Annual*.

Preliminary monthly data are estimated based on 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 *Natural Gas Annual*. Final monthly data are estimated by allocating annual extraction loss data to each month based on its total natural gas disposition.

**4. Supplemental Gaseous Fuels:** Supplemental gaseous fuels are mainly synthetic natural gas, propane-air, and refinery gas. Other gases may also be included such as, coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization.

Annual data beginning with 1980 are from the EIA *Natural Gas Annual 1984*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

All monthly data are considered preliminary until after the publication of the EIA *Natural Gas Annual* for that year.

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. This ratio is applied to the monthly sum of these three elements to compute a monthly supplemental gaseous fuels figure.

**5. Imports and Exports:** The United States imports natural gas via pipeline from Mexico and Canada, and liquefied natural gas via tanker from Algeria. The United States exports natural gas via pipeline to Mexico and Canada and liquefied natural gas via tanker to Japan.

Annual and final monthly data are published from the annual 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 *Natural Gas Monthly*. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas* for that year.

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

All final data are from the EIA, *Natural Gas Annual*. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual*. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA *Natural Gas Monthly*.

**7. Unaccounted for:** The "Unaccounted for" category represents the following: (1) quantities lost; (2) the net result of flow data metered at varying temperature and pressure conditions and converted to a standard temperature and pressure base; (3) metering inaccuracies; (4) differences between billing cycle and calendar period time frames; (5) the effect of variations in company accounting and billing practices; and (6) imbalances from EIA's merger of data reporting systems which vary in scope, format, definitions, and type of respondents. The increase of almost 0.2 trillion cubic feet (Tcf) in the "Unaccounted for" category in 1983 followed by a decline of 0.5 trillion cubic feet 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 *Natural Gas Monthly*, 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. This 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.

All monthly data concerning underground storage are collected from the essentially identical Forms FPC-8 and EIA-191. Monthly data are revised after publication of the EIA *Underground Natural Gas Storage in the United States* for that heating year (April through March). In addition, injection and withdrawal data from the FPC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the EIA *Natural Gas Annual*.

The final monthly and annual storage and withdrawal data for 1980 through 1984 include both underground and liquefied natural gas (LNG) storage. Underground storage data are taken from the FPC-8/EIA-191 survey in the following manner. Annual data on LNG additions and withdrawals are taken 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 it to annual LNG data.

## Notes and Sources for the Natural Gas Section (continued)

### Sources

**Production:** 1973 through 1984: Energy Information Administration (EIA), *Natural Gas Annual 1984*; January 1985 forward: State reports to the Interstate Oil Compact Commission, data from the U.S. Minerals Management Service, and EIA estimates for States that do not report monthly data on a regular or timely basis.

**Extraction Loss, Consumption, and Unaccounted For:** 1973 through 1984: EIA, *Natural Gas Annual 1984*; January 1985 forward: EIA computations.

**Withdrawals from and Additions to Storage:** 1973 through 1984: EIA, *Natural Gas Annual 1984*; January 1985 forward: Form FPC-8 and Form EIA-191, "Underground Gas Storage Report."

**Supplemental Gaseous Fuels:** 1980 through 1984: EIA, *Natural Gas Annual 1984*; January 1985 forward: EIA computations.

**Imports and Exports:** 1973 through 1984: Form FPC-14, "Imports and Exports of Natural Gas"; January 1985 forward: EIA computations.

**End-Use Consumption:** • All data except electric utility—1973 through 1984: EIA, *Natural Gas Annual, 1984*; January 1985 forward: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers," and EIA computations.

• Electric utility data—EIA, Form 759, "Monthly Power Plant Report" (formerly Form FPC-4).

**Underground Storage:** 1973 and 1974: American Gas Association, *Gas Facts*; 1975 through 1979: EIA, Form FPC-8 and Form EIA-191, and the *Natural Gas Annual*; 1980 forward: EIA, Form FPC-8, Form EIA-191, and Form 176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."

# Part 5

## Oil and Gas Resource Development

### Oil and Gas Resource Development

In April 1986, the 205 crews engaged in seismic exploration were 46.5 percent fewer than those in April 1985. April 1986 was the 9th consecutive month that the number of crews declined. The 20 marine vessels in April 1986 were 57.4 percent fewer and the 185 land crews were 44.9 percent fewer than those in April 1985.

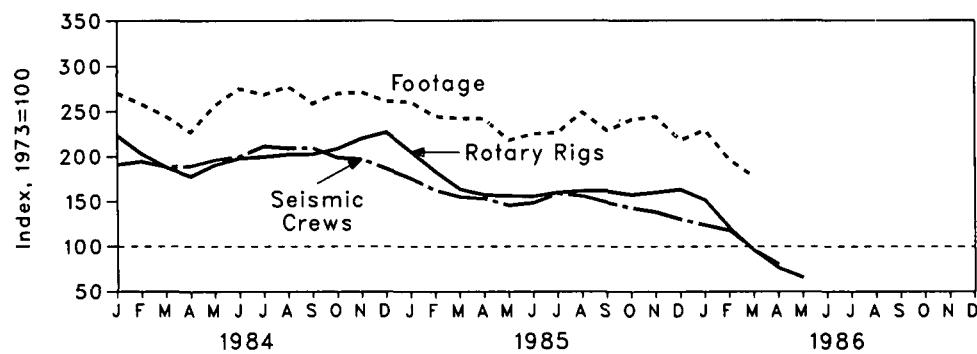
The May 1986 rotary rig count of 781 was 58.1 percent less than the count in May 1985. This was the lowest monthly count in the records that go back to 1949. The 94 rigs operating offshore in May 1986 were 53.0 percent fewer and the 687 rigs onshore were 58.7 percent fewer than those operating in May 1985.

Exploratory and development well completions during March 1986 were an estimated 4,760, 24.4 percent less than the 6,300 completions estimated in March

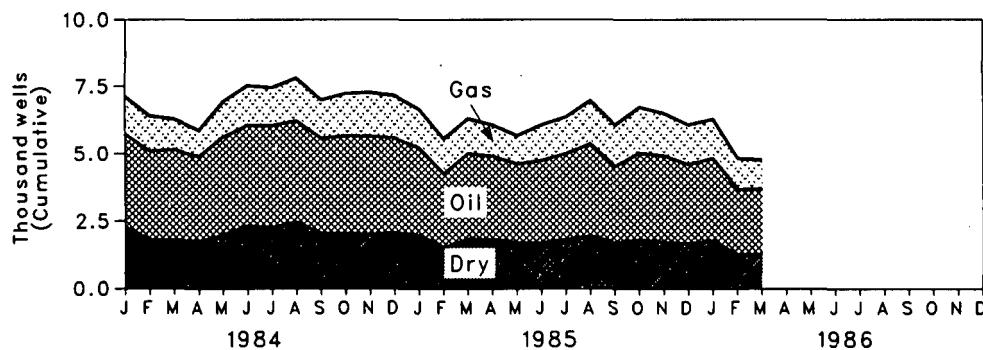
1985. Oil well completions were an estimated 2,410, 23.7 percent lower than the 3,160 oil well completions in the previous March. The 1,070 gas well completions were 17.7 percent lower than the March 1985 number of 1,300. Total footage drilled in March 1986 was 21.0 million feet, a decrease of 26.9 percent compared with the 28.7 million feet drilled in March 1985.

During the first quarter of 1986 exploratory and development well completions were an estimated 15,860, 14.3 percent less than during the first quarter of 1985. Oil well completions were an estimated 7,870, 13.8 percent below the first-quarter 1985 level. The 3,690 gas well completions during the first quarter of 1986 were 8.4 percent lower than the 1985 figure. During the first 3 months of 1986, total footage drilled was 69.2 million feet, 19.3 percent less than during the first quarter of 1985.

Seismic Crews and Rotary Rigs in Operation, and Footage Drilled



Exploratory and Development Well Completions



# Oil and Gas Resource Development

## Seismic Crews and Rotary Rigs

	Crews Engaged in Seismic Exploration			Rotary Rigs In Operation <sup>1</sup>			
	Offshore	Onshore	Total	Offshore	Onshore	Total	
	Monthly average			Weekly average			
1973	Average	23	227	250	84	1,110	1,194
1974	Average	31	274	305	94	1,378	1,472
1975	Average	30	254	284	106	1,554	1,660
1976	Average	25	237	262	129	1,529	1,658
1977	Average	27	281	308	167	1,834	2,001
1978	Average	25	327	352	185	2,074	2,259
1979	Average	30	370	400	207	1,970	2,177
1980	Average	37	493	530	231	2,678	2,909
1981	Average	44	637	681	256	3,714	3,970
1982	Average	57	531	588	243	2,862	3,105
1983	Average	47	426	473	199	2,033	2,232
1984	January	50	427	477	216	2,450	2,666
	February	53	433	486	202	2,221	2,423
	March	47	424	471	198	2,047	2,245
	April	50	423	473	203	1,917	2,120
	May	46	444	490	202	2,075	2,277
	June	45	455	500	205	2,158	2,363
	July	47	482	529	206	2,180	2,386
	August	53	470	523	216	2,201	2,417
	September	52	472	524	214	2,206	2,420
	October	48	449	497	223	2,269	2,492
	November	49	444	493	232	2,397	2,629
	December	52	414	466	242	2,471	2,713
	Average	49	445	494	213	2,215	2,428
1985	January	46	393	439	242	2,210	2,452
	February	46	360	406	233	1,955	2,188
	March	48	340	388	223	1,732	1,955
	April	47	336	383	210	1,667	1,877
	May	41	323	364	200	1,665	1,865
	June	47	324	371	203	1,653	1,858
	July	47	350	397	194	1,715	1,909
	August	49	341	390	197	1,734	1,931
	September	49	323	372	197	1,733	1,930
	October	45	312	357	195	1,684	1,879
	November	41	305	346	187	1,725	1,912
	December	39	287	326	190	1,760	1,950
	Average	45	333	378	206	1,774	1,980
1986	January	39	271	310	175	1,635	1,810
	February	39	256	295	164	1,280	1,444
	March	28	212	240	132	1,007	1,139
	April	20	185	205	112	794	906
	May	NA	NA	NA	94	687	781
	Average <sup>2</sup>	32	231	263	139	1,073	1,212

<sup>1</sup>Monthly data are averages of 4- or 5-week reporting periods and are not calendar months.

<sup>2</sup>Average of available data.

NA=Not available.

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

Sources: • See the last page of this section.

# Oil and Gas Resource Development

## Exploratory and Development Wells and Footage Drilled

### Exploratory and Development Well Completions<sup>1</sup>

		Oil	Gas	Dry	Total	Total Footage <sup>1</sup>
		Thousand wells			Million feet	
1973	Total	10.25	6.97	10.47	27.69	139.42
1974	Total	13.66	7.17	12.20	33.03	153.79
1975	Total	16.98	8.17	13.74	38.89	181.05
1976	Total	17.70	9.44	13.80	40.94	187.29
1977	Total	18.70	12.12	15.04	45.86	215.70
1978	Total	19.06	14.40	16.59	50.05	238.39
1979	Total	20.70	15.17	16.04	51.91	243.69
1980	Total	32.24	17.19	20.30	69.73	312.03
1981	Total	42.91	19.97	27.25	90.13	409.13
1982	Total	38.82	18.80	25.97	83.59	375.77
1983	Total	36.70	14.34	23.30	74.35	312.90
1984	January	3.44	1.39	2.29	7.12	31.97
	February	R3.28	1.31	R1.81	R6.40	R28.58
	March	R3.34	1.14	R1.80	R6.28	R28.91
	April	3.14	0.98	1.75	5.87	26.03
	May	3.63	1.31	1.99	6.93	30.41
	June	3.73	1.47	2.32	7.52	31.53
	July	3.78	1.41	2.26	7.45	31.79
	August	3.76	1.59	2.46	7.81	32.87
	September	3.52	1.42	2.05	6.99	29.64
	October	3.61	1.57	2.05	7.23	31.93
	November	3.65	1.63	1.99	7.27	31.07
	December	3.51	1.57	2.07	7.15	30.94
	Total	R42.39	16.79	R24.85	R84.02	R365.67
1985	January	3.24	1.43	1.98	6.64	30.88
	February	R2.73	R1.30	1.52	R5.56	R26.17
	March	R3.16	R1.30	R1.84	R6.30	R28.70
	April	3.08	1.17	1.82	6.07	27.75
	May	2.91	R1.06	1.70	R5.68	R25.82
	June	3.04	1.33	1.70	6.07	25.79
	July	3.17	R1.36	1.83	R6.37	R26.84
	August	R3.40	R1.60	R1.96	R6.95	R29.52
	September	R2.83	R1.53	R1.70	R6.06	R26.23
	October	3.21	1.70	1.81	6.72	28.54
	November	3.20	1.58	1.72	6.50	27.99
	December	2.92	1.48	1.67	6.07	25.84
	Total	R36.90	R16.83	R21.24	R74.97	R329.15
1986	January	3.04	1.46	1.78	6.28	27.17
	February	2.41	1.16	1.25	4.81	21.01
	March	2.41	1.07	1.28	4.76	20.98
	Year to Date	7.87	3.69	4.31	15.86	69.16

<sup>1</sup>Data exclude service wells and stratigraphic and core tests.

R=Revised data.

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

• Totals and averages may not equal sum of components due to subsequent revisions and independent rounding.

• Due to the method of estimation, data shown on this page are frequently revised. See the last page of this section for further explanation.

Source: • See the last page of this section.

## Notes and Sources for the Oil and Gas Resource Development Section

### Notes

Beginning in the March 1985 *Monthly Energy Review* (MER), the Energy Information Administration (EIA) revised the exploratory and development wells drilled data series. In order to present a consistent series, historical as well as current statistics were adjusted.

In previous issues, the MER published statistics based on data on well completions reported to the American Petroleum Institute during a given month, as opposed to data on wells actually completed during the month. Because of the time lag from date of well completion to date of reporting, data on well completions reported are not as accurate an indicator of drilling activity as are data on well completions. For example, during 1982 well completions reported continued to rise even though the number of wells actually completed fell. Starting in the March 1985 issue of the MER, published figures have been EIA estimates of the number of wells actually completed in a given month and are shown in thousands, rounded to two decimal places. The associated footage drilled is shown in millions, also rounded to two decimal places.

The EIA estimates are calculated using an adjustment process that imputes total well counts and footage by type and class based on partial counts of well completions available from the reported data. That is, based on statistical analysis of the incomplete reported data, the process imputes the missing portions to determine values for total well completions and footage. Estimates for a given month are first published in the MER for that month, that is, estimates for June 1984 are first published in the June 1984

MER. Revisions to the estimates are scheduled for the 6th, 12th, and 24th months following initial publication, as newly reported data refine the accuracy of the estimate. Unscheduled revisions to the published data will also be made when the latest estimate differs by more than 15 percent during the first 5 months, more than 10 percent during the next 6 months, more than 5 percent during the following 6 months, or more than 2 percent thereafter through 5 years. After 5 years, the actual reported data will be published.

The three well types considered are oil, gas, and dry. By convention, wells with both oil and gas zones are categorized as oil. Well classes are either development or exploratory; wells in any other class have been deleted. Exploratory well categories considered are new field wildcat, new pool wildcat, deeper pool test, shallower pool test, or extension (American Association of Petroleum Geologists well classification codes 1 through 5).

Additional information may be obtained from "Estimating Well Completions," the feature article published in the March 1985 *Monthly Energy Review*.

### Sources

- Crews Engaged: Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bulletins, *Geophysics* and *Leading Edge*.
- Rotary Rigs: Hughes Tool Company, "Rotary Rigs Running—by State."
- Wells and Footage Drilled: EIA computations based on well reports submitted to the American Petroleum Institute by Petroleum Information Corporation.

# Part 6 Coal

## Coal

Coal production in April 1986 totaled 73.4 million short tons, 3.4 million short tons (4.4 percent) below the 76.8 million short tons produced in April 1985.

Electric utility coal consumption in March 1986 totaled 53.9 million short tons, 1.6 percent less than the 54.8 million short tons for March 1985. During the first 3 months of 1986, coal consumption was 173.0 million short tons. This was 0.5 percent less than the 173.9 million short tons consumed during the first 3 months of 1985.

Electric utility coal stocks at the end of March 1986 were 154.4 million short tons, 7.2 percent less than the 166.4 million short tons of stocks 1 year earlier.

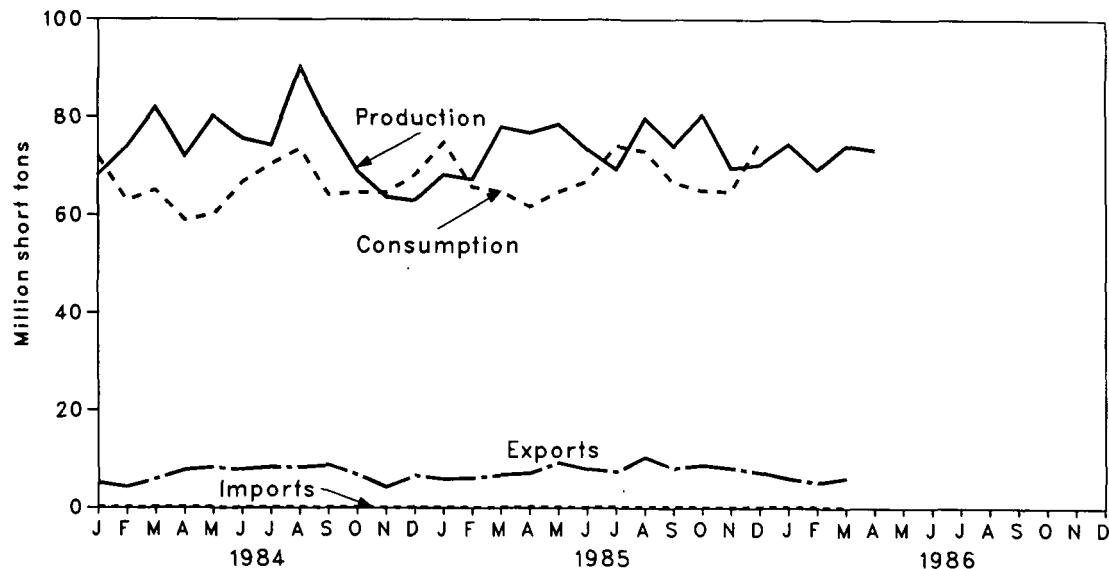
Exports of coal in March 1986 totaled 6.2 million short tons, 8.1 percent less than the 6.7 million short tons exported during March 1985. Coal exports for January through March 1986 totaled 17.2 million short tons, 7.0 percent less than the 18.5 million short tons exported during the comparable period in 1985.

Coal imports of 122,000 short tons in March 1986 were 19,000 short tons more than the amount imported in March 1985. During the first 3 months of 1986, 485,000 short tons of coal were imported, 155,000 short tons more than the amount imported January through March 1985.

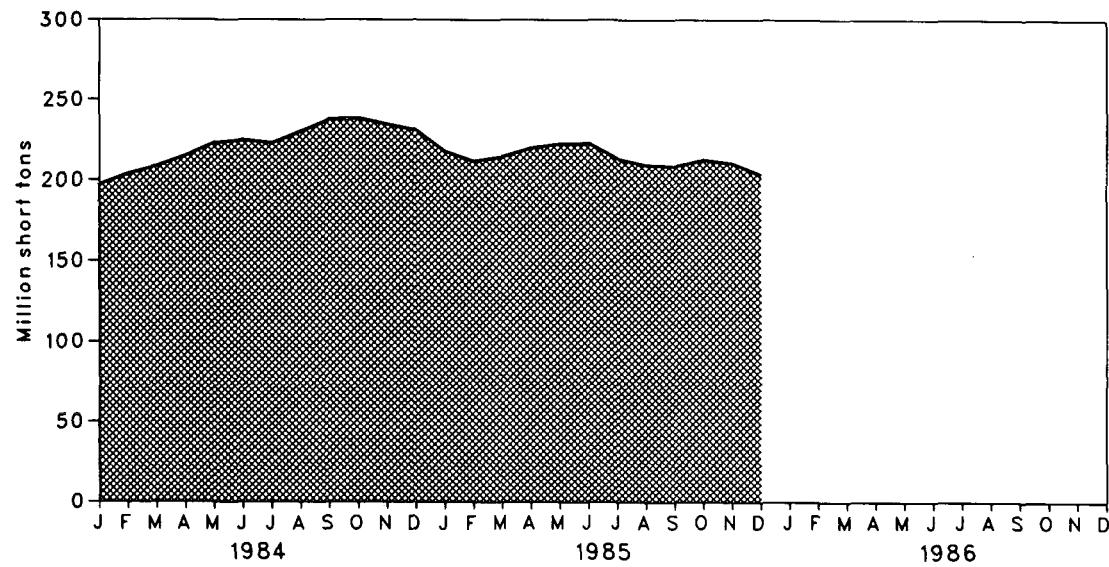
# Coal

## Overview

### Production, Consumption, Imports, and Exports



### Stocks at End of Period



# Coal

## Overview

		Production	Consumption	Imports <sup>1</sup>	Exports <sup>2</sup>	Stocks <sup>3</sup>
Thousand short tons						
1973	Total	598,568	562,584	127	53,587	NA
1974	Total	610,023	558,402	2,080	60,661	NA
1975	Total	654,641	562,641	940	66,309	NA
1976	Total	684,913	603,790	1,203	60,021	NA
1977	Total	697,205	625,291	1,647	54,312	NA
1978	Total	670,164	625,225	2,953	40,714	NA
1979	Total	781,134	680,524	2,059	66,042	202,472
1980	Total	829,700	702,729	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	January	67,921	71,919	81	5,062	196,985
	February	73,670	62,994	140	4,251	203,771
	March	81,524	65,028	55	5,813	208,548
	April	72,751	58,946	148	7,688	215,023
	May	81,073	60,164	72	8,221	223,262
	June	76,402	66,707	49	7,828	224,905
	July	74,785	70,422	193	8,318	223,118
	August	90,823	73,558	147	8,235	230,224
	September	78,984	64,133	95	8,710	237,720
	October	69,785	64,664	104	6,641	238,350
	November	64,388	64,613	68	4,190	234,702
	December	63,815	68,147	134	6,526	231,300
	Total	895,921	791,296	1,286	81,483	
1985	January	†68,259	74,852	126	5,817	218,119
	February	†67,319	65,780	101	6,030	212,011
	March	†77,989	64,861	103	6,696	214,788
	April	†76,783	61,741	203	7,065	220,205
	May	†78,574	64,783	159	9,231	222,787
	June	†73,436	66,967	138	7,913	223,211
	July	†69,348	74,163	177	7,314	213,602
	August	†79,818	73,103	264	10,422	209,555
	September	†74,134	66,674	182	8,095	208,828
	October	†80,488	65,024	128	8,744	212,931
	November	†69,608	64,856	111	8,134	210,678
	December	†70,338	75,191	260	7,220	203,398
	Total	†886,096	817,993	1,952	92,680	
1986	January†	74,524	NA	154	5,935	NA
	February†	69,295	NA	209	5,158	NA
	March†	74,243	NA	122	6,152	NA
	April†	73,399	NA	NA	NA	NA
	Year to Date*	291,461	NA	485	17,245	NA

<sup>1</sup>Includes Puerto Rico.

<sup>2</sup>Excludes shipments of anthracite to U.S. Armed Forces overseas (218,000 short tons in 1982, 341,000 short tons in 1983, 298,000 short tons in 1984, and 240,000 short tons in 1985).

<sup>3</sup>Stocks held by electric utilities, coke plants, general industry, and coal producers and distributors at the end of period. Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

\*Total of available data.

†Preliminary data. NA = Not available.

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

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

• See Note on the last page of this section for methodology used to calculate production, consumption, and stocks.

Sources: • See the last page of this section.

# Coal

## Consumption by End-Use Sector<sup>1</sup>

		Industrial				
		Electric Utilities	Coke Plants	Other Industrial Including Transportation	Residential and Commercial	Total
Thousand short tons						
1973	Total	389,212	94,101	68,154	11,117	562,584
1974	Total	391,811	90,191	64,983	11,417	558,402
1975	Total	405,962	83,598	63,670	9,410	562,641
1976	Total	448,371	84,704	61,799	8,916	603,790
1977	Total	477,126	77,739	61,472	8,954	625,291
1978	Total	481,235	71,394	63,085	9,511	625,225
1979	Total	527,051	77,368	67,717	8,388	680,524
1980	Total	569,274	66,657	60,347	6,451	702,729
1981	Total	596,797	61,014	67,395	7,421	732,627
1982	Total	593,666	40,908	64,097	8,240	706,911
1983	Total	625,211	37,033	65,980	8,448	736,672
1984	January	60,225	3,791	6,858	1,045	71,919
	February	52,257	3,592	6,230	915	62,994
	March	54,534	3,843	5,999	652	65,028
	April	47,565	4,180	6,273	928	58,946
	May	49,507	4,100	5,997	560	60,164
	June	56,971	3,564	5,729	443	66,707
	July	60,359	3,639	5,730	694	70,422
	August	63,396	3,620	5,886	656	73,558
	September	54,045	3,557	5,659	872	64,133
	October	54,753	3,317	5,902	692	64,664
	November	54,229	3,346	6,305	733	64,613
	December	56,560	3,473	7,176	938	68,147
	Total	664,399	44,022	73,745	9,130	791,296
1985	January	63,645	3,463	6,914	830	74,852
	February	55,491	3,282	6,281	726	65,780
	March	54,784	3,511	6,048	518	64,861
	April	50,903	3,851	6,223	764	61,741
	May	54,595	3,778	5,950	461	64,783
	June	57,634	3,284	5,684	365	66,967
	July	64,252	3,437	5,951	523	74,163
	August	63,076	3,420	6,113	494	73,103
	September	56,780	3,361	5,877	656	66,674
	October	54,969	3,165	6,174	716	65,024
	November	54,311	3,192	6,595	758	64,856
	December	63,402	3,314	7,506	969	75,191
	Total	693,841	41,056	75,317	7,779	817,993
1986	January†	64,032	NA	NA	NA	NA
	February†	55,049	NA	NA	NA	NA
	March†	53,898	NA	NA	NA	NA
	Year to Date	172,979	NA	NA	NA	NA

<sup>1</sup>See Note 2 on the last page of this section.

†Total of available data.

‡Preliminary data. NA=Not available.

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

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

Sources: • See the last page of this section.

# Coal

## Stocks at End of Period

		Consumer				Producers and Distributors	Total <sup>1</sup>
		Electric Utilities	Coke Plants	Other Industrial	Total <sup>1</sup>		
Thousand short tons							
1973	Year	86,967	6,998	10,370	104,335	NA	NA
1974	Year	83,509	6,209	6,605	96,323	NA	NA
1975	Year	110,724	8,797	8,529	128,050	NA	NA
1976	Year	117,436	9,902	7,100	134,438	NA	NA
1977	Year	133,219	12,816	11,063	157,098	NA	NA
1978	Year	128,225	8,278	9,048	145,551	NA	NA
1979	Year	159,714	10,155	11,777	181,646	20,826	202,472
1980	Year	183,010	9,067	11,951	204,028	24,379	228,407
1981	Year	168,893	6,475	9,906	185,274	24,149	209,423
1982	Year	181,132	4,642	9,479	195,254	36,784	232,038
1983	Year	155,598	4,346	8,710	168,654	33,931	202,584
1984	January	149,403	4,947	8,593	162,943	34,042	196,985
	February	155,593	5,548	8,476	169,617	34,154	203,771
	March	159,775	6,149	8,359	174,283	34,265	208,548
	April	165,592	7,171	9,137	181,900	33,123	215,023
	May	173,171	8,194	9,915	191,280	31,982	223,262
	June	174,155	9,217	10,693	194,065	30,841	224,905
	July	171,095	9,658	11,904	192,657	30,461	223,118
	August	176,928	10,099	13,116	200,143	30,081	230,224
	September	183,151	10,541	14,327	208,019	29,701	237,720
	October	184,779	9,083	13,324	207,186	31,164	238,350
	November	182,130	7,625	12,320	202,075	32,627	234,702
	December	179,727	6,166	11,317	197,211	34,090	231,300
1985	January	167,592	5,583	10,427	183,602	34,517	218,119
	February	162,531	4,999	9,537	177,067	34,944	212,011
	March	166,355	4,415	8,647	179,417	35,371	214,788
	April	171,695	4,472	8,725	184,892	35,313	220,205
	May	174,198	4,530	8,804	187,532	35,255	222,787
	June	174,545	4,587	8,882	188,013	35,197	223,211
	July	165,903	4,171	9,186	179,260	34,342	213,602
	August	162,825	3,754	9,489	176,068	33,487	209,555
	September	163,065	3,338	9,793	176,196	32,632	208,828
	October	166,749	3,365	10,018	180,132	32,799	212,931
	November	164,075	3,393	10,244	177,712	32,966	210,678
	December	156,376	3,420	10,469	170,265	33,133	203,398
1986	January†	152,078	NA	NA	NA	NA	NA
	February†	151,157	NA	NA	NA	NA	NA
	March†	154,409	NA	NA	NA	NA	NA

<sup>1</sup>Excludes stocks held at retail dealers for consumption by the residential and commercial sector.

