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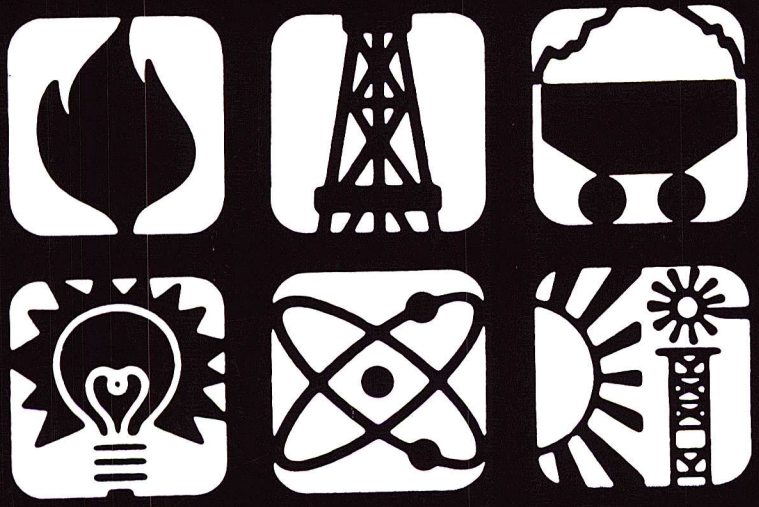
Energy Information Administration

Monthly Energy Review

January 1987



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.

Publication of this report is in keeping with responsibilities given the Energy Information Administration in Public Law 95-91 (Section 205(a)(2)) that states:

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

The *Monthly Energy Review* is intended to provide timely energy information to Members of Congress, to Federal and State agencies, and to the general public.

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Monthly Energy Review

January 1987

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

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Contents

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.

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.

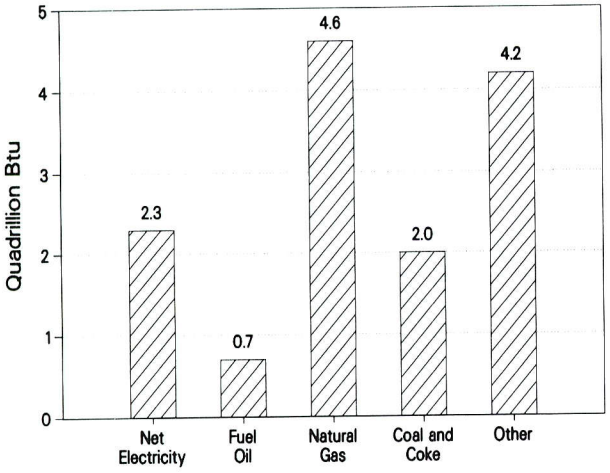
Manufacturing Sector Energy Consumption, 1985 Provisional Estimates

Consumption by Energy Source

During 1985, the manufacturing sector of the U.S. economy consumed an estimated 13.7 quadrillion Btu of energy for the production of heat, steam, or power, and the generation of electricity (Table FE1).[1] The most heavily consumed energy source was natural gas, which accounted for approximately 4.6 quadrillion Btu (4,483 billion cubic feet), approximately 34 percent of total manufacturing energy consumption (Figure FE1).

In contrast, the consumption of distillate and residual fuel oil by the manufacturing sector totaled 0.7 quadrillion Btu (114 million barrels), about 5 percent of the sector's total energy consumption. Thus, the ratio of natural gas to fuel oil consumption in 1985 was approximately 6.5 to 1.

Figure FE1. Manufacturing Sector Energy Consumption, 1985, Provisional Estimates



Note: The consumption of energy for nonfuel purposes is not included.
Source: Energy Information Administration, Office of Energy Markets and End Use, Energy End Use Division, Form EIA-846(F), 1985 Manufacturing Energy Consumption Survey.

The Survey

The energy consumption estimates in the text, tables, and figures of this article are from the 1985 Manufacturing Energy Consumption Survey (MECS). The results are provisional. The MECS is a new survey that was designed by the Energy Information Administration and conducted under the authority of the Federal Energy Administration Act of 1974, Public Law 93-275, as amended. Subsequent MECS will be conducted triennially under the authority of Section 3101(a) of the Omnibus Budget Reconciliation Act of 1986, Public Law 99-509.

The Industry Division of the U.S. Bureau of the Census serves as collecting and compiling agent for the MECS. Individual establishment reports to the Census Bureau are confidential under the provisions of Section 9, Title 13, of the U.S. Code.

The survey is based on a probability subsample of about 12,000 manufacturing establishments selected from 56,000 manufacturing establishments that compose the Annual Survey of Manufactures of the Bureau of the Census. The results of the MECS have been weighted to represent the universe of manufacturing establishments consisting of multiunit and single-unit establishments with five or more employees.

[1] All estimates of energy consumption in this article are based upon the Energy Information Administration, Form EIA-846(F), part of the 1985 Manufacturing Energy Consumption Survey. The estimates, which cover calendar year 1985, are provisional; they exclude energy used for nonfuel purposes (for example, coal consumed to produce coke, crude oil consumed to produce petroleum products, and hydrogen used as an atmosphere for electroplating).

Table FE1. Manufacturing Sector Energy Consumption for Heat and Power by Industry Group, 1985, Provisional Estimates

SIC Code	Industry Group	Net Electricity[1]	Fuel Oil[2]	Natural Gas	Coal and Coke	Other[3]	Total
		Trillion Btu					
20	Food and kindred products	165.8	65.1	458.9	131.7	132.9	954.3
21	Tobacco products	4.6	2.3	3.4	9.4	0.1	19.8
22	Textile mill products	88.1	21.3	91.2	38.0	9.7	248.1
23	Apparel and other textile products	15.3	2.9	12.5	1.4	0.4	32.4
24	Lumber and wood products	55.1	23.4	31.4	W	W	348.9
25	Furniture and fixtures	15.2	2.7	19.6	2.1	9.1	48.6
26	Paper and allied products	183.6	166.9	379.7	322.5	1,302.9	2,355.6
27	Printing and publishing	52.5	2.4	40.6	W	W	98.6
28	Chemicals and allied products	445.2	100.3	1,180.9	336.4	397.7	2,460.5
29	Petroleum and coal products	120.3	134.9	690.7	7.3	1,472.9	2,426.3
30	Rubber and misc. plastics products	90.7	15.2	102.0	8.1	4.8	220.8
31	Leather and leather products	4.3	3.3	4.5	0.9	0.4	13.4
32	Stone, clay, and glass products	116.3	33.1	397.0	349.0	32.3	927.6
33	Primary metal industries	458.7	53.2	669.2	660.6	520.5	2,362.2
34	Fabricated metal products	91.2	16.7	171.6	8.7	8.0	296.2
35	Machinery, except electrical	114.2	14.6	113.7	30.6	4.5	277.6
36	Electric and electronic equipment	110.1	10.4	91.4	8.6	3.3	223.7
37	Transportation equipment	115.0	25.7	120.7	43.8	17.0	322.2
38	Instruments and related products	29.2	8.1	23.6	W	W	79.7
39	Misc. manufacturing industries	11.4	2.6	15.4	1.3	0.7	31.3
--	**Total**	**2,286.5**	**705.2**	**4,617.7**	**1,980.3**	**4,158.2**	**13,747.9**

SIC Code	Industry Group	Net Electricity[1]	Fuel Oil[2]	Natural Gas	Coal and Coke	Other[3]	Total
		Million Kilowatthours	Thousand Barrels	Billion Cubic Feet	Thousand Short Tons	Trillion Btu	Trillion Btu
20	Food and kindred products	48,591.5	10,651.5	445.5	5,764.1	132.9	954.3
21	Tobacco products	1,353.0	371.1	3.3	411.2	0.1	19.8
22	Textile mill products	25,806.8	3,449.3	88.5	1,649.6	9.7	248.1
23	Apparel and other textile products	4,476.4	491.5	12.1	55.4	0.4	32.4
24	Lumber and wood products	16,137.3	3,987.0	30.5	W	W	348.9
25	Furniture and fixtures	4,447.9	456.9	19.0	92.4	9.1	48.6
26	Paper and allied products	53,809.6	26,662.6	368.6	14,100.6	1,302.9	2,355.6
27	Printing and publishing	15,388.4	402.0	39.4	W	W	98.6
28	Chemicals and allied products	130,492.3	16,183.4	1,146.5	14,703.8	397.7	2,460.5
29	Petroleum and coal products	35,253.6	21,732.5	670.6	324.8	1,472.9	2,426.3
30	Rubber and misc. plastics products	26,572.9	2,476.4	99.0	357.1	4.8	220.8
31	Leather and leather products	1,271.3	532.7	4.4	38.3	0.4	13.4
32	Stone, clay, and glass products	34,092.7	5,553.7	385.4	15,294.1	32.3	927.6
33	Primary metal industries	134,431.6	8,612.3	649.7	26,718.3	520.5	2,362.2
34	Fabricated metal products	26,717.4	2,803.6	166.6	377.7	8.0	296.2
35	Machinery, except electrical	33,455.5	2,412.5	110.4	1,294.1	4.5	277.6
36	Electric and electronic equipment	32,255.8	1,704.6	88.7	377.1	3.3	223.7
37	Transportation equipment	33,706.3	4,204.1	117.2	1,898.1	17.0	322.3
38	Instruments and related products	8,545.2	1,320.2	22.9	W	W	79.7
39	Misc. manufacturing industries	3,333.7	433.1	14.9	51.4	0.7	31.3
--	**Total**	**670,139.2**	**114,441.0**	**4,483.2**	**84,378.8**	**4,158.2**	**13,747.9**

[1]"Net electricity" is obtained by summing purchases, transfers in, and generation from noncombustible renewable resources, minus quantities sold and transferred out. It does not include electricity inputs from onsite cogeneration or generation from combustible fuels because that energy has already been included as generating fuel (for example, coal).

[2]"Fuel oil" includes distillate and residual.

[3]"Other" includes liquefied petroleum gases (LPG), other petroleum and natural gas products not specifically shown, byproducts and waste products (for example, still gas, coke ovengas, pulping liquor, wood waste), steam (the sum of purchases, generation from renewables, and net transfers), roundwood, biomass, and any other energy sources that the respondents indicated were used for the production of heat, steam, power, or generated electricity.

W=Withheld to avoid disclosing data for individual companies data are included in higher level totals.

Note: Totals may not equal sum of components due to independent rounding. All estimates are provisional. Energy consumed for nonfuel purposes (for example, coal to produce coke, crude oil to produce petroleum products, hydrogen used as an atmosphere for electroplating) is not included.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy End Use Division, Form EIA-846(F), 1985 Manufacturing Energy Consumption Survey.

Electricity was the second most heavily consumed energy source in the manufacturing sector during 1985; it accounted for about 2.3 quadrillion Btu (670.1 billion kilowatthours), nearly 17 percent of the sector's total energy consumption. The electricity values shown in the accompanying tables and figures are "net" values and exclude quantities of electricity generated or cogenerated on site from combustible energy sources. The reported values are obtained by summing reported electricity purchases, transfers in, and generation from noncombustible renewable resources; from the total, transfers out and quantities sold are subtracted.

The manufacturing sector consumed a total of 2.0 quadrillion Btu (84.4 million short tons) of coal and coke used as fuel, approximately 14 percent of total energy consumption. This estimate excludes the quantities of coal used to produce coke and other nonfuel uses of those energy sources.

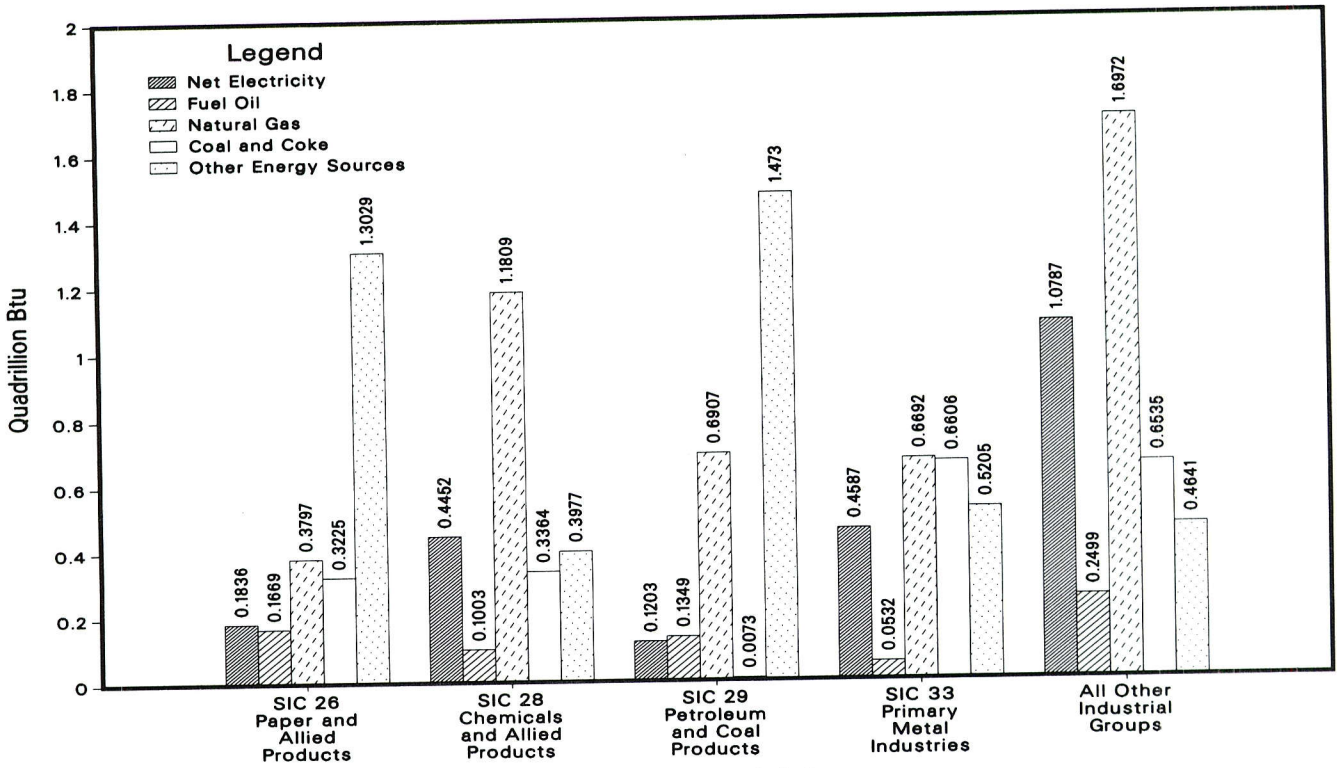
Other energy sources used by the manufacturing sector include liquefied petroleum gases (LPG), other petroleum and natural gas products, steam, roundwood, biomass, and various byproducts and waste products. Total consumption of those energy sources by the manufacturing sector was 4.2 quadrillion Btu, 30 percent of total energy.

Energy Consumption by Industry Group

Energy consumption in manufacturing is dominated by 4 of the 20 major industry groups: chemicals and allied products, petroleum and coal products, primary metal industries, and paper and allied products. Altogether, those four industry groups accounted for approximately 9.6 quadrillion Btu, or nearly 70 percent of the total energy consumed by the manufacturing sector in 1985.

The chemicals and allied products industry group, Standard Industrial Classification[2] (SIC) 28, consumed a total of 2.5 quadrillion Btu of energy in 1985 (Figure FE2). Natural gas accounted for approximately 1.2

Figure FE2. Manufacturing Sector Energy Consumption by Industry Group, 1985, Provisional Estimates



Note: The consumption of energy for nonfuel purposes is not included.
Source: Energy Information Administration, Office of Energy Markets and End Use, Energy End Use Division, Form EIA-846(F), 1985 Manufacturing Energy Consumption Survey.

[2]The Standard Industrial Classification system was developed by the Office of Management and Budget for use in classifying establishments by the type of activity in which they are engaged. These activities are defined at the establishment level, that is, an economic unit, generally at a single physical location where business is conducted or where services or industrial operations are performed. Twenty major industry groups (SIC 20-39) constitute all manufacturing operations. This level of detail was used in preparing the provisional estimates in this article.

quadrillion Btu, nearly 48 percent of the total for the group, and 26 percent of the total consumption of natural gas by all industry groups. The second most heavily consumed energy source in the chemical industry group was electricity, at slightly under 0.5 quadrillion Btu, followed closely by coal and coke at just over 0.3 quadrillion Btu.

The petroleum and coal products industry group, SIC 29, consumed a total of 2.4 quadrillion Btu of energy of which "other" energy sources accounted for nearly 1.5 quadrillion Btu, or 61 percent. The "other" energy sources include the byproduct still gas also known as refinery gas. (Still gas is any form or mixture of gas produced from crude oil or other hydrocarbons by distillation, cracking, reforming or other refinery processes. Its principal constituents are methane, ethylene, propane, propylene, butanes, and butylene. Still gas is commonly used as a fuel in refineries.)

The petroleum and coal products group is also a heavy consumer of natural gas, with a 1985 consumption of about 0.7 quadrillion Btu. This industry group was second only to the chemicals and allied products industry group in natural gas consumption.

The primary metals industry group, SIC 33, had total energy consumption of 2.4 quadrillion Btu during 1985. This industry group is the third heaviest consumer of natural gas and the heaviest consumer of coal and coke, using 0.7 quadrillion Btu of each. That amount represents about 15 and 33 percent of the total manufacturing sector consumption of natural gas, and coal and coke, respectively. The primary metal industry is also a heavy user of "other" fuels, and of electricity, with each accounting for approximately 0.5 quadrillion Btu.

The paper and allied products industry group, SIC 26, consumed 2.4 quadrillion Btu of energy in 1985, and is an especially heavy user of "other" energy sources, which includes pulping or black liquor. Consumption of "other" energy sources totaled 1.3 quadrillion Btu in 1985, 55 percent of total energy consumption of that group. (The chemical pulping of wood in the paper industry produces a residual substance known as pulping liquor. This liquor is burned as fuel in a furnace that permits the recovery of certain reusable chemicals.)

For Further Information

This article was prepared by John L. Preston of the Energy End Use Division, Office of Energy Markets and End Use, Energy Information Administration. Inquiries regarding this article or the survey may be addressed to Mr. Preston on (202) 586-1128.

Table FE2. Relative Standard Errors by Industry Group, 1985, Provisional Estimates (Percent)

SIC Code	Industry Group	Net Electricity	Fuel Oil	Natural Gas	Coal and Coke	Other	Total
20	Food and kindred products	4	10	4	6	3	5
21	Tobacco products	7	10	11	10	11	7
22	Textile mill products	4	10	4	8	9	3
23	Apparel and other textile products	9	17	12	30	29	8
24	Lumber and wood products	8	18	12	--	--	11
25	Furniture and fixtures	8	15	9	16	19	7
26	Paper and allied products	4	5	5	6	6	4
27	Printing and publishing	10	18	9	--	--	8
28	Chemicals and allied products	6	6	3	4	9	3
29	Petroleum and coal products	4	7	5	11	4	4
30	Rubber and misc. plastics products	5	13	5	7	14	4
31	Leather and leather products	19	20	15	39	29	14
32	Stone, clay, and glass products	3	11	4	5	11	3
33	Primary metal industries	5	7	3	6	5	4
34	Fabricated metal products	4	11	5	7	10	4
35	Machinery, except electrical	5	13	6	34	12	6
36	Electric and electronic equipment	4	8	4	7	11	3
37	Transportation equipment	3	5	3	5	8	3
38	Instruments and related products	9	10	10	--	--	6
39	Misc. manufacturing industries	7	11	9	22	29	7
--	**Total**	**2**	**3**	**2**	**3**	**3**	**2**

Note: Because the MECS is a sample survey, the estimates in this article are subject to sampling variability, as well as nonsampling errors and biases. This table provides estimates of the relative standard error (RSE), expressed in percent, of all energy consumption estimates given in this article, whether given in physical units or in Btu equivalents. To determine the standard error of an estimate, multiply the estimate by its RSE and divide by 100.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy End Use Division, Form EIA-846(F), 1985 Manufacturing Energy Consumption Survey.

Section 1. Energy Summary

Energy production during January 1987 totaled 5.6 quadrillion Btu, a 3.1-percent decrease compared with the level of production during January 1986. Coal production was down 7.6 percent. Petroleum production dropped 7.1 percent, and natural gas production increased 0.3 percent. All other forms of energy production combined were up 12.5 percent from the level of production during January 1986.

Energy consumption during January 1987 totaled 7.1 quadrillion Btu, 1.1 percent below the level of consumption during January 1986. Natural gas consumption decreased 9.0 percent and coal dropped 2.3 percent, while petroleum consumption increased 2.9 percent. Consumption of all other forms of energy combined increased 11.5 percent compared with the level 1 year earlier.

Net imports of energy during January 1987 totaled 1.0 quadrillion Btu, 22.0 percent above the level of net imports 1 year earlier. Net imports of petroleum increased 18.7 percent, and net imports of natural gas rose 12.9 percent. Net exports of coal decreased 7.7 percent compared with the level in January 1986.

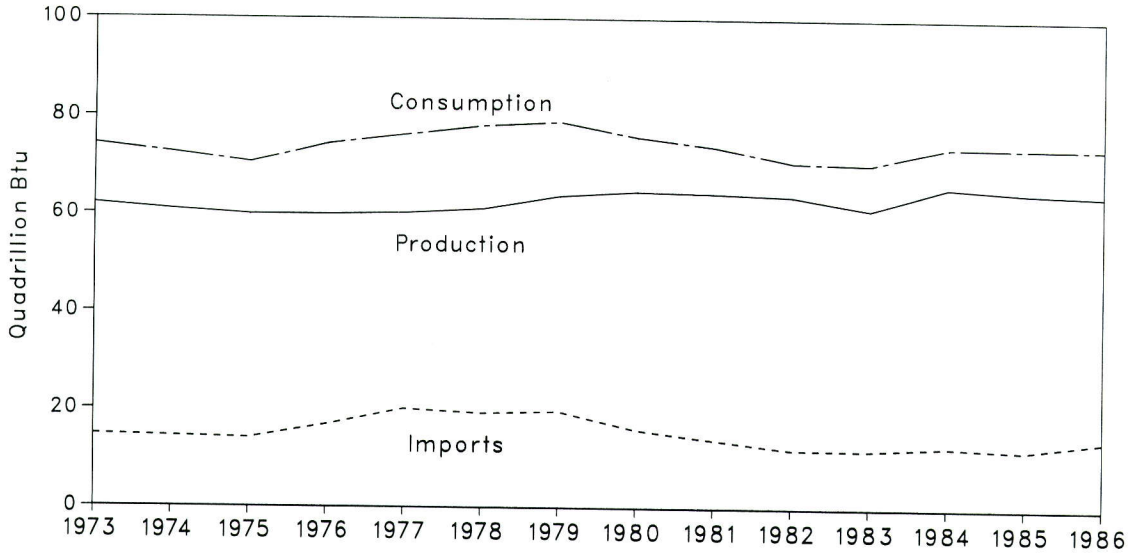
Table 1.1 Energy Summary for January 1987
(Quadrillion (10^{15}) Btu)

	January				
	1987	1987 Daily Rate	1986	1986 Daily Rate	Percent Change[a]
Total Production[b]	5.598	0.181	5.776	0.186	-3.1
Petroleum[c]	1.711	.055	1.842	.059	-7.1
Natural Gas (Dry)	1.577	.051	1.573	.051	.3
Coal	1.591	.051	1.723	.056	-7.6
Other[d]	.718	.023	.638	.021	12.5
Total Consumption[b]	7.072	.228	7.151	.231	-1.1
Petroleum[e]	2.748	.089	2.671	.086	2.9
Natural Gas[f]	1.983	.064	2.180	.070	-9.0
Coal	1.591	.051	1.628	.053	-2.3
Other[g]	.750	.024	.672	.022	11.5
Net Imports	.953	.031	.781	.025	22.0
Petroleum[h]	.957	.031	.806	.026	18.7
Natural Gas	.105	.003	.093	.003	12.9
Coal[i]	-.141	-.005	-.152	-.005	-7.7
Other[j]	.032	.001	.034	.001	-7.8

[a]Based on daily rates prior to rounding.
[b]Production and consumption totals exclude wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
[c]Includes crude oil, lease condensate, and natural gas plant liquids.
[d]Other is hydroelectric and nuclear electric power, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[e]Includes petroleum products.
[f]Includes supplemental gaseous fuels.
[g]Other is hydroelectric and nuclear electric power; electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy; and net imports of electricity and coal coke.
[h]Includes crude oil, lease condensate, petroleum products, pentanes plus, unfinished oils, gasoline blending components, and imports of crude oil for the Strategic Petroleum Reserve.
[i]Minus sign indicates exports are greater than imports.
[j]Other is net imports of electricity and coal coke.
Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration (EIA), *Monthly Energy Review* Section 1 and EIA calculations.

Figure 1.1 Energy Overview

Yearly



Monthly

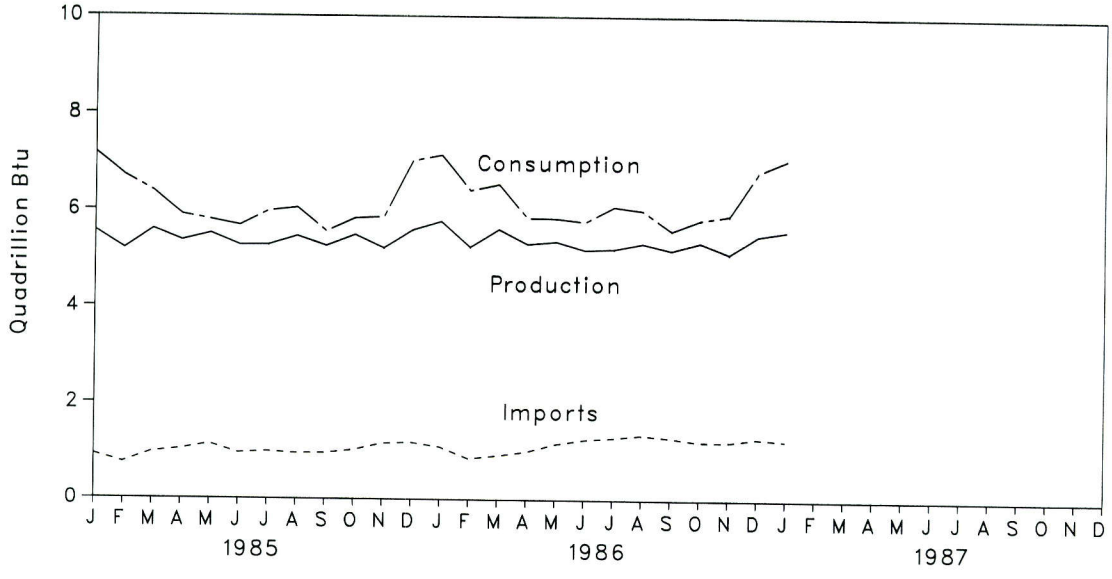


Table 1.2 Energy Overview[a]
(Quadrillion (10^{15}) Btu)

	Production[c]	Consumption[b] [c]	Imports	Exports	Net Imports
1973 Total	**62.059**	**74.282**	**14.731**	**2.051**	**12.680**
1974 Total	**60.836**	**72.543**	**14.413**	**2.223**	**12.190**
1975 Total	**59.860**	**70.545**	**14.111**	**2.359**	**11.752**
1976 Total	**59.891**	**74.362**	**16.837**	**2.188**	**14.648**
1977 Total	**60.218**	**76.289**	**20.090**	**2.071**	**18.019**
1978 Total	**61.103**	**78.089**	**19.254**	**1.931**	**17.323**
1979 Total	**63.801**	**78.897**	**19.616**	**2.870**	**16.746**
1980 Total	**64.761**	**75.955**	**15.971**	**3.723**	**12.247**
1981 Total	**64.422**	**73.991**	**13.975**	**4.329**	**9.646**
1982 Total	**63.889**	**70.838**	**12.091**	**4.632**	**7.459**
1983 Total	**61.194**	**70.500**	**12.025**	**3.716**	**8.309**
1984 Total	**65.814**	**74.064**	**12.758**	**3.804**	**8.954**
1985 January	5.564	7.187	.926	.305	.621
February	5.192	6.701	.756	.306	.450
March	5.596	6.378	.971	.318	.653
April	5.361	5.902	1.034	.332	.702
May	5.509	5.794	1.145	.381	.764
June	5.268	5.680	.960	.342	.618
July	5.276	5.982	.994	.328	.666
August	5.460	6.048	.959	.420	.539
September	5.259	5.562	.964	.364	.600
October	5.492	5.835	1.029	.365	.664
November	5.216	5.865	1.170	.406	.764
December	5.593	7.029	1.189	.368	.821
Total	**64.784**	**73.962**	**12.098**	**4.232**	**7.866**
1986 January	R 5.776	R 7.151	1.100	.319	.781
February	R 5.247	R 6.415	.861	.285	.576
March	R 5.619	R 6.542	.926	.301	.625
April	5.314	R 5.854	1.008	.374	.634
May	R 5.369	5.847	1.167	.367	.800
June	5.191	5.781	1.264	.313	.952
July	5.217	6.097	1.305	.329	.976
August	5.337	6.019	1.367	.372	.995
September	5.192	5.601	1.313	.346	.967
October	R 5.359	R 5.831	1.230	.347	.882
November	5.121	R 5.922	1.224	.328	.896
December	5.503	R 6.812	1.303	.328	.974
Total	**R 64.246**	**R 73.870**	**14.068**	**4.011**	**10.057**
1987 January	5.598	7.072	1.255	.302	.953

[a]For definitions, see Notes at end of section.

[b]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.

[c]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.

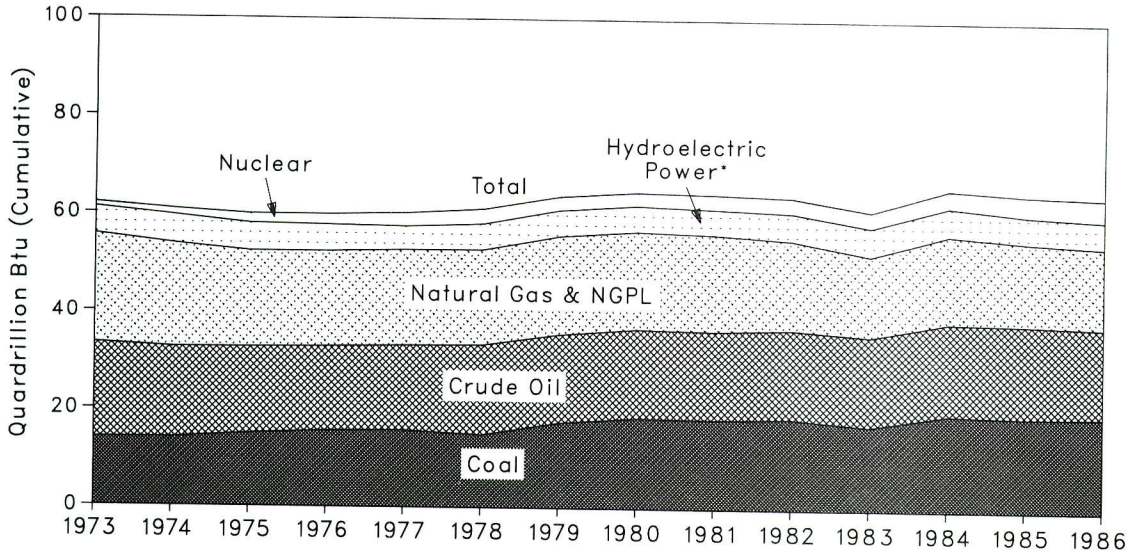
R=Revised data.

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

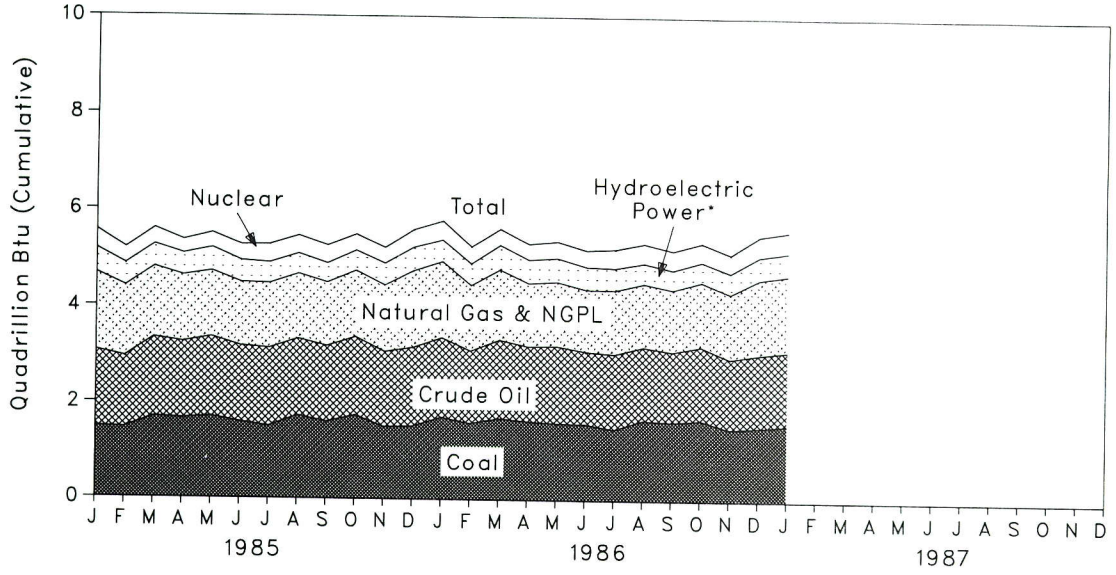
Source: Energy Information Administration calculations based on data appearing elsewhere in this publication.

Figure 1.2 Production of Energy by Source

Yearly



Monthly



*Includes other.

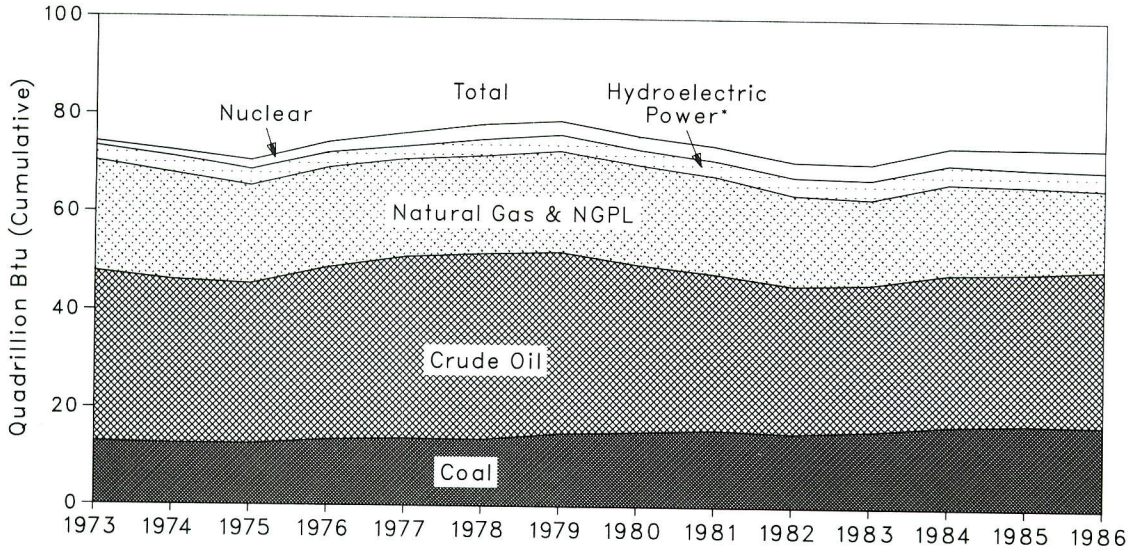
Table 1.3 Production of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Crude Oil[a]	NGPL[b]	Natural Gas (Dry)	Hydro-electric Power[c]	Nuclear Electric Power	Other[d]	Total[e]	Year to Date
1973 Total	**13.993**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.059**	
1974 Total	**14.074**	**18.575**	**2.471**	**21.210**	**3.177**	**1.272**	**.056**	**60.836**	
1975 Total	**14.990**	**17.729**	**2.374**	**19.640**	**3.155**	**1.900**	**.072**	**59.860**	
1976 Total	**15.654**	**17.262**	**2.327**	**19.480**	**2.976**	**2.111**	**.081**	**59.891**	
1977 Total	**15.755**	**17.454**	**2.327**	**19.565**	**2.333**	**2.702**	**.082**	**60.218**	
1978 Total	**14.910**	**18.434**	**2.245**	**19.485**	**2.937**	**3.024**	**.068**	**61.103**	
1979 Total	**17.539**	**18.104**	**2.286**	**20.076**	**2.931**	**2.776**	**.089**	**63.801**	
1980 Total	**18.597**	**18.249**	**2.254**	**19.908**	**2.900**	**2.739**	**.114**	**64.761**	
1981 Total	**18.377**	**18.146**	**2.307**	**19.699**	**2.758**	**3.008**	**.127**	**64.422**	
1982 Total	**18.639**	**18.309**	**2.191**	**18.255**	**3.256**	**3.131**	**.108**	**63.889**	
1983 Total	**17.250**	**18.392**	**2.184**	**16.530**	**3.502**	**3.203**	**.133**	**61.194**	
1984 Total	**19.723**	**18.848**	**2.274**	**17.931**	**3.312**	**3.553**	**.174**	**65.814**	
1985 January	1.493	1.571	.192	1.610	.288	.391	.018	5.564	5.564
February	1.471	1.466	.173	1.463	.270	.333	.016	5.192	10.756
March	1.701	1.635	.189	1.460	.258	.336	.018	5.596	16.352
April	1.674	1.574	.181	1.375	.255	.286	.016	5.361	21.713
May	1.715	1.642	.188	1.360	.277	.310	.016	5.509	27.221
June	1.602	1.570	.183	1.315	.250	.333	.016	5.268	32.490
July	1.514	1.609	.185	1.346	.223	.380	.018	5.276	R 37.765
August	1.742	1.583	.189	1.343	.209	.376	.018	5.460	43.225
September	1.618	1.558	.180	1.316	.196	.373	R .017	5.259	48.484
October	1.753	1.613	.190	1.372	.209	.337	.017	5.492	53.976
November	1.515	1.549	.190	1.376	.240	.326	.021	5.216	59.192
December	1.531	1.624	.199	1.588	.265	.365	.022	5.593	64.785
Total	**19.329**	**18.992**	**2.241**	**16.922**	**2.939**	**4.147**	**.213**	**64.784**	
1986 January	1.723	1.640	.202	1.573	R .224	.391	.023	R 5.776	R 5.776
February	1.600	1.491	.182	1.359	R .243	.354	.019	R 5.247	R 11.024
March	1.707	1.619	.190	1.453	R .297	.333	.020	R 5.619	R 16.643
April	1.649	1.540	.178	1.312	.288	.329	.018	5.314	R 21.956
May	1.611	1.590	.187	1.334	.285	.345	.018	R 5.369	R 27.326
June	1.600	1.495	.177	1.286	.274	.339	.020	5.191	R 32.517
July	1.494	1.553	.183	1.326	.252	.388	.021	5.217	R 37.734
August	1.686	1.509	.177	1.317	R .222	.405	.021	5.337	R 43.071
September	1.653	1.450	.169	1.287	R .220	.396	.018	5.192	R 48.264
October	1.695	1.516	.174	1.342	R .223	.391	R .017	R 5.359	R 53.623
November	1.514	1.448	.176	1.348	.242	.378	.015	5.121	R 58.743
December	1.549	1.501	.180	1.556	.271	.427	.020	5.503	R 64.246
Total	**19.481**	**18.351**	**2.174**	**16.494**	**R 3.040**	**4.475**	**.232**	**R 64.246**	
1987 January	1.591	1.524	.187	1.577	.266	.432	.020	5.598	5.598

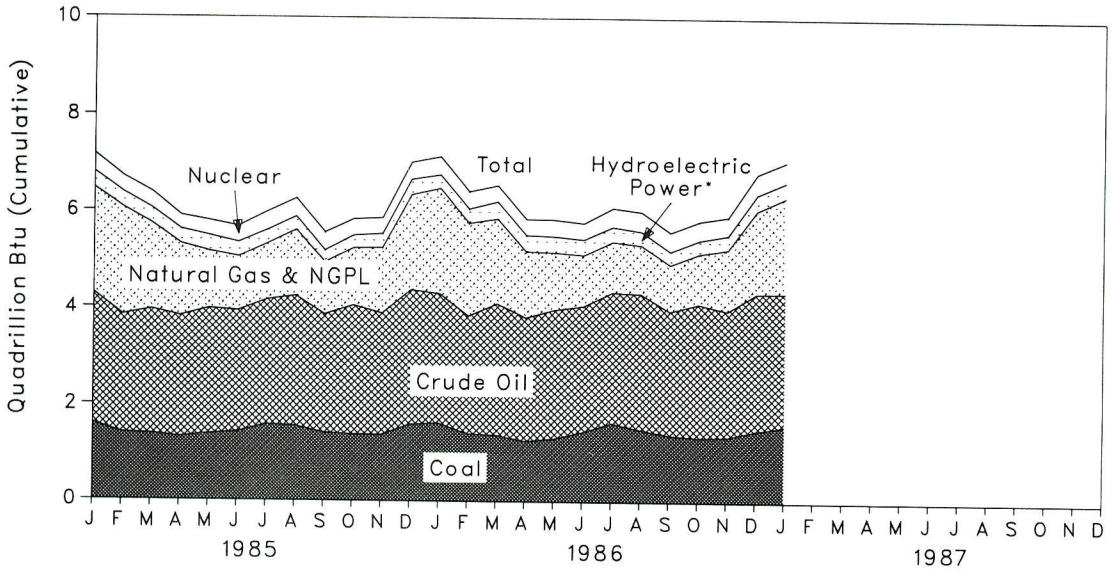
[a]Includes lease condensate.
[b]Natural gas plant liquids.
[c]Includes industrial and utility production of hydroelectric power.
[d]Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[e]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
R=Revised data.
Notes: • 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 appearing elsewhere in this publication.