†Preliminary data. NA=Not available.

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

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

Sources: • See the last page of this section.

## Notes and Sources for the Coal Section

### 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 (AAR) 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 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 (ICC). 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 factor because data for the current quarter are not yet available. This method also ensures that the seasonal variations in production are preserved.

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 the *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:** Both monthly and quarterly consumption for electric utility plants are taken directly from reported data. Prior to 1980, monthly consumption at coke plants was also taken directly from reported data. Since that time, it has been estimated by proportioning reported quarterly data using the ratios of monthly to quarterly consumption in 1979, the last year in which monthly data were reported. Quarterly consumption is taken directly from reported data.

Prior to 1978, monthly consumption for the other industrial sector (i.e., all industrial users minus coke plants) was 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 subsequent years, monthly figures were derived from data reported on Forms EIA-3 and EIA-6. Beginning in 1980, monthly figures have been estimated by proportioning derived quarterly data using the ratios of monthly to quarterly consumption in 1979, the last year in which monthly data were reported on Form EIA-3. Quarterly consumption for the other industrial sector is derived from reported data by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts are taken as 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 are included where appropriate.

Prior to 1980, monthly consumption for the residential and commercial sector was derived by using reported data to modify baseline figures developed by the Bureau of Mines. Since that time, it has been estimated by proportioning reported quarterly data using the ratios of monthly to quarterly consumption 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 temper-

ature degree-days. Quarterly consumption is taken directly from reported data and is defined as distribution to the residential and commercial sector as reported by coal producers and distributors on Form EIA-6.

**3. Stocks:** Both monthly and quarterly stocks at electric utility plants are taken directly from reported data. Prior to 1980, monthly stocks at coke plants were also taken directly from reported data. Since that time, they have been 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.

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. During the period 1978 through 1982, they were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. Since that time, they have been 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.

Prior to 1980, monthly and quarterly stock data for the residential and commercial sector were taken directly from reported data. Monthly and quarterly stock data are not available for the residential and commercial sector after December 1979.

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.

Additional information concerning coal production, consumption, and stock data and estimation procedures may be obtained in EIA's *Quarterly Coal Report*, DOE/EIA-0121.

### Sources

**Production:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys*; October 1977 forward: Energy Information Administration (EIA), *Weekly Coal Production*.

**Consumption and Stocks:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys* (except Residential and Commercial Consumption and Stocks and Producers and Distributors Stocks);

- Electric Utilities—October 1977 forward: EIA, Form EIA-759 (formerly FPC Form 4), "Monthly Power Plant Report."

- Coke Plants—October 1977 through December 1980: EIA, Form EIA-5/5A, "Coke and Coal Chemicals-Monthly/Annual"; January 1981 forward: EIA, Form EIA-5/5A, "Coke Plant Report-Quarterly/Annual Supplement."

- Other Industrial—October 1977 through December 1979: EIA, Form EIA-3, "Monthly Fuel Consumption Report-Manufacturing Plants"; January 1980 forward: EIA, Form EIA-3, "Quarterly Fuel Consumption Report-Manufacturing Plants" and Form EIA-6, "Coal Distribution Report."

- Residential and Commercial Consumption and Stocks—1973 through 1976: Bureau of Mines, *Minerals Yearbook*; January 1977 through September 1977: Bureau of Mines, Form 6-1400-M, "Monthly Coal Report, Retail Dealers—Upper Lake Docks"; October 1977 through December 1979: EIA, Form EIA-2, "Monthly Coal Report, Retail Dealers—Upper Lake Docks"; January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report," (stock data are not collected).

- Producers and Distributors Stocks—January 1980 forward: EIA, Form EIA-6, "Coal Distribution Report."

**Imports and Exports:** Bureau of the Census, U.S. Department of Commerce, Monthly Reports IM-145 (Imports) and EM-522 (Exports).

# Part 7

## Electric Utilities

### Electric Utilities

During March 1986, electric utilities generated 196.7 billion kilowatthours of electricity, 0.9 percent above the March 1985 generation level. Coal-fired generation totaled 110.4 billion kilowatthours, 0.9 percent below the March 1985 level. Nuclear generation totaled 30.8 billion kilowatthours, 0.9 percent below the March 1985 level. Hydroelectric generation was 28.3 billion kilowatthours in March 1986, 15.0 percent above the March 1985 level. Natural gas-fired generation was 16.1 billion kilowatthours, 18.6 percent below the level 1 year earlier. Petroleum-fired generation totaled 10.1 billion kilowatthours, 41.4 percent above the March 1985 level.

During the first quarter of 1986, electric utilities generated 606.9 billion kilowatthours of electricity, 2.3 percent below first-quarter 1985 generation. Coal-fired generation during the first quarter of 1986 totaled 351.4 billion kilowatthours, 0.3 percent below the level in the same period of 1985. Nuclear generation totaled 99.7 billion kilowatthours, 1.7 percent above the first-quarter 1985 level. Hydroelectric generation during the first quarter of 1986 was 73.5 billion kilowatthours, 5.9 percent below the generation in the same period of 1985. Natural gas-fired generation was 48.5 billion kilowatthours, 20.8 percent below the first-quarter 1985 level. Petroleum-fired generation totaled 30.7 billion kilowatthours during the first quarter of 1986, 7.7 percent above the level in the same period of 1985. Electricity generated from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources totaled 3.1 billion kilowatthours during the first quarter of 1986, 16.1 percent above the level in the same period of 1985.

Sales of electricity to all ultimate consumers in the United States in March 1986 were 188.5 billion kilowatthours, 1.9 percent above March 1985 sales. Sales to residential consumers during March 1986 were 65.6 billion kilowatthours, 2.5 percent above the level of sales during the same month in 1985. Commercial sales were 48.5 billion kilowatthours, 3.9 percent more than the amount sold to commercial consumers in March 1985. Sales to industrial consumers totaled 67.6 billion kilowatthours in March 1986, 0.3 percent

more than the 1985 figure. In March 1986, other sales totaled 6.8 billion kilowatthours, 0.4 percent below the March 1985 level.

Sales of electricity to all ultimate consumers in the United States from January through March 1986 were 590.7 billion kilowatthours, 0.6 percent above first-quarter 1985 sales. Sales to residential consumers during the first quarter of 1986 were 219.4 billion kilowatt-hours, 0.5 percent above the level of sales during the same period in 1985. Commercial sales were 152.2 billion kilowatthours, 4.5 percent more than the amount sold to commercial consumers in the first quarter of 1985. Sales to industrial consumers totaled 198.3 billion kilowatthours during the first quarter of 1986, 1.5 percent less than the 1985 figure. During the first 3 months of 1986, other sales totaled 20.9 billion kilowatthours, 1.3 percent below the first-quarter 1985 level.

Electric utility petroleum consumption (excluding petroleum coke) during March 1986 was 17.0 million barrels, 38.5 percent above the March 1985 level. Coal consumption during March 1986 was 53.9 million short tons, 1.6 percent below the March 1985 rate. During March 1986, electric utilities consumed 169.7 billion cubic feet of natural gas, 17.7 percent below the March 1985 consumption level.

Electric utility petroleum consumption (excluding petroleum coke) during the first quarter of 1986 totaled 52.1 million barrels, 5.3 percent above consumption in the same period of 1985. Coal consumption during the first quarter of 1986 was 173.0 million short tons, 0.5 percent below the 1985 rate. During the first quarter of 1986, electric utilities consumed 510.8 billion cubic feet of natural gas, 19.6 percent below the first-quarter 1985 consumption level.

On March 31, 1986, utility stocks of anthracite, bituminous coal, and lignite totaled 154.4 million short tons. These stockpiles were 7.2 percent below the level of March 31, 1985. Petroleum stocks (excluding petroleum coke) on March 31, 1986, totaled 71.5 million barrels, 11.0 percent below the level on the same date in 1985.

# Electric Utilities

## Net Electricity Generation by Primary Energy Source

		Coal	Petroleum <sup>1</sup>	Natural Gas <sup>2</sup>	Nuclear Electric Power	Hydro-electric Power	Other <sup>3</sup>	Total
Million kilowatthours								
1973	Total	847,651	314,343	340,858	83,479	272,083	2,294	1,860,710
1974	Total	828,433	300,931	320,065	113,976	301,032	2,703	1,867,140
1975	Total	852,786	289,095	299,778	172,505	300,047	3,437	1,917,649
1976	Total	944,391	319,988	294,624	191,104	283,707	3,883	2,037,696
1977	Total	985,219	358,179	305,505	250,883	220,475	4,063	2,124,323
1978	Total	975,742	365,060	305,391	276,403	280,419	3,315	2,206,331
1979	Total	1,075,037	303,525	329,485	255,155	279,783	4,387	2,247,372
1980	Total	1,161,562	245,994	346,240	251,116	276,021	5,506	2,286,439
1981	Total	1,203,203	206,421	345,777	272,674	260,684	6,054	2,294,812
1982	Total	1,192,004	146,797	305,260	282,773	309,213	5,164	2,241,211
1983	Total	1,259,424	144,499	274,098	293,677	332,130	6,456	2,310,285
1984	January	120,850	15,939	20,245	29,313	29,737	547	216,632
	February	104,706	10,053	17,827	28,436	27,900	643	189,564
	March	111,158	10,806	19,645	27,345	30,435	719	200,107
	April	97,542	7,450	21,197	24,231	29,970	695	181,084
	May	100,139	8,422	25,304	25,867	31,814	673	192,217
	June	115,426	11,152	28,345	25,299	28,773	654	209,648
	July	121,094	10,397	33,327	28,284	27,495	648	221,245
	August	127,744	12,836	33,292	29,493	25,137	794	229,296
	September	108,862	7,713	27,839	29,146	20,911	728	195,198
	October	110,801	7,874	25,783	24,774	20,887	819	190,936
	November	109,759	9,232	23,728	24,575	22,259	827	190,380
	December	113,601	7,935	20,863	30,872	25,834	892	199,996
	Total	1,341,681	119,808	297,394	327,634	321,150	8,638	2,416,304
1985	January	129,092	12,077	22,051	36,186	27,543	906	227,856
	February	112,037	9,270	19,417	30,812	25,902	803	198,242
	March	111,391	7,120	19,848	31,041	24,640	930	194,970
	April	104,790	6,017	22,425	26,458	24,403	783	184,740
	May	111,515	6,859	22,481	28,697	26,421	816	196,790
	June	115,583	7,576	26,740	30,837	23,839	788	205,363
	July	128,880	8,289	32,191	35,184	21,293	885	226,722
	August	126,550	9,858	33,915	34,812	19,981	934	226,050
	September	114,630	7,435	26,273	34,508	18,767	887	202,499
	October	111,053	7,514	24,120	31,205	20,048	849	194,789
	November	108,815	7,008	22,453	30,166	22,954	1,031	192,427
	December	127,792	11,177	20,031	33,782	25,359	1,113	219,255
	Total	1,402,128	100,202	291,946	383,691	281,149	10,724	2,469,841
1986	January	130,017	11,088	17,473	36,219	21,815	1,123	217,735
	February	110,999	9,513	14,925	32,721	23,319	956	192,433
	March	110,390	10,070	16,149	30,773	28,346	984	196,711

<sup>1</sup>Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.

<sup>2</sup>Includes supplemental gaseous fuels.

<sup>3</sup>Other is electricity produced from geothermal, wood, waste, wind, photovoltaic, and solar thermal energy sources connected to electric utility distribution systems.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Electric Utilities

## Electricity Sales<sup>1</sup>

		Residential	Commercial	Industrial	Other <sup>2</sup>	Total
Million kilowatthours						
1973	Total	579,231	388,266	686,085	59,328	1,712,910
1974	Total	578,184	384,826	684,875	58,039	1,705,924
1975	Total	588,140	403,049	687,680	68,222	1,747,091
1976	Total	606,452	425,094	754,069	69,631	1,855,246
1977	Total	645,239	446,514	786,037	70,571	1,948,361
1978	Total	674,466	461,163	809,078	73,215	2,017,922
1979	Total	682,819	473,307	841,903	73,070	2,071,099
1980	Total	717,495	488,156	815,067	73,732	2,094,449
1981	Total	722,265	514,338	825,742	84,756	2,147,101
1982	Total	729,519	526,397	744,949	85,575	2,086,440
1983	Total	750,948	543,788	775,999	80,219	2,150,955
1984	January	83,295	49,243	66,709	7,289	206,537
	February	69,818	46,293	67,445	6,690	190,246
	March	63,656	45,232	69,684	6,902	185,475
	April	56,373	43,052	69,048	6,339	174,813
	May	53,519	44,150	70,774	6,559	175,003
	June	59,955	49,454	73,037	6,714	189,160
	July	71,020	53,922	71,843	7,006	203,791
	August	73,138	53,603	74,534	7,089	208,364
	September	67,456	52,854	71,275	6,780	198,365
	October	55,965	48,061	70,945	6,732	181,702
	November	56,543	45,937	68,688	6,840	178,008
	December	66,915	46,481	66,606	6,908	186,910
	Total	777,654	578,281	840,588	81,849	2,278,372
1985	January	77,242	49,634	67,219	7,270	201,364
	February	78,011	49,406	66,582	7,046	201,045
	March	63,981	46,629	67,437	6,875	184,922
	April	56,025	45,826	68,445	7,049	177,345
	May	52,842	47,711	R70,140	R6,903	R177,596
	June	60,652	51,521	70,091	R6,848	R189,112
	July	R70,966	56,128	69,760	7,135	R203,989
	August	73,693	57,041	71,402	7,277	209,414
	September	71,064	55,960	70,744	7,263	205,030
	October	57,515	49,978	69,158	6,903	183,554
	November	56,794	47,843	67,164	7,264	179,065
	December	72,192	51,289	66,383	7,243	197,107
	Total	R790,977	608,968	R824,523	R85,075	R2,309,543
1986 <sup>a</sup>	January	82,956	53,376	65,548	7,222	209,102
	February	70,820	50,371	65,116	6,856	193,162
	March†	65,576	48,452	67,607	6,848	188,483
	Year to Date	219,352	152,198	198,270	20,926	590,747

<sup>1</sup>Electricity sales to all ultimate consumers.

<sup>2</sup>Includes sales of electricity to Government, railways, street lighting authorities, and sales not included elsewhere.

<sup>a</sup>Beginning with January 1986, monthly electricity sales estimates are based on a new sample and new expansion factors from data reported on Form EIA 861, "Annual Electric Utility Report."

†Initial estimates. R=Revised data.

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

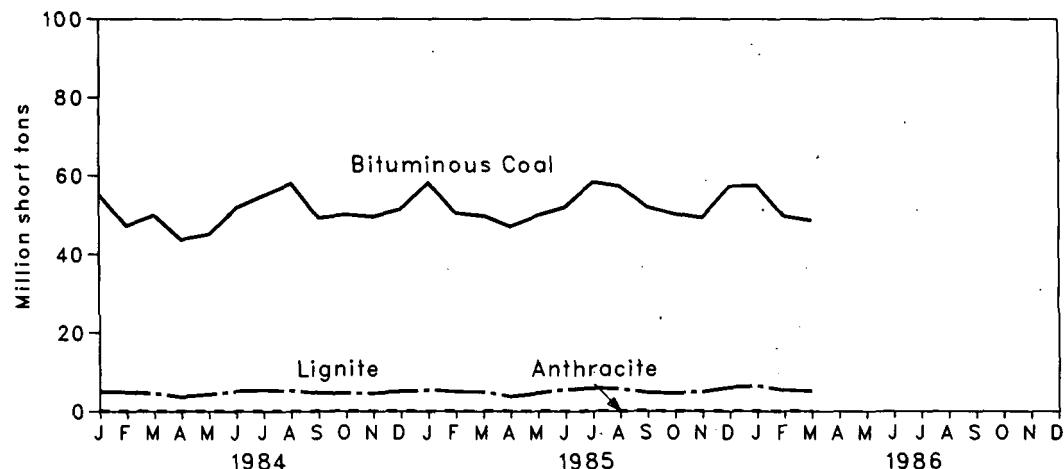
• Totals may not equal sum of components due to independent rounding.

Sources: Energy Information Administration (EIA). • 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; • March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; • January 1983 forward: Form EIA 826, "Electric Utility Company Monthly Statement."

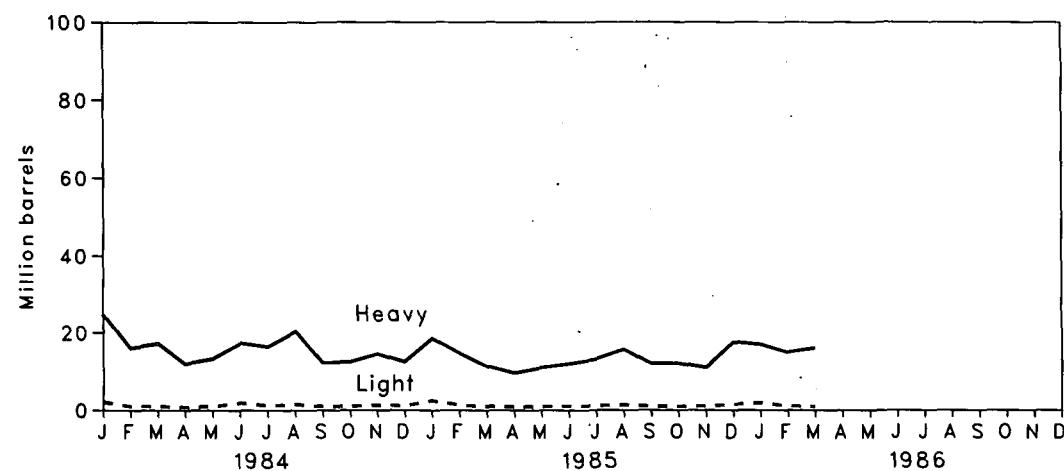
## **Electric Utilities**

## **Primary Energy Consumed to Produce Electricity**

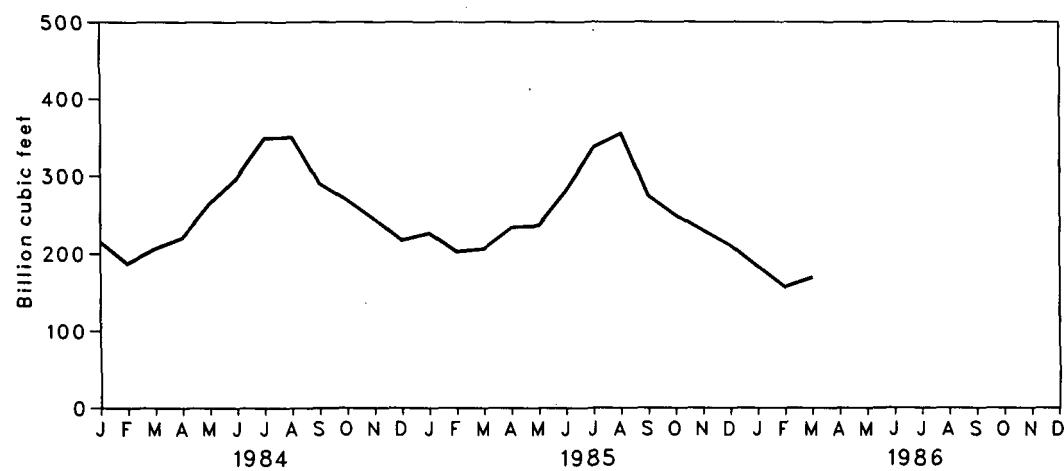
## **Coal Consumption**



## Petroleum Consumption



## Natural Gas Consumption



# Electric Utilities

## Primary Energy Consumed to Produce Electricity

		Coal				Petroleum				Natural Gas <sup>1</sup>
		Anthracite	Bituminous Coal	Lignite	Total	Heavy <sup>2</sup>	Light <sup>3</sup>	Total Liquids	Petroleum Coke	Million cubic feet
									Thousand short tons	
1973	Total	1,443	376,975	10,794	389,212	(*)	(*)	560,248	507	3,660,172
1974	Total	1,498	378,643	11,670	391,811	(*)	(*)	536,274	625	3,443,428
1975	Total	1,480	388,523	15,960	405,962	(*)	(*)	506,128	70	3,157,669
1976	Total	1,350	425,205	21,817	448,371	(*)	(*)	555,920	68	3,080,868
1977	Total	1,425	451,051	24,650	477,126	(*)	(*)	623,705	98	3,191,200
1978	Total	1,064	448,763	31,407	481,235	(*)	(*)	635,839	398	3,188,363
1979	Total	1,046	488,129	37,876	527,051	(*)	(*)	523,297	268	3,490,523
1980	Total	951	526,680	41,642	569,274	391,163	29,051	420,214	179	3,681,595
1981	Total	1,221	550,784	44,792	596,797	329,798	21,313	351,111	139	3,640,154
1982	Total	1,075	543,346	49,245	593,666	234,434	15,337	249,771	149	3,225,518
1983	Total	1,036	570,108	54,067	625,211	228,984	16,512	245,497	261	2,910,767
1984	January	98	55,142	4,985	60,225	24,745	2,176	26,921	24	215,027
	February	75	47,279	4,904	52,257	16,091	1,018	17,108	21	187,259
	March	69	49,921	4,543	54,534	17,274	1,016	18,290	18	206,171
	April	83	43,779	3,703	47,565	11,971	831	12,802	22	220,005
	May	99	45,115	4,294	49,507	13,327	1,010	14,337	23	264,522
	June	102	51,757	5,112	56,971	17,363	1,927	19,289	23	297,560
	July	100	54,928	5,331	60,359	16,453	1,259	17,712	22	348,848
	August	97	58,026	5,273	63,396	20,337	1,522	21,859	20	349,878
	September	81	49,288	4,675	54,045	12,235	996	13,231	21	290,595
	October	83	50,091	4,578	54,753	12,450	965	13,415	19	269,629
	November	91	49,595	4,543	54,229	14,543	1,326	15,870	17	244,637
	December	93	51,418	5,050	56,560	12,499	1,146	13,645	20	217,210
	Total	1,070	606,339	56,990	664,399	189,289	15,190	204,479	252	R3,111,342
1985	January	88	58,155	5,402	63,645	18,574	2,482	21,056	18	226,276
	February	70	50,481	4,940	55,491	14,729	1,333	16,062	17	202,546
	March	78	49,793	4,913	R54,784	11,323	980	12,303	16	206,286
	April	92	47,072	3,738	50,903	9,561	911	10,471	16	233,819
	May	98	49,890	4,607	54,595	11,046	962	12,008	13	236,220
	June	90	51,984	5,561	57,634	12,005	1,111	13,116	21	281,939
	July	92	58,327	5,833	64,252	13,238	1,109	14,347	20	336,535
	August	96	57,304	5,676	63,076	15,730	1,338	17,067	19	354,653
	September	74	52,031	4,675	56,780	11,994	979	12,972	24	274,868
	October	85	50,265	4,619	54,969	12,060	969	13,029	23	249,579
	November	83	49,315	4,913	54,311	10,925	1,021	11,946	23	229,943
	December	86	57,270	6,046	63,402	17,595	1,440	19,035	20	210,417
	Total	1,033	631,885	60,923	693,841	158,779	14,635	173,414	231	3,044,083
1986	January	67	57,483	6,482	64,032	17,037	1,905	18,942	15	184,025
	February	50	49,673	5,325	55,049	14,978	1,100	16,077	15	157,070
	March	88	48,691	5,119	53,098	16,090	954	17,044	23	169,698

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.

<sup>3</sup>Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.

\*Prior to 1980, petroleum consumption data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.

R=Revised data.

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

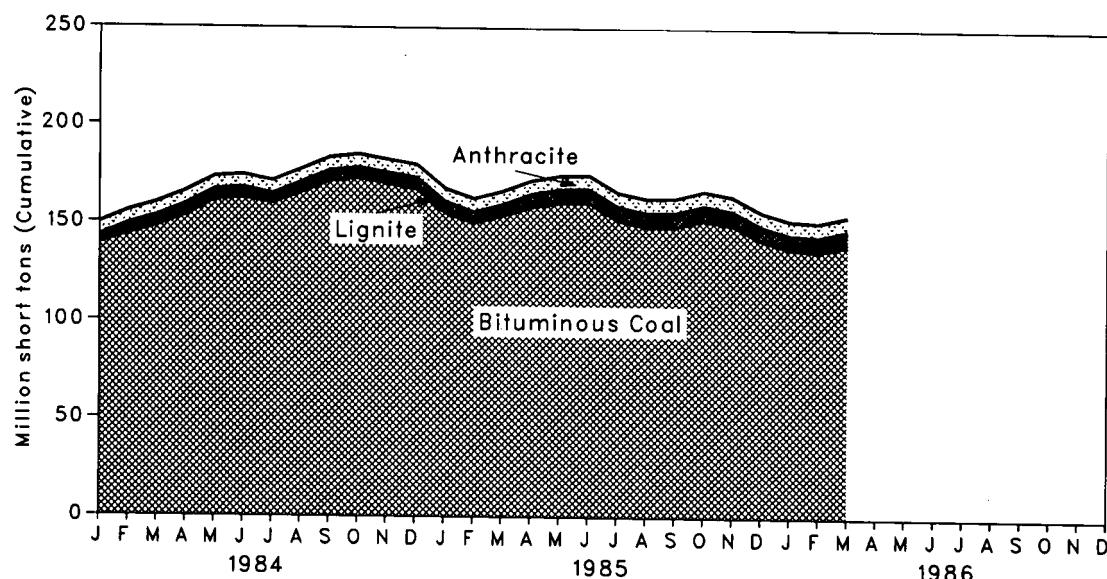
• Totals may not equal sum of components due to independent rounding.

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

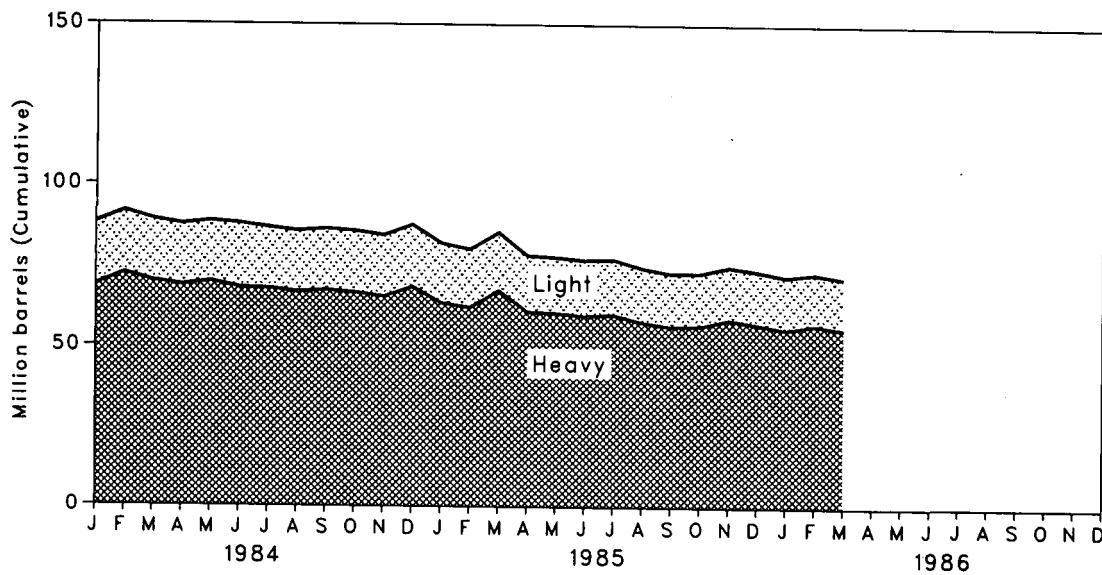
## Electric Utilities

### Coal and Petroleum Stocks at End of Period

#### Coal Stocks



#### Petroleum Stocks



# Electric Utilities

## Coal and Petroleum Stocks at End of Period

		Coal				Petroleum			
		Anthracite	Bituminous			Heavy <sup>1</sup>	Light <sup>2</sup>	Total Liquids	Petroleum Coke
			Coal	Lignite	Total				
		Thousand short tons							
1973	Year	1,066	84,941	961	86,967	(*)	(*)	89,216	312
1974	Year	930	81,712	867	83,509	(*)	(*)	112,917	35
1975	Year	982	107,927	1,815	110,724	(*)	(*)	125,257	31
1976	Year	1,000	114,130	2,306	117,436	(*)	(*)	121,696	32
1977	Year	2,321	128,210	2,688	133,219	(*)	(*)	144,031	44
1978	Year	2,178	123,020	3,027	128,225	(*)	(*)	118,788	198
1979	Year	3,274	152,981	3,459	159,714	(*)	(*)	131,422	183
1980	Year	4,741	174,154	4,115	183,010	105,351	30,023	135,374	52
1981	Year	5,537	158,258	5,098	168,893	102,042	26,094	128,136	42
1982	Year	6,080	170,480	4,573	181,132	95,515	23,369	118,884	41
1983	Year	6,507	145,250	3,841	155,598	70,573	18,801	89,375	55
1984	January	6,500	139,026	3,877	149,403	68,679	19,369	88,048	43
	February	6,510	143,731	5,352	155,593	72,339	19,227	91,566	41
	March	6,519	147,756	5,500	159,775	69,984	19,058	89,042	45
	April	6,515	153,300	5,777	165,592	68,771	18,849	87,620	47
	May	6,532	161,067	5,573	173,171	69,890	18,695	88,584	51
	June	6,541	162,426	5,188	174,155	68,098	19,807	87,906	51
	July	6,530	159,683	4,883	171,095	67,856	18,840	86,696	50
	August	6,583	164,987	5,358	176,928	66,836	18,795	85,632	47
	September	6,628	170,987	5,536	183,151	67,370	18,921	86,291	49
	October	6,674	172,553	5,552	184,779	66,717	18,965	85,682	49
	November	6,715	169,788	5,627	182,130	65,548	18,875	84,423	43
	December	6,710	167,118	5,899	179,727	68,503	19,116	87,619	50
1985	January	6,719	155,067	5,806	167,592	63,546	18,518	82,064	57
	February	6,736	150,077	5,717	162,531	62,094	18,088	80,182	50
	March	6,782	153,739	5,834	166,355	62,558	17,837	80,395	43
	April	6,836	158,218	6,641	171,695	60,889	17,398	78,286	31
	May	6,905	160,326	6,967	174,198	60,530	17,236	77,765	33
	June	6,991	160,595	6,959	174,545	59,629	17,218	76,846	33
	July	7,045	151,809	7,049	165,903	60,116	17,034	77,151	43
	August	7,109	148,698	7,018	162,825	57,820	16,699	74,519	42
	September	7,185	148,637	7,243	163,065	56,487	16,442	72,930	40
	October	7,258	151,999	7,492	166,749	56,676	16,292	72,968	43
	November	7,223	149,579	7,272	164,075	58,720	16,250	74,970	47
	December	7,189	142,144	7,043	156,376	57,304	16,386	73,689	49
1986	January	7,182	137,699	7,196	152,078	55,757	16,254	72,011	52
	February	7,172	136,487	7,498	151,157	57,143	15,834	72,976	50
	March	7,146	139,529	7,734	154,409	55,811	15,731	71,542	36

<sup>1</sup>Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.

<sup>2</sup>Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.

<sup>a</sup>Prior to 1980, petroleum stock data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Electric Utilities

## Petroleum Consumption and Stocks by Prime Mover Type

Petroleum Consumption				Petroleum Stocks at End of Period		
	Steam Plants	GT/IC <sup>1</sup>	Total Liquids	Steam Plants	GT/IC <sup>1</sup>	Total Liquids
Thousand barrels						
1973 Total	513,190	47,058	560,248	79,121	10,095	89,216
1974 Total	483,146	53,128	536,274	97,718	15,199	112,917
1975 Total	467,221	38,907	506,128	108,825	16,432	125,257
1976 Total	514,077	41,843	555,920	106,993	14,703	121,696
1977 Total	574,869	48,837	623,705	124,750	19,281	144,031
1978 Total	588,319	47,520	635,839	102,402	16,386	118,788
1979 Total	492,606	30,691	523,297	111,121	20,301	131,422
1980 Total	401,863	18,351	420,214	117,227	18,147	135,374
1981 Total	339,680	11,431	351,111	112,380	15,756	128,136
1982 Total	243,537	6,234	249,771	105,287	13,597	118,884
1983 Total	237,845	7,652	245,497	78,285	11,090	89,375
1984	January	25,838	1,082	26,921	76,756	11,292
	February	16,662	447	17,108	80,404	11,163
	March	17,881	410	18,290	78,014	11,028
	April	12,495	306	12,802	76,721	10,899
	May	13,896	441	14,337	77,699	10,886
	June	17,997	1,293	19,289	76,126	11,780
	July	17,085	627	17,712	75,788	10,908
	August	20,957	902	21,859	74,832	10,799
	September	12,795	436	13,231	75,588	10,703
	October	13,019	396	13,415	74,906	10,775
	November	15,177	692	15,870	73,833	10,590
	December	13,247	398	13,645	76,836	10,784
	Total	197,050	7,429	204,479		
1985	January	19,846	1,210	21,056	71,528	10,536
	February	15,595	467	16,062	70,088	10,094
	March	11,966	337	12,303	70,385	10,010
	April	10,133	338	10,471	68,651	9,636
	May	11,604	403	12,008	68,249	9,516
	June	12,516	601	13,116	67,529	9,317
	July	13,840	507	14,347	67,816	9,334
	August	16,272	795	17,067	65,307	9,212
	September	12,485	488	12,972	63,701	9,229
	October	12,646	383	13,029	63,908	9,059
	November	11,584	362	11,946	66,103	8,867
	December	18,355	680	19,035	64,704	8,985
	Total	166,842	6,572	173,414		
1986	January	17,915	1,027	18,942	63,224	8,787
	February	15,536	541	16,077	64,313	8,663
	March	16,611	433	17,044	62,825	8,717
						71,542

<sup>1</sup>GT/IC=Gas turbine and internal combustion plants.

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

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

Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; • October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; • 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

# Part 8

## Nuclear

### Nuclear

In March 1986, U.S. nuclear power plants generated a total of 30.8 billion net kilowatt-hours of electricity while achieving an average capacity factor of 51.3 percent. This generation represents a decrease of 0.9 percent compared with March 1985 generation. Nuclear power supplied 15.6 percent of the electricity generated in March 1986 compared with 15.9 percent in March 1985.

For the period from January through March 1986, nuclear generation increased 1.7 percent compared with first quarter generation in 1985. The monthly capacity factor for the first quarter of 1986 averaged 57.4 percent compared with an average monthly capacity factor of 63.2 percent in the same period of 1985. During the first quarter of 1986, nuclear power supplied 16.4 percent of the electricity distributed compared with a 15.8-percent share of the electricity distributed in the first quarter of 1985.

On March 13, Diablo Canyon-2, a 1,070-net-megawatt-electric pressurized-water reactor, was declared commercially operable by the Pacific Gas and Electric Company. A full-power amendment to the operating license for Diablo Canyon-2 had been issued by the Nuclear Regulatory Commission in August 1985. Perry-1, a 1,193-net-megawatt-electric boiling-water reactor operated by the Cleveland Electric Illuminating Company, was issued an operating license on March 18. The license authorizes fuel-loading and low-power testing.

There were 96 operable U.S. nuclear power generating units as of March 31, 1986, with a collective net generating capability of 80.7 million net kilowatts. Four additional units had

licenses from the Nuclear Regulatory Commission authorizing fuel-loading and low-power testing (Catawba-2, Palo Verde-2, Perry-1, and Shoreham). Of the 96 operable units, 3 were in power ascension (Fermi-2, Millstone-3, and River Bend-1), and 38 units generated no electricity or operated substantially below capacity (Browns Ferry-1, Browns Ferry-2, Browns Ferry-3, Brunswick-2, Callaway, Connecticut Yankee, Cook-2, Crystal River-3, Davis Besse, Dresden-3, Fitzpatrick, Fort Saint Vrain, Hanford-1, Hatch-1, Indian Point-2, Keweenaw, LaCrosse, LaSalle-1, Limerick-1, Nine Mile Point-1, North Anna-2, Oconee-1, Palisades, Palo Verde-1, Peach Bottom-3, Prairie Island-2, Quad Cities-1, Rancho Seco, Robinson-2, San Onofre-1, Sequoyah-1, Sequoyah-2, Susquehanna-1, Turkey Point-3, Turkey Point-4, Vermont Yankee, Waterford-3, and WNP-2). The 38 units in March 1986 compare with 22 units in March 1985 that generated no electricity or operated substantially below capacity. One-fourth of this increase in the number of inoperable units can be attributed to the Tennessee Valley Authority's shutdown of all its nuclear units in the fall of 1985.

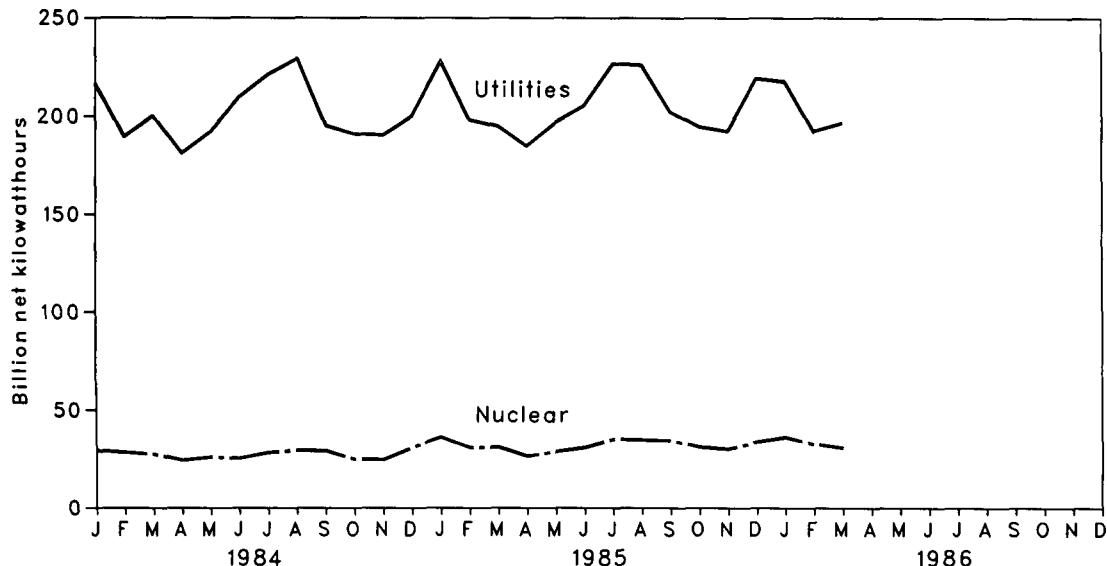
During the first quarter of 1986 no additional nuclear power generating units became commercially operable, compared with 2 units that became commercially operable during the same period of 1985.

As of March 31, 1986, there were 130 domestic nuclear power generating units in all stages of planning, construction, or operation, with an aggregate design capacity of 121 million net kilowatts.

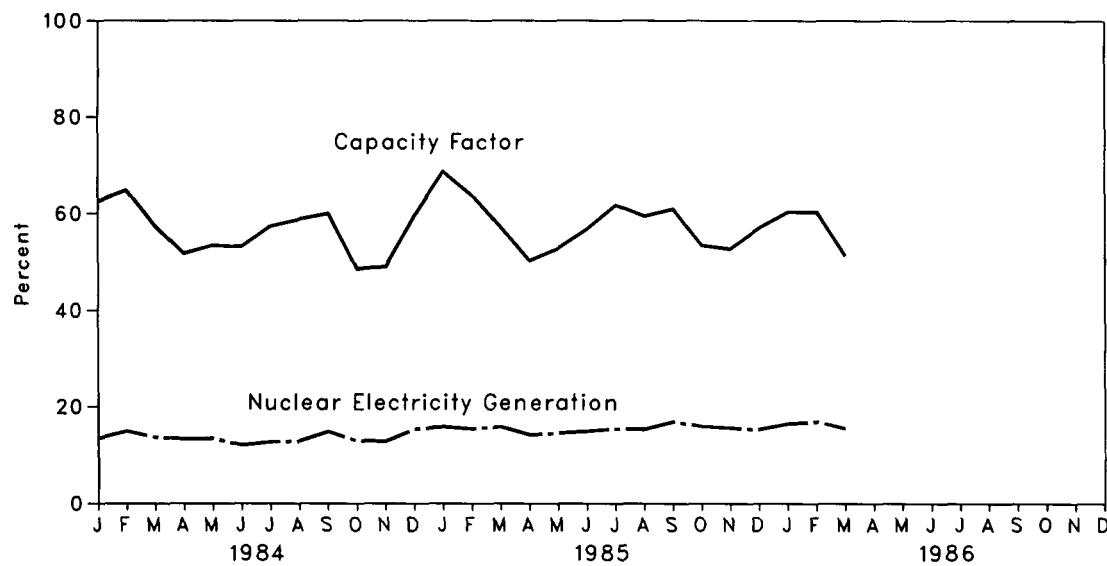
# Nuclear

## Nuclear Power Plant Operations

### Electricity Generated by Utilities and by Nuclear Power Plants



### Nuclear Portion of Electricity Generation and Capacity Factor



# Nuclear

## Nuclear Power Plant Operations

	Operable Reactors <sup>1,2</sup>	Nuclear-Based Electricity Generation Million net kilowatthours	Nuclear Portion of Domestic Electricity Generation Percent	Net Summer Capability of Operable Reactors <sup>1,3</sup> Million net kilowatts	Capacity Factor <sup>4</sup> Percent
1973	Year	39	83,479	4.5	22,615 53.7
1974	Year	48	113,976	6.1	31,803 47.9
1975	Year	54	172,505	9.0	37,161 56.0
1976	Year	61	191,104	9.4	43,657 54.9
1977	Year	65	250,883	11.8	46,202 63.4
1978	Year	70	276,403	12.5	50,709 64.7
1979	Year	68	255,155	11.4	49,630 58.5
1980	Year	70	251,116	11.0	51,668 56.4
1981	Year	74	272,674	11.9	55,914 58.4
1982	Year	77	282,773	12.6	59,927 56.7
1983	Year	80	293,677	12.7	63,009 54.4
1984	January	80	29,313	13.5	63,009 62.5
	February	80	28,436	15.0	63,009 64.8
	March	81	27,345	13.7	64,057 57.4
	April	82	24,231	13.4	65,157 51.7
	May	82	25,867	13.5	65,157 53.4
	June	83	25,299	12.1	66,207 53.1
	July	83	28,284	12.8	66,207 57.4
	August	84	29,493	12.9	67,446 58.8
	September	84	29,146	14.9	67,446 60.0
	October	85	24,774	13.0	68,566 48.6
	November	86	24,575	12.9	69,652 49.0
	December	86	30,872	15.4	69,652 59.6
	Year	86	327,634	13.6	69,652 56.3
1985	January	87	36,186	15.9	70,784 68.7
	February	88	30,812	15.5	71,904 63.8
	March	89	31,041	15.9	72,994 57.2
	April	89	26,458	14.3	72,994 50.3
	May	89	28,697	14.6	72,994 52.8
	June	91	30,837	15.0	75,390 56.8
	July	92	35,184	15.5	76,469 61.8
	August	94	34,812	15.4	78,590 59.5
	September	94	34,508	17.0	78,590 61.0
	October	94	31,205	16.0	78,590 53.4
	November	95	30,166	15.7	79,509 52.7
	December	95	33,782	15.4	79,509 57.1
	Year	95	383,691	15.5	79,509 57.9
1986	January	96	36,219	16.6	80,652 60.4
	February	96	32,721	17.0	80,652 60.4
	March	96	30,773	15.6	80,652 51.3

The "Maximum Dependable Capacity" data series previously shown in this table has been replaced by a new data series entitled "Net Summer Capability." The "Capacity Factor" column has been revised to reflect the change. See the explanation on page 90 for additional information regarding the data series change.

<sup>1</sup>Monthly data are the status as of the last day of the month. Yearly data are the status as of December 31 of each year.

<sup>2</sup>See Note 1 on the last page of this section for the definition.

<sup>3</sup>When possible, net summer capability is used. When a reactor has not operated long enough to permit determination of a net summer capability, an estimation is made based on the net design electrical rating. For the definitions of net summer capability and net design electrical rating, see Note 3 on the last page of this section.

<sup>4</sup>For an explanation of the method of calculating the capacity factor, see Note 4 on the last page of this section.

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

Sources: • See the last page of this section.

# Nuclear

## Status of Nuclear Reactor Units<sup>1</sup>

	Licensed for Operation	Construction Permits					Total Design Capacity <sup>4</sup>		
		Operable <sup>2</sup>	In Startup <sup>3</sup>	Granted	Pending	On Order			
1973 Year	39	3	51	58	48	20	219	212	
1974 Year	48	5	58	80	28	16	235	234	
1975 Year	54	2	69	73	19	19	236	236	
1976 Year	61	0	72	66	16	19	234	236	
1977 Year	65	1	80	52	13	9	220	220	
1978 Year	70	0	90	32	9	4	205	204	
1979 Year	68	0	91	21	3	0	183	179	
1980 Year	70	2	82	12	3	0	169	163	
1981 Year	74	0	75	11	3	0	163	157	
1982 Year	77	2	60	3	2	0	144	135	
1983 Year	80	3	53	0	2	0	138	129	
1984	January	80	3	51	0	2	0	136	128
	February	80	3	51	0	2	0	136	128
	March	81	3	50	0	2	0	136	128
	April	82	3	49	0	2	0	136	128
	May	82	3	49	0	2	0	136	128
	June	83	3	48	0	2	0	136	128
	July	83	3	48	0	2	0	136	128
	August	84	2	44	0	2	0	132	123
	September	84	2	44	0	2	0	132	123
	October	85	3	42	0	2	0	132	123
	November	86	2	42	0	2	0	132	123
	December	86	6	38	0	2	0	132	123
1985	January	87	5	38	0	2	0	132	123
	February	88	4	38	0	2	0	132	123
	March	89	5	36	0	2	0	132	123
	April	89	6	35	0	2	0	130	123
	May	89	6	35	0	2	0	130	123
	June	91	4	35	0	2	0	130	123
	July	92	3	33	0	2	0	130	121
	August	94	2	32	0	2	0	130	121
	September	94	2	32	0	2	0	130	121
	October	94	2	32	0	2	0	130	121
	November	95	2	31	0	2	0	130	121
	December	95	3	30	0	2	0	130	121
1986	January	96	2	30	0	2	0	130	121
	February	96	3	29	0	2	0	130	121
	March	96	4	28	0	2	0	130	121

<sup>1</sup>Monthly data are the status as of the last day of the month. Annual data are the status as of December 31 of each year.

<sup>2</sup>See Note 1 on the last page of this section for the definition.

<sup>3</sup>See Note 2 on the last page of this section for the definition.

<sup>4</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 on the last page of this section.

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

Sources: • See the last page of this section.

## Notes and Sources for the Nuclear Section

### Notes

**1. Operable Reactors:** For 1973 through 1979, units are defined as operable based upon the date they first produced electricity. For 1980 and following, operable units are defined as those units that have received operating licenses, completed low-power testing, and received full power amendments from the Nuclear Regulatory Commission (NRC). This distinction arises because the full power amendment date has no direct analogue for full years prior to 1980. Fermi-2 (net summer capability of 1,079 MWe), is included, although currently the unit is restricted by the NRC from providing electric power to the grid. The Hanford-N reactor, operated by the Department of Energy (DOE), with a net summer capability of 850 megawatts electric (MWe) is included as an operable reactor, although it is not licensed by the NRC, because electricity produced from its output steam is distributed commercially. Similarly, the Shippingport reactor (net summer capability of 55 MWe) operated by DOE, was included prior to retirement from service on October 1, 1982, except for the interval from March 1974 through August 1977 when it was excluded because of a major core modification outage. The DOE-operated Experimental Breeder Reactor-2 (EBR-2) is not included because the electricity it generates is not distributed commercially. Five units, each of which has been inoperative for at least 4 years prior to January 1, 1984, are deleted from entries subsequent to their removal from service: Peach Bottom-1 (net summer capability of 36 MWe) and Indian Point-1 (net summer capability of 253 MWe), both out of service since November 1974; Humboldt Bay (net summer capability of 60 MWe), down since August 1976 for major seismic modifications and subsequently officially retired; Dresden-1 (net summer capability of 189 MWe), out of service since January 1979 for major modifications and officially retired in August 1984; and Three Mile Island-2 (net summer capability of 890 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979.

**2. In Startup:** Units that have received Operating Licenses authorizing fuel loading and low-power testing but have not received a Full Power Amendment from the NRC. Without the amendment, these units cannot distribute electricity commercially.

**3. Capacity:** Nuclear power plants may have more than one type of net capacity rating including:

(a) Net Summer Capability—The steady hourly output which 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 Maximum Dependable Capacity (MDC)—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 peak demand during the most restrictive seasonal conditions (usually summer).

(c) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of the 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 monthly net summer capability. This fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are averages of the monthly values for that year.

### Sources

**Reactors Licensed for Operation:** Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."

**Electricity Generation:** • 1973 through September 1977—Federal Power Commission, Form 4, "Monthly Power Plant Report."

• October 1977 through 1981—Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report."

• 1982 forward—Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."

**Net Summer Capability:** Energy Information Administration, Form EIA-860, "Annual Electric Generator Report."

**Maximum Dependable Capacity:** Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."

**Capacity Factor:** Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.

**Reactor Construction and Planning Data:** • 1973 through June 1982—Compiled from various sources, primarily the Department of Energy, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and from the Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.

• July 1982 forward—Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and various trade journals.

**Total Design Capacity:** Nuclear Regulatory Commission report NUREG-0020, "Licensed Operating Reactors" and Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report."

## Explanation of Changes in Nuclear Data Series

Beginning with this issue, capacity data for nuclear generating units published in the "nuclear power plant operations" table will be the "net summer capability" ratings collected on Form EIA-860, "Annual Electric Generator Report." (See Note 3 on the Notes and Sources page for the definition of net summer capability.) "Maximum dependable capacity," previously shown in the table, is similar to net summer capability, except that net summer capability is measured during the summer season,

when a unit's output potential is usually lowest because the cooling water is at its maximum temperature. Also the revised data series will not reflect self-imposed or Nuclear Regulatory Commission capability restrictions, as did the previous series, because capability restrictions are not reported on Form EIA-860. A table comparing the two data series is shown below. The "capacity factor" column of the table has been revised to reflect the change in capacity definition.

		Current Series		Previous Series	
		Net Summer Capability of Operable Reactors	Capacity Factor	Maximum Dependable Capacity of Operable Reactors	Capacity Factor
		Million net kilowatts	Percent	Million net kilowatts	Percent
1973	Year	22.615	53.7	22.900	52.9
1974	Year	31.803	47.9	31.710	48.3
1975	Year	37.161	56.0	33.312	59.7
1976	Year	43.657	54.9	43.277	57.8
1977	Year	46.202	63.4	46.046	64.1
1978	Year	50.709	64.7	49.629	65.7
1979	Year	49.630	58.5	49.326	58.7
1980	Year	51.668	56.4	51.059	57.1
1981	Year	55.914	58.4	55.534	58.4
1982	Year	59.927	56.7	59.552	57.2
1983	Year	63.009	54.4	62.809	54.8
1984	January	63.009	62.5	62.772	62.8
	February	63.009	64.8	62.942	64.9
	March	64.057	57.4	64.036	57.4
	April	65.157	51.7	65.049	51.8
	May	65.157	53.4	64.986	53.5
	June	66.207	53.1	66.091	53.2
	July	66.207	57.4	66.091	57.5
	August	67.446	58.8	67.341	58.9
	September	67.446	60.0	67.066	60.4
	October	68.566	48.6	68.497	48.5
	November	69.652	49.0	69.534	49.1
	December	69.652	59.6	69.522	59.7
	Year	69.652	56.3	69.522	56.5
1985	January	70.784	68.7	70.667	68.8
	February	71.904	63.8	71.841	63.8
	March	72.994	57.2	72.931	57.2
	April	72.994	50.3	72.911	50.4
	May	72.994	52.8	72.920	52.9
	June	75.390	56.8	75.262	56.9
	July	76.469	61.8	75.180	62.9
	August	78.590	59.5	76.897	60.8
	September	78.590	61.0	76.955	62.3
	October	78.590	53.4	76.877	54.6
	November	79.509	52.7	78.067	53.7
	December	79.509	57.1	78.087	58.1
	Year	79.509	57.9	78.087	58.5

Part  
6  
**Price**

## Price

### Crude Oil

The average price of domestic crude oil purchased at the wellhead was \$12.78 per barrel in March 1986. This was 28.4 percent below the previous month's level and 46.5 percent below the level in March 1985.

During March 1986, the cost of imported crude oil decreased \$3.81 per barrel from the February 1986 level to \$14.21 per barrel in March. This was 47.8 percent below the March 1985 average. The cost of domestic crude oil in March 1986 was \$15.11, a decrease of 43.2 percent from the March 1985 average.

### Motor Gasoline

The national city average retail price of leaded regular gasoline at all types of stations was \$0.82 per gallon in April 1986, 8.8 percent lower than the price in March 1986. The price of unleaded regular gasoline was \$0.89 per gallon in April, 9.5 percent lower than the price in the previous month. The price of unleaded premium gasoline averaged \$1.06 per gallon in April, 8.5 percent lower than during March 1986.

### Residual Fuel Oil

The average price, excluding taxes, of residual fuel oil sold to end users in March 1986 was \$0.39 per gallon, 14.8 percent below the previous month's price and 42.0 percent below the March 1985 average. The average price, excluding taxes, of residual fuel oil sold to other-than-ultimate consumers for resale in March 1986 was \$0.32 per gallon, 18.3 percent below the February 1986 average and 49.4 percent below the March 1985 average.

### Aviation Fuel

The average price, excluding taxes, of aviation gasoline sold to end users in March 1986 was \$1.12 per gallon, 4.9 percent below the price in the previous month and 8.2 percent below the price in March 1985. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in March 1986 was \$0.69 per gallon, down 11.4 percent from the previous month's price and down 14.2 percent from the price 1 year earlier.

### No. 2 Distillate Fuel Oil

The national average price of heating oil sold to residential customers in March 1986 was \$0.88 per gallon. This was 7.7 percent below the price in February 1986 and 15.8 percent below the March 1985 price. The average price for resale was \$0.52 per gallon in March 1986, 8.0 percent below the price in the previous month, and 32.1 percent below the price in March 1985.

### Natural Gas

In February 1986 the average wellhead price of marketed natural gas production was \$2.25 per thousand cubic feet, \$0.41 (15.4 percent) below the February 1985 price. The average price of natural gas delivered to electric utility plants was \$2.91 per thousand cubic feet in February 1986, \$0.82 (22.0 percent) below the February 1985 price. The average price of natural gas used by residential consumers in March 1986 was \$5.70 per thousand feet, \$0.29 (4.8 percent) less than the March 1985 price.