Figure 1.3 Consumption of Energy by Source

Yearly



Monthly



*Includes other.

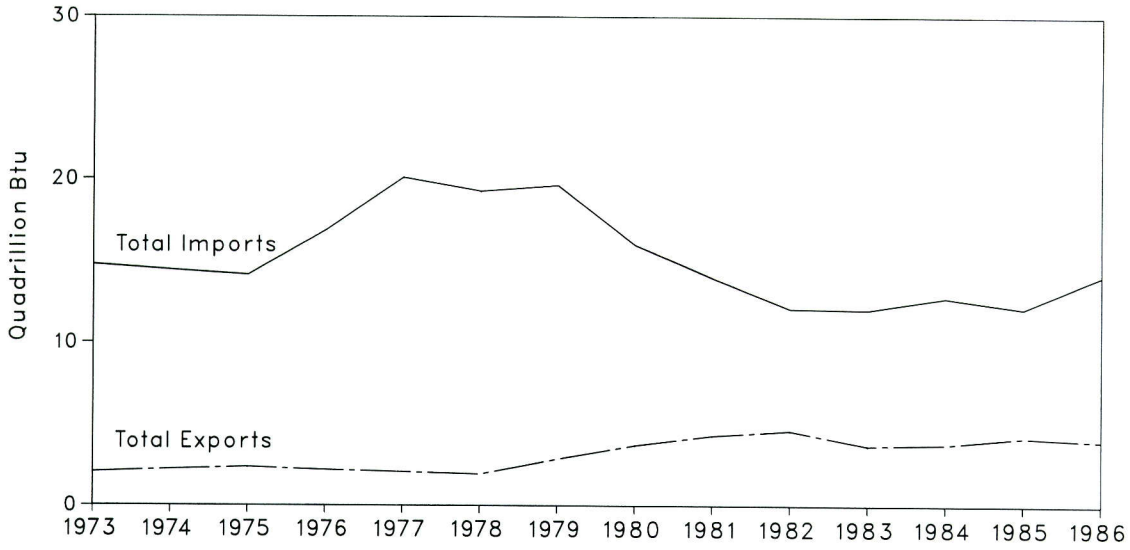
Table 1.4 Consumption of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petro-leum	Hydro-electric Power[b]	Nuclear Electric Power	Other[c]	Total[d]	Year to Date
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**	**.112**	**72.543**	
1975 Total	**12.663**	**19.948**	**32.731**	**3.219**	**1.900**	**.086**	**70.545**	
1976 Total	**13.584**	**20.345**	**35.175**	**3.065**	**2.111**	**.081**	**74.362**	
1977 Total	**13.922**	**19.931**	**37.122**	**2.515**	**2.702**	**.097**	**76.289**	
1978 Total	**13.765**	**20.000**	**37.965**	**3.142**	**3.024**	**.193**	**78.089**	
1979 Total	**15.039**	**20.666**	**37.123**	**3.141**	**2.776**	**.152**	**78.897**	
1980 Total	**15.423**	**20.394**	**34.202**	**3.118**	**2.739**	**.079**	**75.955**	
1981 Total	**15.908**	**19.928**	**31.931**	**3.105**	**3.008**	**.111**	**73.991**	
1982 Total	**15.322**	**18.505**	**30.231**	**3.561**	**3.131**	**.086**	**70.838**	
1983 Total	**15.898**	**17.357**	**30.054**	**3.871**	**3.203**	**.118**	**70.500**	
1984 Total	**17.074**	**18.507**	**31.051**	**3.717**	**3.553**	**.163**	**74.064**	
1985 January	1.599	2.170	2.690	.317	.391	.018	7.187	7.187
February	1.406	2.219	2.432	.295	.333	.017	6.701	13.888
March	1.386	1.776	2.567	.295	.336	.018	6.378	R 20.266
April	1.320	1.495	2.500	.285	.286	.016	5.902	26.168
May	1.385	1.186	2.589	.310	.310	.013	5.794	31.962
June	1.431	1.113	2.502	.287	.333	.014	5.680	37.642
July	1.585	1.157	2.577	.267	.380	.016	5.982	43.624
August	1.562	1.155	2.682	.256	.376	.017	6.048	49.672
September	1.425	1.075	2.440	.234	.373	.015	5.562	55.235
October	1.390	1.186	2.663	.245	.337	R .015	5.835	61.070
November	1.386	1.356	2.505	.273	.326	.018	5.865	66.935
December	1.604	1.966	2.774	.299	.365	.021	7.029	73.964
Total	**17.479**	**17.851**	**30.922**	**3.363**	**4.147**	**R .199**	**73.962**	
1986 January	1.628	2.180	2.671	R .258	.391	.023	R 7.151	R 7.151
February	1.414	1.918	2.433	R .277	.354	.019	R 6.415	R 13.566
March	1.384	1.757	2.716	R .333	.333	.019	R 6.542	R 20.108
April	1.265	R 1.365	2.556	.322	.329	.018	R 5.854	R 25.962
May	1.322	1.187	2.659	.318	.345	.016	5.847	R 31.809
June	1.464	1.056	2.597	.305	.339	.020	5.781	R 37.590
July	1.650	1.054	2.697	.289	.388	.019	6.097	R 43.686
August	1.518	1.013	2.799	.267	.405	.016	6.019	R 49.706
September	1.403	.964	2.558	.263	.396	.017	5.601	R 55.307
October	R 1.357	R 1.039	2.758	R .268	.391	.017	R 5.831	R 61.138
November	R 1.368	1.275	2.606	.283	.378	.012	R 5.922	R 67.060
December	R 1.499	1.721	2.835	.311	.427	.020	R 6.812	R 73.872
Total	**R 17.271**	**R 16.528**	**31.887**	**R 3.495**	**4.475**	**.215**	**R 73.870**	
1987 January	1.591	1.983	2.748	.298	.432	.019	7.072	

[a]Includes supplemental gaseous fuels.
[b]Includes industrial and utility production and net imports of electricity.
[c]Other is net imports of coal coke and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[d]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
R=Revised data.
Notes: • 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 appearing elsewhere in this publication.

Figure 1.4 Energy Imports and Exports

Yearly



Monthly

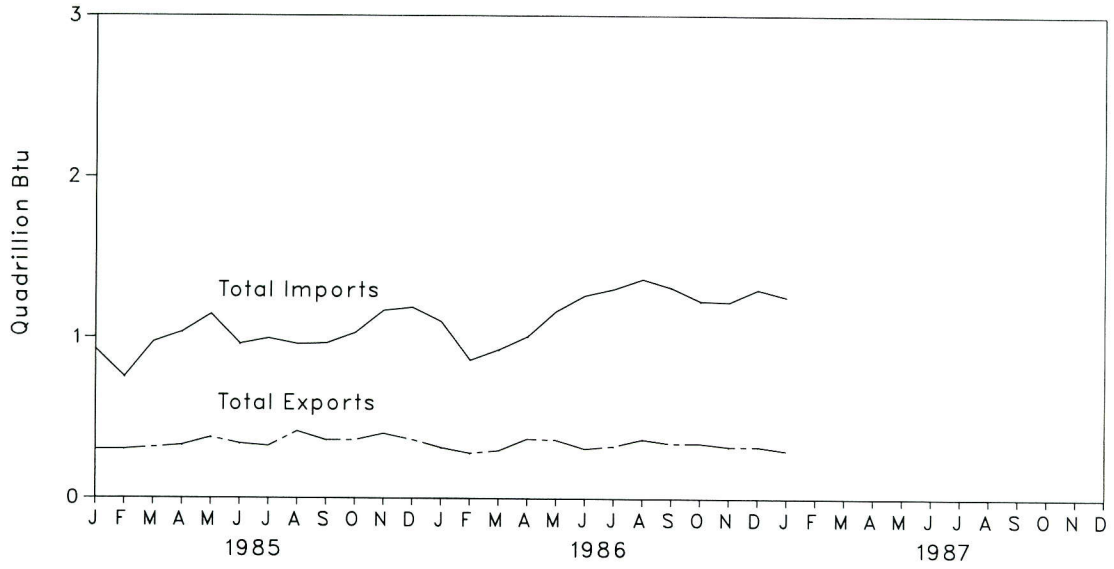


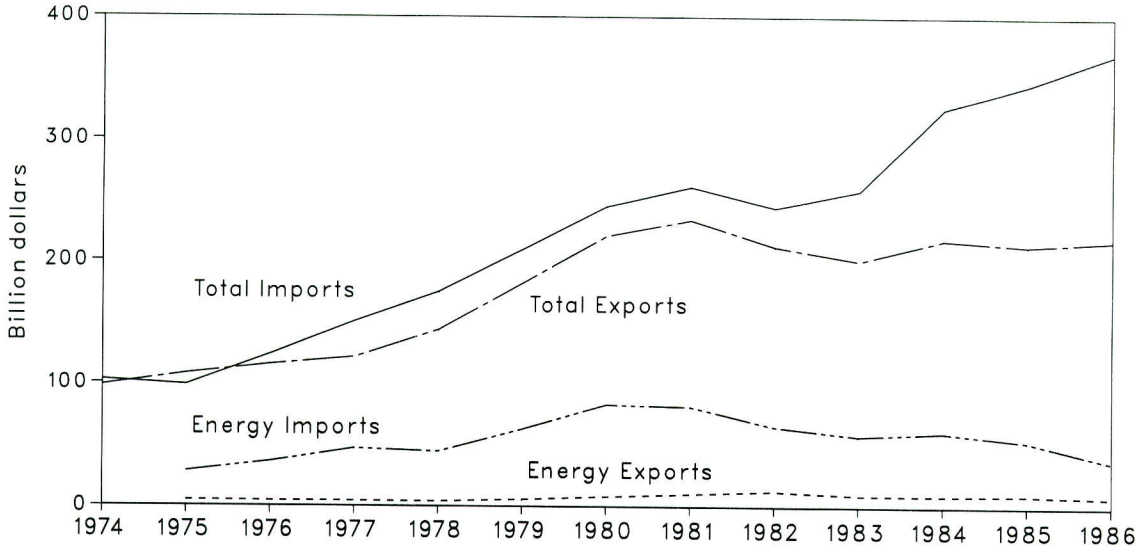
Table 1.5 Net Imports[a] of Energy by Source
(Quadrillion (10^{15}) Btu)

	Coal	Crude Oil[b]	Petroleum Products[c]	Natural Gas	Electricity[d]	Coal Coke	Total	Year to Date
1973 Total	**-1.422**	**6.883**	**6.097**	**0.981**	**0.148**	**-0.007**	**12.680**	
1974 Total	**-1.568**	**7.389**	**5.273**	**.907**	**.133**	**.056**	**12.190**	
1975 Total	**-1.738**	**8.708**	**3.800**	**.904**	**.064**	**.014**	**11.752**	
1976 Total	**-1.567**	**11.221**	**3.982**	**.922**	**.089**	**0**	**14.648**	
1977 Total	**-1.401**	**13.921**	**4.321**	**.981**	**.182**	**.015**	**18.019**	
1978 Total	**-1.004**	**13.125**	**3.932**	**.941**	**.204**	**.125**	**17.323**	
1979 Total	**-1.702**	**13.328**	**3.603**	**1.243**	**.211**	**.063**	**16.746**	
1980 Total	**-2.391**	**10.586**	**2.912**	**.957**	**.217**	**-.035**	**12.247**	
1981 Total	**-2.918**	**8.854**	**2.522**	**.857**	**.347**	**-.016**	**9.646**	
1982 Total	**-2.768**	**6.917**	**2.128**	**.898**	**.306**	**-.022**	**7.459**	
1983 Total	**-2.013**	**6.731**	**2.351**	**.887**	**.369**	**-.016**	**8.309**	
1984 Total	**-2.119**	**6.918**	**2.970**	**.792**	**.405**	**-.011**	**8.954**	
1985 January	-.150	.465	.177	.099	.030	0	.621	0.621
February	-.156	.308	.178	.094	.025	.001	.450	1.071
March	-.174	.470	.235	.084	.038	0	.653	1.724
April	-.181	.554	.228	.071	.030	.001	.702	2.427
May	-.239	.629	.271	.071	.034	-.003	.764	3.191
June	-.205	.519	.210	.060	.037	-.002	.618	3.809
July	-.188	.551	.208	.053	.044	-.002	.666	4.475
August	-.268	.520	.185	.056	.047	-.001	.539	5.014
September	-.208	.519	.196	.058	.038	-.003	.600	5.614
October	-.227	.563	.223	.071	.035	-.001	.664	6.278
November	-.211	.650	.223	.072	.033	-.003	.764	7.043
December	-.183	.633	.237	.101	.034	-.001	.821	7.863
Total	**-2.389**	**6.381**	**2.570**	**.894**	.423	**-.013**	**7.866**	
1986 January	-.152	.573	.233	.093	E .034	0	.781	.781
February	-.130	.464	.139	.068	E .035	0	.576	1.357
March	-.159	.504	.195	.049	E .036	-.001	.625	1.982
April	-.213	.633	.142	.039	E .034	0	.634	2.616
May	-.220	.711	.235	.044	E .033	-.003	.800	3.416
June	-.188	.776	.292	.041	E .030	0	.952	4.367
July	-.200	.829	.269	.043	E .037	-.002	.976	5.343
August	-.199	.831	.278	.045	E .046	-.006	.995	6.338
September	-.211	.844	.240	.051	E .043	0	.967	7.305
October	-.187	.753	.209	.061	E .046	-.001	.882	8.187
November	-.167	.759	.196	.070	E .042	-.003	.896	9.083
December	-.167	.748	.259	.095	E .040	-.001	.974	10.057
Total	**-2.193**	**8.426**	**2.687**	**.700**	**E .455**	**-.017**	**10.057**	
1987 January	-.141	.776	.181	.105	E .033	-.001	.953	.953

[a]Net imports equals imports minus exports. Minus sign indicates exports are greater than imports.
[b]Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.
[c]Includes petroleum products, unfinished oils, pentanes plus, and gasoline blending components.
[d]Assumed to be hydroelectricity.
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 appearing elsewhere in this publication.

Figure 1.5 Merchandise Trade Value

Yearly



Monthly

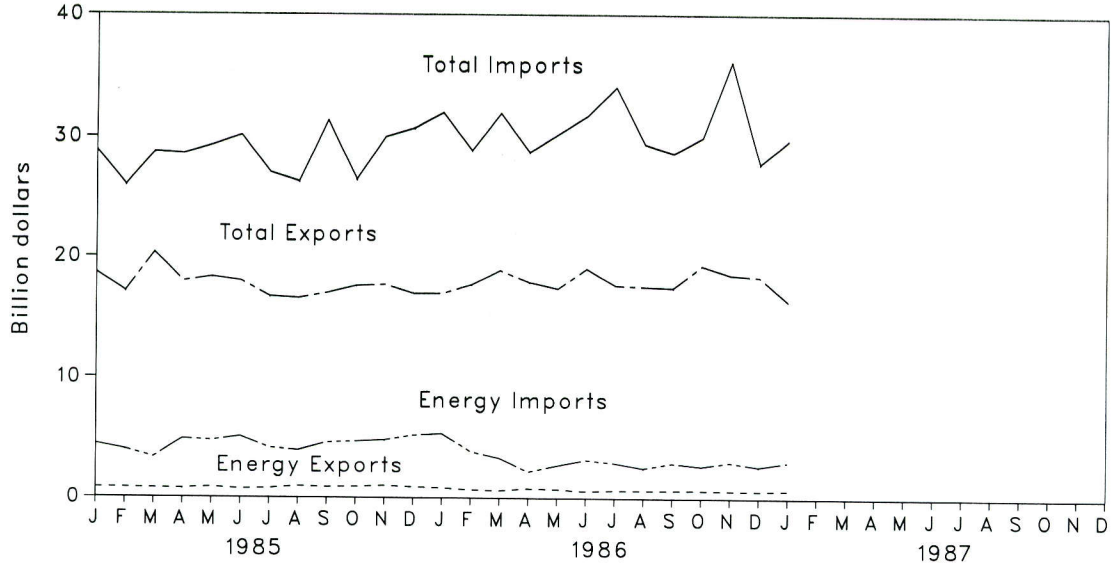


Table 1.6 Merchandise Trade Value
(Million Dollars)

	Exports			Imports			Trade Balance		
	Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total
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 Total	**9,311**	**208,577**	**217,888**	**60,980**	**264,746**	**325,726**	**-51,669**	**-56,169**	**-107,838**
1985 January	804	17,869	18,673	4,434	24,402	28,836	-3,630	-6,533	-10,163
February	786	16,357	17,143	3,989	21,952	25,941	-3,203	-5,595	-8,798
March	754	19,576	20,330	3,351	25,374	28,725	-2,597	-5,798	-8,395
April	738	17,235	17,973	4,876	23,696	28,572	-4,138	-6,461	-10,599
May	837	17,500	18,337	4,748	24,554	29,302	-3,911	-7,054	-10,965
June	708	17,304	18,012	5,088	25,048	30,136	-4,380	-7,744	-12,124
July	760	15,967	16,727	4,146	22,854	27,000	-3,386	-6,888	-10,274
August	934	15,650	16,584	3,937	22,310	26,247	-3,003	-6,660	-9,663
September	868	16,166	17,034	4,597	26,752	31,349	-3,729	-10,586	-14,315
October	903	16,715	17,618	4,699	23,730	26,429	-3,796	-7,015	-10,811
November	991	16,730	17,721	4,824	25,186	30,010	-3,833	-8,457	-12,290
December	888	16,106	16,994	5,228	25,500	30,728	-4,340	-9,394	-13,734
Total	**9,971**	**203,175**	**213,146**	**53,917**	**291,359**	**345,276**	**-43,946**	**-88,183**	**-132,129**
1986 January	812	16,194	17,006	5,344	26,661	32,005	-4,532	-10,467	-14,999
February	676	17,059	17,735	3,874	25,041	28,895	-3,198	-7,963	-11,161
March	622	18,291	18,913	3,331	28,641	31,972	-2,709	-10,350	-13,059
April	791	17,174	17,965	2,176	26,586	28,762	-1,385	-9,412	-10,797
May	728	16,703	17,431	2,700	27,572	30,272	-1,972	-10,870	-12,842
June	584	18,486	19,070	3,185	28,579	31,764	-2,601	-10,093	-12,694
July	653	17,054	17,707	2,933	31,188	34,121	-2,280	-14,134	-16,414
August	661	16,943	17,604	2,511	26,965	29,476	-1,850	-10,021	-11,871
September	657	16,861	17,518	2,933	25,762	28,695	-2,276	-8,901	-11,177
October	670	18,660	19,330	2,662	27,356	30,018	-1,992	-8,696	-10,688
November	641	17,954	18,595	3,014	33,173	36,187	-2,373	-15,219	-17,592
December	620	17,811	18,431	2,647	25,148	27,795	-2,027	-7,337	-9,364
Total	**8,115**	**209,189**	**217,304**	**37,310**	**332,651**	**369,961**	**-29,195**	**-123,462**	**-152,657**
1987 January	669	15,715	16,384	3,025	26,780	29,805	-2,356	-11,065	-13,421

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 comprises the 50 States, the District of Columbia, and Puerto Rico) and the Virgin Islands.

Additional Notes and Sources: See end of section.

Figure 1.6 Quarterly Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted)

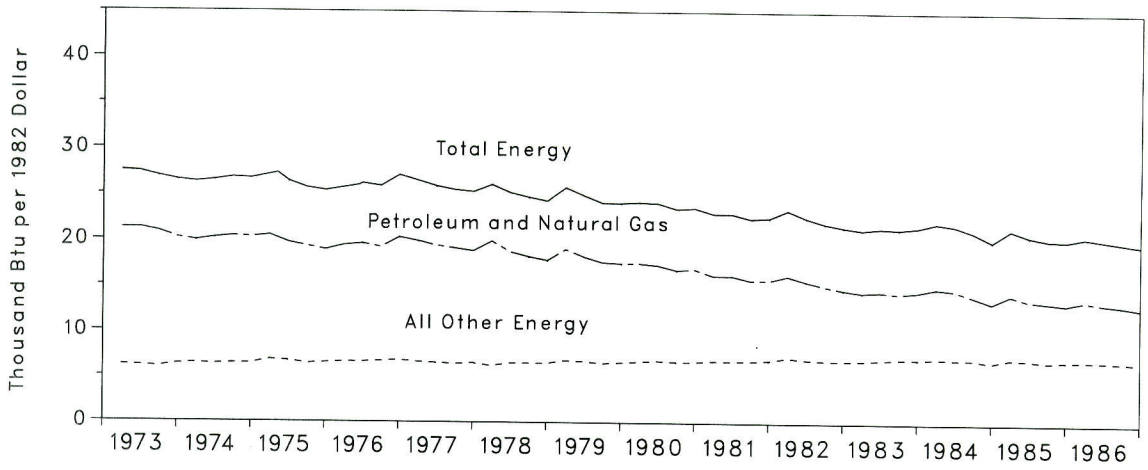


Table 1.7 Energy Consumption per Dollar of Gross National Product (Seasonally Adjusted)

	Annual Rate of Energy Consumption[a]	Gross National Product (GNP)	Energy Consumption per Dollar of GNP (Seasonally Adjusted)		
			Total Energy	Petroleum and Natural Gas	All Other Energy
	Quadrillion Btu	Trillion 1982 Dollars	Thousand Btu per 1982 Dollar		
1973 Year	**74.282**	**2.744**	**27.1**	**20.9**	**6.2**
1974 Year	**72.543**	**2.729**	**26.6**	**20.2**	**6.4**
1975 Year	**70.545**	**2.695**	**26.2**	**19.5**	**6.7**
1976 Year	**74.362**	**2.827**	**26.3**	**19.6**	**6.7**
1977 Year	**76.289**	**2.959**	**25.8**	**19.3**	**6.5**
1978 Year	**78.089**	**3.115**	**25.1**	**18.6**	**6.5**
1979 Year	**78.897**	**3.192**	**24.7**	**18.1**	**6.6**
1980 Year	**75.955**	**3.187**	**23.8**	**17.1**	**6.7**
1981 Year	**73.991**	**3.249**	**22.8**	**16.0**	**6.8**
1982 Year	**70.838**	**3.166**	**22.4**	**15.4**	**7.0**
1983 Year	**70.500**	**3.279**	**21.5**	**14.5**	**7.0**
1984 Year	**74.064**	**3.490**	**21.2**	**14.2**	**7.0**
1985 1st Quarter[b]	R 75.794	3.547	21.4	14.2	7.2
2nd Quarter[b]	73.906	3.568	20.7	13.6	7.1
3rd Quarter[b]	R 73.083	3.604	20.3	13.4	6.9
4th Quarter[b]	R 73.115	3.622	20.2	13.2	7.0
Year	**73.962**	**3.585**	**20.6**	**13.6**	**7.0**
1986 1st Quarter[b]	R 75.141	3.656	20.6	13.6	7.0
2nd Quarter[b]	R 74.223	3.661	20.3	13.3	7.0
3rd Quarter[b]	R 73.575	3.686	20.0	13.1	6.9
4th Quarter[b]	R 72.579	3.696	19.6	12.8	R 6.8
Year	**R 73.870**	**R 3.675**	**20.1**	**13.2**	**6.9**

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

[b]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 end of section.

Figure 1.7 U.S. Dependence on Petroleum Net Imports

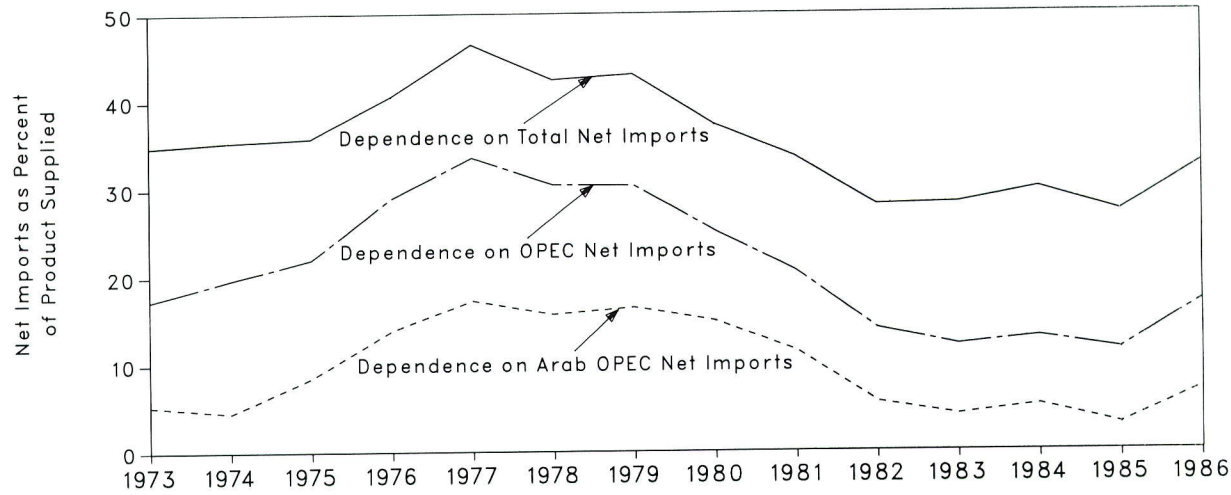


Table 1.8 U.S. Dependence on Petroleum Net Imports[a]

Annual Rate	Net Imports[b]			Petroleum Products Supplied	Net Imports as Percent of U.S. Petroleum Products Supplied		
	From Arab OPEC[c] Countries	From All OPEC[d] Countries	From All Countries		From Arab OPEC[c] Countries	From All OPEC[d] Countries	From All Countries
	Thousand Barrels per Day				Percent		
1973 Average	**914**	**2,991**	**6,025**	**17,308**	**5.3**	**17.3**	**34.8**
1974 Average	**752**	**3,277**	**5,892**	**16,653**	**4.5**	**19.7**	**35.4**
1975 Average	**1,382**	**3,599**	**5,846**	**16,322**	**8.5**	**22.0**	**35.8**
1976 Average	**2,423**	**5,063**	**7,090**	**17,461**	**13.9**	**29.0**	**40.6**
1977 Average	**3,184**	**6,190**	**8,565**	**18,431**	**17.3**	**33.6**	**46.5**
1978 Average	**2,962**	**5,747**	**8,002**	**18,847**	**15.7**	**30.5**	**42.5**
1979 Average	**3,054**	**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 Average	**817**	**2,037**	**4,715**	**15,726**	**5.2**	**13.0**	**30.0**
1985 1st Quarter	331	1,371	3,570	15,859	2.1	8.6	22.5
2nd Quarter	529	1,857	4,625	15,486	3.4	12.0	29.9
3rd Quarter	288	1,780	4,135	15,536	1.9	11.5	26.6
4th Quarter	730	2,266	4,803	16,025	4.6	14.1	30.0
Average	**470**	**1,821**	**4,286**	**15,726**	**3.0**	**11.6**	**27.3**
1986 1st Quarter	843	2,038	4,083	16,055	5.3	12.7	25.4
2nd Quarter	1,138	2,714	5,321	15,864	7.2	17.1	33.5
3rd Quarter	1,323	3,267	6,206	16,177	8.2	20.2	38.4
4th Quarter	1,279	3,003	5,522	16,467	7.8	18.2	33.5
Average	**1,147**	**2,759**	**5,289**	**16,142**	**7.1**	**17.1**	**32.8**

[a]Beginning in October 1977, Strategic Petroleum Reserves are included.

[b]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.

[c]Includes Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

[d]Includes Arab OPEC countries plus Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela.

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 end of section.

Figure 1.8 Cost of Fuels to End Users in Constant (1972) Dollars

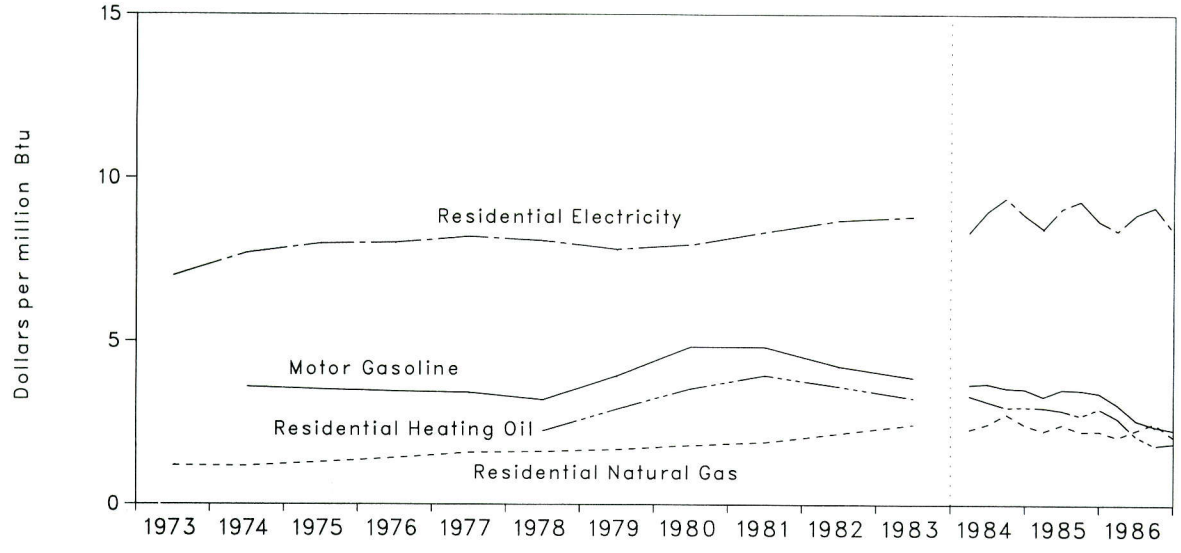


Table 1.9 Cost of Fuels to End Users in Constant (1972) Dollars[a]

	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 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	234.5	2.28	2.89	8.47
2nd Quarter	44.4	3.55	40.3	2.91	255.5	2.48	3.10	9.09
3rd Quarter	44.2	3.53	38.1	2.75	275.3	2.27	3.18	9.32
4th Quarter	43.0	3.44	41.2	2.97	234.5	2.28	2.97	8.70
Average	**43.4**	**3.47**	**41.0**	**2.96**	**238.0**	**2.31**	**3.03**	**8.88**
1986 1st Quarter	38.7	3.09	37.1	2.67	217.1	2.10	2.87	8.41
2nd Quarter	32.7	2.61	29.6	2.13	239.1	2.32	3.04	8.91
3rd Quarter	30.4	2.43	25.6	1.85	261.3	2.53	3.12	9.14
4th Quarter	29.0	2.32	26.5	1.91	217.8	2.11	2.87	8.41
Average	**32.7**	**2.61**	**32.2**	**2.32**	**222.1**	**2.15**	**2.97**	**8.70**

[a]Fuel costs shown on this page are calculated using the Urban Consumer Price Index developed by the Bureau of Labor Statistics. See Note 6 at end of section.

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 end of section.

Figure 1.9 U.S. Passenger Car Efficiency Index

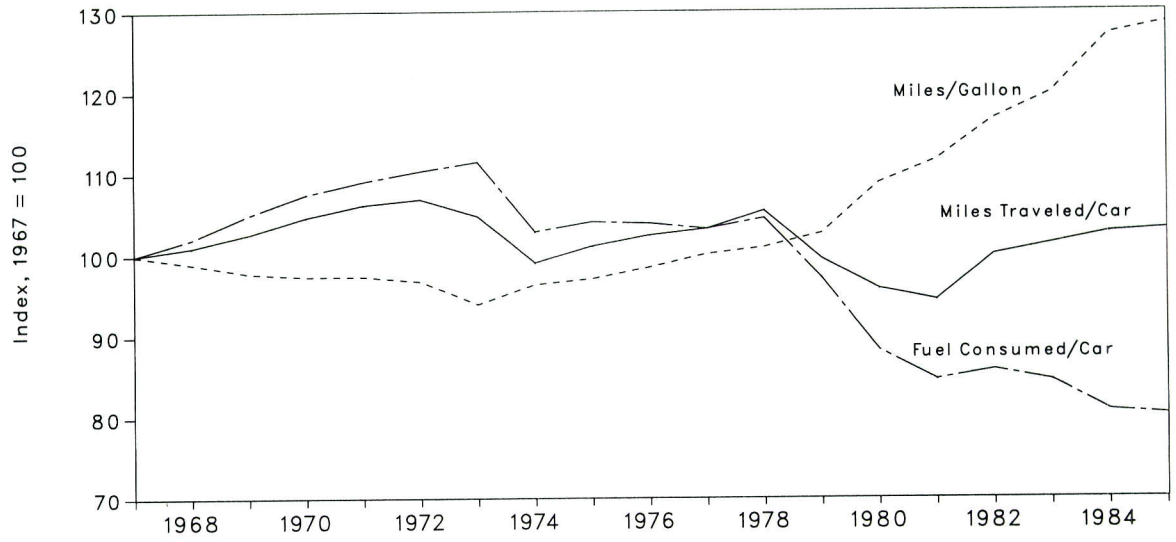


Table 1.10 U.S. Passenger Car Efficiency

	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	553	80.8	9,787	102.7	17.70	127.1
1985[a]	549	80.3	9,827	103.1	17.90	128.5

[a]Preliminary data.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Table 1.11 Population-Weighted Heating Degree-Days[a]

Census Divisions	March 1 through March 31					Cumulative July 1 through March 31				
				Percent Change					Percent Change	
	Normal[b]	1986	1987	Normal to 1987	1986 to 1987	Normal[b]	1986	1987	Normal to 1987	1986 to 1987
New England CT, ME, MA, NH, RI, VT	920	857	863	-6.2	0.7	5,643	5,548	5,711	1.2	2.9
Middle Atlantic NJ, NY, PA	834	754	729	-12.6	-3.3	5,127	4,924	4,980	-2.9	1.1
Eastern North Central IL, IN, MI, OH, WI	894	776	751	-16.0	-3.2	5,631	5,683	5,259	-6.6	-7.5
Western North Central IA, KS, MN, MO, NE, ND, SD	914	716	725	-20.7	1.3	5,975	6,158	5,376	-10.0	-12.7
South Atlantic DE, FL, GA, MD and DC, NC, SC, VA, WV	408	380	386	-5.4	1.6	2,773	2,565	2,645	-4.6	3.1
Eastern South Central AL, KY, MS, TN	466	406	405	-13.1	-.2	3,294	3,001	3,087	-6.3	2.9
Western South Central AR, LA, OK, TX	287	189	301	4.9	59.3	2,217	1,974	2,222	.2	12.6
Mountain AZ, CO, ID, MT, NV, NM, UT, WY	724	522	695	-4.0	33.1	4,728	4,573	4,697	-.7	2.7
Pacific Coast CA, OR, WA	452	348	412	-8.8	18.4	2,692	2,582	2,585	-4.0	.1
U.S. Average[c]	**647**	**551**	**573**	**-11.4**	**4.0**	**4,151**	**4,035**	**3,966**	**-4.5**	**-1.7**

[a]See Note 7 at end of section.
[b]Normal is based on calculations of data from 1951 through 1980.
[c]Excludes Alaska and Hawaii.
Source: See end of 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, and electricity generated from nuclear power. Production also includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. 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 (assumed to be hydroelectricity), net imports of coal coke, and electricity generated from nuclear power. Consumption also includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available. Approximate heat contents (Btu values) are derived 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 (assumed to be hydroelectricity), 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 "Note for imports and exports of electricity" under 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 "Note for imports and exports of electricity" under 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 United 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. The Consumer Price Index: The Consumer Price Index, All Urban Consumers, All Items, for 1967=100.0 is rebased to 1972=100.0 by the Energy Information Administration. The values are:

1972	100.0	1985:	1st Quarter	253.3
1973	106.2		2nd Quarter	256.3
1974	117.9		3rd Quarter	258.3
1975	128.7		4th Quarter	260.6
1976	136.1		Year	257.1
1977	144.9	1986:	1st Quarter	261.2
1978	155.9		2nd Quarter	260.6
1979	173.5		3nd Quarter	262.5
1980	197.0		4th Quarter	264.0
1981	217.4		Year	262.1
1982	230.7			
1983	238.1			
1984	248.3			

7. 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, MD. The data are available weekly with monthly summaries

and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident State population data estimated for 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--Section 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"; 1981-1985: EIA, *Petroleum Supply Annual.* 1986: 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 6 in the Notes and Sources *Monthly Energy Review* Section 9, Price, 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.

Section 2. Consumption

Total U.S. energy consumption in January 1987 was 7.1 quadrillion Btu, 1.1 percent below the January 1986 level. Petroleum products accounted for 38.9 percent of the energy consumed in January 1987, while natural gas accounted for 28.0 percent, and coal accounted for 22.5 percent. The transportation sector used 57.2 percent of the petroleum products consumed in January 1987 and the industrial sector used 27.8 percent. Of natural gas consumed, the residential and commercial sector used 57.3 percent; the industrial sector, 30.3 percent. Most of the coal used (82.8 percent) was consumed by electric utilities. The residential and commercial sector used 68.5 percent of total electricity sales, while the industrial sector accounted for 31.4 percent.

Residential and commercial sector consumption was 3.1 quadrillion Btu in January 1987, down 1.9 percent from the 1986 level. That sector consumed 43.5 percent of the January 1987 total, down from its 43.8-percent share in January 1986.

Industrial sector consumption was 2.4 quadrillion Btu in January 1987, down 1.3 percent from the January 1986 level. The industrial sector accounted for 33.5 percent of the January 1987 total consumption, the same as the industrial sector's share of the January 1986 total consumption.

Transportation sector consumption of energy was 1.6 quadrillion Btu in January 1987, up 0.7 percent from the January 1986 level. That sector consumed 23.0 percent of the January 1987 total, up from the sector's 22.6-percent share in January 1986.

Electric utility consumption of energy was an estimated 2.4 quadrillion Btu in January 1987, 2.4 percent higher than in January 1986. Coal contributed 55.2 percent of the energy consumed by electric utilities in January 1987, while nuclear electric power contributed 18.1 percent; hydroelectric power, 12.4 percent; natural gas, 8.0 percent; petroleum products, 5.4 percent; and wood, waste, geothermal, wind, photovoltaic, and solar thermal energy, 0.8 percent.

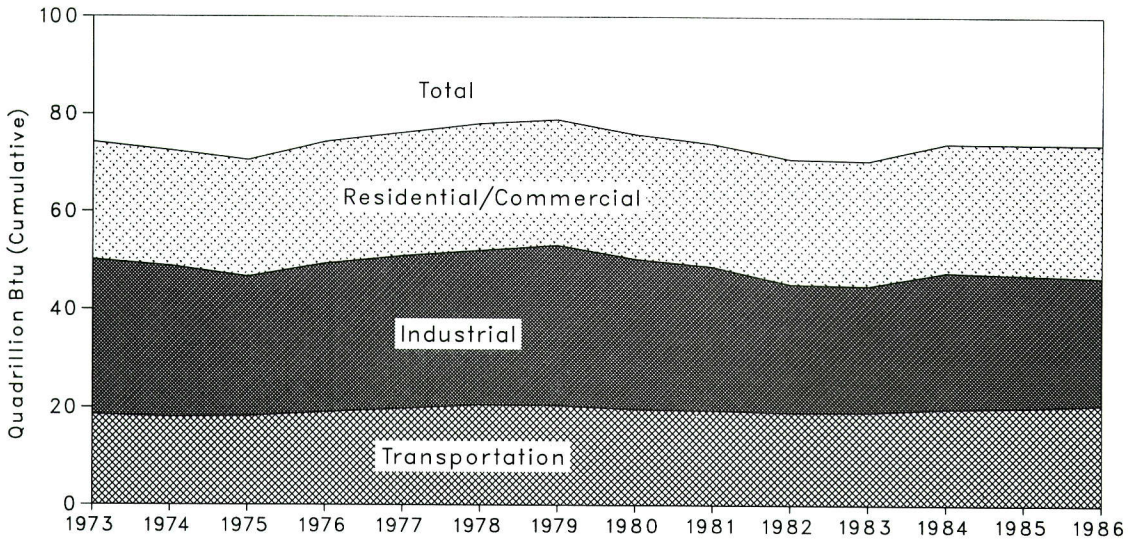
Table 2.1 Energy Consumption Summary for January 1987
(Quadrillion (10^{15}) Btu)

Energy Source	Sector				Total
	Residential and Commercial	Industrial	Transportation	Electric Utilities	
Coal	0.021	0.252	[a]	1.318	1.591
Natural Gas[b]	1.137	.601	0.053	.192	1.983
Petroleum Products	.282	.765	1.573	.129	2.748
Hydroelectric Power	.000	.003	.000	.295	.298
Nuclear Electric Power	.000	.000	.000	.432	.432
Net Imports of Coal Coke	.000	-.001	.000	.000	-.001
Other[c]	.000	.000	.000	.020	.020
Primary Consumption	**1.440**	**1.620**	**1.626**	**2.386**	**7.072**
Electricity	.491	.225	.001	-.717	
Net Energy Consumption	**1.931**	**1.845**	**1.627**		**5.403**
Electrical System Energy Losses	1.143	.523	.003	-1.669	1.669
Total Energy Consumption[d]	**3.074**	**2.368**	**1.630**		**7.072**

[a]Negligible quantity is included in the industrial sector.
[b]Includes supplemental gaseous fuels. Transportation sector is pipeline fuel only.
[c]Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[d]Excludes wood, waste, geothermal, wind, photovotaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
Note: Totals may not equal sum of components due to independent rounding and the use of sector-specific conversion factors.
Additional Notes and Sources: See end of section.