### Electricity

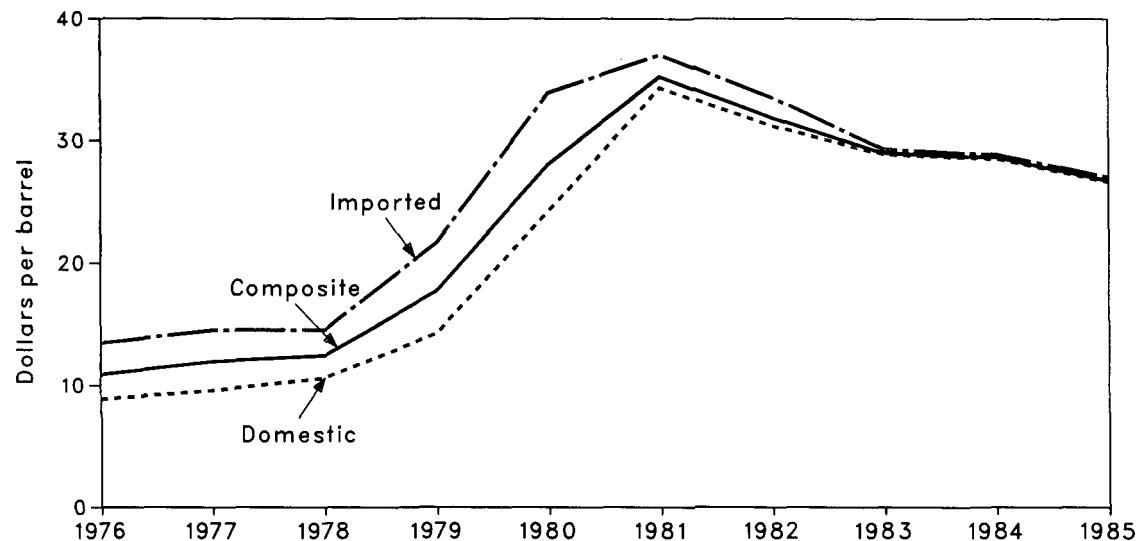
Beginning with January 1986, there are new series of national average price estimates based on a statistically derived sample of both publicly and privately owned electric utilities. Prior to that time, average price estimates were derived from selected privately owned electric utilities and were not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

The national retail price of electricity to residential consumers in March 1986 was 7.23 cents per kilowatthour, 1.6 percent (based on unrounded numbers) above the February 1986 price. The average price of electricity sold to commercial consumers was 7.22 cents per kilowatthour in March 1986, 0.8 percent above the previous month's price. The average electricity price to industrial users during March 1986 was 4.94 cents per kilowatthour, the same as the previous month's price. The March national retail price of electricity to other consumers was 6.75 cents per kilowatthour, 0.5 percent (based on unrounded numbers) above the February 1986 price.

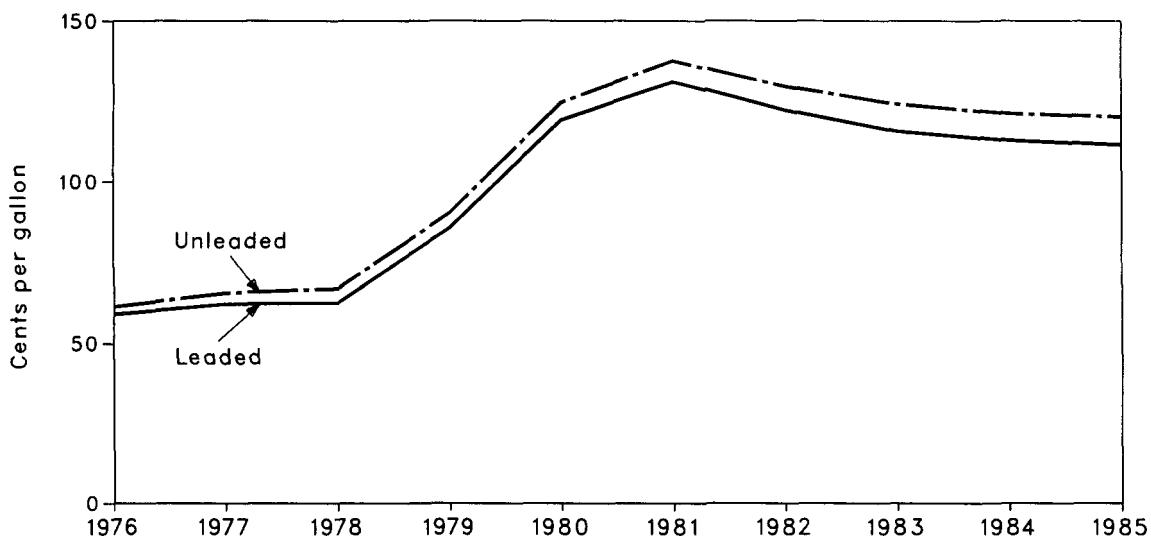
## Price

### Selected Petroleum Series

#### Refiner Acquisition Cost of Crude Oil



#### Regular Motor Gasoline Prices (Including Tax)



# Price

## Crude Oil Price Summary

		Actual Domestic Average Wellhead Price <sup>1</sup>	Average FOB Cost of Crude Oil Imports <sup>2</sup>	Average Landed Cost of Crude Oil Imports <sup>3</sup>	Refiner Acquisition Cost of Crude Oil <sup>4</sup>		
					Domestic	Imported	Composite
Dollars per barrel							
1976	Average	8.19	12.17	13.34	8.84	13.48	10.89
1977	Average	8.57	13.24	14.31	9.55	14.53	11.96
1978	Average	9.00	13.30	14.38	10.61	14.57	12.46
1979	Average	12.64	20.19	21.65	14.27	21.67	17.72
1980	Average	21.59	32.27	33.95	24.23	33.89	28.07
1981	Average	31.77	35.10	36.52	34.33	37.05	35.24
1982	Average	28.52	32.11	33.18	31.22	33.55	31.87
1983	Average	26.19	27.73	28.93	28.87	29.30	28.99
1984	January	25.93	27.56	28.49	28.62	28.80	28.67
	February	26.06	27.78	28.89	28.76	28.91	28.81
	March	26.05	27.70	28.69	28.75	28.95	28.81
	April	25.93	27.84	28.91	28.63	29.11	28.77
	May	26.00	27.87	28.94	28.65	29.26	28.83
	June	26.09	27.78	28.89	28.58	29.19	28.77
	July	26.11	27.19	28.32	28.70	29.00	28.79
	August	26.02	27.29	28.20	28.59	28.92	28.69
	September	25.97	27.14	28.14	28.56	28.70	28.60
	October	25.92	27.15	28.18	28.46	28.79	28.56
	November	25.44	26.91	27.88	28.10	28.74	28.30
	December	25.05	26.69	27.69	27.95	28.02	27.97
	Average	25.88	27.44	28.46	28.53	28.88	28.63
1985	January	24.28	26.10	26.95	26.89	27.51	27.02
	February	23.63	25.90	26.82	26.39	27.05	26.53
	March	23.88	26.32	27.14	26.61	27.23	26.77
	April	24.15	26.58	27.47	26.79	27.61	27.04
	May	24.18	26.25	27.13	26.90	27.62	27.11
	June	24.03	25.69	26.47	26.50	27.27	26.69
	July	24.00	25.41	26.20	26.67	26.46	26.61
	August	23.92	25.48	26.22	26.45	26.62	26.50
	September	23.93	25.43	26.46	26.39	26.59	26.44
	October	24.06	25.76	26.73	26.59	26.80	26.65
	November	24.31	25.66	26.63	26.72	27.12	26.85
	December	24.53	24.03	25.11	26.91	26.60	26.82
	Average	24.08	25.77	26.60	26.65	27.03	26.76
1986	January	23.38	R21.45	R22.76	25.94	24.92	25.64
	February	R17.84	R†15.19	R†16.41	R20.42	R18.02	19.81
	March†	12.78	12.45	13.40	15.11	14.21	14.87

<sup>1</sup>See Note 1 in the Notes and Sources for this section.

<sup>2</sup>See Note 2 in the Notes and Sources for this section.

<sup>3</sup>See Note 3 in the Notes and Sources for this section.

<sup>4</sup>See Note 4 in the Notes and Sources for this section.

†Preliminary data. R=Revised data.

Note: • Geographic coverage is the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions.

Sources: • See the Notes and Sources for this section.

## Price

### FOB Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

		Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
Dollars per barrel									
1976	Average	13.05	12.76	11.61	NA	13.08	11.69	NA	11.32
1977	Average	14.36	13.57	12.67	13.42	14.44	12.37	NA	12.68
1978	Average	14.10	13.64	12.65	13.24	14.04	12.70	13.82	12.45
1979	Average	20.65	19.35	23.71	20.29	21.80	17.63	21.20	17.37
1980	Average	36.57	32.37	( <sup>2</sup> )	31.11	35.82	28.53	34.58	24.78
1981	Average	39.09	35.93	( <sup>2</sup> )	33.13	38.53	32.48	36.08	28.86
1982	Average	34.23	35.27	30.93	28.07	35.13	33.50	33.46	23.77
1983	Average	30.06	29.93	28.25	25.19	29.78	28.03	29.84	21.48
1984	January	27.60	29.89	W	26.22	29.80	27.76	29.29	24.21
	February	28.56	29.09	W	26.04	29.98	26.72	29.70	23.55
	March	28.69	W	NA	26.30	29.89	28.39	29.95	23.86
	April	28.90	29.50	W	26.07	29.93	28.17	29.85	23.93
	May	28.98	29.44	W	26.36	29.67	27.43	29.93	24.07
	June	28.52	29.35	NA	26.58	29.34	W	29.67	24.23
	July	27.43	29.21	W	26.62	29.22	W	28.91	24.37
	August	26.97	W	W	26.71	29.02	W	28.13	23.91
	September	26.90	28.83	NA	26.34	29.24	27.99	27.99	24.57
	October	27.42	28.93	NA	26.44	28.40	W	28.50	24.43
	November	26.50	28.68	NA	26.53	28.32	NA	27.61	24.24
	December	25.13	28.03	NA	26.43	28.11	NA	27.85	24.32
	Average	28.04	29.10	26.93	26.37	29.39	27.60	28.90	24.16
1985	January	25.47	27.43	NA	26.10	27.22	W	W	24.02
	February	W	27.62	NA	26.00	27.41	W	W	24.36
	March	26.50	27.01	W	26.31	28.20	NA	W	24.93
	April	27.47	27.50	W	26.33	27.95	NA	28.09	24.49
	May	W	27.44	W	26.24	27.77	NA	27.41	24.52
	June	W	27.06	W	24.75	27.09	NA	26.65	24.32
	July	W	27.44	W	24.25	27.95	NA	26.58	23.13
	August	NA	26.60	W	24.69	27.82	NA	26.98	22.58
	September	W	25.29	W	24.59	27.97	W	27.67	22.49
	October	W	26.95	W	24.78	28.30	W	28.22	22.81
	November	W	27.24	W	24.37	28.67	W	28.65	23.06
	December	W	27.49	W	23.22	29.19	18.48	28.04	22.78
	Average	26.71	27.11	W	25.17	28.03	22.04	27.66	23.61
1986	January	W	R26.68	NA	19.81	R26.18	12.60	25.15	21.40
	February†	W	W	W	14.24	W	W	R18.31	R12.56
	March†	W	13.18	NA	11.54	16.18	NA	W	10.39

<sup>1</sup>The Free on Board (FOB) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 in the Notes and Sources for this section.

<sup>2</sup>No crude oil was imported.

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

Note: • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. Annual averages are the weighted average of the 12 monthly prices including those prices that were not published.

Sources: • See the Notes and Sources for this section.

## Price

### Landed Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

		Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
Dollars per barrel										
1975	Average	12.72	12.72	13.79	12.21	NA	12.62	12.30	NA	11.65
1976	Average	13.81	13.57	13.82	12.82	NA	13.80	13.04	NA	11.80
1977	Average	15.20	14.21	14.63	13.80	13.75	15.25	13.61	NA	13.13
1978	Average	14.91	14.50	14.64	13.88	13.54	14.86	13.92	NA	12.83
1979	Average	21.90	20.43	20.69	25.02	20.86	22.96	19.15	22.16	18.18
1980	Average	37.90	30.47	33.92	( <sup>2</sup> )	31.80	37.05	30.02	35.88	25.86
1981	Average	40.49	32.16	37.57	( <sup>2</sup> )	33.78	39.70	34.19	37.24	29.87
1982	Average	35.28	26.92	36.75	32.40	28.64	36.17	35.00	34.28	24.82
1983	Average	31.26	25.63	31.57	29.81	25.78	30.84	29.76	30.87	22.94
1984	January	29.19	26.44	31.22	W	26.85	30.62	29.67	30.09	25.28
	February	29.73	26.40	30.91	W	26.73	31.29	28.38	30.77	25.21
	March	30.31	26.01	30.81	NA	26.92	30.93	30.20	30.98	24.75
	April	29.81	26.10	31.02	W	26.68	31.08	29.95	30.73	24.86
	May	29.96	27.12	30.80	W	26.92	30.96	28.95	30.75	24.93
	June	29.62	26.00	31.21	NA	27.24	31.05	29.90	30.43	25.29
	July	28.63	27.16	30.26	W	26.98	30.07	W	29.54	25.24
	August	28.16	26.95	30.59	W	26.99	29.99	W	28.93	24.95
	September	27.94	27.03	30.05	W	26.66	30.60	29.75	28.81	25.29
	October	28.42	26.82	30.11	W	26.80	29.47	28.57	29.27	25.49
	November	28.12	26.33	30.03	W	26.78	29.45	NA	28.39	25.35
	December	27.07	26.50	30.12	NA	26.86	29.32	NA	28.55	25.24
	Average	29.08	26.59	30.64	28.67	26.87	30.50	29.50	29.60	25.15
1985	January	26.28	24.99	29.26	NA	26.46	28.70	W	W	25.18
	February	26.06	24.00	28.73	NA	26.37	28.55	W	W	25.37
	March	27.09	25.13	28.40	W	26.60	29.42	NA	W	25.69
	April	28.28	26.16	29.02	W	26.60	28.99	W	28.57	25.44
	May	W	26.33	28.98	W	26.56	28.69	NA	27.98	25.26
	June	W	26.34	28.73	24.55	25.16	27.81	NA	27.42	25.13
	July	27.35	25.96	28.95	W	24.54	28.56	W	27.28	23.81
	August	W	26.05	28.01	25.70	24.85	28.54	NA	27.69	23.45
	September	W	25.88	26.79	26.47	24.92	28.75	W	28.22	23.29
	October	W	25.82	28.47	26.59	25.12	29.06	26.69	29.00	23.55
	November	W	25.74	29.00	W	24.70	29.61	24.72	29.39	23.78
	December	W	25.48	28.82	W	23.58	30.38	21.07	28.75	23.53
	Average	27.35	25.68	28.65	25.73	25.50	28.95	24.63	28.34	24.42
1986	January	W	R23.92	28.44	NA	20.17	R27.83	R14.41	R25.38	22.21
	February†	W	R17.41	W	W	14.58	RW	14.33	R18.62	R13.27
	March†	15.04	13.02	15.12	NA	11.87	16.90	W	W	11.02

<sup>1</sup>See Note 3 in the Notes and Sources for this section.

<sup>2</sup>No crude oil was imported.

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

Note: • Prices through 1980 reflect the period of reporting; prices since then reflect the period of loading. Annual averages are the weighted average of the 12 monthly prices including those prices that were not published.

Sources: • See the Notes and Sources for this section.

## Price

### U.S. City Average Retail Prices for Motor Gasoline<sup>1</sup>

		Leaded Regular	Unleaded Regular	Unleaded Premium	Average for All Types <sup>2</sup>
Cents per gallon, including tax					
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>3</sup>	131.1	137.8	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	January	113.1	121.6	136.9	120.0
	February	112.5	120.9	136.1	119.3
	March	112.5	121.0	136.2	119.4
	April	114.5	122.7	137.5	121.1
	May	115.4	123.6	138.0	122.1
	June	114.7	122.9	137.7	121.4
	July	112.9	121.2	137.0	119.7
	August	111.6	119.6	135.5	118.4
	September	112.0	120.3	136.0	118.9
	October	112.7	120.9	136.5	119.5
	November	112.4	120.7	136.4	119.3
	December	110.9	119.3	135.4	117.9
	Average	112.9	121.2	136.6	119.8
1985	January	106.0	114.8	130.4	114.5
	February	104.1	113.1	129.0	112.8
	March	107.1	115.9	131.0	115.5
	April	111.9	120.5	134.0	119.9
	May	114.4	123.1	136.0	122.3
	June	115.3	124.1	137.1	123.3
	July	115.4	124.2	136.7	123.3
	August	114.3	122.9	135.9	122.2
	September	112.9	121.6	134.9	120.9
	October	111.7	120.4	134.2	119.8
	November	112.3	120.7	133.9	120.1
	December	112.3	120.8	134.4	120.3
	Average	111.5	120.2	134.0	119.6
1986	January	110.7	119.4	133.6	119.0
	February	103.4	112.0	128.2	111.9
	March	89.4	98.1	116.0	98.3
	April	81.5	88.8	106.1	89.5

<sup>1</sup>See Note 5 in the Notes and Sources for this section.

<sup>2</sup>Also includes types of gasoline not shown separately.

<sup>3</sup>Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily.

NA=Not available.

Note: • Geographic coverage for 1974 through 1977 is 56 urban areas. For 1978 forward it is 85 urban areas.

Sources: • See the Notes and Sources for this section.

## Price

### Refiner and Gas Plant Operator Sales Prices of Residual Fuel Oil<sup>1</sup>

		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
Cents per gallon, excluding tax							
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	January	71.0	73.6	62.3	64.6	64.8	69.0
	February	71.4	75.1	65.7	65.8	67.5	70.4
	March	70.5	73.1	61.9	64.7	64.5	68.5
	April	69.2	73.1	64.7	66.5	66.2	69.1
	May	68.3	72.7	65.0	67.4	66.0	69.5
	June	69.8	73.2	66.1	68.9	67.2	71.0
	July	66.8	71.5	64.0	66.7	65.0	69.0
	August	65.6	69.5	62.7	65.0	63.6	67.1
	September	65.9	70.0	63.8	64.9	64.5	67.5
	October	66.8	70.8	64.3	65.8	65.1	67.8
	November	66.8	70.4	63.6	65.8	64.6	67.9
	December	67.5	70.5	63.3	65.6	64.6	67.7
	Average	68.5	72.0	63.9	65.9	65.4	68.7
1985	January	67.6	71.1	63.3	66.5	64.7	68.4
	February	67.6	71.2	63.4	66.3	65.0	68.7
	March	66.2	70.1	60.8	65.0	62.4	67.2
	April	63.0	67.5	58.7	61.9	60.2	64.1
	May	58.1	61.2	53.4	58.0	54.9	59.5
	June	54.9	59.9	50.6	52.8	52.4	55.6
	July	56.4	58.9	52.8	54.6	53.9	56.4
	August	55.1	57.7	52.1	53.7	53.2	55.8
	September	60.1	62.8	53.1	54.8	56.1	58.6
	October	60.1	63.6	52.3	53.8	54.9	58.3
	November	57.8	61.7	50.7	52.8	53.6	56.8
	December	60.7	62.6	52.2	54.4	55.0	58.2
	Average	60.9	64.5	55.9	58.4	57.6	61.1
1986	January	57.1	62.0	49.5	52.9	51.7	57.1
	February	43.9	49.0	36.3	42.7	38.7	45.8
	March†	37.7	42.7	28.3	35.7	31.6	39.0

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

†Preliminary data.

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

•Prices prior to January 1983 are Energy Information Administration estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: •See the Notes and Sources for this section.

# Price

## Refiner and Gas Plant Operator Sales Prices of Petroleum Products for Resale<sup>1</sup>

		Finished Motor Gasoline <sup>2</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
Cents per gallon, excluding tax								
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	January	83.2	116.7	86.4	95.9	87.5	82.6	47.7
	February	83.8	116.5	86.5	100.4	89.2	84.5	47.4
	March	84.7	117.1	84.6	91.5	81.3	81.0	45.3
	April	86.9	116.8	84.2	90.7	82.8	80.8	44.6
	May	86.6	117.1	84.3	90.9	83.2	81.9	44.4
	June	84.5	116.8	84.2	88.1	82.4	81.9	44.1
	July	81.7	117.2	82.8	87.6	79.4	79.3	42.3
	August	81.1	116.7	81.0	86.0	77.8	77.7	43.2
	September	82.8	116.8	81.7	88.8	80.0	78.4	44.8
	October	83.6	116.4	82.9	88.9	80.8	80.0	46.1
	November	81.9	114.8	81.4	88.0	79.4	79.0	45.6
	December	78.0	114.0	80.1	86.4	77.1	77.0	43.0
	Average	83.2	116.5	83.0	91.6	82.1	80.3	45.0
1985	January	75.2	114.5	79.5	85.8	75.7	74.9	40.0
	February	76.3	114.0	79.3	86.5	75.2	74.1	39.4
	March	81.0	113.6	78.6	85.7	76.4	75.6	38.0
	April	86.0	112.6	79.5	84.7	79.3	79.1	37.9
	May	87.5	113.2	78.1	80.4	76.5	78.9	38.1
	June	87.7	113.7	76.0	75.9	72.9	75.5	37.1
	July	87.3	113.6	75.2	76.9	70.3	72.3	36.3
	August	85.0	113.3	76.8	79.7	72.0	72.5	36.5
	September	83.2	113.0	79.2	85.9	77.0	76.3	37.6
	October	83.1	113.0	81.5	90.1	81.7	80.5	39.7
	November	84.7	112.6	83.6	93.6	84.9	84.3	43.0
	December	83.0	108.1	83.1	92.7	83.2	82.1	46.9
	Average	83.5	112.9	79.4	87.4	77.6	77.2	39.7
1986	January	76.7	109.8	77.0	83.8	73.7	73.3	43.9
	February	R65.0	108.9	68.0	67.2	R56.4	R56.0	35.4
	March†	52.4	102.2	58.1	62.0	51.9	47.4	29.2

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

<sup>2</sup>See Note 5 in the Notes and Sources for this section.

†Preliminary data. R=Revised data.

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

•Prices prior to January 1983 are Energy Information Administration estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

## Price

### Refiner and Gas Plant Operator Sales Prices of Petroleum Products to End Users<sup>1</sup>

		Finished Motor Gasoline <sup>2</sup>	Finished Aviation Gasoline	Kerosene- Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
Cents per gallon, excluding tax								
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	January	90.6	123.9	85.8	106.8	97.7	84.4	76.8
	February	90.2	123.7	86.5	117.9	104.6	87.4	76.3
	March	90.7	123.8	85.6	111.3	94.7	83.2	76.4
	April	92.9	124.4	85.1	105.8	91.9	82.4	76.5
	May	93.4	123.9	85.2	102.4	90.9	83.2	70.4
	June	92.5	124.6	84.5	94.3	86.9	84.0	70.6
	July	90.4	124.3	84.1	90.6	84.3	81.3	69.6
	August	89.2	123.2	83.4	92.8	82.8	79.7	71.9
	September	89.7	123.7	83.1	99.2	84.3	80.2	73.4
	October	90.5	123.3	83.2	102.7	87.3	81.6	74.1
	November	89.9	119.3	82.4	106.1	87.7	80.7	73.8
	December	88.0	121.9	82.2	101.4	88.1	79.4	70.0
	Average	90.7	123.4	84.2	103.6	91.6	82.3	73.7
1985	January	84.6	121.7	81.4	106.0	87.0	77.6	78.8
	February	83.6	121.1	80.9	103.7	86.1	76.7	76.1
	March	87.1	121.4	80.4	103.1	86.0	77.0	74.6
	April	92.4	121.2	80.1	101.0	85.8	79.9	75.7
	May	94.4	121.9	79.5	94.1	82.2	79.7	70.5
	June	95.2	121.7	78.6	88.2	77.8	77.2	66.8
	July	95.4	120.2	78.2	86.0	72.4	74.5	62.9
	August	94.0	118.9	77.7	89.9	74.4	73.8	62.9
	September	91.9	119.5	78.1	96.0	81.1	78.1	63.8
	October	90.8	118.9	78.8	100.4	85.2	81.6	69.7
	November	91.7	118.3	80.1	106.7	91.3	85.4	72.2
	December	91.9	117.0	80.9	111.5	92.3	85.6	75.2
	Average	91.2	120.1	79.5	103.0	84.8	78.9	71.6
1986	January	89.1	116.2	80.5	105.4	87.1	78.1	77.8
	February	80.3	117.2	R77.9	93.4	69.9	61.5	71.4
	March†	65.2	111.5	69.0	85.1	63.0	51.2	65.9

<sup>1</sup>Sales for Resale are those made to purchasers who are other-than-ultimate consumers, that is, wholesale sales. Sales to End Users are those made directly to the ultimate consumer including bulk customers such as agriculture, industry, and utilities, as well as residential and commercial customers.

<sup>2</sup>See Note 5 in the Notes and Sources for this section.

†Preliminary data. R=Revised data.

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

•Prices prior to January 1983 are Energy Information Administration estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

# Price

## Sales Prices of No. 2 Distillate to Residences for Selected States<sup>1</sup>

	CT	ME	MA	NH	RI	VT	DE	DC	MD	NJ	NY	PA	VA
Cents per gallon, excluding tax													
1978	Average	50.1	48.6	48.8	50.3	50.7	50.8	47.8	50.7	49.2	49.6	50.1	48.8
1979	Average	72.0	68.8	70.9	72.5	72.8	72.5	68.2	74.2	70.1	71.0	71.2	69.8
1980	Average	98.0	96.3	97.8	100.4	101.1	101.5	95.4	102.6	97.9	97.9	98.2	96.4
1981	Average	121.7	120.4	121.3	123.7	123.8	125.4	117.3	127.4	121.4	121.5	123.2	118.1
1982	Average	118.3	115.5	117.6	117.4	120.1	120.1	111.3	124.5	117.1	117.4	120.5	113.7
1983	Average	109.1	102.8	109.1	104.1	110.5	112.9	106.0	117.0	110.3	107.9	112.1	105.8
1984	January	115.7	110.2	114.4	114.0	113.7	116.6	114.8	122.0	115.6	114.1	118.3	112.9
	February	121.7	112.6	119.7	117.8	117.5	118.9	118.4	128.6	121.9	119.5	124.3	117.4
	March	114.5	103.3	113.1	108.8	111.7	115.1	111.1	122.6	116.2	113.5	117.0	110.9
	April	113.4	103.3	112.4	107.7	110.7	113.3	109.9	119.9	115.6	110.6	116.0	107.8
	May	112.5	102.7	112.5	108.8	111.4	112.2	109.0	119.5	113.0	109.1	114.5	105.8
	June	110.6	103.7	110.5	104.5	110.8	112.8	107.2	116.3	109.9	107.1	115.0	103.3
	July	107.4	102.5	107.3	101.9	109.3	108.6	103.7	116.5	109.0	104.9	112.8	99.7
	August	104.7	98.0	105.5	98.6	106.0	108.0	103.7	109.8	105.2	103.6	110.2	99.6
	September	105.4	99.1	106.0	101.0	105.9	106.9	102.1	109.9	106.7	104.3	109.3	100.9
	October	106.2	101.9	106.9	102.2	107.4	108.0	103.5	111.8	107.5	105.7	111.9	101.5
	November	107.2	100.6	107.2	102.7	106.5	107.5	103.3	111.9	108.2	105.2	111.7	102.9
	December	106.4	97.9	107.0	103.1	107.1	106.4	102.8	112.9	107.1	104.9	111.3	103.2
	Average	112.1	103.9	111.6	108.4	111.4	111.9	109.6	118.7	113.5	111.0	115.5	107.9
1985	January	106.9	97.9	107.2	101.3	108.1	106.9	103.8	112.1	107.5	105.0	111.3	102.9
	February	107.2	98.5	107.1	102.7	106.9	107.3	104.0	117.1	108.6	105.7	112.0	103.2
	March	106.8	100.6	107.3	103.3	106.2	107.9	104.6	115.9	108.3	105.1	111.3	102.1
	April	107.0	101.5	106.6	102.2	106.9	106.4	105.1	113.9	109.7	105.2	110.7	100.9
	May	106.2	99.4	104.5	99.9	102.1	105.4	100.7	112.4	108.1	103.4	109.7	99.8
	June	103.5	95.4	101.1	94.4	98.6	103.7	96.4	107.1	104.4	99.6	108.1	95.0
	July	100.2	91.4	98.3	90.9	97.5	101.6	96.2	107.3	101.2	97.4	105.0	92.1
	August	99.5	91.0	96.1	91.7	95.9	101.5	97.5	105.5	98.9	97.3	105.0	92.5
	September	100.5	94.0	100.7	97.5	101.0	104.9	98.8	107.1	103.2	101.4	104.5	96.6
	October	106.4	99.4	104.7	102.3	104.4	106.9	102.7	109.9	106.3	103.4	107.0	98.6
	November	111.4	103.7	110.5	107.7	111.6	111.2	107.1	114.5	111.8	109.3	114.3	105.7
	December	114.3	105.6	110.7	109.1	111.1	113.1	110.7	117.0	112.6	111.9	115.0	108.9
	Average	108.0	99.7	106.9	102.5	106.7	107.8	104.7	114.2	108.7	105.9	111.2	102.2
1986	January	111.6	101.1	105.9	103.2	101.9	109.0	102.3	116.3	112.2	107.7	111.4	104.7
	February	99.5	90.9	R90.6	R88.5	93.5	100.2	R93.9	105.4	R99.9	98.3	102.6	R95.3
	March†	93.4	86.5	85.9	84.2	84.6	95.6	87.1	97.5	93.9	91.4	96.3	86.9

<sup>1</sup>The States are listed by geographic region of the country. State names are abbreviated as follows: CT - Connecticut, ME - Maine, MA - Massachusetts, NH - New Hampshire, RI - Rhode Island, VT - Vermont, DE - Delaware, DC - District of Columbia, MD - Maryland, NJ - New Jersey, NY - New York, PA - Pennsylvania, VA - Virginia, WV - West Virginia, IL - Illinois, IN - Indiana, MI - Michigan, MN - Minnesota, OH - Ohio, WI - Wisconsin, ID - Idaho, AK - Alaska, OR - Oregon, WA - Washington.

Footnotes continued on following page.

## Price

### Sales Prices of No. 2 Distillate to Residences for Selected States<sup>1</sup> (continued)

		WV	IL	IN	MI	MN	OH	WI	ID	AK	OR	WA	U.S. Average
Cents per gallon, excluding tax													
1978	Average	48.2	48.5	48.5	47.9	47.8	47.4	44.7	43.8	53.2	45.8	48.8	49.0
1979	Average	65.1	68.8	72.7	70.9	72.4	68.6	67.3	62.1	68.2	68.0	69.7	70.4
1980	Average	92.2	95.8	99.6	97.8	99.9	91.9	91.5	91.6	97.8	97.3	100.8	97.4
1981	Average	115.0	114.9	118.5	118.3	118.4	113.2	109.1	110.4	118.0	111.4	116.5	119.4
1982	Average	109.3	110.9	114.3	113.9	115.1	110.2	107.8	110.4	117.4	111.8	117.8	116.0
1983	Average	101.0	100.4	100.7	106.4	103.1	101.3	101.2	101.8	108.8	103.6	109.0	107.8
1984	January	108.5	104.7	106.0	107.3	106.6	104.6	101.5	100.1	104.1	100.5	103.6	112.0
	February	109.9	105.9	107.3	108.0	102.8	105.7	102.8	101.3	106.5	100.9	103.8	116.9
	March	104.9	102.3	100.6	105.6	105.1	101.7	101.7	97.2	107.3	100.9	104.6	111.3
	April	101.6	100.3	103.4	104.8	103.9	101.9	101.4	96.2	107.3	100.6	105.0	109.8
	May	98.9	102.3	102.4	105.2	105.3	103.1	101.0	98.1	107.2	99.5	104.2	108.4
	June	99.5	101.6	105.9	103.3	104.2	101.7	100.5	93.8	107.8	98.2	103.3	107.2
	July	96.2	99.4	101.4	102.6	105.1	101.8	100.5	93.1	107.2	97.1	100.4	104.8
	August	96.6	98.9	100.3	101.8	104.5	99.5	100.0	97.4	107.3	94.9	99.7	103.3
	September	96.9	98.6	100.7	103.2	103.5	100.1	98.8	98.4	105.0	95.9	100.4	103.6
	October	98.3	97.1	100.9	103.0	103.0	101.2	100.7	99.4	107.8	96.5	100.9	104.9
	November	99.6	95.8	102.3	103.5	103.1	100.8	101.0	97.9	107.8	97.6	101.3	105.3
	December	99.2	94.4	100.9	103.2	102.8	99.3	99.0	98.8	107.5	97.4	100.5	104.8
	Average	102.1	100.1	103.1	105.0	104.1	102.1	101.0	98.5	106.9	99.3	102.6	109.1
1985	January	98.6	95.2	98.6	102.1	99.5	98.3	97.3	96.8	108.6	96.1	100.6	104.9
	February	98.3	94.4	97.8	101.0	99.8	98.7	96.1	96.9	107.6	96.6	99.8	105.3
	March	98.1	94.5	96.3	101.3	101.0	97.9	96.4	96.6	112.8	95.7	100.3	105.0
	April	96.4	96.7	98.6	98.2	101.4	99.9	97.6	96.1	NA	96.5	99.2	105.0
	May	93.8	96.4	101.5	96.8	103.8	99.9	99.6	96.8	106.8	96.7	98.1	103.5
	June	90.7	92.1	97.5	98.2	104.3	97.1	94.2	95.9	107.4	95.5	99.1	100.8
	July	90.2	90.0	93.2	99.4	100.5	92.9	93.0	94.9	108.1	95.3	97.5	98.0
	August	88.6	90.8	93.1	96.8	101.0	91.8	93.0	94.5	107.1	93.0	97.1	97.2
	September	96.2	95.6	95.4	99.2	98.6	95.8	94.9	94.3	109.2	93.9	97.6	99.7
	October	98.7	100.1	101.1	101.7	101.1	98.0	99.1	97.2	108.8	94.1	100.0	103.0
	November	105.0	104.0	105.2	103.5	105.6	104.4	102.0	98.0	106.2	99.1	104.4	108.6
	December	104.8	103.4	105.4	107.3	105.2	105.9	103.2	98.8	106.7	102.4	106.1	110.4
	Average	98.1	97.5	99.3	101.8	102.0	99.8	98.3	97.1	108.1	97.0	101.1	105.3
1986	January	100.1	97.6	99.8	102.6	100.5	100.7	96.4	97.1	106.8	100.1	104.5	106.4
	February	R87.8	83.1	R84.9	R91.9	R86.3	91.9	83.9	R90.9	R104.9	R83.7	R90.4	R95.8
	March†	79.4	74.9	75.0	80.4	80.3	80.8	75.9	76.5	113.7	66.9	75.1	88.4

Footnotes continued.

†Preliminary data. R=Revised data. NA=Not available.

Note: • Prices prior to January 1983 are Energy Information Administration estimates. See Note 8 in the Notes and Sources for this section for additional information.

Sources: • See the Notes and Sources for this section.

## Price

### National Average Natural Gas Prices—Previous Series

		Wellhead Price	Imports by Major Interstate Pipeline Companies	Purchased from Producers by Major Interstate Pipeline Companies	Industrial Sales by Major Interstate Pipeline Companies <sup>1</sup>	Purchased by Electric Plants <sup>1, 2</sup>	Residential Price <sup>1, 3</sup>
Dollars per thousand cubic feet <sup>4</sup>							
1973	Average	0.22	NA	NA	NA	0.35	1.29
1974	Average	0.30	NA	NA	NA	0.49	1.43
1975	Average	0.45	NA	NA	NA	0.77	1.71
1976	Average	0.58	NA	NA	NA	1.06	1.98
1977	Average	0.79	NA	NA	NA	1.33	2.35
1978	Average	0.91	2.21	0.83	1.54	1.48	2.56
1979	Average	1.18	2.60	1.22	2.01	1.80	2.98
1980	Average	1.59	4.42	1.63	2.53	2.28	3.68
1981	Average	1.98	4.84	2.15	3.11	2.91	4.29
1982	Average	2.46	4.94	2.72	3.73	3.49	5.17
1983	Average	2.59	4.51	2.93	4.26	3.58	6.06
1984	January	2.67	4.40	2.80	4.25	3.55	5.98
	February	2.71	4.37	2.82	3.97	3.61	6.01
	March	2.67	4.40	2.80	4.18	3.52	5.98
	April	2.64	4.23	2.95	4.11	3.57	6.00
	May	2.67	4.15	2.86	4.17	3.75	6.19
	June	2.70	4.25	2.89	4.06	3.76	6.13
	July	2.68	4.15	2.95	4.04	3.89	6.17
	August	2.69	4.12	2.95	4.07	3.80	6.20
	September	2.62	4.34	2.84	4.10	3.83	6.26
	October	2.63	4.19	2.96	4.06	3.75	6.25
	November	2.61	3.43	3.13	4.26	3.72	6.12
	December	2.57	3.34	2.95	4.22	3.69	6.09
	Average	2.66	4.08	2.91	4.13	3.72	6.06
1985	January	2.62	3.21	2.89	4.19	3.79	6.19
	February	2.66	3.08	2.87	3.82	3.73	6.12
	March	2.56	3.29	2.90	4.00	3.80	6.16
	April	2.58	3.39	2.86	3.96	3.76	6.14
	May	2.48	3.32	2.89	3.84	3.61	NA
	June	2.52	3.40	3.00	3.86	3.60	NA
	July	2.46	3.41	2.82	3.83	3.60	NA
	August	2.42	3.28	2.69	3.75	3.49	NA
	September	2.37	3.28	2.76	3.80	3.43	NA
	October	2.35	3.16	2.68	3.99	3.41	NA
	November	2.35	2.88	2.62	3.92	3.43	NA
	December	2.34	2.79	2.67	3.91	3.35	NA
	Average	2.48	3.18	2.81	3.91	3.58	NA
1986	January	2.28	2.81	2.64	3.95	3.26	NA
	February	2.25	2.79	2.60	3.77	2.91	NA

**Previous Data Series.** The residential and industrial price series shown on this page are being replaced by the series shown on the following page. Concurrent publication of both previous and current data series will continue until 3 months overlap of industrial data has occurred.

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.

<sup>3</sup>Monthly residential prices are Energy Information Administration calculations. See Note 6 in the Notes and Sources for this section for estimation procedures.

<sup>4</sup>Prices shown on this page are intended to include all taxes. See Note 9 in the Notes and Sources for this section.

NA=Not available.

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

• Data for 1973 through December 1984 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the Notes and Sources for this section.

# Price

## National Average Natural Gas Prices—Current Series

		Major Interstate Pipeline Companies			Delivered to Consumers <sup>1</sup>					
		Wellhead	Imports	Purchases from Producers	City Gate	Residential			Industrial	Electric Utilities <sup>2</sup>
						Residential	Commercial	Industrial		
Dollars per thousand cubic feet <sup>3</sup>										
1973	Average	0.22	NA	NA	NA	1.29	0.94	0.50	0.38	0.73
1974	Average	0.30	NA	NA	NA	1.43	1.07	0.67	0.51	0.89
1975	Average	0.45	NA	NA	NA	1.71	1.35	0.96	0.77	1.19
1976	Average	0.58	NA	NA	NA	1.98	1.64	1.24	1.06	1.47
1977	Average	0.79	NA	NA	NA	2.35	2.04	1.50	1.32	1.78
1978	Average	0.91	2.21	0.83	NA	2.56	2.23	1.70	1.48	1.98
1979	Average	1.18	2.60	1.22	NA	2.98	2.73	1.99	1.81	2.34
1980	Average	1.59	4.42	1.63	NA	3.68	3.39	2.56	2.27	2.91
1981	Average	1.98	4.84	2.15	NA	4.29	4.00	3.14	2.89	3.51
1982	Average	2.46	4.94	2.72	NA	5.17	4.82	3.87	3.48	4.32
1983	Average	2.59	4.51	2.93	NA	6.06	5.59	4.18	3.58	4.82
1984	January	2.67	4.40	2.80	3.94	5.78	5.49	NA	3.55	NA
	February	2.71	4.37	2.82	4.02	5.84	5.54	NA	3.61	NA
	March	2.67	4.40	2.80	3.91	5.92	5.57	NA	3.52	NA
	April	2.64	4.23	2.95	3.97	5.96	5.52	NA	3.57	NA
	May	2.67	4.15	2.86	3.99	6.27	5.60	NA	3.75	NA
	June	2.70	4.25	2.89	4.04	6.76	5.67	NA	3.76	NA
	July	2.68	4.15	2.95	4.07	7.11	5.62	NA	3.89	NA
	August	2.69	4.12	2.95	3.69	7.23	5.48	NA	3.80	NA
	September	2.62	4.34	2.84	4.04	7.17	5.53	NA	3.83	NA
	October	2.63	4.19	2.96	3.98	6.80	5.54	NA	3.75	NA
	November	2.61	3.43	3.13	3.92	6.30	5.55	NA	3.72	NA
	December	2.57	3.34	2.95	3.98	6.05	5.60	NA	3.69	NA
	Average	2.66	4.08	2.91	3.96	6.12	5.55	4.22	3.72	4.86
1985	January	2.62	3.21	2.89	3.90	5.98	5.63	NA	3.79	NA
	February	2.66	3.08	2.87	3.94	5.87	5.54	NA	3.73	NA
	March	2.56	3.29	2.90	3.98	5.99	5.59	NA	3.80	NA
	April	2.58	3.39	2.86	3.91	6.11	5.64	NA	3.76	NA
	May	2.48	3.32	2.89	3.91	6.58	5.55	NA	3.61	NA
	June	2.52	3.40	3.00	3.90	6.96	5.59	NA	3.60	NA
	July	2.46	3.41	2.82	3.75	7.07	5.42	NA	3.60	NA
	August	2.42	3.28	2.69	3.75	7.21	5.39	NA	3.49	NA
	September	2.37	3.28	2.76	3.71	7.06	5.36	NA	3.43	NA
	October	2.35	3.16	2.68	3.60	6.51	5.29	NA	3.41	NA
	November	2.35	2.88	2.62	3.48	6.13	5.35	NA	3.43	NA
	December	2.34	2.79	2.67	3.47	5.72	5.23	NA	3.35	NA
	Average	2.48	3.18	2.81	3.77	6.13	5.49	NA	3.58	NA
1986	January	2.28	2.81	2.64	3.55	5.63	5.30	NA	3.26	NA
	February	2.25	2.79	2.60	3.54	5.65	5.27	NA	2.91	NA
	March	NA	NA	NA	3.49	5.70	5.27	NA	NA	NA

**Current Data Series.** The residential and industrial price series shown on this page are replacing the series shown on the preceding page. The city gate, commercial, and consumer average price series are new. See the last page of this section for a listing of the sources of all data series.

<sup>1</sup>Includes supplemental gaseous fuels.

<sup>2</sup>Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.

<sup>3</sup>Prices shown on this page are intended to include all taxes. See Note 9 in the Notes and Sources for this section.

\*The decline from the previous month was primarily the result of refunds in the form of reduced charges.

NA=Not available.

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

• Data for 1973 through December 1984 are final. All other data are preliminary unless otherwise indicated.

Sources: • See the Notes and Sources for this section.

## Price

### Average Retail Electricity Prices<sup>1</sup>

		Residential		Commercial		Industrial		Other		Total <sup>2</sup>	
		Old Series <sup>2</sup>	New Series								
Cents per kilowatthour											
1973	Average	2.54		2.41		1.25		2.10		1.96	
1974	Average	3.10		3.04		1.69		2.75		2.49	
1975	Average	3.51		3.45		2.07		3.08		2.92	
1976	Average	3.73		3.69		2.21		3.27		3.09	
1977	Average	4.05		4.09		2.50		3.51		3.42	
1978	Average	4.31		4.36		2.79		3.62		3.69	
1979	Average	4.64		4.68		3.05		3.96		3.99	
1980	Average	5.36		5.48		3.69		4.76		4.73	
1981	Average	6.20		6.29		4.29		5.28		5.46	
1982	Average	6.86		6.86		4.95		5.92		6.13	
1983	Average	7.18		7.02		4.96		6.38		6.30	
1984	January	6.76		6.79		4.86		6.34		6.13	
	February	6.96		6.99		4.85		6.53		6.19	
	March	7.16		7.12		4.88		6.69		6.26	
	April	7.32		7.23		4.87		6.74		6.30	
	May	7.58		7.28		4.92		6.86		6.39	
	June	7.89		7.48		5.10		6.79		6.66	
	July	7.99		7.51		5.22		6.99		6.83	
	August	8.05		7.51		5.16		6.77		6.83	
	September	8.05		7.64		5.26		7.07		6.89	
	October	7.95		7.63		5.14		6.88		6.71	
	November	7.61		7.42		5.06		7.00		6.53	
	December	7.33		7.28		5.07		6.72		6.47	
	Average	7.54		7.33		5.04		6.78		6.52	
1985	January	7.28		7.25		5.12		6.80		6.52	
	February	7.19		7.21		5.12		6.77		6.47	
	March	7.48		7.36		5.13		7.01		6.55	
	April	7.73		7.44		5.09		6.95		6.58	
	May	7.98		7.55		5.08		7.09		6.66	
	June	8.15		7.60		5.24		7.07		6.86	
	July	8.24		7.64		5.36		7.13		7.02	
	August	8.18		7.55		5.20		7.01		6.92	
	September	8.18		7.62		5.24		7.08		6.95	
	October	8.05		7.65		5.19		6.98		6.80	
	November	7.73		7.49		5.10		6.91		6.63	
	December	7.44		7.29		5.10		6.73		6.56	
	Average	7.79		7.48		5.17		6.96		6.72	
1986*	January	7.34	7.02	7.29	7.05	5.16	4.97	7.00	6.38	6.60	6.34
	February	7.54	7.12	7.41	7.16	5.12	4.94	7.05	6.72	6.64	6.36
	March†	7.59	7.23	7.47	7.22	5.12	4.94	7.29	6.75	6.63	6.37

Beginning with January 1986, national average price estimates are based on a statistically derived sample of both publicly and privately owned electric utilities. Prior to that time, national average price estimates were based on a sample of only privately owned electric utilities. Data are shown for both the old and the new series. Publication of both series will continue until sufficient information exists to estimate historical data based on the new series.

\*Prices are calculated by dividing revenues by sales. Revenues may not correspond to sales for a particular month because of utility billing and accounting procedures. This could result in uncharacteristic increases or decreases in the monthly prices.

†Data through 1979 cover privately owned electric utilities in Classes A and B. Data for 1980 forward cover selected privately owned electric utilities in Class A whose electric operating revenues were \$100 million or more during the previous year.

‡Average price for total sales to ultimate consumers.

\*See Note 9 in the Notes and Sources for this section.

†Initial estimates. R=Revised data.

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

Sources: • See the Notes and Sources for this section.

# Price

## Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants<sup>1</sup>

		Coal	Heavy Oil <sup>2</sup>	Natural Gas <sup>3</sup>	All Fossil Fuels <sup>2</sup>
Cents per million Btu					
1973	Average	40.5	78.5	33.8	47.6
1974	Average	70.9	189.0	48.2	91.4
1975	Average	81.4	200.5	75.2	104.4
1976	Average	84.8	195.2	103.4	111.9
1977	Average	94.7	219.8	129.1	129.7
1978	Average	111.6	212.5	142.2	141.1
1979	Average	122.4	298.8	174.9	163.9
1980	Average	135.1	426.7	219.9	192.8
1981	Average	153.2	533.4	280.5	225.6
1982	Average	164.7	483.2	337.6	224.9
1983	Average	165.6	457.8	347.4	220.6
1984	January	161.6	488.9	343.7	221.0
	February	164.9	496.3	347.5	217.4
	March	163.4	484.0	339.8	208.4
	April	165.7	494.1	344.4	210.6
	May	168.6	486.9	360.4	220.3
	June	169.1	488.3	360.9	223.2
	July	168.2	474.6	373.1	231.3
	August	167.2	459.6	365.6	223.5
	September	167.4	472.5	368.0	217.5
	October	168.7	474.1	361.4	218.8
	November	166.6	470.6	357.2	216.8
	December	165.0	480.4	355.4	218.7
	Average	166.4	481.2	358.3	219.2
1985	January	164.0	472.7	364.2	218.8
	February	167.3	482.4	358.1	218.4
	March	167.5	458.9	365.1	210.2
	April	167.7	453.0	361.7	210.7
	May	166.8	405.2	346.2	206.2
	June	165.1	384.8	345.0	208.1
	July	164.2	391.9	344.2	217.2
	August	164.0	380.5	335.0	211.1
	September	163.0	419.0	328.7	204.7
	October	163.4	415.9	330.4	204.4
	November	163.7	397.2	329.4	204.5
	December	161.7	424.3	320.8	203.6
	Average	164.9	424.6	343.2	209.7
1986	January	159.5	392.6	313.5	194.7
	February	161.1	302.3	281.0	185.4

<sup>1</sup>Data through December 1982 cover all steam-electric utility plants with a capacity of 25 megawatts or greater. From 1974 through 1982, data include peaking units. Beginning with January 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.

<sup>2</sup>See Note 10 in the Notes and Sources for this section.

<sup>3</sup>Includes supplemental gaseous fuels.

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

Sources: • See the Notes and Sources for this section.

## Notes and Sources for the Price Section

### Notes

1. The actual domestic average price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.

2. FOB 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 EIA Form 14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on ERA Form 49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The ERA Form 49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for EIA Form 14 in accordance with conventions used for ERA Form 49. Also, the respondents for the two forms are 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 in 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 ERA Form 51, the "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 ERA Form 49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 included unfinished oils but excluded SPR. Imported averages derived from ERA Form 49 exclude oil purchased for SPR, whereas the composite averages derived from ERA Form 49 include SPR. None of the prices derived from EIA Form 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 for 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. For the period 1974 through 1978, prices were collected in 56 urban areas. For the period 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 and Gas Plant Operator Sales Prices of Finished Motor Gasoline for Resale and to End Users are determined by the Energy Information Administration 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 FEA Form 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, as well as residential and commercial consumers.

6. The monthly national average price of residential natural gas is based on data from the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) for natural gas (piped) and on data from Form EIA-176. Initial monthly estimates are obtained by multiplying the annual average price of residential natural gas collected on Form EIA-176 by the ratio of monthly values of the natural gas CPI-U for consecutive months. When a subsequent year's annual average price becomes available, the initial monthly estimates are adjusted to this annual average.

7. 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 annual data series have been generated for 1978-1980, and monthly series for 1981 and 1982, by estimating the prices that would have been published had the EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment for product and sales type matching, and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale, and between retail and end user. The resale category continues to include sales among resellers. However, bulk sales to 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 the bulk utility, industrial, and commercial sales. 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 the Energy Information Administration.

8. Respondents to Form EIA-826, "Electric Utility Company Monthly Statement," consist of a sample of 187 electric utilities that were statistically chosen using stratification techniques. The respondents were chosen from more than 3,000 electric utilities reporting on Form EIA-861, "Annual Electric Utility Report." This schema differs from the cut-off sample used prior to January 1986.

9. Heavy fuel oil prices include fuel oils No. 4, No. 5, and No. 6, and topped crude fuel oil prices. The weighted average for all fossil fuels includes both residual fuel oil prices and light oil (No. 2 fuel oil, kerosene, and jet fuel) prices.

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

(Notes and Sources for the Price Section are continued on the next page.)

## Notes and Sources for the Price Section (continued)

### Sources

- Petroleum and Petroleum Products:** • Actual domestic average wellhead prices—Economic Regulatory Administration (ERA), January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 through September 1979: FEA Form P124, "Domestic Crude Oil Purchaser's (Monthly) Report"; October 1979 through December 1982: ERA Form 182, "Domestic Crude Oil First Purchase Report"; January 1983 forward: EIA Form 182, "Domestic Crude Oil First Purchase Report." • Crude oil imports costs—Energy Information Administration (EIA), 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report"; February 1979 through September 1982: ERA Form 51, "Transfer Pricing Report"; October 1982 through June 1984: EP Form 51, "Monthly Foreign Crude Oil Transaction Report"; July 1984 forward: Form EIA-856, "Monthly Foreign Crude Oil Acquisition Report." • Refiner acquisition costs—EIA, January 1976: FEO Form 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: EIA Form 14, "Refiners' Monthly Cost Report." • U.S. City average retail motor gasoline prices—Bureau of Labor Statistics. • No. 2 Distillate to Residences—January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report" and EIA-782B, "Resellers/Retailers' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA estimates using data from FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9A, "No. 2 Distillate Price Monitoring Report." See Note 8 on the previous page for additional information on the estimated data. • All other petroleum products—January 1983 forward, EIA Form-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report." Prices prior to January 1983 are EIA estimates using data from FEA Form 302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices." See Note 8 on the previous page for additional information on the estimated data.

**Natural Gas—Previous Series:** • Average wellhead price—Annual data through 1982 from EIA, *Natural Gas Annual, 1973 through 1983*. Annual data for 1983 and 1984 from Form EIA-627, "Annual Quantity and Value of Natural Gas Report" and the U.S. Minerals Management Service. Monthly data are estimated primarily on the basis of values reported by State agencies in Mississippi, New Mexico,

Oklahoma, and Texas. These States together account for almost 50 percent of total U.S. marketed production. Monthly data are adjusted to conform with final reported annual data.

- Imports, Purchased from Producers, and Industrial Sales by Major Interstate Pipeline Companies—FERC Form 11, "Interstate Pipeline Company Purchases, and Industrial Sales".
- Electric plant data—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
- Residential Price—Annual data through 1983 from EIA, *Natural Gas Annual, 1973 through 1983*. Annual data for 1984 from Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." Monthly data are EIA estimates based on the Bureau of Labor Statistics Urban Consumer Price Index (CPI-U) for natural gas and are adjusted to conform with final reported annual data. See Note 6 on the previous page for estimation procedures.

**Natural Gas—Current Series:** • Average wellhead—Annual data through 1982 from EIA, *Natural Gas Annual, 1973 through 1983*. Annual data for 1983 and 1984 from Form EIA-627, "Annual Quantity and Value of Natural Gas Report" and the U.S. Minerals Management Service. Monthly data are estimated primarily on the basis of values reported by State agencies in Mississippi, New Mexico, Oklahoma, and Texas. These States together account for almost 50 percent of total U.S. marketed production. Monthly data are adjusted to conform with final reported annual data.

- Imports and Purchases from Producers by Major Interstate Pipeline Companies—FERC Form 11, "Interstate Pipeline Company Purchases, and Industrial Sales".
- City Gate—EIA, October 1983 forward: Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."
- Residential, Commercial, Industrial and Consumer Average—Annual data from EIA, Form EIA-176 "Annual Report of Natural and Supplemental Gas Supply and Disposition." Monthly data from EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."
- Electric Utilities—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

**Electricity:** • Cost of fossil fuels—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

- Retail prices—EIA, January 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; January 1983 forward: EIA Form 826, "Electric Utility Company Monthly Statement."

# Part 10 International

## International

### Crude Oil Production

World crude oil production in March 1986 was 54.9 million barrels per day, down 0.3 million from the level in the previous month. World crude oil production in the first quarter of 1986 averaged 55.1 million barrels per day, up 3.0 percent from the first-quarter 1985 level.

Organization of Petroleum Exporting Countries (OPEC) production during March 1986 averaged 17.3 million barrels per day, down 0.4 million from the level during the previous month. OPEC output in the first quarter of 1986 averaged 17.5 million barrels per day, up 7.1 percent from the first-quarter 1985 average. Production by the Arab members of OPEC during March 1986 averaged 10.5 million barrels per day, down 0.4 million from the February 1986 level. During March 1986, production increased in Kuwait by 200,000 barrels per day, in Algeria by 50,000, and in Qatar by 25,000 barrels per day. Production decreased in Saudi Arabia and the United Arab Emirates by 600,000 and 50,000 barrels per day, respectively, during March 1986. Production by Arab members of OPEC during the first quarter of 1986 averaged 10.6 million barrels per day, 15.1 percent above the first-quarter 1985 level. Among non-Arab OPEC countries during March 1986, production increased in Nigeria by 200,000 barrels per day, but decreased in Iran by the same amount.

Of the non-OPEC nations during March 1986, production increased in Mexico by 95,000 and Canada by 5,000 barrels per day. The level of production declined in the United Kingdom by 15,000 and the United States by 1,000 barrels per day during the month.

### Petroleum Consumption

In February 1986 consumption in all OECD countries was up by 1.0 percent compared with the level in February 1985. Consumption was down in Canada by 4.1 percent and in the United States by 0.4 percent compared with levels a year earlier. Consumption in Japan was 7.7 percent higher than the level a year earlier. Consumption in European OECD countries in February 1986 was up by 0.6 percent compared with the level 1 year earlier. Consumption was down in the United

Kingdom by 22.4 percent and in Italy by 3.9 percent, but up in West Germany by 20.8 percent and in France by 3.5 percent compared with levels 1 year earlier.