Figure 2.1 Consumption of Energy by End-Use Sector

Yearly



Monthly

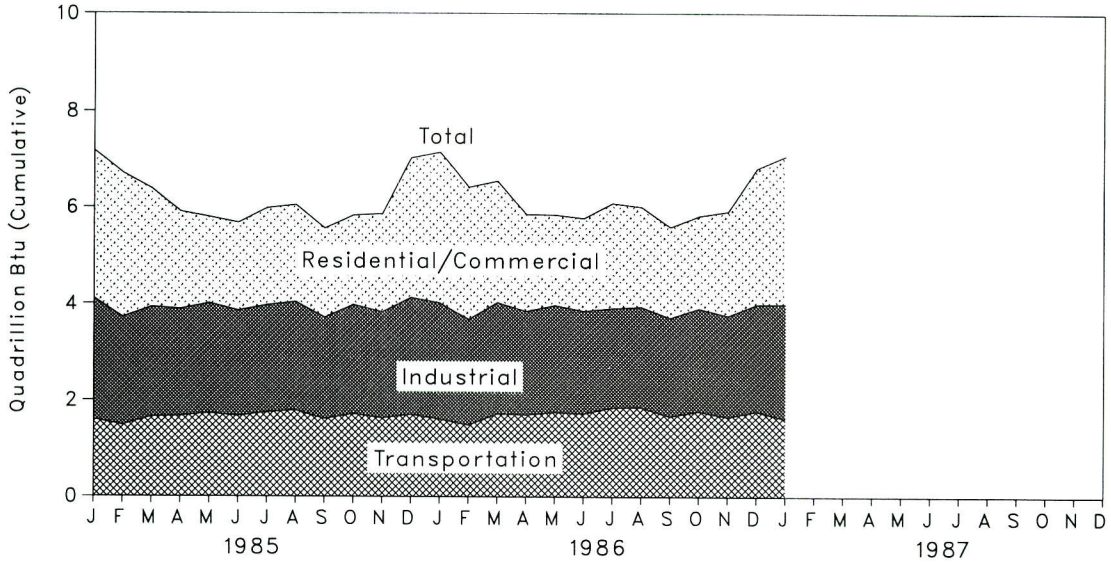


Table 2.2 Consumption of Energy by End-Use Sector
(Quadrillion (10^{15}) Btu)

	Residential and Commercial	Industrial	Transportation	Total
1973 Total	**24.142**	**31.536**	**18.595**	**74.282**
1974 Total	**23.724**	**30.697**	**18.113**	**72.543**
1975 Total	**23.900**	**28.405**	**18.240**	**70.545**
1976 Total	**25.019**	**30.240**	**19.094**	**74.362**
1977 Total	**25.387**	**31.086**	**19.808**	**76.289**
1978 Total	**26.088**	**31.411**	**20.589**	**78.089**
1979 Total	**25.809**	**32.623**	**20.464**	**78.897**
1980 Total	**25.653**	**30.607**	**19.695**	**75.955**
1981 Total	**25.244**	**29.245**	**19.496**	**73.991**
1982 Total	**25.625**	**26.136**	**19.066**	**70.838**
1983 Total	**25.617**	**25.743**	**19.133**	**70.500**
1984 Total	**26.415**	**27.769**	**19.878**	**74.064**
1985 January	3.080	2.494	1.611	7.187
February	2.984	2.229	1.487	6.701
March	2.451	2.264	1.665	6.378
April	2.018	2.209	1.680	5.902
May	1.793	2.267	1.737	5.794
June	1.822	2.176	1.681	5.680
July	2.013	2.211	1.756	5.982
August	2.014	2.236	1.797	6.048
September	1.851	2.090	1.622	5.562
October	1.857	2.251	1.727	5.835
November	2.036	2.190	1.640	5.865
December	2.904	2.406	1.717	7.029
Total	**26.823**	**27.019**	**20.120**	**73.962**
1986 January	R 3.135	R 2.398	1.618	R 7.151
February	R 2.740	2.186	1.491	R 6.415
March	2.518	2.296	1.730	R 6.542
April	2.010	R 2.138	1.712	R 5.854
May	R 1.879	2.207	1.764	5.847
June	1.924	2.118	1.737	5.781
July	2.179	2.055	1.856	6.097
August	R 2.073	2.077	1.863	6.019
September	1.888	2.031	1.680	5.601
October	1.922	R 2.120	1.788	R 5.831
November	R 2.165	R 2.087	1.669	R 5.922
December	R 2.815	R 2.207	1.787	R 6.812
Year to Date	**R 27.244**	**R 25.924**	**20.695**	**R 73.870**
1987 January	3.074	2.368	1.630	7.072

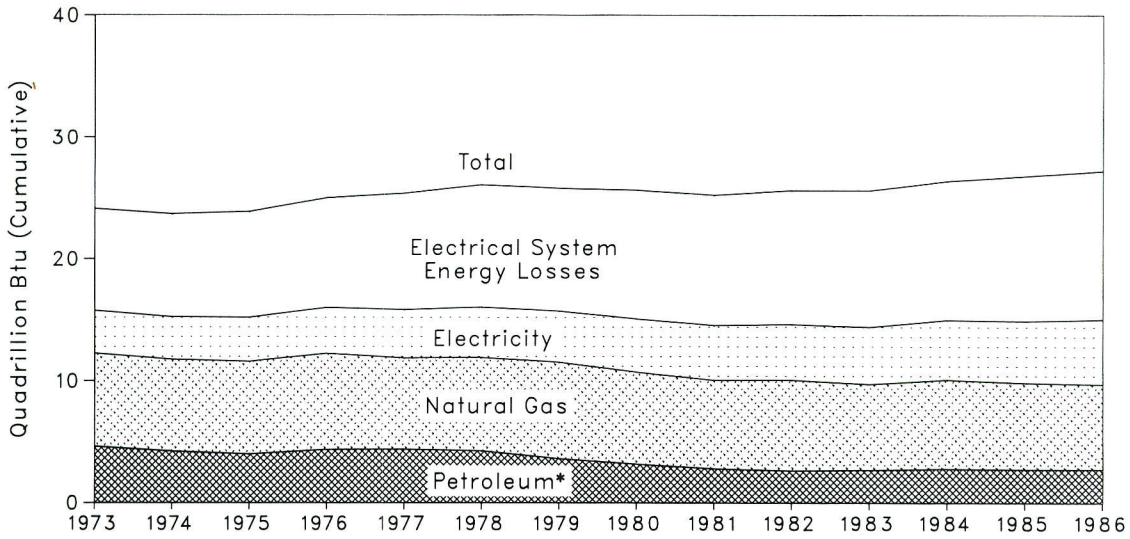
R=Revised data.

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.

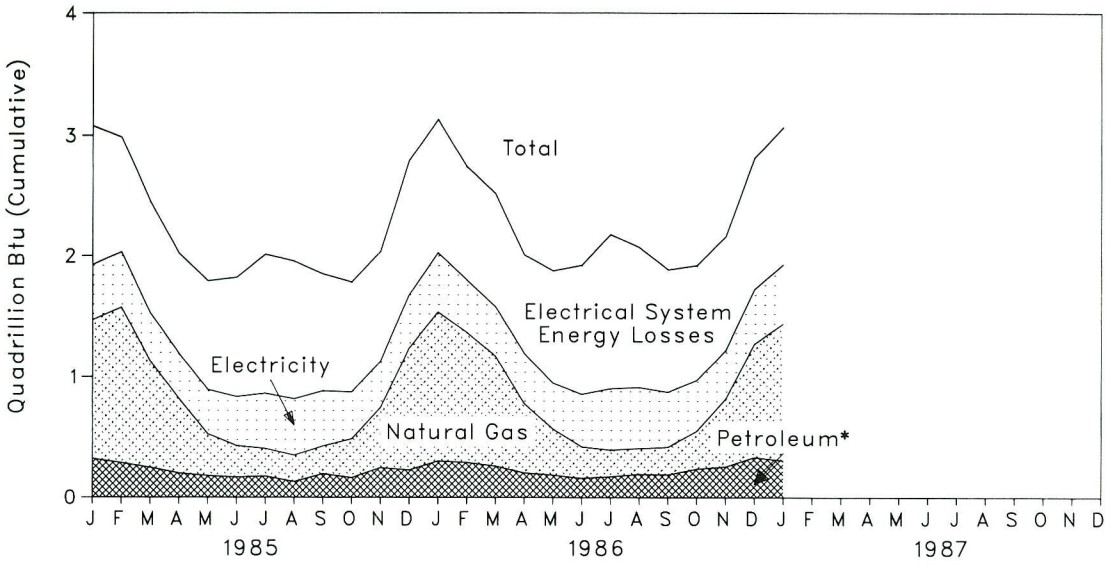
Additional Notes and Sources: See end of section.

Figure 2.2 Consumption of Energy by the Residential and Commercial Sector

Yearly



Monthly



*Includes coal.

Table 2.3 Consumption of Energy by the Residential and Commercial Sector

(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Electricity[b]	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	**0.254**	**7.626**	**4.391**	**3.495**	**8.377**	**24.142**	
1974 Total	**.257**	**7.518**	**3.996**	**3.475**	**8.478**	**23.724**	
1975 Total	**.209**	**7.581**	**3.805**	**3.604**	**8.701**	**23.900**	
1976 Total	**.203**	**7.866**	**4.181**	**3.747**	**9.023**	**25.019**	
1977 Total	**.205**	**7.461**	**4.206**	**3.955**	**9.559**	**25.387**	
1978 Total	**.214**	**7.624**	**4.070**	**4.116**	**10.065**	**26.088**	
1979 Total	**.187**	**7.891**	**3.448**	**4.184**	**10.100**	**25.809**	
1980 Total	**.145**	**7.540**	**3.035**	**4.355**	**10.578**	**25.653**	
1981 Total	**.168**	**7.243**	**2.634**	**4.497**	**10.703**	**25.244**	
1982 Total	**.188**	**7.427**	**2.449**	**4.566**	**10.994**	**25.625**	
1983 Total	**.196**	**7.024**	**2.499**	**4.680**	**11.218**	**25.617**	
1984 Total	**.212**	**7.292**	**2.582**	**4.894**	**11.435**	**26.415**	
1985 January	.019	1.151	.299	.457	1.154	3.080	3.080
February	.017	1.289	.267	.458	.954	2.984	6.064
March	.012	.883	.233	.400	.923	2.451	8.515
April	.018	.622	.179	.371	.829	2.018	10.533
May	.011	.351	.165	.366	.900	1.793	12.325
June	.008	.265	.157	.405	.986	1.822	14.147
July	.012	.233	.160	.457	1.150	2.013	16.160
August	.011	.219	.176	.470	1.138	2.014	R 18.174
September	.015	.234	.177	.457	.967	1.851	20.025
October	.017	.325	.217	.389	.910	1.857	21.883
November	.017	.502	.227	.381	.909	2.036	23.918
December	.022	1.011	.316	.445	1.110	2.904	R 26.822
Total	**.179**	**7.085**	**2.573**	**5.054**	**11.931**	**26.823**	
1986 January	.021	1.238	.278	.489	R 1.108	R 3.135	R 3.135
February	.018	1.079	.270	.436	.936	R 2.740	R 5.874
March	.013	.914	.245	.411	.934	2.518	R 8.393
April	.019	.580	.182	.413	.816	2.010	R 10.403
May	.011	.388	.172	.379	R .929	R 1.879	R 12.283
June	.009	.265	.148	.435	1.067	1.924	R 14.206
July	.011	.225	.158	.508	1.278	2.179	R 16.385
August	.010	.218	.180	.505	R 1.159	R 2.073	R 18.459
September	.014	.233	.172	.455	1.014	1.888	R 20.346
October	R .015	.318	.219	.421	R .949	1.922	R 22.269
November	R .016	.565	.237	.399	.947	R 2.165	R 24.433
December	R .021	.941	.311	.455	1.087	R 2.815	R 27.248
Total	**R .179**	**6.968**	**2.573**	**5.306**	**R 12.217**	**R 27.244**	
1987 January	.021	1.137	.282	.491	1.143	3.074	3.074

[a]Includes supplemental gaseous fuels.

[b]Includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

[c]Excludes wood, waste, geothermal wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.

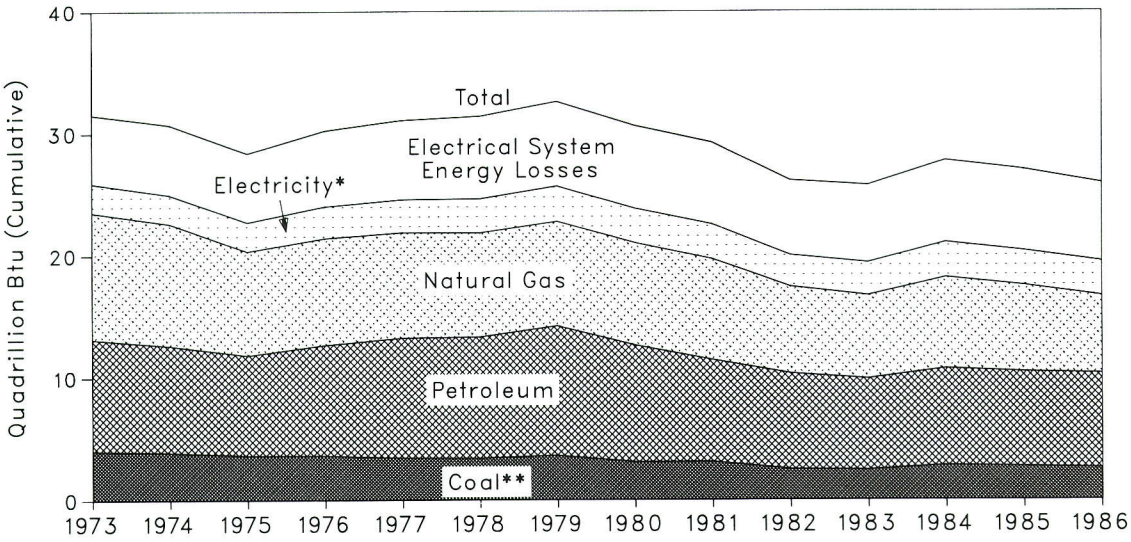
R=Revised data.

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

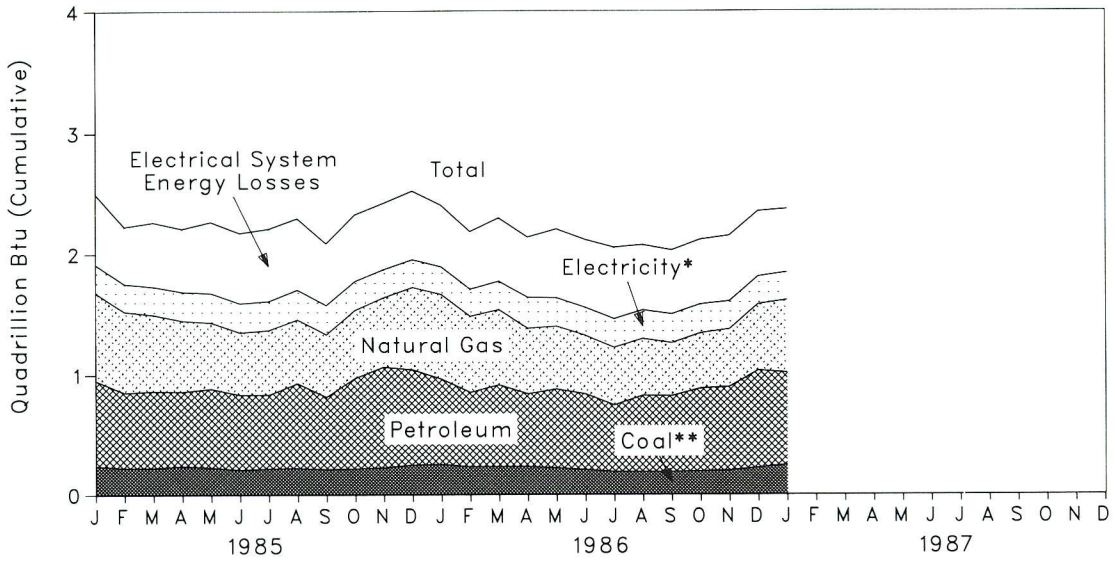
Additional Notes and Sources: See end of section.

Figure 2.3 Consumption of Energy by the Industrial Sector

Yearly



Monthly



*Includes hydroelectric power.
**Includes net imports of coal coke.

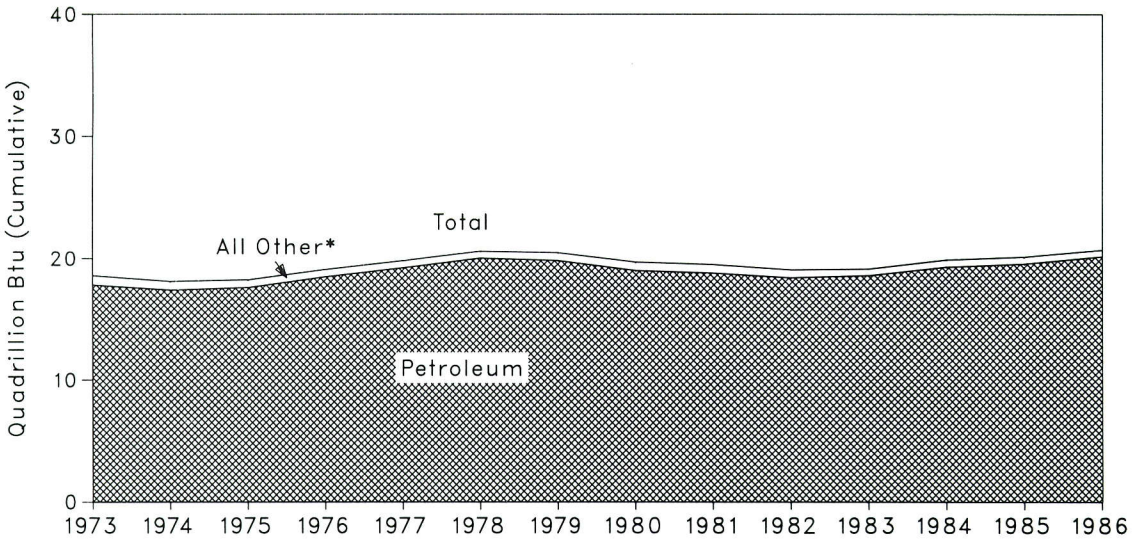
Table 2.4 Consumption of Energy by the Industrial Sector
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Hydroelectric Power	Net Imports of Coal Coke	Electricity[b]	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	**4.057**	**10.388**	**9.113**	**0.035**	**-0.007**	**2.341**	**5.611**	**31.536**	
1974 Total	**3.868**	**10.003**	**8.698**	**.033**	**.056**	**2.337**	**5.701**	**30.697**	
1975 Total	**3.666**	**8.532**	**8.151**	**.032**	**.014**	**2.346**	**5.664**	**28.405**	
1976 Total	**3.660**	**8.761**	**9.018**	**.033**	**0**	**2.573**	**6.196**	**30.240**	
1977 Total	**3.453**	**8.636**	**9.786**	**.033**	**.015**	**2.682**	**6.481**	**31.086**	
1978 Total	**3.314**	**8.539**	**9.890**	**.032**	**.125**	**2.761**	**6.751**	**31.411**	
1979 Total	**3.593**	**8.549**	**10.576**	**.034**	**.063**	**2.873**	**6.935**	**32.623**	
1980 Total	**3.155**	**8.394**	**9.524**	**.033**	**-.035**	**2.781**	**6.755**	**30.607**	
1981 Total	**3.157**	**8.257**	**8.291**	**.033**	**-.016**	**2.817**	**6.705**	**29.245**	
1982 Total	**2.552**	**7.116**	**7.795**	**.033**	**-.022**	**2.542**	**6.120**	**26.136**	
1983 Total	**2.490**	**6.821**	**7.421**	**.033**	**-.016**	**2.648**	**6.346**	**25.743**	
1984 Total	**2.842**	**7.449**	**7.889**	**.032**	**-.011**	**2.868**	**6.701**	**27.769**	
1985 January	.245	.728	.708	.003	0	.229	.580	2.494	2.494
February	.226	.671	.627	.003	.001	.227	.473	2.229	4.723
March	.227	.633	.639	.003	0	.230	.531	2.264	6.987
April	.241	.589	.620	.003	.001	.234	R .522	2.209	9.196
May	.233	.549	.656	.003	-.003	.239	.589	2.267	11.463
June	.213	.516	.624	.003	-.002	.239	.582	2.176	13.639
July	.223	.534	.615	.003	-.002	.238	.599	2.211	15.850
August	.226	.529	.646	.002	-.001	.244	.590	2.236	R 18.085
September	.219	.518	.600	.002	-.003	.241	.511	2.090	20.175
October	.221	.562	.680	.002	-.001	.236	.551	2.251	22.426
November	.231	.576	.608	.002	-.003	.229	.547	2.190	24.616
December	.252	.683	.678	.002	-.001	.226	.565	2.406	27.022
Total	**2.757**	**7.087**	**7.702**	**.033**	**-.013**	**2.813**	**6.641**	**27.019**	
1986 January	.256	.699	.710	.003	0	.224	R .507	R 2.398	R 2.398
February	.236	.630	.618	.003	0	.222	.477	2.186	R 4.584
March	.237	.623	.680	.003	-.001	.231	.524	2.296	R 6.880
April	.237	R .542	.605	.003	0	.253	.499	R 2.138	9.018
May	.229	.520	.655	.003	-.003	.232	.570	2.207	R 11.225
June	.210	.483	.631	.003	0	.229	.562	2.118	13.344
July	.195	.478	.553	.003	-.002	.235	.592	2.055	15.399
August	.198	.470	.636	.002	-.006	.235	.540	2.077	R 17.475
September	.192	.438	.632	.002	0	.237	.529	2.031	R 19.506
October	R .197	R .457	.690	.002	-.001	.238	R .536	R 2.120	R 21.625
November	R .207	.477	.631	.002	-.003	.229	.544	R 2.087	R 23.713
December	R .228	.549	.663	.002	-.001	.226	.539	R 2.207	R 25.920
Total	**R 2.623**	**R 6.363**	**R 7.704**	**.033**	**-.017**	**2.791**	**R 6.426**	**R 25.924**	
1987 January	.252	.601	.765	.003	-.001	.225	.523	2.368	2.368

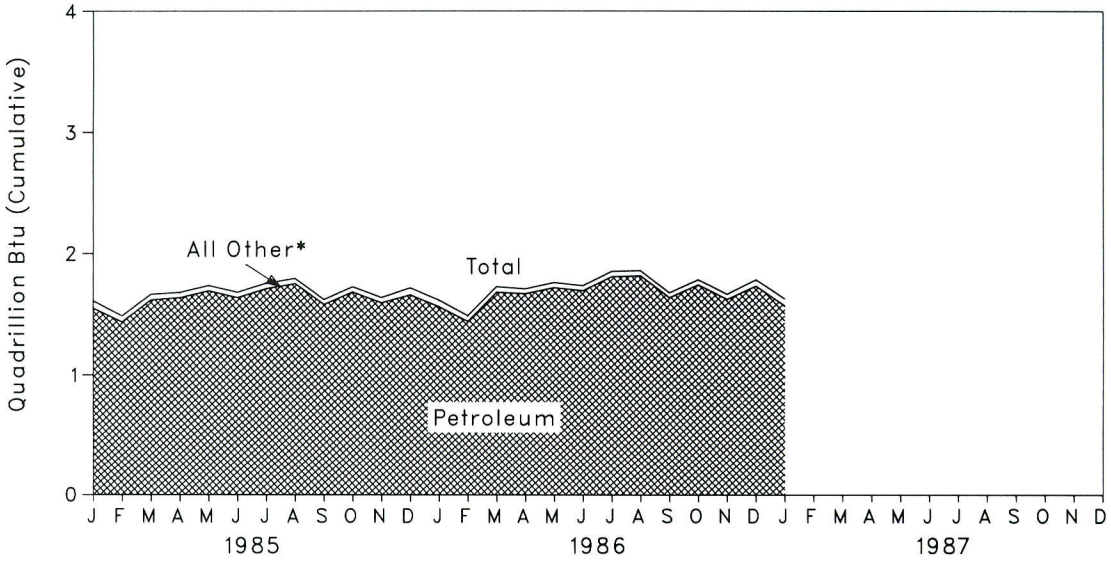
[a]Includes supplemental gaseous fuels.
[b]Includes electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
[c]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy except for small amounts used by electric utilities to generate electricity for distribution.
R=Revised data.
Notes: • 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 end of section.