### Petroleum Stocks

For all OECD countries, petroleum stocks at the end of February 1986 were 1.8 percent higher than at the end of February 1985. Stocks in the United States were 3.6 percent higher, but in Canada 3.4 percent lower, than the levels 1 year earlier. Stocks in Japan were 1.7 percent higher than the level 1 year earlier. Ending stock levels in all European OECD countries for February 1986 were 0.8 percent higher than in February 1985. Stocks in Italy were up by 4.2 percent, but down in the United Kingdom by 4.6 percent, in France by 5.9 percent, and in West Germany by 5.5 percent.

### Nuclear Electricity Production

In March 1986, the 20 non-Communist nations with nuclear power capacity generated 116.5 gross terawatthours (billion kilowatt-hours) of nuclear-based electricity, 6.0 percent more than the March 1985 generation. The United States generated 30.8 gross terawatthours, 26.4 percent of the total nuclear generation by the non-Communist nations in March 1986.

During the first quarter of 1986, the 20 non-Communist nations' nuclear generation increased 9.8 percent compared with the same period in 1985. The United States accounted for 28.8 percent of that generation compared with its 31.7-percent share in the first quarter of 1985.

In Canada, Ontario Hydro's Pickering-8 generating unit was in service as of February 27. Pickering-8 is a 540-gross-megawatt-electric pressurized heavy-water-moderated and cooled reactor. With the addition of Pickering-8, there were 305 operable nuclear power generating units in the non-Communist countries as of March 31, 1986, with a collective gross generating capacity of 233.5 gigawatts. In March 1986, the 96 operable U.S. units accounted for 86.0 gross gigawatts (36.8 percent) of the total non-Communist nuclear generating capacity.

# International

## Crude Oil Production for Major Petroleum Producing Countries

		Algeria	Iraq	Kuwait <sup>1</sup>	Libya	Qatar	Saudi Arabia <sup>1</sup>	United Arab Emirates	Arab Members of OPEC <sup>2</sup>	Indonesia	Iran
Thousand barrels per day											
1973	Average	1,097	2,018	3,020	2,175	570	7,596	1,533	18,009	1,339	5,861
1974	Average	1,009	1,971	2,546	1,521	518	8,480	1,679	17,724	1,375	6,022
1975	Average	983	2,262	2,084	1,480	438	7,075	1,664	15,986	1,307	5,350
1976	Average	1,075	2,415	2,145	1,933	497	8,577	1,936	18,578	1,504	5,883
1977	Average	1,152	2,348	1,969	2,063	445	9,245	1,999	19,221	1,686	5,663
1978	Average	1,161	2,563	2,131	1,983	487	8,301	1,831	18,457	1,635	5,242
1979	Average	1,154	3,477	2,500	2,092	508	9,532	1,831	21,094	1,591	3,168
1980	Average	1,012	2,514	1,656	1,787	472	9,900	1,709	19,050	1,577	1,662
1981	Average	805	1,000	1,125	1,140	405	9,815	1,474	15,764	1,605	1,380
1982	Average	710	1,012	823	1,150	330	6,483	1,250	11,758	1,339	2,214
1983	Average	660	1,005	1,064	1,105	295	5,086	1,149	10,364	1,343	2,440
1984	January	650	1,100	1,080	1,100	445	5,130	1,200	10,705	1,470	2,200
	February	600	1,000	1,240	1,100	315	5,040	1,200	10,495	1,575	2,300
	March	600	1,200	1,293	1,100	440	4,843	1,205	10,681	1,560	2,400
	April	600	1,200	1,250	1,200	400	5,150	1,205	11,005	1,570	2,200
	May	650	1,200	1,200	1,200	400	5,000	1,200	10,850	1,470	1,700
	June	700	1,200	1,200	1,250	500	5,450	1,225	11,525	1,520	2,200
	July	650	1,200	1,110	1,100	430	5,010	1,090	10,590	1,390	2,400
	August	650	1,300	1,220	1,000	400	4,520	990	10,080	1,410	1,800
	September	650	1,300	1,183	1,000	480	4,133	1,110	9,856	1,400	1,900
	October	650	1,200	1,129	1,000	380	4,129	1,060	9,548	1,430	2,100
	November	650	1,300	990	1,000	280	3,990	1,060	9,270	1,350	2,400
	December	600	1,300	990	1,000	260	3,590	1,210	8,950	1,450	2,500
	Average	638	1,209	1,157	1,087	394	4,663	1,146	10,294	1,466	2,175
1985	January	600	1,250	1,110	1,000	270	3,510	1,100	R8,840	1,310	1,900
	February	650	1,250	1,125	1,000	290	4,025	1,160	9,500	1,330	2,100
	March	690	1,200	1,085	1,000	315	3,835	1,215	9,340	1,300	2,200
	April	650	1,370	970	1,000	260	3,470	1,215	8,935	1,300	2,300
	May	650	1,300	940	1,100	290	2,590	1,160	8,030	1,200	2,000
	June	600	1,370	920	980	300	2,420	1,100	7,690	1,050	2,200
	July	600	1,450	940	910	320	2,740	1,155	8,115	1,300	2,200
	August	600	1,400	940	910	320	2,340	1,200	7,710	1,300	2,400
	September	650	1,600	980	1,100	295	2,980	1,285	8,890	1,200	2,200
	October	650	1,650	1,055	1,200	320	3,910	1,255	10,040	1,260	2,300
	November	680	1,700	1,050	1,200	300	4,200	1,250	10,380	1,300	2,200
	December	650	1,650	1,080	1,300	335	4,680	1,225	10,920	1,250	2,400
	Average	639	1,433	1,016	1,059	301	3,388	1,193	R9,029	1,258	2,201
1986	January	650	1,650	R1,115	1,100	360	R4,465	1,215	R10,555	1,420	2,100
	February	R550	R1,650	R1,315	R900	R325	R4,715	R1,415	R10,870	R1,300	R2,000
	March	600	1,650	1,515	900	350	4,115	1,365	10,495	1,300	1,800
	Average	602	1,650	1,315	969	346	4,422	1,329	10,632	1,341	1,966

<sup>1</sup>Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In March 1986, total production in this region amounted to approximately 230,000 barrels per day.

<sup>2</sup>Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.

Footnotes continued on following page.

# International

## Crude Oil Production for Major Petroleum Producing Countries (continued)

		Nigeria	Vene-zuela	Total OPEC <sup>a</sup>	Canada	Mexico	United Kingdom	United States	China	USSR	Other <sup>b</sup>	World
Thousand barrels per day												
1973	Average	2,054	3,366	30,989	1,800	465	2	9,208	1,090	8,465	3,655	55,674
1974	Average	2,255	2,976	30,729	1,684	571	2	8,774	1,315	9,000	3,777	55,852
1975	Average	1,783	2,346	27,155	1,439	705	12	8,375	1,490	9,625	4,079	52,880
1976	Average	2,067	2,294	30,738	1,295	831	245	8,132	1,670	10,143	4,258	57,312
1977	Average	2,085	2,238	31,298	1,320	981	768	8,245	1,874	10,682	4,517	59,685
1978	Average	1,897	2,166	29,805	1,313	1,209	1,082	8,707	2,082	11,185	4,674	60,057
1979	Average	2,302	2,356	30,928	1,496	1,461	1,568	8,552	2,122	11,460	4,948	62,535
1980	Average	2,055	2,168	26,891	1,435	1,936	1,622	8,597	2,114	11,773	5,170	59,538
1981	Average	1,433	2,102	22,646	1,285	2,313	1,811	8,572	2,012	11,907	5,355	55,901
1982	Average	1,295	1,895	18,868	1,271	2,748	2,065	8,649	2,045	11,967	5,639	53,252
1983	Average	1,241	1,801	17,583	1,356	2,689	2,291	8,688	2,120	12,027	6,239	52,993
1984	January	1,365	1,840	17,980	1,365	2,670	2,525	8,868	2,200	11,950	6,643	54,201
	February	1,565	1,815	18,140	1,445	2,755	2,600	8,874	2,200	11,950	6,629	54,593
	March	1,560	1,815	18,416	1,475	2,710	2,480	8,672	2,200	11,800	6,563	54,316
	April	1,300	1,815	18,300	1,430	2,770	2,475	8,862	2,225	11,800	6,649	54,511
	May	1,300	1,840	17,570	1,415	2,800	2,439	8,955	2,225	11,950	6,724	54,078
	June	1,400	1,805	18,870	1,470	2,820	2,350	8,852	2,225	11,950	6,834	55,371
	July	1,200	1,860	17,860	1,515	2,845	2,470	8,885	2,305	11,920	6,838	54,638
	August	1,150	1,820	16,670	1,435	2,680	2,300	8,809	2,305	11,920	6,846	52,965
	September	1,400	1,850	16,826	1,330	2,705	2,435	8,993	2,335	11,840	6,957	53,421
	October	1,600	1,800	16,893	1,450	2,675	2,615	8,906	2,335	11,840	7,118	53,832
	November	1,600	1,725	16,760	1,460	2,745	2,605	8,979	2,335	11,800	7,170	53,854
	December	1,600	1,770	16,685	1,445	2,830	2,645	8,897	2,335	11,800	7,211	53,848
	Average	1,419	1,813	17,576	1,436	2,750	2,495	8,879	2,269	11,878	6,847	54,130
1985	January	1,400	1,670	R15,530	1,450	2,635	2,780	R8,740	2,450	11,700	7,214	R52,499
	February	1,690	1,670	16,710	1,450	2,685	2,650	R9,025	2,450	11,700	7,254	R53,924
	March	1,700	1,680	16,650	1,500	2,810	2,600	R9,095	2,450	11,700	7,327	R54,132
	April	1,600	1,670	16,235	1,465	2,825	2,635	R9,043	2,480	11,700	7,404	R53,787
	May	1,450	1,675	14,785	1,475	2,790	2,545	R9,132	2,480	11,750	7,368	R52,325
	June	1,100	1,670	14,110	1,450	2,555	2,450	R9,022	2,480	11,680	7,134	R50,881
	July	1,000	1,670	14,715	1,430	2,620	2,385	R8,949	2,490	11,820	7,465	R51,874
	August	1,200	1,670	14,710	1,450	2,795	2,215	R8,803	2,490	11,860	7,456	R51,779
	September	1,450	1,670	15,860	1,450	2,815	2,600	R8,954	2,490	11,920	7,548	R53,637
	October	1,700	1,670	17,420	1,450	2,750	2,670	R8,970	2,500	11,960	7,545	R55,265
	November	1,760	1,670	17,760	1,450	2,795	2,680	R8,902	2,500	11,970	7,607	R55,664
	December	1,620	1,670	18,310	1,553	2,733	2,440	R9,030	2,500	11,960	R7,592	R56,118
	Average	1,471	1,671	R16,062	1,465	2,734	2,553	R8,971	2,480	11,811	R7,410	R53,486
1986	January	1,200	1,670	R17,395	1,540	2,510	2,666	8,942	2,500	11,960	R7,640	R55,153
	February	1,400	1,670	R17,690	1,475	R2,125	R2,725	8,940	2,500	11,960	R7,771	R55,186
	March	1,600	1,670	17,325	1,480	2,220	2,710	8,939	2,500	11,980	7,771	54,925
	Average	1,400	1,670	17,463	1,499	2,290	2,700	8,940	2,500	11,967	7,726	55,085

Footnotes continued.

<sup>a</sup>Other is a calculated total derived from the difference between world production and the nations represented above.

R=Revised data.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.

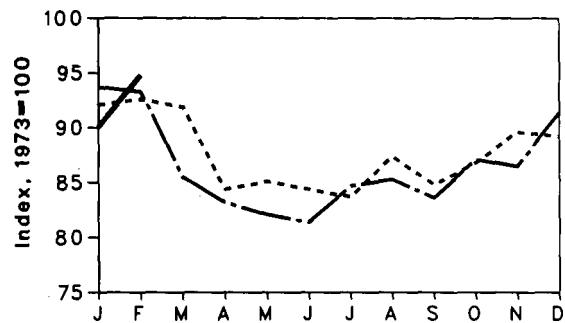
• Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Sources: • See the last page of this section.

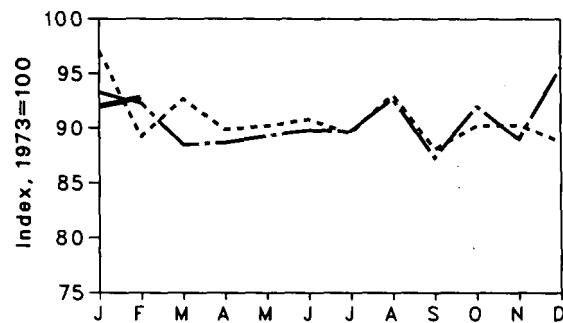
# International

## Petroleum Consumption for OECD Countries

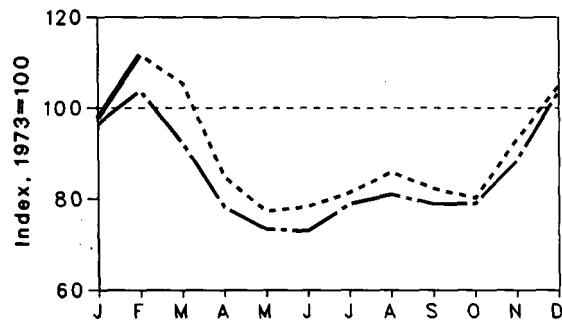
Total OECD



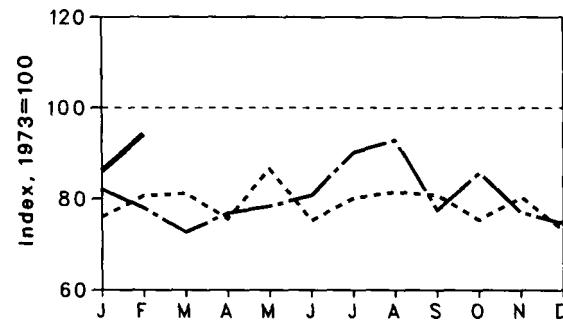
United States



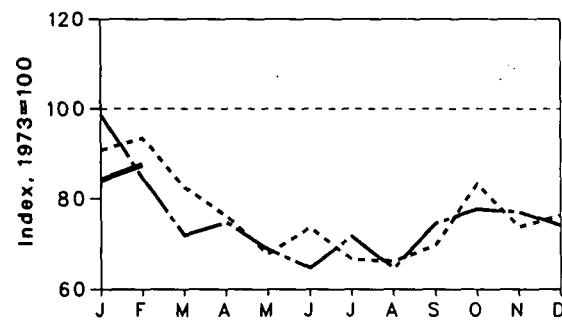
Japan



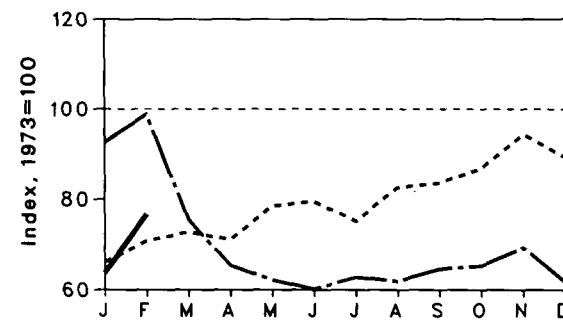
West Germany



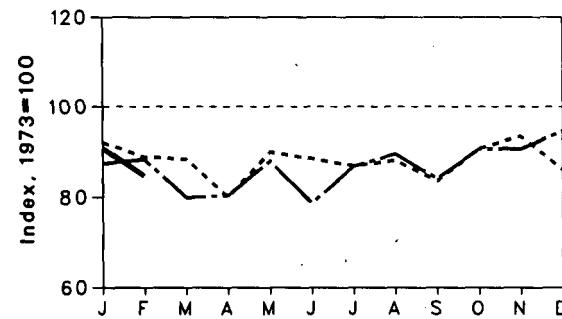
France



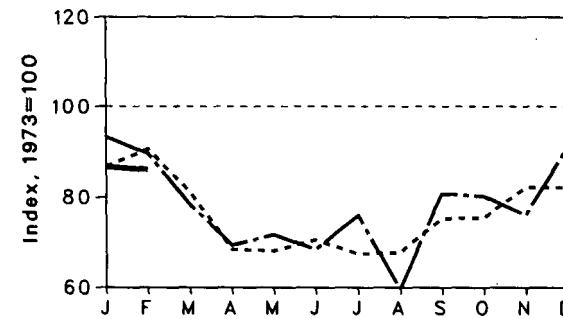
United Kingdom



Canada



Italy



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# International

## Petroleum Consumption for OECD Countries<sup>1</sup>—New Series

		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Total OECD Europe <sup>a</sup>	Other OECD <sup>b</sup>	Total OECD <sup>c</sup>
Thousand barrels per day											
1973	Average	1,707	2,422	2,147	5,071	2,301	17,308	2,915	14,521	975	39,582
1974	Average	1,740	2,260	2,090	4,960	2,138	16,653	2,612	13,708	1,017	38,078
1975	Average	1,694	2,136	1,583	4,502	1,872	16,322	2,515	12,656	915	36,089
1976	Average	1,743	2,280	1,801	4,771	1,856	17,461	2,708	13,509	1,024	38,508
1977	Average	1,751	2,235	1,973	5,231	1,880	18,431	2,837	13,847	1,079	40,339
1978	Average	1,737	2,169	2,176	5,142	1,850	18,847	3,048	14,017	1,070	40,813
1979	Average	1,857	2,385	2,003	5,480	1,930	18,513	3,073	14,723	1,045	41,618
1980	Average	1,947	2,256	1,876	4,960	1,725	17,056	2,707	13,511	1,126	38,600
1981	Average	1,836	2,023	1,906	4,848	1,590	16,058	2,449	12,473	1,087	36,302
1982	Average	1,616	1,940	1,782	4,554	1,587	15,296	2,324	12,092	1,132	34,690
1983	Average	1,490	1,911	1,730	4,368	1,520	15,231	2,290	11,808	1,008	33,908
1984	January	1,571	2,199	1,865	4,976	1,522	16,801	2,215	12,130	972	36,449
	February	1,517	2,262	1,945	5,662	1,630	15,437	2,352	12,935	1,101	36,651
	March	1,510	1,999	1,742	5,356	1,674	16,050	2,367	12,409	1,066	36,390
	April	1,366	1,848	1,468	4,300	1,635	15,568	2,203	11,295	861	33,390
	May	1,535	1,642	1,462	3,918	1,807	15,620	2,525	11,605	1,021	33,699
	June	1,511	1,785	1,514	3,975	1,828	15,709	2,191	11,293	937	33,425
	July	1,483	1,615	1,448	4,130	1,731	15,498	2,337	11,014	1,024	33,150
	August	1,505	1,607	1,454	4,355	1,900	16,116	2,377	11,423	1,200	34,599
	September	1,427	1,688	1,612	4,171	1,924	15,247	2,354	11,660	1,048	33,554
	October	1,549	2,018	1,617	4,069	1,996	15,616	2,198	12,001	1,126	34,362
	November	1,594	1,788	1,763	4,722	2,173	15,627	2,344	12,327	1,179	35,449
	December	1,470	1,851	1,766	5,324	2,057	15,375	2,133	11,960	1,162	35,291
	Average	1,503	1,857	1,637	4,577	1,824	15,726	2,300	11,834	1,058	34,698
1985	January	1,491	R2,389	2,001	4,887	2,130	R16,109	2,393	R13,550	1,031	R37,068
	February	1,508	R2,050	1,923	5,262	2,274	R16,121	2,274	R13,121	1,078	R37,090
	March	1,364	R1,740	1,682	4,680	1,738	R15,373	2,120	R11,392	1,069	R33,878
	April	1,372	R1,812	1,487	3,962	1,505	R15,472	2,238	R11,103	1,146	R33,055
	May	1,501	1,668	1,537	3,721	1,431	R15,504	2,284	10,708	1,094	R32,528
	June	1,344	R1,569	1,469	3,701	1,383	R15,483	2,356	R10,582	1,058	R32,168
	July	1,483	R1,738	1,627	4,003	1,445	R15,434	2,630	R11,417	1,091	R33,428
	August	1,527	R1,566	1,281	4,109	1,425	R16,060	2,708	R11,065	1,015	R33,776
	September	1,435	R1,807	1,733	4,002	1,487	R15,099	2,258	R11,447	1,082	R33,065
	October	1,546	1,882	1,723	4,008	1,503	R15,944	2,499	12,040	971	R34,509
	November	1,546	R1,867	1,629	4,487	1,596	R15,503	2,245	R11,693	1,088	R34,317
	December	1,614	1,798	1,951	5,259	1,423	R16,611	2,176	R11,704	R1,071	R36,259
	Average	1,478	R1,823	1,669	4,336	1,808	R15,726	2,350	R11,645	1,066	R34,251
1986	January	R1,549	R2,036	1,861	R4,960	R1,468	15,923	2,509	R12,230	R1,016	R35,679
	February	1,446	2,121	1,848	5,668	1,764	16,056	2,746	13,204	1,140	37,513
	Average	1,500	2,076	1,855	5,296	1,808	15,986	2,622	12,692	1,075	36,549

The consumption data series shown on this page include inland consumption plus international marine bunkers and refinery fuel. They replace the previous inland consumption series shown on page 118. In addition, International Energy Agency totals previously shown on this page have been replaced with OECD totals.

<sup>a</sup>Organization for Economic Cooperation and Development (OECD) includes Canada, Japan, and the United States; as well as "Total OECD Europe" and "Other OECD."

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

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

R=Revised data. NA=Not available.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.

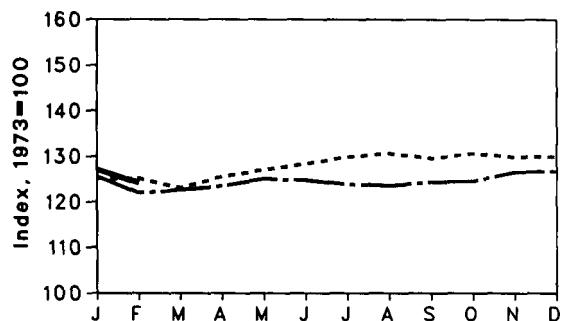
• Data for 1983 through 1985 are preliminary.

Sources: • See the last page of this section.

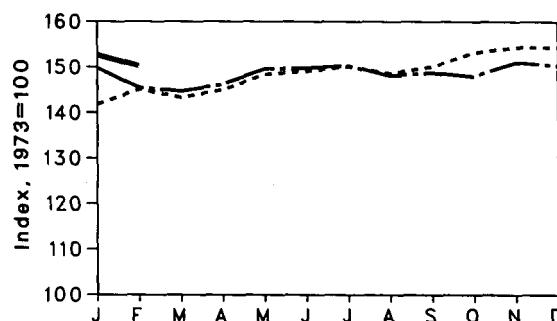
# International

## Petroleum Stocks for OECD Countries at End of Period

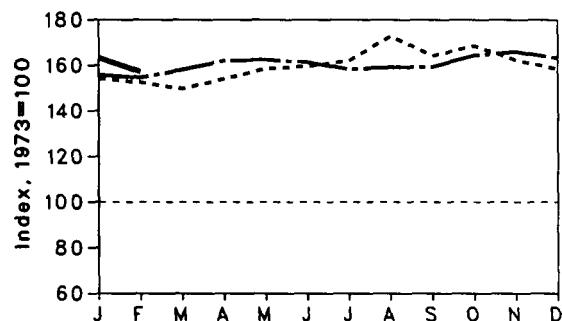
Total OECD



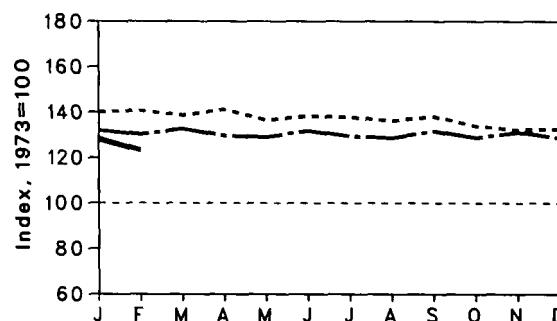
United States



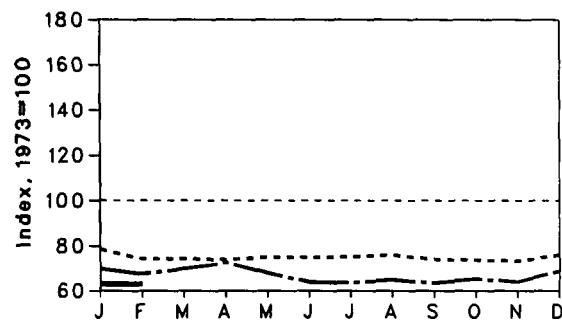
Japan



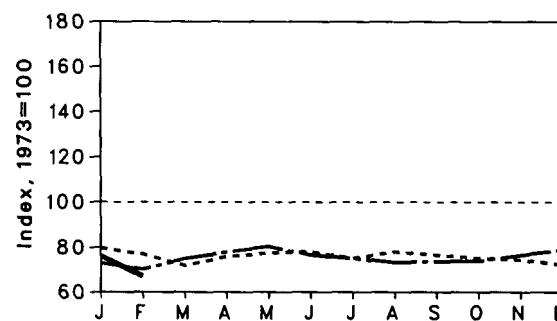
West Germany



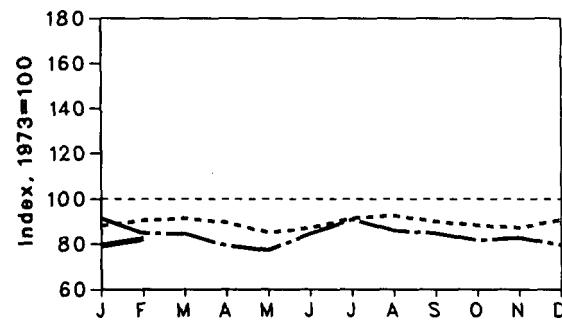
France



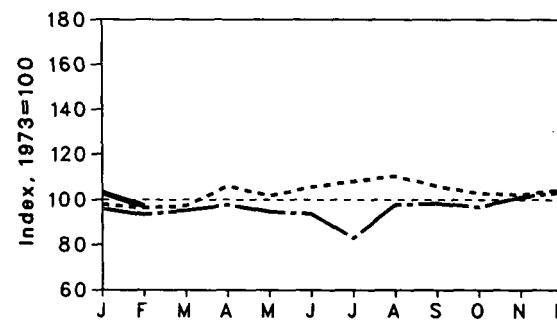
United Kingdom



Canada



Italy



----- 1984      - - - 1985      - - - - 1986

## International

### Petroleum Stocks<sup>1</sup> for OECD Countries<sup>2</sup> at End of Period

		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Total OECD Europe <sup>3</sup>	Other OECD <sup>4</sup>	Total OECD <sup>2</sup>
Million barrels											
1973	Year	140	201	152	303	156	1,008	181	1,070	67	2,588
1974	Year	145	249	167	370	161	1,074	213	1,227	64	2,880
1975	Year	174	225	143	375	165	1,133	187	1,154	67	2,903
1976	Year	153	234	143	380	165	1,112	208	1,205	68	2,918
1977	Year	167	239	161	409	148	1,312	225	1,268	68	3,224
1978	Year	144	201	154	413	157	1,278	238	1,219	68	3,122
1979	Year	150	226	163	460	169	1,341	272	1,353	75	3,379
1980	Year	164	243	170	495	168	1,392	319	1,464	72	3,587
1981	Year	161	214	167	482	143	1,484	297	1,337	67	3,531
1982	Year	136	193	179	484	125	1,430	272	1,258	68	3,376
1983	Year	120	153	149	471	119	1,454	250	1,145	68	3,258
1984	January	123	158	149	467	124	1,429	254	1,150	68	3,237
	February	127	149	147	462	120	1,463	255	1,119	69	3,240
	March	128	149	148	454	112	1,444	251	1,092	68	3,185
	April	125	148	161	467	118	1,462	256	1,130	67	3,251
	May	119	151	155	480	121	1,496	247	1,129	65	3,289
	June	122	151	161	484	122	1,503	250	1,149	66	3,324
	July	128	151	164	491	117	1,513	249	1,161	69	3,362
	August	130	153	168	524	122	1,498	247	1,163	68	3,383
	September	126	149	161	498	119	1,513	250	1,150	68	3,355
	October	124	148	156	511	117	1,544	242	1,137	67	3,382
	November	122	147	155	492	116	1,556	239	1,126	65	3,362
	December	127	153	159	480	113	1,556	240	1,132	69	3,364
1985	January	128	140	146	472	114	R1,512	239	1,071	70	R3,253
	February	119	R135	142	468	109	R1,462	236	R1,032	71	R3,153
	March	118	140	145	479	117	R1,460	240	1,051	65	R3,173
	April	111	R146	148	491	121	R1,473	235	R1,053	67	R3,194
	May	108	R136	144	492	125	1,508	234	R1,063	65	R3,237
	June	119	128	142	489	119	R1,511	239	1,048	64	R3,231
	July	127	R128	126	480	117	R1,516	234	R1,022	62	R3,207
	August	120	R130	149	482	114	R1,494	233	R1,042	62	R3,200
	September	119	128	149	483	115	R1,502	238	1,056	63	R3,222
	October	114	R131	147	498	115	R1,496	233	R1,056	65	R3,230
	November	116	128	154	503	119	R1,523	237	1,071	65	R3,278
	December	111	138	157	495	123	R1,519	233	R1,093	67	R3,285
1986	January	R111	R127	157	R495	118	1,538	R232	R1,080	66	R3,290
	February	115	127	148	476	104	1,515	223	1,040	67	3,215

A new data series showing Total OECD Europe stocks has been added to this page. The other data series are the same as previously shown and reflect the availability of new data from OECD and a comprehensive review of the EIA international petroleum stock data base.

<sup>1</sup>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 the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea.

<sup>2</sup>Organization for Economic Cooperation and Development (OECD) includes Canada, Japan, and the United States; as well as "Total OECD Europe" and "Other OECD."

<sup>3</sup>"Total OECD Europe" includes France, Italy, the United Kingdom, and West Germany; as well as Austria, Belgium, Denmark, Finland, Greece, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and Turkey.

<sup>4</sup>"Other OECD" includes Australia, New Zealand, and the U.S. Territories.

R=Revised data. NA=Not available.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.

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

• In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported. Using the new basis, the end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,420 in 1980, and 1,462 in 1982.

Sources: • See the last page of this section.

# International

## Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup>

	Argen-tina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Nether-lands	Paki-stan	
Billion gross kilowatthours												
1973 Total	0	0	0	15.3	0	14.7	2.5	3.1	9.4	1.1	0.5	
1974 Total	1.0	0.1	0	15.4	0	14.7	1.9	3.4	18.9	3.3	0.6	
1975 Total	2.5	6.8	0	13.2	0	18.3	2.5	3.8	21.3	3.3	0.5	
1976 Total	2.6	10.0	0	18.0	0	15.8	3.2	3.8	36.6	3.9	0.5	
1977 Total	1.6	11.9	0	26.6	2.7	17.9	2.8	3.4	28.2	3.7	0.3	
1978 Total	2.9	12.5	0	33.0	3.3	30.6	2.3	4.5	53.1	4.1	0.2	
1979 Total	2.7	11.4	0	38.4	6.7	39.9	3.2	2.6	62.0	3.5	(s)	
1980 Total	2.3	12.5	0	40.4	7.0	61.2	2.9	2.2	82.8	4.2	0.1	
1981 Total	2.8	12.8	0	43.3	14.5	105.2	3.1	2.7	86.0	3.7	0.2	
1982 Total	1.9	15.6	0.1	42.6	16.5	108.9	2.2	6.8	104.5	3.9	0.1	
1983 Total	3.4	24.1	0.2	53.0	17.4	144.2	2.9	5.8	109.1	3.6	0.2	
1984	January	0.7	2.7	(s)	5.0	1.7	18.0	0.3	0.4	10.1	0.3	(s)
	February	0.4	2.3	0.2	4.6	1.6	17.1	0.4	0.6	9.2	0.4	0
	March	0.6	1.9	0.1	5.1	1.7	17.8	0.3	0.7	8.8	0.2	0
	April	0.5	2.4	(s)	4.3	1.6	15.4	0.3	0.3	8.9	0.2	(s)
	May	0.5	2.0	0.1	3.6	1.2	14.2	0.5	0.3	10.5	0.4	(s)
	June	0.4	2.6	0	3.7	1.3	13.1	0.4	0.3	9.9	0.4	(s)
	July	0.4	2.4	0	4.4	1.4	13.1	0.5	0.3	10.6	0.2	(s)
	August	0.3	1.9	(s)	4.7	1.4	13.2	0.4	0.8	11.0	0.3	(s)
	September	0.4	1.9	0.3	3.9	1.5	14.7	0.2	0.8	11.4	0.4	(s)
	October	0.1	2.5	0.5	4.5	1.8	16.0	0.4	0.8	11.6	0.4	(s)
	November	(s)	2.6	0.4	4.7	1.7	17.8	0.3	0.8	11.9	0.4	(s)
	December	0.1	2.6	0.4	5.1	1.7	20.9	0.2	0.8	13.2	0.4	(s)
	Total	4.5	27.7	2.1	53.8	18.5	191.2	4.1	6.9	127.2	3.8	0.3
1985	January	0.2	2.5	0.4	5.7	1.7	21.9	0.2	0.8	12.2	0.4	(s)
	February	0.4	1.7	0.3	5.0	1.6	19.2	0.2	0.7	10.7	0.3	(s)
	March	0.5	2.0	0.3	5.9	1.8	20.6	0.4	0.8	12.0	0.2	0
	April	0.4	2.2	0.1	5.2	1.6	17.7	0.6	0.7	11.8	(s)	0
	May	0.4	2.8	0.2	2.4	1.2	15.9	0.5	0.7	13.1	0.2	0
	June	0.4	2.8	0.4	4.2	1.2	13.6	0.4	0.6	12.6	0.4	(s)
	July	0.5	2.5	0.3	5.7	1.4	16.1	0.4	0.6	12.5	0.4	0.1
	August	0.5	3.2	0.1	6.0	1.5	15.4	0.2	0.5	12.9	0.4	(s)
	September	0.5	3.3	0.3	5.4	1.6	17.2	0.3	0.3	12.8	0.4	0
	October	0.6	3.9	0.4	5.1	1.7	20.0	0.4	0.3	13.9	0.4	(s)
	November	0.7	3.9	0.3	5.8	1.7	22.1	0.4	0.3	13.1	0.4	0.1
	December	0.7	3.9	0.3	6.5	1.7	24.4	0.4	0.6	14.7	0.4	0.1
	Total	5.8	34.5	3.4	62.9	18.8	224.0	4.5	7.0	152.0	3.9	0.3
1986	January	0.6	3.8	(s)	6.4	1.9	25.6	0.5	0.9	15.0	0.4	(s)
	February	0.6	2.8	0	4.8	1.6	22.8	0.4	0.5	13.5	0.1	(s)
	March	0.5	3.6	0	6.6	1.8	23.6	0.5	0.9	14.5	0.3	(s)
	Year to Date	1.7	10.2	(s)	17.8	5.2	72.0	1.4	2.3	43.0	0.8	0.1

<sup>1</sup>Figures are for gross electricity generation, as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, which represents the energy consumed by the generating plants themselves.

<sup>2</sup>The United Kingdom assesses generation at 4-, 5- or 6-week intervals, rather than by calendar month.

R=Revised data. (s)=Less than 0.05 billion gross kilowatthours.

Footnotes continued on following page.

# International

## Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup> (continued)

		South Africa	South Korea	Spain	Sweden	Switzer-land	United Taiwan Kingdom <sup>2</sup>	West Germany	Non- Communist World Excluding U.S.	United States	Total Non- Communist World
Billion gross kilowatthours											
1973	Total	0	0	6.5	2.1	6.2	0	28.2	11.9	101.4	87.8
1974	Total	0	0	7.2	2.3	7.0	0	33.8	12.0	121.7	124.3
1975	Total	0	0	7.5	12.0	7.7	0	30.5	21.7	151.8	182.3
1976	Total	0	0	7.6	16.0	7.9	0	36.8	24.5	187.1	201.8
1977	Total	0	0.1	6.5	19.9	8.1	0.1	38.1	36.0	207.8	264.2
1978	Total	0	2.3	7.6	23.8	8.3	2.7	36.6	35.7	263.5	292.4
1979	Total	0	3.2	6.7	21.0	11.8	6.3	38.5	42.2	300.1	270.6
1980	Total	0	3.5	5.2	26.7	14.3	8.2	37.2	43.7	354.3	265.4
1981	Total	0	2.9	9.4	37.7	15.2	10.7	38.9	53.4	442.4	288.5
1982	Total	0	3.8	8.8	38.8	15.0	13.1	44.1	63.4	489.9	298.6
1983	Total	0	9.0	10.7	40.4	15.5	18.9	49.6	65.8	573.9	313.6
1984	January	0	1.3	1.5	5.3	1.5	1.7	4.4	6.9	61.8	30.8
	February	0	1.2	1.5	5.0	1.4	1.8	4.6	6.8	59.1	29.4
	March	0	1.0	1.4	5.4	1.5	2.0	4.8	7.1	60.6	28.6
	April	0.1	0.9	1.3	4.5	1.5	1.8	4.2	7.7	55.8	24.7
	May	0.1	0.8	1.9	3.3	1.3	1.4	4.3	7.2	53.6	27.3
	June	0.3	0.7	2.2	2.8	0.6	1.8	4.7	7.1	52.3	26.4
	July	0.5	0.7	2.5	2.4	1.3	2.7	3.7	6.2	53.2	29.4
	August	0.7	0.9	2.3	3.5	1.0	2.4	3.6	6.3	54.7	31.8
	September	0.7	0.9	2.6	4.2	1.4	2.6	4.9	8.1	60.8	30.3
	October	0.7	1.3	1.8	5.0	1.5	2.0	4.1	8.5	63.5	26.8
	November	0.5	1.3	1.9	4.5	1.5	1.8	4.4	9.9	66.3	26.2
	December	0.6	0.9	2.2	5.4	1.9	2.3	6.3	10.8	75.9	32.0
	Total	4.2	11.8	23.1	51.3	16.3	24.3	54.1	92.6	717.7	343.8
1985	January	0.3	1.1	2.2	5.4	2.2	2.4	5.7	10.8	76.1	38.0
	February	0	1.2	1.9	5.0	2.0	2.1	5.6	10.1	68.2	32.4
	March	0	1.5	2.8	5.6	2.2	2.5	6.6	11.7	77.4	32.5
	April	0	1.3	2.4	4.5	2.2	2.7	5.1	10.6	69.0	28.3
	May	0	1.5	2.3	3.9	1.9	2.8	4.7	9.3	63.8	31.8
	June	0.1	1.2	3.1	2.6	1.2	2.6	5.1	9.6	62.0	31.0
	July	0.8	1.1	2.2	3.1	1.3	2.2	4.1	8.4	63.7	36.4
	August	0.8	1.2	2.1	4.3	1.0	2.2	3.8	9.5	65.5	36.8
	September	1.0	1.3	2.1	4.7	1.7	2.6	4.9	10.3	70.7	35.9
	October	1.1	1.4	2.1	5.4	2.2	2.6	4.3	11.3	77.2	32.1
	November	0.8	1.7	2.1	7.0	2.2	1.7	3.7	11.7	79.6	31.7
	December	0.9	1.9	2.6	6.9	2.2	2.5	6.0	12.3	89.0	35.7
	Total	5.7	16.5	28.0	58.6	22.4	28.7	59.6	125.7	862.2	402.6
1986	January	0.9	2.0	3.1	6.8	2.3	2.9	4.6	12.0	89.7	38.0
	February	0.6	1.7	2.5	6.4	2.1	2.1	5.1	10.4	78.1	34.0
	March	0.7	1.5	2.4	7.2	2.3	2.2	6.4	10.7	85.7	30.8
	Year to Date	2.3	5.2	8.1	20.4	6.7	7.2	16.1	33.1	253.6	102.8
											356.4

Footnotes continued.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.

• The sum of the months may not equal the annual total because the annual total may reflect revisions which are not included in the monthly data. Also, the sum of the months may not equal the annual total due to independent rounding.

Sources: • See the last page of this section.

# International

## Petroleum Consumption for Major Non-Communist Industrialized Countries<sup>1</sup>—Previous Series

		Canada	France <sup>2</sup>	Italy <sup>3</sup>	Japan <sup>4</sup>	United Kingdom	United States	West Germany	Other IEA <sup>5</sup>	Total IEA <sup>6</sup>
Thousand barrels per day										
1973	Average	1,597	2,219	1,525	5,000	1,958	17,308	2,693	4,069	34,150
1974	Average	1,630	2,094	1,521	4,872	1,829	16,653	2,408	4,047	32,960
1975	Average	1,595	1,925	1,468	4,568	1,633	16,322	2,319	3,905	31,810
1976	Average	1,647	2,075	1,503	4,786	1,601	17,461	2,507	4,265	33,770
1977	Average	1,661	1,973	1,476	5,015	1,655	18,431	2,478	4,214	34,930
1978	Average	1,701	2,077	1,551	5,115	1,683	18,847	2,596	4,387	35,880
1979	Average	1,766	2,107	1,607	5,173	1,690	18,513	2,664	4,487	35,900
1980	Average	1,730	1,965	1,602	4,680	1,420	17,056	2,360	4,152	33,000
1981	Average	1,615	1,745	1,705	4,445	1,325	16,058	2,120	4,032	31,300
1982	Average	1,450	1,645	1,614	4,196	1,337	15,296	2,045	3,962	29,900
1983	Average	1,345	1,600	1,590	4,185	1,290	15,231	2,005	4,054	29,700
1984	January	1,300	1,860	1,800	4,800	1,310	16,801	2,000	4,489	32,500
	February	1,370	1,915	1,750	5,450	1,380	15,437	2,180	4,433	32,000
	March	1,350	1,680	1,660	5,020	1,470	16,050	2,170	4,380	32,100
	April	1,200	1,475	1,550	4,110	1,450	15,568	2,030	4,092	30,000
	May	1,329	1,410	1,435	3,740	1,590	15,620	2,230	4,156	30,100
	June	1,330	1,420	1,295	3,590	1,585	15,709	2,020	4,071	29,600
	July	1,370	1,225	1,350	3,950	1,440	15,498	2,140	4,152	29,900
	August	1,365	1,210	1,270	4,230	1,630	16,116	2,050	4,239	30,900
	September	1,280	1,400	1,525	3,960	1,635	15,247	2,040	4,113	29,800
	October	1,415	1,590	1,500	3,860	1,830	15,616	1,880	4,199	30,300
	November	1,420	1,530	1,560	4,375	1,965	15,627	2,095	4,358	31,400
	December	1,320	1,580	1,560	4,995	1,855	15,375	1,855	4,340	31,300
	Average	1,338	1,523	1,520	4,338	1,595	15,726	2,057	4,226	30,800
1985	January	1,390	2,025	1,765	4,670	1,905	R16,109	2,165	4,463	32,500
	February	1,390	1,710	1,810	5,060	2,110	R16,121	2,005	4,550	32,900
	March	1,245	1,560	1,575	4,480	1,600	R15,373	1,840	4,139	30,200
	April	1,270	1,390	1,370	3,755	1,280	R15,472	2,110	4,070	29,200
	May	1,380	1,290	1,255	3,450	1,190	R15,504	1,985	3,980	28,700
	June	1,270	1,340	1,205	3,485	1,150	R15,483	2,105	3,934	28,700
	July	1,350	1,300	1,400	3,815	1,190	R15,434	2,345	4,083	29,700
	August	1,380	1,180	1,300	3,935	1,190	R16,060	2,415	4,241	30,500
	September	1,340	1,440	1,550	3,755	1,285	R15,099	1,955	4,000	29,000
	October	NA	1,564	1,554	3,860	1,300	R15,944	2,230	NA	NA
	November	NA	1,596	1,644	NA	1,361	R15,503	1,909	NA	NA
	December	NA	NA	NA	NA	NA	R16,611	1,150	NA	NA
	Average	1,335	1,489	1,491	4,020	1,410	R15,726	2,018	4,160	30,138

The consumption data series shown on this page represent inland consumption and do not include international marine bunkers or refinery fuel. They have been replaced by the new data series shown on page 113.

<sup>1</sup>These data represent inland consumption, i.e., sales of petroleum products excluding refinery fuel, refinery losses, and ocean bunkers except for the United States, where it represents domestic products supplied.

<sup>2</sup>Not a member of the International Energy Agency (IEA).

<sup>3</sup>Principal products only prior to 1981.

<sup>4</sup>Excludes liquefied petroleum gases and condensate.

<sup>5</sup>Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above.

<sup>6</sup>The 21 signatory nations of the IEA are listed in Note 1 on the last page of this section.

<sup>7</sup>Average of available data.

R=Revised data. NA=Not available.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.

• Data for 1983 through 1985 are preliminary.

Sources: • See the last page of this section.

## Notes and Sources for the International Section

### Notes

1. The 21 signatory nations of the International Energy Agency (IEA) are Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Australia and Portugal joined the IEA as new members in 1979 and 1980, respectively. In an effort to maintain comparability within this time series, consumption data for these two countries have been incorporated into the IEA total for all years.

2. The members of the Organization for Economic Cooperation and Development (OECD) are Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Total OECD includes the U.S. Territories.

### Sources

**Crude Oil Production:** • 1973-1984 annual data (except the United States): Energy Information Administration (EIA), *International Energy Annual 1984*.

• 1973-1985 U.S. annual and monthly data: EIA, *Petroleum Supply Monthly*.

• 1983-1985 monthly data (except United States and world): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources.

• 1983-1985 monthly data for world: Sum of data for all countries using above sources.

**New Petroleum Consumption and Stocks Series:** • U.S. data: EIA, *Petroleum Supply Monthly*.

• OECD data: OECD, *Quarterly Oil Statistics, Monthly Oil Statistics*.

**Previous Petroleum Consumption Series:** • Central Intelligence Agency, "International Energy Statistical Review" (except the United States).

• U.S. data: EIA, *Petroleum Supply Monthly*.

• International Energy Agency totals for latest months are EIA estimates.

**Previous Petroleum Stocks Series:** • U.S. data: EIA, *Petroleum Supply Monthly*.

• Other OECD data: OECD, *Quarterly Oil Statistics*; Comite Professionnel du Petrole, *Bulletin Mensuel*.

• Total OECD data: Sum of data for all OECD member countries using above sources.

**Nuclear Electricity Generation and Capacities:** • *Nucleonics Week*.

# Conversion Factors

## Conversion Factors

### Units of Measure

#### Weight

1 metric ton	contains	1,000 kilograms or 2,204.62 pounds
1 long ton	contains	2,240 pounds
1 short ton	contains	2,000 pounds

#### Conversion Factors for Crude Oil (Average Gravity)

1 barrel	contains	42 gallons
1 barrel	contains	0.136 metric tons (0.150 short tons)
1 metric ton	contains	7.33 barrels
1 short ton	contains	6.65 barrels

#### Conversion Factors for Uranium

1 short ton ( $U_3O_8$ )	contains	0.769 metric tons of uranium
1 short ton ( $UF_4$ )	contains	0.613 metric tons of uranium
1 metric ton ( $UF_4$ )	contains	0.676 metric tons of uranium

### Price Indices

	Gross National Product Implicit Price Deflator (1982 = 100)	Consumer Price Index, All Urban Consumers, All Items (1972 = 100)
1972	46.5	100.0
1973	49.5	106.2
1974	54.0	117.9
1975	59.3	128.7
1976	63.1	136.1
1977	67.3	144.9
1978	72.2	155.9
1979	78.6	173.5
1980	85.7	197.0
1981	94.0	217.4
1982	100.0	230.7
1983	103.9	238.1
1984	108.1	248.3
1985‡	111.7	248.3

†=Preliminary data.

Sources: • Gross National Product Implicit Price Deflator—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

• Consumer Price Index, All Urban Consumers, All Items—1967 = 100.0 from U.S. Department of Labor, Bureau of Labor Statistics. Rebased to 1972 = 100.0 by Energy Information Administration.

### Approximate Heat Content of Petroleum Products

	Million Btu per Barrel
Asphalt.....	6.636
Aviation gasoline .....	5.048
Butane .....	4.326
Butane-propane mixture <sup>1</sup> .....	4.130
Distillate fuel oil .....	5.825
Ethane .....	3.082
Ethane-propane mixture <sup>2</sup> .....	3.308
Isobutane.....	3.974
Jet fuel—kerosene type .....	5.670
Jet fuel—naphtha type .....	5.355
Kerosene.....	5.670
Lubricants.....	6.065
Motor gasoline .....	5.253
Natural gasoline .....	4.620
Pentanes Plus .....	4.620
Petrochemical feedstocks .....	
Naphtha 400° F or less .....	5.248
Other oils over 400° F .....	5.825
Still gas .....	6.000
Petroleum coke.....	6.024
Plant condensate.....	5.418
Propane .....	3.836
Residual fuel oil .....	6.287
Road oil .....	6.636
Special naphtha .....	5.248
Still gas .....	6.000
Unfinished oils .....	5.825
Unfractionated stream .....	5.418
Wax .....	5.537
Miscellaneous .....	5.796

<sup>1</sup> 60 percent butane and 40 percent propane.

<sup>2</sup> 70 percent ethane and 30 percent propane.

## Conversion Factors (continued)

### Approximate Heat Content of Fuels, 1973-1979

	Units	1973	1974	1975	1976	1977	1978	1979
<b>Coal</b>								
Production.....	Million Btu/short ton	23.376	23.072	22.897	22.855	22.597	22.248	22.454
Consumption.....	Million Btu/short ton	23.057	22.677	22.506	22.498	22.265	22.017	22.100
Non-electric utility users.....	Million Btu/short ton	24.878	24.783	24.745	24.861	24.701	24.496	24.626
Electric utilities.....	Million Btu/short ton	22.246	21.781	21.642	21.679	21.508	21.275	21.364
Imports.....	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports.....	Million Btu/short ton	26.596	26.700	26.562	26.601	26.548	26.478	26.548
<b>Anthracite</b>								
Production.....	Million Btu/short ton	22.132	21.711	21.582	22.045	22.661	23.079	23.170
Consumption.....	Million Btu/short ton	21.464	20.919	20.762	21.254	22.066	22.398	22.069
Non-electric utility users.....	Million Btu/short ton	22.674	22.330	22.272	22.618	24.101	24.388	24.272
Electric utilities.....	Million Btu/short ton	17.920	17.200	17.064	17.526	17.244	17.104	17.454
Imports and exports.....	Million Btu/short ton	25.400	25.400	25.400	25.400	25.400	25.400	25.400
<b>Bituminous coal and lignite</b>								
Production.....	Million Btu/short ton	23.391	23.087	22.910	22.863	22.597	22.242	22.449
Consumption.....	Million Btu/short ton	23.073	22.694	22.522	22.509	22.266	22.014	22.100
Residential and commercial.....	Million Btu/short ton	22.887	22.523	22.258	22.819	22.594	22.078	21.884
Coke plants.....	Million Btu/short ton	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial & transportation.....	Million Btu/short ton	22.585	22.420	22.439	22.528	22.290	22.175	22.436
Electric utilities.....	Million Btu/short ton	22.262	21.799	21.659	21.692	21.521	21.284	21.372
Imports.....	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports.....	Million Btu/short ton	26.612	26.716	26.573	26.613	26.561	26.501	26.570
<b>Coal coke, imports and exports</b> .....	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800	24.800
<b>Crude oil<sup>1</sup></b>								
Production.....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Imports.....	Million Btu/barrel	5.817	5.827	5.821	5.808	5.810	5.802	5.810
Exports.....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800
<b>Crude oil and petroleum products</b>								
Imports.....	Million Btu/barrel	5.897	5.884	5.858	5.856	5.834	5.839	5.810
Exports.....	Million Btu/barrel	5.752	5.774	5.748	5.745	5.797	5.808	5.832
<b>Petroleum products<sup>2</sup></b>								
Consumption.....	Million Btu/barrel	5.515	5.504	5.494	5.504	5.518	5.519	5.494
Residential and commercial.....	Million Btu/barrel	5.387	5.377	5.358	5.383	5.389	5.382	5.471
Industrial.....	Million Btu/barrel	5.565	5.537	5.527	5.535	5.552	5.546	5.416
Transportation.....	Million Btu/barrel	5.397	5.394	5.392	5.396	5.402	5.407	5.430
Electric utilities.....	Million Btu/barrel	6.245	6.238	6.250	6.251	6.249	6.251	6.258
Imports.....	Million Btu/barrel	5.983	5.959	5.935	5.980	5.908	5.955	5.811
Exports.....	Million Btu/barrel	5.752	5.773	5.747	5.743	5.796	5.814	5.864
LPG consumption.....	Million Btu/barrel	3.746	3.730	3.715	3.711	3.677	3.669	3.680
<b>Natural gas plant liquids</b>								
Production.....	Million Btu/barrel	4.049	4.011	3.984	3.964	3.941	3.925	3.955
<b>Natural gas</b>								
Production, dry.....	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021
Production, wet.....	Btu/cubic foot	1,093	1,097	1,095	1,093	1,093	1,088	1,092
Consumption.....	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021
Non-electric utility users.....	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018
Electric utilities.....	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,035
Imports.....	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030	1,037
Exports.....	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013

### Approximate Heat Rates for Electricity

Fossil fuel steam-electric power plant generation <sup>3</sup> ...	Btu/kilowatthour	10,389	10,442	10,406	10,373	10,435	10,361	10,353
Nuclear power plant generation.....	Btu/kilowatthour	10,903	11,161	11,013	11,047	10,769	10,941	10,879
Geothermal energy power plant generation.....	Btu/kilowatthour	21,674	21,674	21,611	21,611	21,611	21,611	21,545
Electricity consumption.....	Btu/kilowatthour	3,412	3,412	3,412	3,412	3,412	3,412	3,412

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.

<sup>3</sup> This is used as the thermal conversion factor for hydroelectric power generation and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

Sources: • See "Thermal Conversion Factor Source Documentation" on the following pages.