Figure 2.4 Consumption of Energy by the Transportation Sector

Yearly



Monthly



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

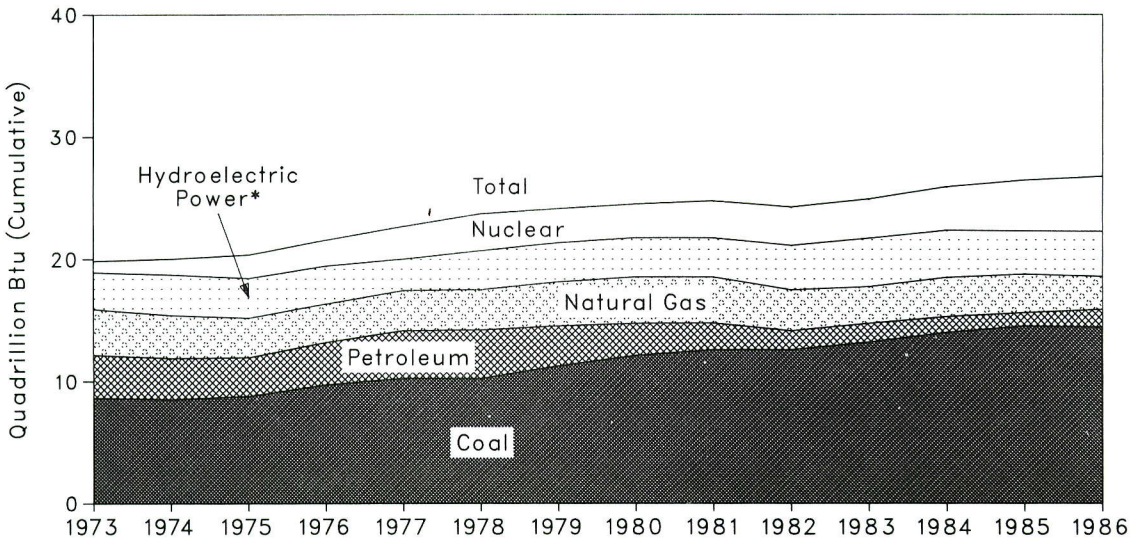
Table 2.5 Consumption of Energy by the Transportation Sector
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum	Electricity[b]	Electrical System Energy Losses	Total[c]	Year to Date
1973 Total	**0.003**	**0.743**	**17.821**	**0.008**	**0.020**	**18.595**	
1974 Total	**.002**	**.685**	**17.396**	**.009**	**.022**	**18.113**	
1975 Total	**.001**	**.595**	**17.610**	**.010**	**.025**	**18.240**	
1976 Total	**([d])**	**.559**	**18.499**	**.010**	**.025**	**19.094**	
1977 Total	**([d])**	**.543**	**19.230**	**.010**	**.025**	**19.808**	
1978 Total	**([e])**	**.539**	**20.019**	**.009**	**.022**	**20.589**	
1979 Total	**([e])**	**.612**	**19.817**	**.010**	**.025**	**20.464**	
1980 Total	**([e])**	**.650**	**19.009**	**.011**	**.026**	**19.695**	
1981 Total	**([e])**	**.658**	**18.800**	**.011**	**.026**	**19.496**	
1982 Total	**([e])**	**.612**	**18.417**	**.011**	**.026**	**19.066**	
1983 Total	**([e])**	**.505**	**18.591**	**.011**	**.026**	**19.133**	
1984 Total	**([e])**	**.545**	**19.295**	**.012**	**.027**	**19.878**	
1985 January	([e])	.056	1.551	.001	.003	1.611	1.611
February	([e])	.047	1.437	.001	.002	1.487	3.098
March	([e])	.043	1.618	.001	.002	1.665	4.763
April	([e])	.040	1.636	.001	.002	1.680	6.443
May	([e])	.041	1.692	.001	.003	1.737	8.180
June	([e])	.039	1.638	.001	.002	1.681	9.861
July	([e])	.041	1.711	.001	.003	1.756	11.617
August	([e])	.040	1.753	.001	.003	1.797	13.414
September	([e])	.038	1.581	.001	.002	1.622	15.036
October	([e])	.040	1.684	.001	.002	1.727	16.764
November	([e])	.040	1.596	.001	.003	1.640	18.403
December	([e])	.053	1.661	.001	.003	1.717	20.120
Total	**([e])**	**.520**	**19.558**	**.013**	**.030**	**20.120**	
1986 January	([e])	.051	1.564	.001	.002	1.618	1.618
February	([e])	.044	1.443	.001	.002	1.491	3.109
March	([e])	.043	1.683	.001	.002	1.730	4.839
April	([e])	.037	1.671	.001	.002	1.712	6.551
May	([e])	.039	1.721	.001	.003	1.764	8.316
June	([e])	.038	1.696	.001	.003	1.737	10.053
July	([e])	.039	1.813	.001	.003	1.856	11.909
August	([e])	.039	1.820	.001	.002	1.863	13.772
September	([e])	.037	1.639	.001	.002	1.680	15.452
October	([e])	.039	1.745	.001	R .003	1.788	17.240
November	([e])	.039	1.626	.001	.002	1.669	18.908
December	([e])	.049	1.735	.001	.003	1.787	20.695
Total	**([e])**	**.495**	**20.158**	**.013**	**.030**	**20.695**	
1987 January	([e])	.053	1.573	.001	.003	1.630	1.630

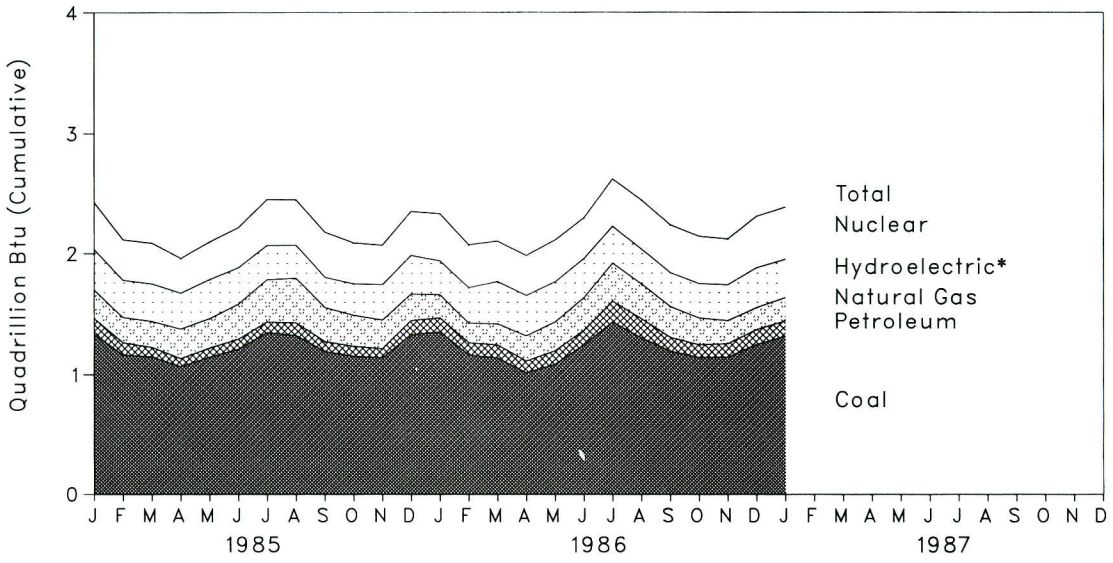
[a]Pipeline fuel only, including supplemental gaseous fuels.
[b]Includes electricity generated for distribution from wood, waste, geothermal, wind photovoltaic, and solar thermal energy.
[c]Excludes wood, waste, geothermal, wind, photovoltaic, and solar thermal energy for small amounts used by electric utilities to generate electricity for distribution.
[d]Less than 0.5 trillion Btu.
[e]Negligible quantities are included in the industrial sector.
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 end of section.

Figure 2.5 Energy Input at Electric Utilities

Yearly



Monthly



*Includes other.

Table 2.6 Energy Input at Electric Utilities
(Quadrillion (10^{15}) Btu)

	Coal	Natural Gas[a]	Petroleum[b]	Hydroelectric Power[c]	Nuclear Electric Power	Other[d]	Total	Year to Date
1973 Total	**8.658**	**3.748**	**3.515**	**2.975**	**0.910**	**0.046**	**19.853**	
1974 Total	**8.534**	**3.519**	**3.365**	**3.276**	**1.272**	**.056**	**20.022**	
1975 Total	**8.786**	**3.240**	**3.166**	**3.187**	**1.900**	**.072**	**20.350**	
1976 Total	**9.720**	**3.152**	**3.477**	**3.032**	**2.111**	**.081**	**21.573**	
1977 Total	**10.262**	**3.284**	**3.901**	**2.482**	**2.702**	**.082**	**22.713**	
1978 Total	**10.238**	**3.297**	**3.987**	**3.110**	**3.024**	**.068**	**23.724**	
1979 Total	**11.260**	**3.613**	**3.283**	**3.107**	**2.776**	**.089**	**24.128**	
1980 Total	**12.123**	**3.810**	**2.634**	**3.085**	**2.739**	**.114**	**24.505**	
1981 Total	**12.583**	**3.768**	**2.202**	**3.072**	**3.008**	**.127**	**24.760**	
1982 Total	**12.582**	**3.342**	**1.568**	**3.528**	**3.131**	**.108**	**24.260**	
1983 Total	**13.213**	**2.998**	**1.544**	**3.838**	**3.203**	**.133**	**24.929**	
1984 Total	**14.020**	**3.220**	**1.286**	**3.684**	**3.553**	**.174**	**25.937**	
1985 January	1.334	.235	.132	.314	.391	.018	2.424	2.424
February	1.163	.210	.101	.292	.333	.016	2.115	4.539
March	1.148	.215	.077	.292	.336	.018	2.087	6.626
April	1.067	.243	.066	.282	.286	.016	1.959	8.585
May	1.144	.245	.075	.307	.310	.016	2.098	10.684
June	1.208	.293	.083	.283	.333	.016	2.216	12.899
July	1.347	.349	.090	.264	.380	.018	2.448	R 15.347
August	1.322	.368	.107	.253	.376	.018	2.445	17.793
September	1.190	.285	.082	.232	.373	R .017	2.180	19.973
October	1.152	.259	.082	.242	.337	.017	2.090	R 22.062
November	1.138	.239	.075	.271	.326	.021	2.070	24.132
December	1.329	.218	.120	.296	.365	.022	2.350	R 26.482
Total	**14.542**	**3.160**	**1.090**	**3.330**	**4.147**	**.213**	**R 26.482**	
1986 January	1.352	.191	.119	R .255	.391	.023	R 2.331	R 2.331
February	1.162	.163	.101	R .275	.354	.019	R 2.074	R 4.405
March	1.138	.176	.107	R .330	.333	.020	R 2.104	R 6.509
April	1.016	R .206	.097	R .318	.329	.018	1.984	R 8.493
May	1.085	.240	.111	R .314	.345	.018	R 2.114	R 10.607
June	1.243	.270	.123	.301	.339	.020	2.296	R 12.903
July	1.436	.312	.173	.286	.388	.021	2.617	R 15.520
August	R 1.303	.287	.163	.265	.405	.021	R 2.443	R 17.963
September	1.194	.256	.115	.261	.396	.018	2.239	R 20.203
October	1.142	R .225	.105	R .266	.391	R .017	R 2.147	R 22.350
November	1.143	.194	.112	.281	.378	.015	2.123	R 24.473
December	1.248	.182	.126	.308	.427	.020	2.311	R 26.784
Total	**R 14.462**	**R 2.701**	**1.452**	**R 3.462**	**4.475**	**.232**	**R 26.784**	
1987 January	1.318	.192	.129	.295	.432	.020	2.386	2.386

[a]Includes supplemental gaseous fuels.
[b]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.
[c]Includes net imports of electricity.
[d]Other is electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.
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 end of 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, and electricity generated from nuclear power. Total energy consumed also includes electricity generated from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy but excludes other energy obtained from those sources because consistent historical data are not available.

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, refrigeration, cooking, and clothes drying); nonmanufacturing 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 Table 4.3 of this report. For Section 2 calculations, 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 1985: EIA, *Natural Gas Annual.*
- 1986 forward: EIA, 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 Section 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 1985.

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 1985. 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;

- Commercial sector deliveries are directly from the "Deliveries" reports for 1979 through 1985. 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 1985 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 1985.

- Residential and commercial sector monthly consumption is estimated by allocating the annual sector estimates described above into 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 and the American Petroleum Institute for 1981 and 1982, and the Energy Information Administration, Form EIA-782-A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, for 1983 through 1985.

- 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, 1986 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 1985.

- **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 1985. Deliveries for 1985 are used as estimates for suc-

ceeding 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 1985. Deliveries for 1985 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 1985. Deliveries for 1985 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 63 percent transportation and 37 percent industrial in 1985.

  - 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 because the collection of data under Form EIA-174 was discontinued after data year 1982.

  - 1984 and 1985: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases" based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association.

  - Succeeding periods: The 1985 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.

- **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 1985.

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 1985. 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 1985 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 1985.

- Commercial sector monthly consumption is estimated by allocating the annual commercial sector estimates described above into 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 and the American Petroleum Institute for 1981 and 1982, and the Energy Information Administration, Form EIA-782-A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale, 1983 through 1985.

- 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, 1986 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 1985.

- **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 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 1985: DOE, Economic Regulatory Administration, ERA-781, "Annual Report of International Electric Import/Export Data."
- 1986 forward: EIA estimates.

8. Nuclear Electric Power and Wood, Waste, Geothermal, 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 a minus sign indicates 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 used by railroads and railways and accounted for in the transportation sector. 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 those losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses are a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line-losses"), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, approximately 67 percent of total energy input is lost in conversion; of electricity generated, approximately 5 percent is lost in plant use and 9 percent in transmission and distribution. Calculated electrical system energy losses may be less than actual losses, because primary consumption does not include the energy equivalent of utility purchases of electricity from non-electric utilities and from Canada and Mexico, although they are included in electricity sales.

Section 3. Petroleum

Domestic crude oil production during March 1987 was estimated to be 8.3 million barrels per day, 7.4 percent lower than the March 1986 rate.

Total petroleum imports averaged 5.3 million barrels per day in March 1987, 14.7 percent more than the March 1986 rate. Total petroleum imports during the first quarter of 1987 averaged 5.8 million barrels per day, 18.3[1] percent more than the average imports during the first quarter of 1986.

In March 1987, 15.9 million barrels per day of petroleum products were supplied for domestic use, 1.9 percent below the level in the previous March. Motor gasoline accounted for 42.6 percent of the total; distillate fuel oil, 19.2 percent; and residual fuel oil, 7.3 percent.

During the first quarter of 1987, 16.3 million barrels per day of petroleum products were supplied, 1.6 percent more than the average during the first quarter of 1986. Motor gasoline was 40.8 percent of the total products supplied during the first quarter of 1987, while distillate fuel oil was 19.7 percent, and residual fuel oil was 8.3 percent of the total.

Motor gasoline supplied during March 1987 averaged 6.8 million barrels per day, 3.0 percent below the rate of the previous March. During the first quarter of 1987, motor gasoline supplied averaged 6.6 million barrels per day, slightly more than the first quarter average of 1986. Stocks of motor gasoline totaled 248 million barrels at the end of March 1987, 28 million barrels above the stocks level 1 year earlier.

In March 1987, 3.0 million barrels of distillate fuel oil were supplied per day, 3.9 percent lower than the March 1986 rate. An average of 3.2 million barrels per day of distillate fuel oil were supplied during the first quarter of 1987, 2.1 percent less than during the first quarter of 1986. Distillate fuel oil ending stocks for March 1987 were 107 million barrels, 8 million barrels higher than the March 1986 ending stocks level.

Residual fuel oil supplied in March 1987 averaged 1.2 million barrels per day, 16.9 percent lower than the March 1986 rate. During the first quarter of 1987, residual fuel oil supplied averaged 1.4 million barrels per day, 4.4 percent less than the first quarter of 1986. Residual fuel oil stocks measured 38 million barrels at the end of March 1987, 1 million barrels lower than the ending 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 December 1986. The total import data above include imports into the Strategic Petroleum Reserve.