## Conversion Factors (continued)

### Approximate Heat Content of Fuels, 1980-1985

	Units	1980	1981	1982	1983	1984	1985-86†
<b>Coal</b>							
Production .....	Million Btu/short ton	22.415	22.309	22.240	22.056	22.014	21.880
Consumption .....	Million Btu/short ton	21.947	21.714	21.675	21.581	21.577	21.378
Non-electric utility users.....	Million Btu/short ton	24.731	24.477	24.194	24.093	24.069	23.647
Electric utilities .....	Million Btu/short ton	21.295	21.085	21.194	21.133	21.101	20.968
Imports.....	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000
Exports .....	Million Btu/short ton	26.384	26.160	26.223	26.291	26.402	26.307
<b>Anthracite</b>							
Production .....	Million Btu/short ton	22.869	23.291	23.289	22.734	23.107	22.846
Consumption .....	Million Btu/short ton	21.405	22.080	22.485	21.583	22.322	21.781
Non-electric utility users.....	Million Btu/short ton	22.719	23.749	24.530	24.536	25.128	24.421
Electric utilities .....	Million Btu/short ton	17.652	18.168	18.160	16.516	17.018	17.018
Imports and exports .....	Million Btu/short ton	25.400	25.400	25.400	25.400	25.400	25.400
<b>Bituminous coal and lignite</b>							
Production .....	Million Btu/short ton	22.411	22.302	22.234	22.053	22.009	21.876
Consumption .....	Million Btu/short ton	21.950	21.712	21.671	21.581	21.574	21.376
Residential and commercial .....	Million Btu/short ton	22.488	22.191	22.373	22.934	22.880	23.056
Coke plants .....	Million Btu/short ton	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial & transportation.....	Million Btu/short ton	22.690	22.572	22.694	22.679	22.524	21.978
Electric utilities .....	Million Btu/short ton	21.301	21.091	21.200	21.141	21.108	20.974
Imports.....	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000
Exports .....	Million Btu/short ton	26.404	26.176	26.231	26.300	26.410	26.320
<b>Coal coke, imports and exports</b> .....	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800
<b>Crude oil<sup>1</sup></b>							
Production .....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800
Imports.....	Million Btu/barrel	5.812	5.818	5.826	5.825	5.823	R5.832
Exports .....	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800
<b>Crude oil and petroleum products</b>							
Imports.....	Million Btu/barrel	5.796	5.775	5.775	5.774	5.745	R5.736
Exports .....	Million Btu/barrel	5.820	5.821	5.820	5.800	5.850	5.814
<b>Petroleum products<sup>2</sup></b>							
Consumption .....	Million Btu/barrel	5.479	5.448	5.415	5.406	5.395	R5.387
Residential and commercial .....	Million Btu/barrel	5.468	5.409	5.392	5.286	5.261	5.252
Industrial .....	Million Btu/barrel	5.376	5.310	5.262	5.273	5.256	R5.250
Transportation.....	Million Btu/barrel	5.440	5.434	5.423	5.416	R5.423	R5.419
Electric utilities .....	Million Btu/barrel	6.254	6.258	6.258	6.255	6.251	6.247
Imports.....	Million Btu/barrel	5.748	5.659	5.664	5.677	5.613	R5.572
Exports .....	Million Btu/barrel	5.841	5.837	5.829	5.800	5.867	5.819
LPG consumption.....	Million Btu/barrel	3.674	3.643	3.615	3.614	3.599	R3.603
<b>Natural gas plant liquids</b>							
Production .....	Million Btu/barrel	3.914	3.930	3.872	3.839	3.812	R3.805
<b>Natural gas</b>							
Production, dry.....	Btu/cubic foot	1,026	1,027	1,028	1,031	1,031	1,031
Production, wet.....	Btu/cubic foot	1,098	1,103	1,107	1,115	1,109	1,109
Consumption .....	Btu/cubic foot	1,026	1,027	1,028	1,031	1,031	1,031
Non-electric utility users.....	Btu/cubic foot	1,024	1,025	1,026	1,031	1,030	1,030
Electric utilities .....	Btu/cubic foot	1,035	1,035	1,036	1,030	1,035	1,035
Imports.....	Btu/cubic foot	1,022	1,014	1,018	1,024	1,005	1,005
Exports .....	Btu/cubic foot	1,013	1,011	1,011	1,010	1,010	1,010

### Approximate Heat Rates for Electricity

Fossil fuel steam-electric power plant generation <sup>3</sup> ...	Btu/kilowatthour	10,388	10,453	10,423	10,445	R10,211	R10,211
Nuclear power plant generation .....	Btu/kilowatthour	10,908	11,030	11,073	10,905	R10,843	R10,843
Geothermal energy power plant generation.....	Btu/kilowatthour	21,639	21,639	21,629	21,290	21,303	21,303
Electricity consumption.....	Btu/kilowatthour	3,412	3,412	3,412	3,412	3,412	3,412

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.

<sup>3</sup> This is used as the thermal conversion factor for hydroelectric power generation and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

†=Preliminary data. R=Revised data.

Sources: • See "Thermal Conversion Factor Source Documentation" on the following pages.

# Thermal Conversion Factor Source Documentation

## Approximate Heat Content of Petroleum Products

**Asphalt.** • 1973 forward: 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.** • 1973 forward: EIA adopted the thermal conversion factor of 5.048 million Btu per barrel as adopted by the Bureau of Mines from the Texas Eastern Transmission Corporation publication *Competition and Growth in American Energy Markets 1947-1985*, 1968.

**Butane.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Butane-Propane Mixture.** • 1973 forward: 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."

**Distillate Fuel Oil.** • 1973 forward: 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.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Ethane-Propane Mixture.** • 1979 forward: 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.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Jet Fuel, Kerosene Type.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as published for "Jet Fuel, Commercial" by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947-1985*, 1968.

**Jet Fuel, Naphtha Type.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel as published for "Jet Fuel, Military" by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947-1985*, 1968.

**Kerosene.** • 1973 forward: 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*.

**Lubricants.** • 1973 forward: 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.** • 1973 forward: EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Motor Gasoline.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel as published for "Gasoline, Motor Fuel" by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947-1985*, 1968.

**Natural Gasoline.** • 1973 forward: 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.** • 1984 forward: 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 400 Degrees Fahrenheit or Less.** • 1973 forward: Assumed by EIA to be 5.248 million Btu per barrel, equal to the thermal conversion factor for special naphtha. See "Special Naphtha."

**Petrochemical Feedstock, Oils Over 400 Degrees Fahrenheit.** • 1973 forward: 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."

## Thermal Conversion Factor Source Documentation (continued)

**Petrochemical Feedstock, Still Gas.** • 1973 forward: 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.** • 1973 forward: 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 the 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.

**Plant Condensate.** • 1973 forward: Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane.** • 1973 forward: EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Residual Fuel Oil.** • 1973 forward: 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.** • 1973 forward: 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 Naphtha.** • 1973 forward: 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.** • 1973 forward: 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.** • 1973 forward: 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.** • 1979 forward: 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*.

**Wax.** • 1973 forward: 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 Fuels

### Petroleum

**Crude Oil, Exports.** • 1973 forward: 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.** • 1973 forward: 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 using National Bureau of Standards, Miscellaneous

Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

**Crude Oil and Lease Condensate, Production.** • 1973 forward: 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.** • 1973 forward: 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 "Petroleum Products, Exports" and "Crude Oil, Exports."

**Crude Oil and Petroleum Products, Imports.** • 1973 forward: Calculated annually by EIA as the

## Thermal Conversion Factor Source Documentation (continued)

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."

**Natural Gas Plant Liquids, Production.** • 1973 forward: 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.

**Petroleum Products, Consumption.** • 1973 forward: 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.** • 1973–1984: 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*. • 1985 forward: Estimated by EIA.

**Petroleum Products, Consumption by Industrial Users.** • 1973–1984: 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*. • 1985 forward: Estimated by EIA.

**Petroleum Products, Consumption by Residential and Commercial Users.** • 1973–1984: 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*. • 1985 forward: Estimated by EIA.

**Petroleum Products, Consumption by Transportation Users.** • 1973–1984: 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*. • 1985 forward: Estimated by EIA.

**Petroleum Products, Exports.** • 1973 forward: 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.** • 1973 forward: 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.

**Petroleum Products, Liquefied Petroleum Gases (LPG) Consumption.** • 1973 forward: 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.

### Natural Gas

**Natural Gas, 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. • 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity of natural gas consumed. Heat content and quantity consumed are from Form EIA-176.

**Natural Gas, Consumption by Electric Utilities.** • 1973 forward: 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 FERC Form 423 and predecessor forms.

**Natural Gas, Consumption by Non-Electric Utility Users.** • 1973 forward: Calculated annually by EIA by dividing the heat content of natural gas consumed by non-electric utility consumers by the quantity of non-electric utility natural gas consumed. Data are from Forms EIA-176, FERC Form 423, EIA-759, and predecessor forms.

**Natural Gas, Exports.** • 1973 forward: 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.

## Thermal Conversion Factor Source Documentation (continued)

**Natural Gas, Imports.** • 1973 forward: 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.** • 1973 forward: Assumed by EIA to be equal to the thermal conversion factor for the consumption of dry natural gas. See "Natural Gas, Consumption."

**Natural Gas Production, Wet.** • 1973 forward: 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.

### Coal and Coal Coke

**Anthracite, Consumption.** • 1973 forward: Calculated annually by EIA by dividing the sum of the heat content of anthracite consumed by electric utilities and non-electric utilities by the total quantity of anthracite consumed.

**Anthracite, Consumption by Electric Utilities.** • 1973 forward: 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 FERC Form 423 and predecessor forms.

**Anthracite, Consumption by Non-Electric Utility Users.** • 1973 forward: 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 non-electric utility anthracite consumption less the quantity of anthracite stock changes, losses, and unaccounted for.

**Anthracite, Imports and Exports.** • 1973 forward: EIA assumed the anthracite imports and exports to be freshly mined anthracite having an estimated heat content of 25.400 million Btu per short ton.

**Anthracite, Production.** • 1973 forward: 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 an average heat content of 17.500 million Btu per short ton) by the total quantity of anthracite production.

**Bituminous Coal and Lignite, Consumption.**

• 1973 forward: 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.** • 1973 forward: Estimated by EIA to be 26.800 million Btu per short ton based on an input/output analysis of coal carbonization.

**Bituminous Coal and Lignite, Consumption by Electric Utilities.** • 1973 forward: 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 FERC Form 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 assuming that the bituminous coal and lignite delivered to other industrial users from each coal-producing district (reported on EIA Form 6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to bituminous coal and lignite received at electric utilities from each of the same coal-producing districts (reported on FERC Form 423). The average Btu value of coal by coal-producing district was applied to the volume of deliveries to other industrial users from each coal-producing district, and the sum total of the heat content was divided by the total volume of deliveries.

**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 district (reported on EIA Form 6 and predecessor Bureau of Mines Form 6-1419-Q) contained a heat value equal to bituminous coal and lignite received at electric utilities from each of the same coal-producing districts (reported on FERC Form 423). The average Btu value of coal by coal-producing district was applied to the volume of deliveries to residential and commercial users from

## Thermal Conversion Factor Source Documentation (continued)

each coal-producing district, and the total of the heat value was divided by the total volume of deliveries.

**Bituminous Coal and Lignite, Exports.** • 1973 forward: 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.** • 1973 forward: EIA estimated the average thermal conversion factor to be 25,000 million Btu per short ton.

**Bituminous Coal and Lignite, Production.** • 1973 forward: 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 the consumption sector. Producers' stock changes and unaccounted for were assumed to have the same conversion factor as consumption by all users.

**Coal, Consumption.** • 1973 forward: 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.** • 1973 forward: 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 Non-Electric Utility Users.** • 1973 forward: Calculated annually by EIA by dividing the sum of the heat content of bituminous coal and lignite and anthracite consumed by non-electric utility users by the sum of their respective tonnages.

**Coal, Exports.** • 1973 forward: 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.** • 1973 forward: 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.** • 1973 forward: 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.** • 1973 forward: EIA adopted the Bureau of Mines estimate of 24,800 million Btu per short ton.

## Approximate Heat Rates for Electricity

**Fossil Fuel Steam-Electric Power 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 electric energy sources. EIA has selected a rate that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants. By using this factor, it is possible to evaluate fossil fuel requirements for replacing these sources during periods of interruption such as drought. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour. • 1973 forward: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States as published by EIA in *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants*.

**Geothermal Energy Power Plant Generation.** • 1973-1981: Calculated annually by EIA by weighting the average annual heat rates of operating geothermal units by the installed nameplate capacities as reported on Form FPC-12. • 1982 forward: Estimated annually by EIA based on an informal survey of relevant plants.

**Nuclear Power Plant Generation.** • 1973 forward: Calculated annually by EIA by dividing the total heat content consumed in reactors at nuclear plants by the total (net) electricity generated by nuclear plants as reported on Form FERC-1, EIA-412 and predecessor forms.

# Glossary

## Glossary

**Anthracite.** A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. It is often referred to as hard coal. It includes meta-anthracite and semianthracite and conforms to ASTM Specification D388 for anthracite.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Base Gas.** The total volume of natural gas in underground storage reservoirs that will maintain the required rate of delivery during an output cycle.

**Bituminous Coal.** Coal that is high in carbonaceous matter having a volatility greater than anthracite and a calorific value greater than lignite. In the United States, it is often referred to as soft coal. In this report, "bituminous coal" includes subbituminous coal and conforms to ASTM Specification D388 for bituminous coal and subbituminous coal. It is used for electricity generation, coke production, and space heating.

**British Thermal Unit (Btu).** The amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit ( $^{\circ}\text{F}$ ) at or near  $39.2\text{ }^{\circ}\text{F}$ . One Btu is equivalent to about 252 International Steam Table calories. An average Btu content of fuel is a heat value per unit quantity of fuel as determined from tests of fuel samples.

**Butane.** A normally gaseous, paraffinic hydrocarbon ( $\text{C}_4\text{H}_{10}$ ) extracted from natural gas or refinery gas streams. It includes isobutane (a branch-chain configuration) and normal butane (a straight-chain configuration) and is covered by ASTM Specification 1835 and Natural Gas Processors Specifications for commercial butane. It is used primarily for blending into high-octane gasoline, for residential and commercial heating, and for industrial uses, especially the manufacture of chemicals and synthetic rubber.

**Butylene.** A normally gaseous, olefinic hydrocarbon ( $\text{C}_4\text{H}_8$ ) recovered from refinery processes. Quantities are included with "normal butane" data.

**City Gate Price of Natural Gas.** Price of natural gas at the point it is transferred from a pipeline to a local distribution company.

**Coal.** Includes all ranks of coal—anthracite, bituminous coal (including subbituminous coal), and lignite—conforming to ASTM Specification D388.

**Coal Coke.** The strong, porous residue, consisting of carbon and mineral ash, that is formed when the volatile constituents of bituminous coal are driven off by heat in the absence of or in a limited supply of air. It is used primarily in blast furnaces for smelting ores, especially iron ore.

**Crude Oil** (including lease condensate). A mixture of hydrocarbons that existed 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. Liquids produced at natural gas processing plants and mixed with crude oil are excluded where identifiable.

**Crude Oil Refinery Input.** Total crude oil (including lease condensate) input to crude oil distillation units and other processing units.

**Crude Oil Stocks.** Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

**Crude Oil Wellhead Price.** The average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.

**Degree-Day Normals.** Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1951–1980). These may be simple degree-day normals or population-weighted degree-day normals.

**Degree-Days, Cooling.** The number of degrees per day that the daily average temperature is above  $65\text{ }^{\circ}\text{F}$ . The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period.

**Degree-Days, Heating.** The number of degrees per day that the daily average

## Glossary (continued)

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 these 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 these products are then summed to arrive at the national population-weighted degree-day figure.

**Development Well.** A well drilled within a proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

**Distillate Fuel Oil.** Light fuel oils distilled during the refining process. Included are products known as No. 1, No. 2, and No. 4 fuel oils; and No. 1, No. 2, and No. 4 diesel fuels, conforming to ASTM Specifications D396 and D975, respectively. These products are 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.

**Electrical System Energy Losses.** The amount of energy lost during generation, transmission, and distribution of electricity, including plant use and unaccounted for electrical energy.

**Electricity Generation.** Net electricity (gross electricity output measured at the generator terminals, minus power plant use) generated at electric utilities. Excludes industrial electricity generation. International data are gross electricity output.

**Electricity Sales.** The gross electricity output measured at the generator terminals, minus power plant

use and transmission and distribution losses. Included in each end-use sector are the following: commercial sales of electricity to businesses that generally require less than 1,000 kilowatts of service; industrial sales of electricity to businesses that generally require more than 1,000 kilowatts of service; residential sales of electricity to residences for household purposes; "other" sales of electricity to government, railways, street lighting authorities, and sales not elsewhere included.

**Electric Utility.** A corporation, person, agency, authority, or other entity that owns or operates facilities for the generation, transmission, distribution, or sale of electricity, primarily for use by the public.

**Ethane.** A normally gaseous, paraffinic hydrocarbon ( $C_2H_6$ ) extracted from natural gas or refinery gas streams. It is used primarily as petrochemical feedstock for eventual production of chemicals and plastic materials.

**Ethylene.** A normally gaseous, olefinic hydrocarbon ( $C_2H_4$ ) recovered from refinery processes. Quantities are included with "ethane" data.

**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, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

**FOB (Free on Board) Price of Imported Crude Oil.** The FOB price is the price actually charged at the producing country's port of loading. The reported price includes deductions for any rebates and discounts and additions of premiums where applicable, and should be the actual price paid with no adjustments for credit terms.

**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.

**Gas Well.** A well completed for the production of natural gas from one or more gas zones or reservoirs. Such wells have no completions for the production of crude oil.

**Geothermal Energy (As Used at Electric Utilities).** Hot water or steam, extracted from geothermal reservoirs in the earth's crust, which is supplied to steam

## Glossary (continued)

turbines at electric utilities that drive generators to produce electricity.

**Gross National Product (GNP).** The total value of goods and services produced by the Nation's economy, before deduction of depreciation charges and other allowances for capital consumption. It includes the total purchases of goods and services by private consumers and government, gross private domestic capital investment, and net foreign trade.

**Hydroelectric Power.** Electricity generated by an electric power plant whose turbines are driven by falling water.

**Imports.** Receipts of goods into the 50 States and the District of Columbia from foreign countries, Puerto Rico, the Virgin Islands, and other U.S. possessions and territories (see "Petroleum Imports").

**Isobutane.** See "Butane."

**Landed Cost of Imported Crude Oil.** The price of imported crude oil at the port of discharge. It includes the purchase price at the foreign port plus charges for transporting and insuring the crude oil from the purchase point to the port of discharge. It does not include import tariffs or fees, wharfage charges, or demurrage costs.

**Lease and Plant Fuel.** Natural gas used in lease operations, as gas processing plant fuel, and as net used for gas lift.

**Lease Condensate.** A natural gas liquid recovered from gas-well gas (associated and nonassociated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons. Generally, it is blended with crude oil for refining.

**Lignite.** A brownish-black coal of low rank with a high inherent moisture and volatile matter. It is also referred to as brown coal. It conforms to ASTM Specification D388 for lignite and is used almost exclusively for electric power generation.

**Liquefied Petroleum Gases.** Ethane, ethylene, propane, propylene, normal butane, butylene, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Motor Gasoline, Finished.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines

and conforming to ASTM Specification D439. Included are finished leaded gasoline, finished unleaded gasoline, and gasohol. Excludes blendstock that has not been blended into finished motor gasoline and alcohol that has not been blended into gasohol.

**Motor Gasoline, Leaded Premium.** A gasoline having an antiknock index of 93 with the use of lead additives or which contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. Includes gasohol.

**Motor Gasoline, Leaded Regular.** A gasoline having an antiknock index of 89 with the use of lead additive or which contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon.

**Motor Gasoline, Total.** Includes finished leaded motor gasoline (premium and regular), finished unleaded motor gasoline (premium and regular), motor gasoline blending components, and gasohol.

**Motor Gasoline, Unleaded Premium.** A gasoline having an antiknock index of 90 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon. Includes gasohol.

**Motor Gasoline, Unleaded Regular.** A gasoline having an antiknock index of 87 containing not more than 0.05 grams of lead per gallon and not more than 0.005 grams of phosphorus per gallon.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in natural reservoirs.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the ASTM and the Gas Processors Association and are classified 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

## Glossary (continued)

as reported by the appropriate agencies of individual producing States and the U.S. Geological Survey. 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.

**Net Electricity Generation.** 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.

**Normal Butane.** See "Butane."

**Nuclear 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.

**Oil Well.** A well completed for the production of crude oil from one or more oil zones or reservoirs.

**Pentanes Plus.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. This product includes isopentane, natural gasoline, and plant condensate.

**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 solid residue that is the final product of the cracking process in petroleum refining. It consists of aromatic hydrocarbons very poor in hydrogen. Calcination of petroleum coke can yield almost pure carbon or artificial graphite suitable for production of carbon or graphite electrodes, structural graphite, motor brushes, dry cells, and similar products. This product is reported as marketable or catalyst coke.

**Petroleum Imports.** Imports of petroleum into the 50 States and the District of Columbia from foreign countries, Puerto Rico, the Virgin Islands, other U.S. territories and possessions, and the U.S. Foreign Trade Zones. 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.** Petroleum products are 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, naphtha less than 400 °F end-point, other oils over 400 °F end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Products Supplied.** Total petroleum products supplied is the sum of the product supplied for each petroleum product, crude oil, unfinished oils, and gasoline blending components. For each of these, except crude oil, product supplied is calculated by adding refinery production, natural gas plant liquids production, new supply of other liquids, imports, and stock withdrawals; and subtracting stock additions, refinery inputs, and exports. Crude oil product supplied is the sum of crude oil burned on leases and at pipeline pump stations as reported on Form EIA-813.

**Petroleum Stocks, Primary.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tankfarms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve, is included. Excluded are stocks of foreign origin that are held in bonded warehouse storage.

**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.

**Propane.** A normally gaseous, paraffinic, hydrocarbon ( $C_3H_8$ ). It is extracted from natural gas or refinery gas streams and includes all products covered by Gas Processors Association Specifications for commercial propane and HD-5 propane and ASTM Specification D1835. Propane is used primarily for residential and commercial heating and cooling, and also as a fuel for transportation. Industrial uses of propane include use as a petrochemical feedstock.

**Propylene.** A normally gaseous, olefinic hydrocarbon ( $C_3H_6$ ) recovered from refinery processes. Quantities are included with "propane" data.

**Refiner Acquisition Cost.** 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.

## Glossary (continued)

**Residual Fuel Oil.** The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations. Included are No. 5 and No. 6 fuel oils that conform to ASTM Specification D396, Navy Special fuel oil, and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and for various industrial purposes. Imports of residual fuel oil include imported crude oil burned as fuel.

**Rotary Rig.** A machine, used for drilling wells, that employs a rotating tube attached to a bit for boring holes through rock.

**Strategic Petroleum Reserve (SPR).** Petroleum stocks maintained by the Federal Government for use during periods of major supply interruption.

**Subbituminous Coal.** A dull, black coal of rank intermediate between lignite and bituminous coal. It conforms to ASTM Specification D388 for subbituminous coal and is used almost exclusively for electric power generation. In this report, quantities are included with "bituminous coal" data.

**Supplemental Gaseous Fuels.** Consists primarily of synthetic natural gas, propane-air, and refinery (still) gas. May also include coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization.

**Synthetic Natural Gas (SNG).** A product resulting from the manufacture, conversion, or reforming of hydrocarbons that may be easily substituted for, or interchanged with, pipeline-quality natural gas.

**Unaccounted for Crude Oil.** Represents the arithmetic difference between the indicated demand for crude oil and the total disposition of crude oil. Indicated demand is the sum of crude oil production and imports less changes in crude oil stocks. Total disposition of crude oil is the sum of refinery input of crude oil, exports of crude oil, crude oil burned as fuel, and crude oil losses.

**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.

**Wind Energy (As Used at Electric Utilities).** The kinetic energy of wind converted at electric utilities into mechanical energy by wind turbines (i.e., blade rotating from a hub) that drive generators to produce electricity.

**Wood and Waste (As Used at Electric Utilities).** Wood energy (see "Wood Energy"), garbage, bagasse, sewerage gas and other industrial, agricultural, and urban refuse used to generate electricity.

**Wood Energy.** Wood and wood products used as fuel. Included are round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

**Working Gas.** The total volume of gas in a storage reservoir that is in excess of the base gas.

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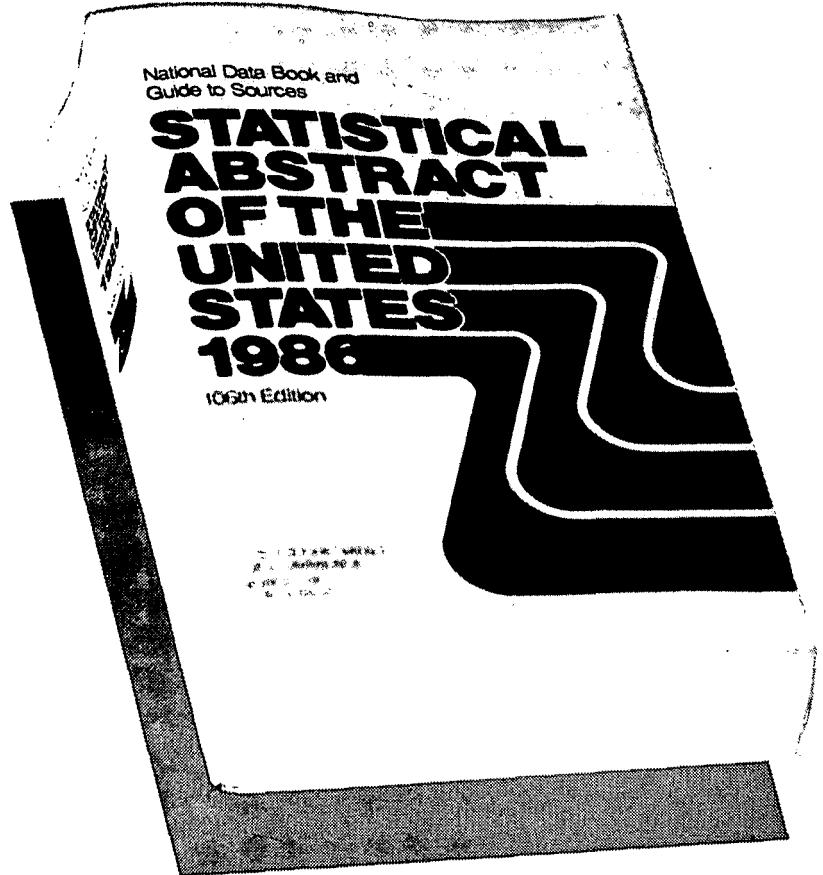
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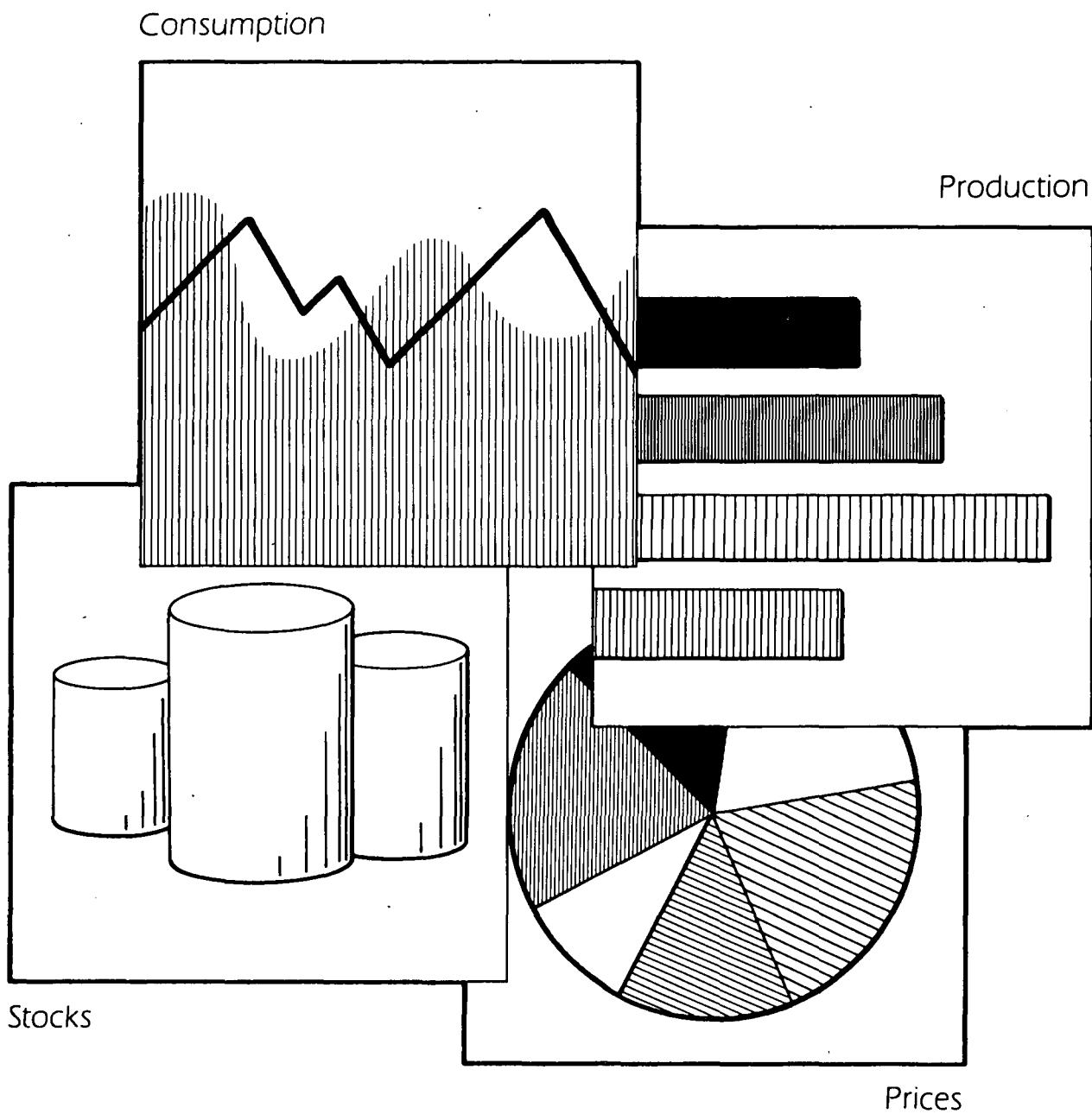
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