[1]Percentages are based on the data shown in the following tables and may not agree with those in the *Petroleum Supply Monthly.*

Table 3.1a Crude Oil[a] and Petroleum Products Overview

	Field Production			Stock Withdrawal[b]		Petroleum Products Supplied	Ending Stocks[c]
	Total Domestic[d]	Crude Oil	Natural Gas Plant Production	Crude Oil[e]	Petroleum Products		Crude Oil[e] 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**	**[i] 1,074**
1975 Average	**10,045**	**8,375**	**1,633**	**[i] -17**	**[i] -15**	**16,322**	**1,133**
1976 Average	**9,774**	**8,132**	**[h] 1,604**	**-39**	**96**	**17,461**	**1,112**
1977 Average	**9,913**	**8,245**	**1,618**	**-170**	**-378**	**18,431**	**1,312**
1978 Average	**10,328**	**8,707**	**1,567**	**-78**	**172**	**18,847**	**1,278**
1979 Average	**10,179**	**8,552**	**1,584**	**-148**	**-25**	**18,513**	**1,341**
1980 Average	**10,214**	**8,597**	**1,573**	**-98**	**-42**	**17,056**	**[i] 1,392**
1981 Average	**10,230**	**8,572**	**1,609**	**[i] -290**	**[i] 130**	**16,058**	**1,484**
1982 Average	**10,252**	**8,649**	**1,550**	**-136**	**283**	**15,296**	**[i] 1,430**
1983 Average	**10,299**	**8,688**	**1,559**	**[i] -214**	**[i] 234**	**15,231**	**1,454**
1984 Average	**10,554**	**8,879**	**1,630**	**-199**	**-81**	**15,726**	**1,556**
1985 January	10,412	8,740	1,628	76	1,351	16,109	1,512
February	10,692	9,025	1,623	425	1,347	16,121	1,462
March	10,748	9,095	1,600	-309	403	15,373	1,460
April	10,673	9,043	1,582	-520	56	15,472	1,473
May	10,770	9,132	1,594	-700	-399	15,504	1,508
June	10,664	9,022	1,597	264	-382	15,483	1,511
July	10,550	8,949	1,568	326	-496	15,434	1,516
August	10,485	8,803	1,594	159	568	16,060	1,494
September	10,584	8,954	1,575	-34	-255	15,099	1,502
October	10,637	8,970	1,610	98	124	15,944	1,496
November	10,640	8,902	1,660	-295	-634	15,503	1,523
December	10,777	9,030	1,680	-58	207	16,611	1,519
Average	**10,636**	**8,971**	**1,609**	**-50**	**153**	**15,726**	
1986 January	10,895	9,121	1,721	-461	-228	15,923	1,538
February	10,926	9,181	1,710	-35	847	16,056	1,515
March	10,660	9,002	1,617	-338	1,178	16,188	1,489
April	10,448	8,850	1,561	27	265	15,743	1,480
May	10,499	8,842	1,594	264	-1,089	15,852	1,506
June	10,206	8,591	1,555	50	-1,226	15,998	1,541
July	10,253	8,636	1,558	-580	-615	16,075	1,578
August	9,958	8,391	1,505	243	-417	16,686	1,584
September	9,865	8,333	1,482	-216	-998	15,755	1,620
October	9,962	8,434	1,484	-203	468	16,441	1,612
November	9,929	8,321	1,543	59	-133	16,051	1,614
December	9,925	8,348	1,529	190	469	16,897	1,594
Average	**10,291**	**8,668**	**1,571**	**-84**	**-127**	**16,142**	
1987 January	10,145	8,477	1,592	-189	377	16,382	1,588
February	10,010	[R] 8,318	1,625	[R] 0	[R] 814	[R] 16,721	[R] 1,565
March	NA	[E] 8,336	NA	-144	[E] 587	[E] 15,876	[E] 1,558
3-Mo. Average	**NA**	**8,379**	**NA**	**-115**	**585**	**16,313**	
1986 3-Mo. Average	**10,824**	**9,099**	**1,682**	**-286**	**591**	**16,055**	
1985 3-Mo. Average	**10,615**	**8,951**	**1,617**	**52**	**1,023**	**15,859**	

[a]Includes lease condensate.
[b]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[c]Stocks are totals as of end of period.
[d]Includes crude oil, natural gas plant liquids, other hydrocarbons, and alcohol.
[e]Includes stocks located in the Strategic Petroleum Reserve.
[f]Includes crude oil for storage in the Strategic Petroleum Reserve.
[g]Net imports equals imports minus exports.
[h]Due to a rounding difference, this value is 1,603 in the *Petroleum Supply Annual* and *Petroleum Supply Monthly.*
[i]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stocks withdrawal calculations.
See Note 5 at end of section.
Footnotes continued on following page.

Table 3.1b Crude Oil[a] and Petroleum Products Overview (continued)

	Imports			Exports			Net Imports[g]
	Total	Crude Oil[f]	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 Average	**5,437**	**3,426**	**2,011**	**722**	**181**	**541**	**4,715**
1985 January	4,415	2,717	1,698	792	144	647	3,623
February	3,913	2,108	1,805	857	221	636	3,056
March	4,673	2,786	1,887	694	189	505	3,979
April	5,316	3,401	1,915	764	236	528	4,553
May	5,776	3,730	2,046	705	250	455	5,071
June	4,929	3,188	1,741	692	226	467	4,237
July	4,950	3,203	1,747	675	154	521	4,274
August	4,718	3,114	1,603	749	241	508	3,969
September	4,970	3,155	1,816	806	188	618	4,164
October	5,121	3,238	1,883	690	123	567	4,431
November	6,116	3,999	2,118	1,036	286	750	5,080
December	5,831	3,696	2,135	925	197	728	4,905
Average	**5,067**	**3,201**	**1,866**	**781**	**204**	**577**	**4,286**
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	5,310	3,709	1,601	827	94	733	4,483
May	6,016	4,029	1,987	715	98	616	5,301
June	6,802	4,675	2,128	623	240	383	6,179
July	6,784	4,648	2,136	638	65	573	6,145
August	7,075	4,826	2,249	865	233	632	6,210
September	6,977	4,984	1,993	714	161	553	6,263
October	6,217	4,317	1,899	823	151	672	5,394
November	6,335	4,453	1,881	810	115	696	5,524
December	6,468	4,297	2,171	820	159	661	5,648
Average	**6,061**	**4,111**	**1,950**	**772**	**154**	**618**	**5,289**
1987 January	6,186	4,385	1,801	829	96	732	5,358
February	R 5,849	R 3,896	R 1,953	991	299	692	4,858
March	5,319	3,592	E 1,727	NA	NA	NA	NA
3-Mo. Average	**5,783**	**3,960**	**1,823**	**NA**	**NA**	**NA**	**NA**
1986 3-Mo. Average	**4,890**	**3,115**	**1,776**	**808**	**178**	**630**	**4,083**
1985 3-Mo. Average	**4,348**	**2,551**	**1,797**	**778**	**184**	**595**	**3,570**

Footnotes continued.

R=Revised data. NA=Not available. E=Estimated 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 end of section.

Figure 3.1 Crude Oil and Natural Gas Liquids Production

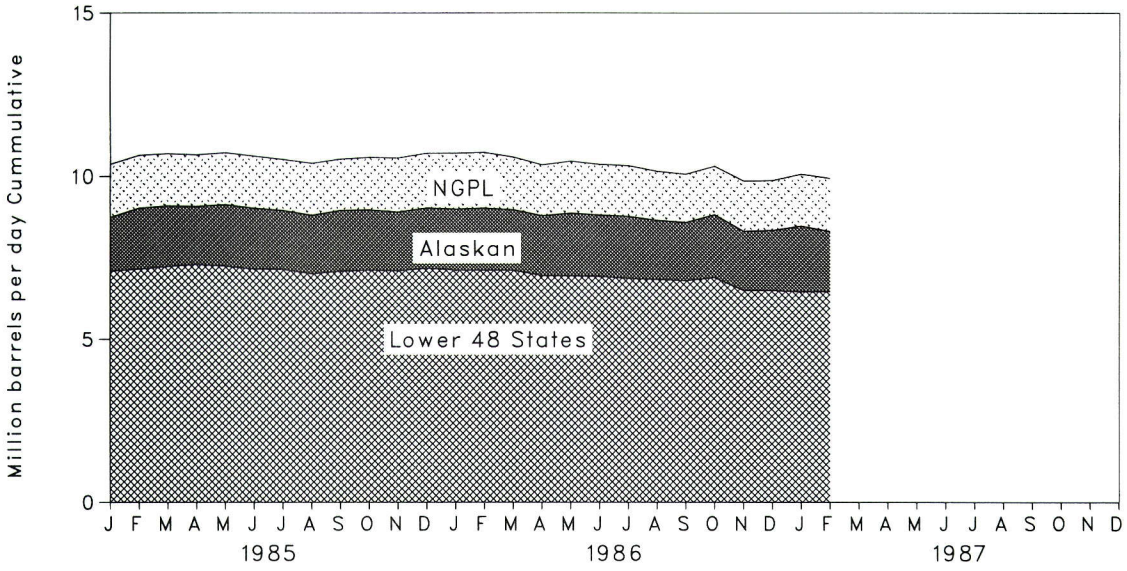


Figure 3.2 Crude Oil Ending Stocks

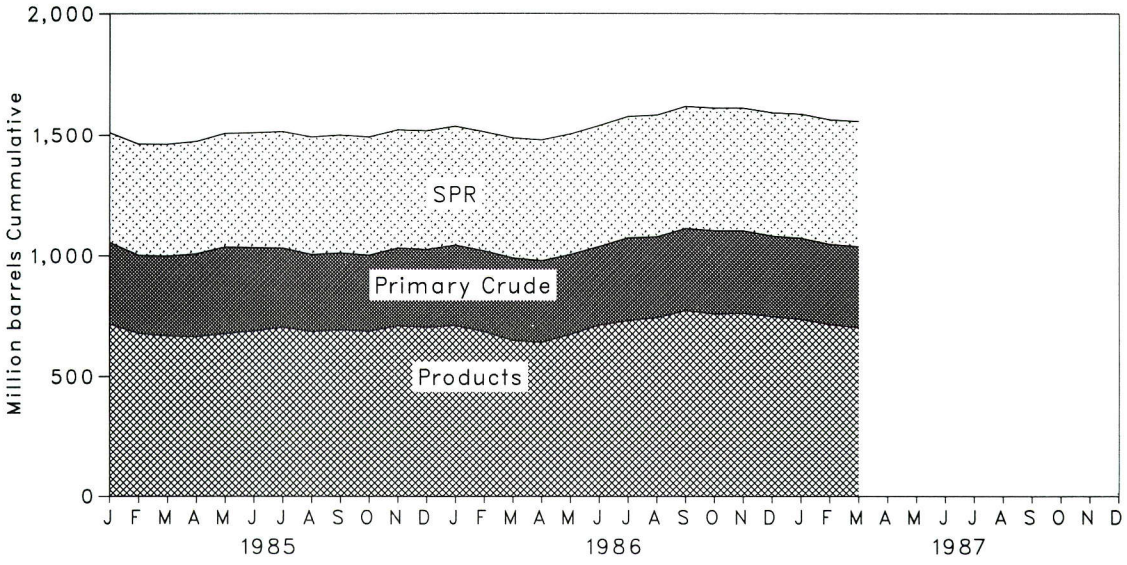


Figure 3.3 Petroleum Products Supplied and Imports

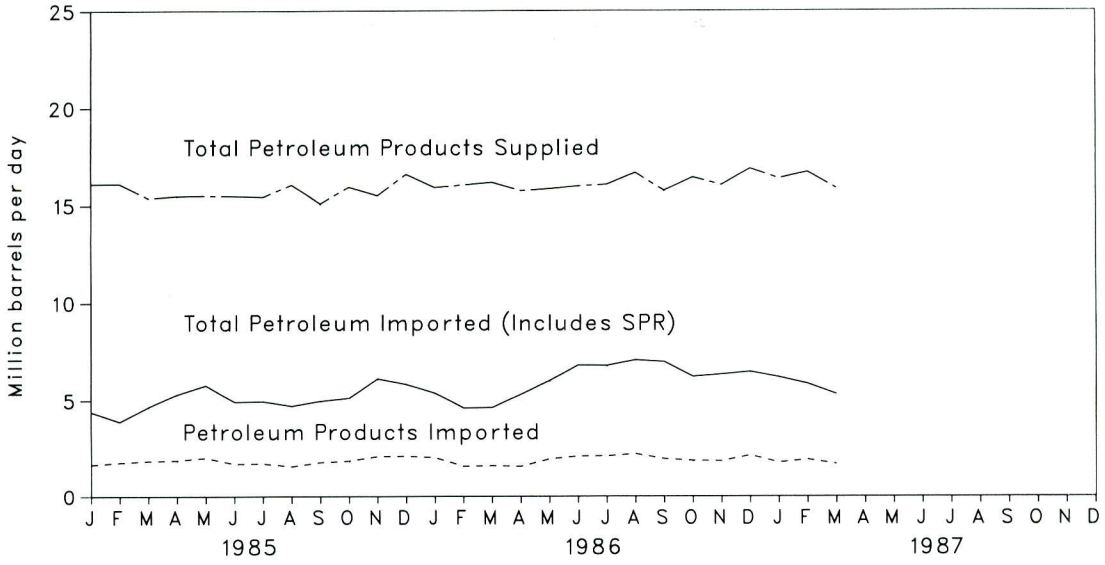


Figure 3.4 Petroleum Imports by Source

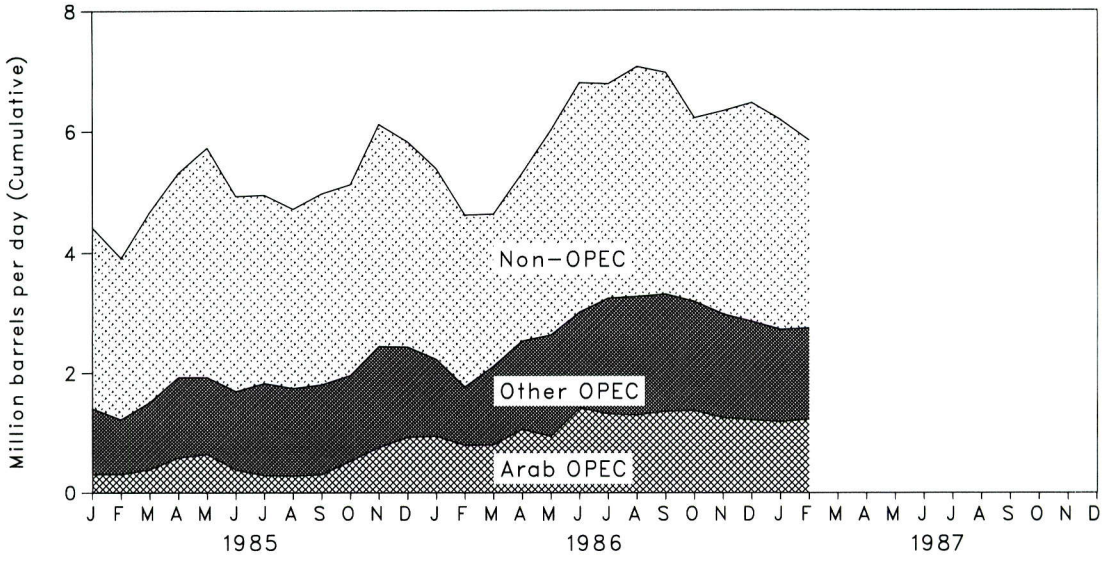


Table 3.2a Crude Oil[a] Supply and Disposition
(Thousand Barrels per Day)

	Supply							
	Field Production		Imports			Stock Withdrawal[c]		Unaccounted for Crude Oil
	Total Domestic	Alaskan	Total	SPR[d]	Other	SPR[d]	Other	
1973 Average	**9,208**	**198**	**3,244**		**3,244**		**11**	**3**
1974 Average	**8,774**	**193**	**3,477**		**3,477**		**-62**	**-25**
1975 Average	**8,375**	**191**	**4,105**		**4,105**		**-17**	**17**
1976 Average	**8,132**	**173**	**5,287**		**5,287**		**-39**	**77**
1977 Average	**8,245**	**464**	**6,615**	**21**	**6,594**	**-20**	**-150**	**-6**
1978 Average	**8,707**	**1,229**	**6,356**	**162**	**6,195**	**-163**	**84**	**-57**
1979 Average	**8,552**	**1,401**	**6,519**	**67**	**6,452**	**-67**	**-81**	**-11**
1980 Average	**8,597**	**1,617**	**5,263**	**44**	**5,219**	**-45**	**-52**	**34**
1981 Average	**8,572**	**1,609**	**4,396**	**256**	**4,141**	**-336**	[f] **46**	**83**
1982 Average	**8,649**	**1,696**	**3,488**	**165**	**3,323**	**-174**	**38**	**71**
1983 Average	**8,688**	**1,714**	**3,329**	**234**	**3,096**	**-234**	[f] **20**	**114**
1984 Average	**8,879**	**1,722**	**3,426**	**197**	**3,229**	**-195**	**-4**	**185**
1985 January	8,740	1,647	2,717	223	2,494	-223	298	122
February	9,025	1,877	2,108	98	2,010	-97	522	94
March	9,095	1,866	2,786	48	2,738	-48	-262	59
April	9,043	1,784	3,401	108	3,293	-111	-409	183
May	9,132	1,888	3,730	222	3,508	-225	-475	247
June	9,022	1,871	3,188	155	3,034	-155	419	100
July	8,949	1,809	3,203	226	2,977	-225	551	177
August	8,803	1,795	3,114	116	2,999	-116	274	267
September	8,954	1,867	3,155	71	3,084	-71	37	93
October	8,970	1,850	3,238	20	3,218	-20	119	81
November	8,902	1,804	3,999	53	3,946	-53	-242	150
December	9,030	1,852	3,696	74	3,621	-60	2	164
Average	**8,971**	**1,825**	**3,201**	**118**	**3,083**	**-117**	**67**	**145**
1986 January	9,121	1,870	3,329	51	3,277	-35	-426	609
February	9,181	1,907	3,005	24	2,981	-35	(s)	(s)
March	9,002	1,860	3,000	59	2,941	-49	-289	252
April	8,850	1,836	3,709	63	3,646	-63	90	43
May	8,842	1,927	4,029	36	3,993	-35	300	271
June	8,591	1,887	4,675	64	4,611	-64	114	236
July	8,636	1,903	4,648	52	4,595	-52	-528	315
August	8,391	1,811	4,826	51	4,775	-51	293	96
September	8,333	1,782	4,984	47	4,937	-47	-169	205
October	8,434	1,927	4,317	37	4,281	-36	-166	279
November	8,321	1,820	4,453	45	4,408	-65	125	155
December	8,348	1,850	4,297	48	4,250	-68	258	143
Average	**8,668**	**1,865**	**4,111**	**48**	**4,063**	**-50**	**-34**	**220**
1987 January	8,477	2,017	4,385	92	4,293	-108	-81	34
February	[R] 8,318	[R] 1,853	[R] 3,896	[R] 44	[R] 3,851	[R] -64	[R] 64	422
March	[E] 8,336	[E] 1,966	3,592	[E] 85	[E] 3,507	[E] -101	[E] -43	NA
3-Mo. Average	**8,379**	**1,948**	**3,960**	**75**	**3,885**	**-92**	**-23**	**NA**
1986 3-Mo. Average	**9,099**	**1,878**	**3,115**	**46**	**3,069**	**-40**	**-246**	**297**
1985 3-Mo. Average	**8,951**	**1,794**	**2,551**	**124**	**2,427**	**-123**	**175**	**91**

[a]Includes lease condensate.
[b]Stocks are totals as of end of period.
[c]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[d]Strategic Petroleum Reserve.
[e]Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.
[f]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 at end of section.
Footnotes continued on following page.

Table 3.2b Crude Oil[a] Supply and Disposition (continued)

	Supply	Disposition				Ending Stocks[b]		
	Crude Used Directly[e]	Crude Losses	Refinery Inputs	Exports	Product Supplied[e]	Total	SPR[d]	Other Primary
	Thousand Barrels per Day					Million Barrels		
1973 Average	**-19**	**13**	**12,431**	**2**		**242**		**242**
1974 Average	**-15**	**13**	**12,133**	**3**		**265**		**265**
1975 Average	**-17**	**13**	**12,442**	**6**		**271**		**271**
1976 Average	**-18**	**15**	**13,416**	**8**		**285**		**285**
1977 Average	**-14**	**16**	**14,602**	**50**		**348**	**7**	**340**
1978 Average	**-14**	**16**	**14,739**	**158**		**376**	**67**	**309**
1979 Average	**-13**	**16**	**14,648**	**235**		**430**	**91**	**339**
1980 Average	**-13**	**15**	**13,481**	**287**		**[f] 466**	**108**	**[f] 358**
1981 Average	**-58**	**5**	**12,470**	**228**		**594**	**230**	**363**
1982 Average	**-59**	**3**	**11,774**	**236**		**[f] 644**	**294**	**350**
1983 Average	**NA**	**2**	**11,685**	**164**	**66**	**723**	**379**	**344**
1984 Average	**NA**	**2**	**12,044**	**181**	**64**	**796**	**451**	**345**
1985 January	NA	1	11,445	144	63	794	457	336
February	NA	1	11,367	221	63	782	460	322
March	NA	1	11,372	189	69	791	462	330
April	NA	1	11,805	236	67	807	465	342
May	NA	1	12,094	250	65	829	472	357
June	NA	1	12,292	226	56	821	477	344
July	NA	1	12,445	154	55	811	484	327
August	NA	(s)	12,045	241	55	806	487	318
September	NA	(s)	11,925	188	55	807	489	317
October	NA	(s)	12,209	123	55	804	490	314
November	NA	(s)	12,410	286	59	812	491	321
December	NA	1	12,570	197	63	814	493	321
Average	**NA**	**1**	**12,002**	**204**	**60**			
1986 January	NA	3	12,375	159	62	826	494	332
February	NA	(s)	11,921	162	68	827	495	332
March	NA	1	11,648	212	56	838	497	341
April	NA	1	12,483	94	51	837	499	338
May	NA	(s)	13,259	98	49	829	500	329
June	NA	(s)	13,260	240	52	827	502	325
July	NA	(s)	12,902	65	51	845	503	342
August	NA	(s)	13,274	233	48	838	505	333
September	NA	(s)	13,098	161	45	844	506	338
October	NA	(s)	12,636	151	41	850	508	343
November	NA	(s)	12,833	115	41	849	509	339
December	NA	(s)	12,778	159	42	843	512	331
Average	**NA**	**1**	**12,710**	**154**	**50**			
1987 January	NA	1	12,570	96	41	849	515	334
February	NA	(s)	[R] 12,296	299	41	849	517	[R] 332
March	NA	NA	[E] 12,034	NA	NA	854	[E] 520	[E] 334
3-Mo. Average	**NA**	**NA**	**12,300**	**NA**	**NA**			
1986 3-Mo. Average	**NA**	**1**	**11,983**	**178**	**62**			
1985 3-Mo. Average	**NA**	**1**	**11,395**	**184**	**65**			

Footnotes continued.

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

Sources: See end of section.

Table 3.3a Crude Oil and Petroleum Product Imports
(Thousand Barrels per Day)

	Imports from OPEC Sources[a]										
	Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC[b]	Total OPEC	Total Arab OPEC[c]
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 Average	**323**	**1**	**325**	**117**	**343**	**10**	**216**	**548**	**166**	**2,049**	**819**
1985 January	112	0	106	60	296	0	262	481	89	1,405	305
February	174	0	108	0	232	0	119	524	64	1,220	307
March	247	0	85	52	283	0	164	588	84	1,505	385
April	286	8	201	70	313	0	280	684	86	1,928	575
May	255	0	41	128	265	0	381	552	354	1,976	635
June	178	5	26	81	438	0	357	452	152	1,690	378
July	125	10	44	13	390	42	381	573	248	1,825	286
August	135	0	46	17	377	100	207	568	289	1,740	280
September	147	0	27	57	206	43	285	808	230	1,802	302
October	177	20	251	17	277	41	305	676	196	1,958	520
November	164	11	430	34	356	99	325	727	294	2,440	752
December	244	0	642	15	324	0	432	625	149	2,430	925
Average	**187**	**4**	**168**	**45**	**314**	**27**	**293**	**605**	**187**	**1,830**	**472**
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
May	190	0	564	32	326	0	383	874	266	2,635	944
June	319	0	704	83	353	0	362	755	439	3,014	1,418
July	296	0	713	59	519	66	542	720	330	3,244	1,318
August	363	0	653	37	274	93	593	892	366	3,271	1,300
September	231	0	796	62	341	31	646	848	356	3,310	1,360
October	305	0	685	147	344	0	530	834	344	3,190	1,372
November	311	0	828	34	307	0	444	846	214	2,984	1,255
December	290	0	763	30	232	0	439	819	290	2,862	1,215
Average	**266**	**0**	**681**	**42**	**309**	**16**	**420**	**772**	**263**	**2,768**	**1,149**
1987 January	158	0	873	15	285	0	313	866	215	2,726	1,187
February	315	0	772	54	420	30	240	764	155	2,749	1,226
2-Mo. Average	**233**	**0**	**825**	**33**	**349**	**14**	**279**	**818**	**187**	**2,737**	**1,206**
1986 2-Mo. Average	**173**	**0**	**634**	**6**	**281**	**0**	**221**	**551**	**144**	**2,009**	**870**
1985 2-Mo. Average	**141**	**0**	**107**	**31**	**265**	**0**	**194**	**501**	**77**	**1,317**	**306**

[a]Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products that were refined from crude oil produced in OPEC countries.
[b]Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.
[c]Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.
Footnotes continued on following page.

Table 3.3b Crude Oil and Petroleum Product Imports (continued)
(Thousand Barrels per Day)

	Imports from Non-OPEC Sources[d]										Total Imports
	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non-OPEC	Total Non-OPEC	
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 Average	**88**	**630**	**748**	**188**	**94**	**402**	**42**	**294**	**902**	**3,388**	**5,437**
1985 January	92	616	767	132	113	345	32	235	678	3,010	4,415
February	37	730	652	52	119	151	50	213	689	2,693	3,913
March	36	909	923	49	115	133	29	235	739	3,168	4,673
April	4	890	950	18	107	213	42	205	959	3,388	5,316
May	74	823	929	28	126	419	37	252	1,112	3,800	5,776
June	24	720	726	30	92	481	23	271	872	3,240	4,929
July	38	610	814	36	133	324	14	236	918	3,124	4,950
August	11	664	859	18	121	336	28	241	699	2,978	4,718
September	47	783	852	40	129	303	26	173	815	3,169	4,970
October	35	825	745	5	99	352	21	260	821	3,163	5,121
November	22	766	887	30	100	376	26	325	1,143	3,676	6,116
December	54	902	676	44	96	273	12	314	1,029	3,400	5,831
Average	**40**	**770**	**816**	**40**	**113**	**310**	**28**	**247**	**873**	**3,237**	**5,067**
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
May	30	775	727	38	130	365	27	237	1,052	3,381	6,016
June	24	735	879	17	167	568	30	233	1,135	3,788	6,802
July	36	754	819	25	131	352	29	237	1,156	3,540	6,784
August	35	793	738	12	133	583	7	214	1,289	3,804	7,075
September	12	786	615	17	162	437	23	291	1,324	3,667	6,977
October	35	846	670	26	112	170	21	215	930	3,027	6,217
November	33	951	567	51	129	428	21	179	992	3,350	6,335
December	52	803	741	7	142	366	12	290	1,193	3,607	6,468
Average	**30**	**790**	**694**	**25**	**124**	**351**	**22**	**243**	**1,013**	**3,293**	**6,061**
1987 January	54	777	669	29	99	419	33	327	1,053	3,461	6,186
February	54	762	689	30	111	235	24	296	900	3,100	R 5,849
2-Mo. Average	**54**	**770**	**678**	**30**	**105**	**332**	**28**	**312**	**980**	**3,289**	**6,026**
1986 2-Mo. Average	**42**	**760**	**628**	**36**	**97**	**286**	**20**	**318**	**826**	**3,014**	**5,023**
1985 2-Mo. Average	**66**	**670**	**712**	**94**	**116**	**253**	**40**	**225**	**683**	**2,859**	**4,177**

Footnotes continued.

[d]Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products that were refined from crude oil produced in OPEC countries.

(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 end of section.

Annual values for crude oil and petroleum product imports from Total Non-OPEC sources for the years 1981 through 1985 were incorrect as published in the December 1986 *Monthly Energy Review*. Those values have been corrected in this issue.

Figure 3.5 Finished Motor Gasoline Products Supplied, Production, and Imports

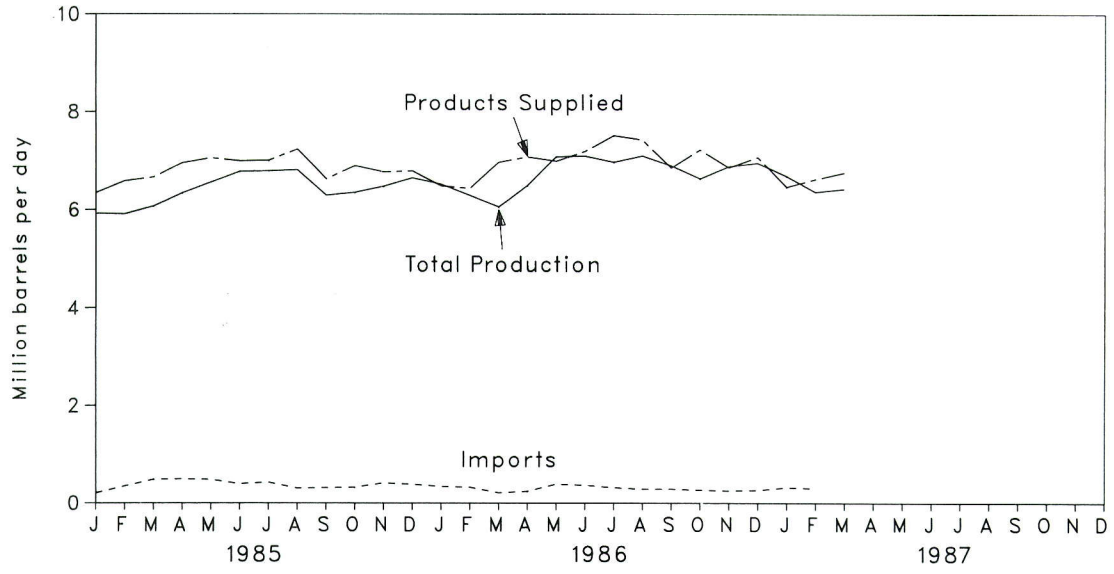


Figure 3.6 Motor Gasoline Ending Stocks

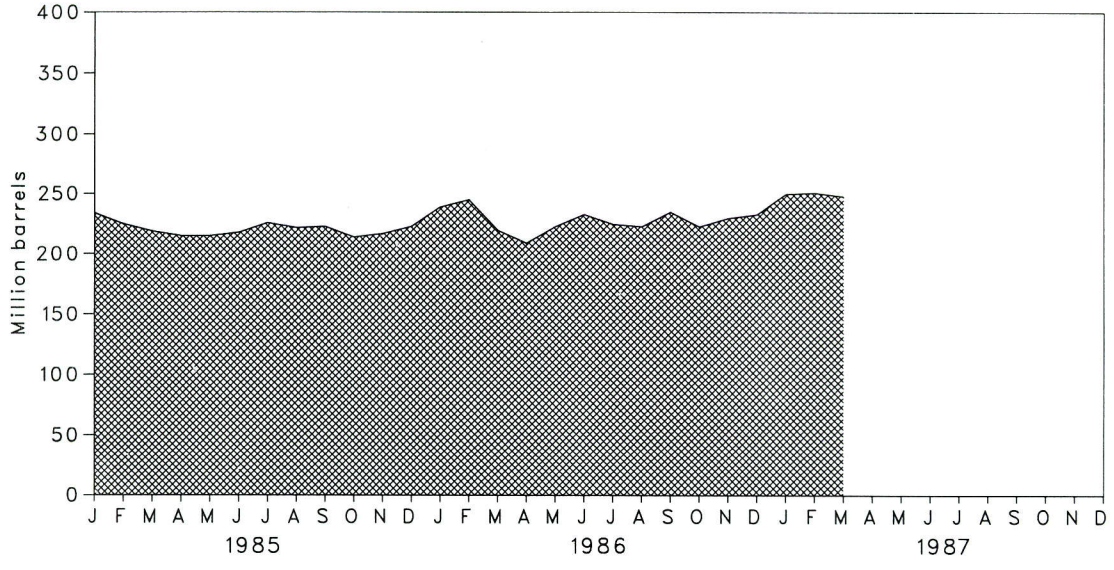


Table 3.4 Finished Motor Gasoline Supply and Disposition

	Supply			Disposition				Ending Stocks[a]	
					Product Supplied				
	Total Production	Imports[b]	Stock Withdrawal[b] [c]	Exports	Total	Unleaded[d]	Unleaded	Total Motor Gasoline[e]	Finished Motor Gasoline
	Thousand Barrels per Day						Percent of Total	Million Barrels	
1973 Average	**6,535**	**134**	**9**	**4**	**6,674**			**209**	
1974 Average	**6,360**	**204**	**-24**	**2**	**6,537**			**[f] 218**	
1975 Average	**6,520**	**184**	**[f] -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**	**[f] 261**	
1981 Average[g]	**6,405**	**157**	**[f] 28**	**2**	**6,588**	**3,264**	**49.5**	**253**	
1982 Average	**6,338**	**197**	**25**	**20**	**6,539**	**3,409**	**52.1**	**[f] 235**	
1983 Average	**6,340**	**247**	**[f] 45**	**10**	**6,622**	**3,647**	**55.1**	**222**	**186**
1984 Average	**6,453**	**299**	**-54**	**6**	**6,693**	**3,987**	**59.6**	**243**	**205**
1985 January	5,926	204	220	2	6,348	4,016	63.3	234	198
February	5,914	348	327	2	6,587	4,126	62.6	225	189
March	6,072	481	115	3	6,664	4,202	63.1	219	186
April	6,344	494	128	11	6,956	4,396	63.2	215	182
May	6,564	480	23	8	7,060	4,445	63.0	215	181
June	6,780	396	-172	7	6,997	4,482	64.1	218	186
July	6,788	426	-188	18	7,008	4,545	64.8	226	192
August	6,814	305	127	4	7,242	4,755	65.7	222	188
September	6,299	314	22	6	6,629	4,357	65.7	223	187
October	6,356	324	235	19	6,897	4,485	65.0	214	180
November	6,480	410	-104	17	6,770	4,477	66.1	217	183
December	6,651	386	-227	18	6,792	4,561	67.2	223	190
Average	**6,419**	**381**	**41**	**10**	**6,831**	**4,406**	**64.5**		
1986 January	6,522	341	-376	0	6,487	4,404	67.9	239	201
February	6,297	325	-185	0	6,438	4,341	67.4	245	207
March	6,060	211	699	0	6,970	4,706	67.5	220	185
April	6,497	241	346	0	7,083	4,813	68.0	209	175
May	7,088	388	-481	0	6,995	4,714	67.4	223	190
June	7,102	368	-269	0	7,200	4,934	68.5	233	198
July	6,974	317	228	0	7,519	5,232	69.6	225	191
August	7,105	287	82	40	7,434	5,131	69.0	223	188
September	6,900	289	-292	40	6,857	4,800	70.0	235	197
October	6,639	268	379	54	7,232	5,068	70.1	223	185
November	6,884	253	-189	85	6,863	4,882	71.1	230	191
December	6,955	263	-117	24	7,077	5,129	72.5	233	194
Average	**6,755**	**296**	**-12**	**20**	**7,018**	**4,850**	**69.1**		
1987 January	6,688	320	-484	55	6,469	4,775	73.8	250	209
February	[R] 6,367	[R] 303	[R] 78	22	[R] 6,726	4,991	74.2	251	[R] 207
March	[E] 6,428	[E] 251	[E] 121	NA	[E] 6,758	NA	NA	[E] 248	[E] 206
3-Mo. Average	**6,499**	**291**	**-101**	**NA**	**6,648**	**NA**	**NA**		
1986 3-Mo. Average	**6,293**	**291**	**54**	**0**	**6,638**	**4,488**			
1985 3-Mo. Average	**5,973**	**344**	**217**	**2**	**6,532**	**4,115**			

[a]Stocks are totals as of end of period.
[b]Beginning in 1981, excludes blending components.
[c]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[d]Includes gasohol.
[e]Includes motor gasoline blending components.
[f]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 at end of section.
[g]Beginning in January 1981, survey forms were modified. See Note 2 at end of section.
[h]Due to rounding difference, this value is 57.5 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly.*
R=Revised data. NA=Not available. E=Estimated 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.
Sources: See end of section.

Figure 3.7 Distillate Fuel Oil Product Supplied, Production, and Imports

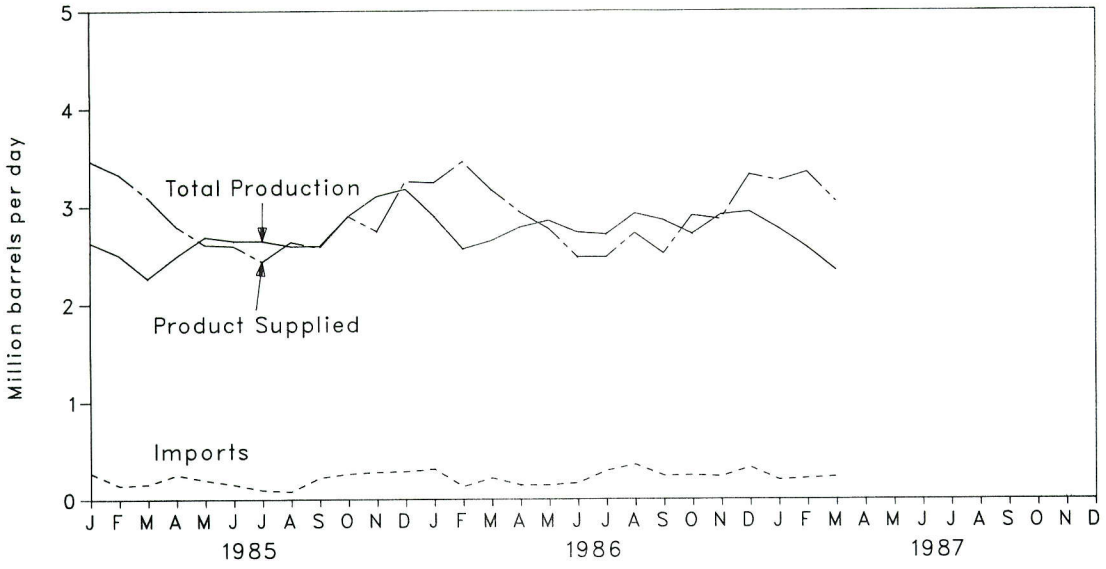


Figure 3.8 Distillate Fuel Oil Ending Stocks

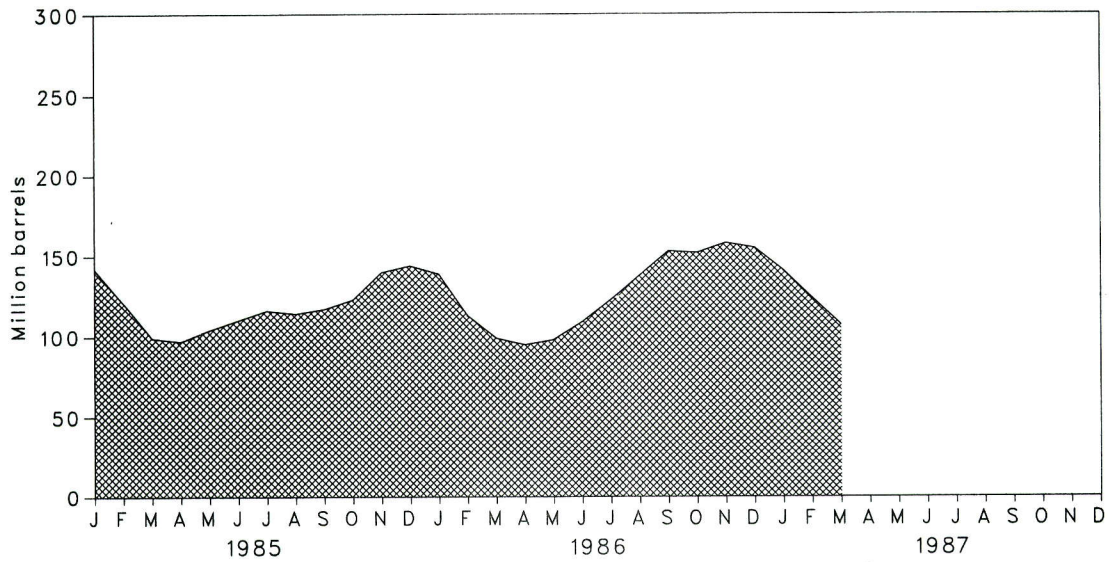


Table 3.5 Distillate Fuel Oil Supply and Disposition

	Supply				Disposition		
	Total Production	Imports	Stock Withdrawal[a]	Crude Used Directly[b]	Exports	Product Supplied[b]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**2,822**	**392**	**-115**	**2**	**9**	**3,092**	**196**
1974 Average	**2,669**	**289**	**-9**	**2**	**2**	**2,948**	**[d] 200**
1975 Average	**2,654**	**155**	**[d] 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**	**[d] 205**
1981 Average[e]	**2,613**	**173**	**[d] 38**	**10**	**5**	**2,829**	**192**
1982 Average	**2,606**	**93**	**35**	**10**	**74**	**2,671**	**[d] 179**
1983 Average	**2,456**	**174**	**[d] 124**	**NA**	**64**	**2,690**	**140**
1984 Average	**2,681**	**272**	**-57**	**NA**	**51**	**2,845**	**161**
1985 January	2,631	272	603	NA	41	3,465	142
February	2,504	143	748	NA	64	3,330	121
March	2,267	156	714	NA	44	3,093	99
April	2,490	253	82	NA	27	2,798	97
May	2,686	197	-245	NA	31	2,607	104
June	2,647	152	-175	NA	30	2,594	110
July	2,646	95	-193	NA	112	2,436	116
August	2,592	81	62	NA	100	2,636	114
September	2,594	222	-120	NA	121	2,575	117
October	2,902	262	-195	NA	67	2,901	123
November	3,102	280	-543	NA	92	2,747	140
December	3,176	287	-128	NA	81	3,254	144
Average	**2,687**	**200**	**48**	**NA**	**67**	**2,868**	
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	2,788	146	132	NA	128	2,939	95
May	2,857	145	-81	NA	149	2,771	98
June	2,735	165	-367	NA	53	2,480	109
July	2,712	293	-452	NA	75	2,478	123
August	2,926	355	-491	NA	64	2,726	138
September	2,859	240	-486	NA	98	2,515	153
October	2,717	246	17	NA	74	2,907	152
November	2,915	233	-209	NA	72	2,867	158
December	2,943	326	110	NA	55	3,323	155
Average	**2,798**	**235**	**-30**	**NA**	**100**	**2,904**	
1987 January	2,774	197	440	NA	152	3,259	141
February	[R] 2,574	[R] 229	[R] 637	NA	93	[R] 3,347	[R] 124
March	[E] 2,342	[E] 205	[E] 613	NA	NA	[E] 3,045	[E] 107
3-Mo. Average	**2,563**	**210**	**561**	**NA**	**NA**	**3,213**	
1986 3-Mo. Average	**2,708**	**222**	**496**	**NA**	**143**	**3,283**	
1985 3-Mo. Average	**2,466**	**192**	**686**	**NA**	**49**	**3,295**	

[a]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[b]Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Note 4 at end of section.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 at end of section.
[e]Beginning in January 1981, survey forms were modified. See Note 2 at end of section.
R=Revised data. NA=Not available. E=Estimated 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 end of section.

Figure 3.9 Residual Fuel Oil Product Supplied, Production, and Imports

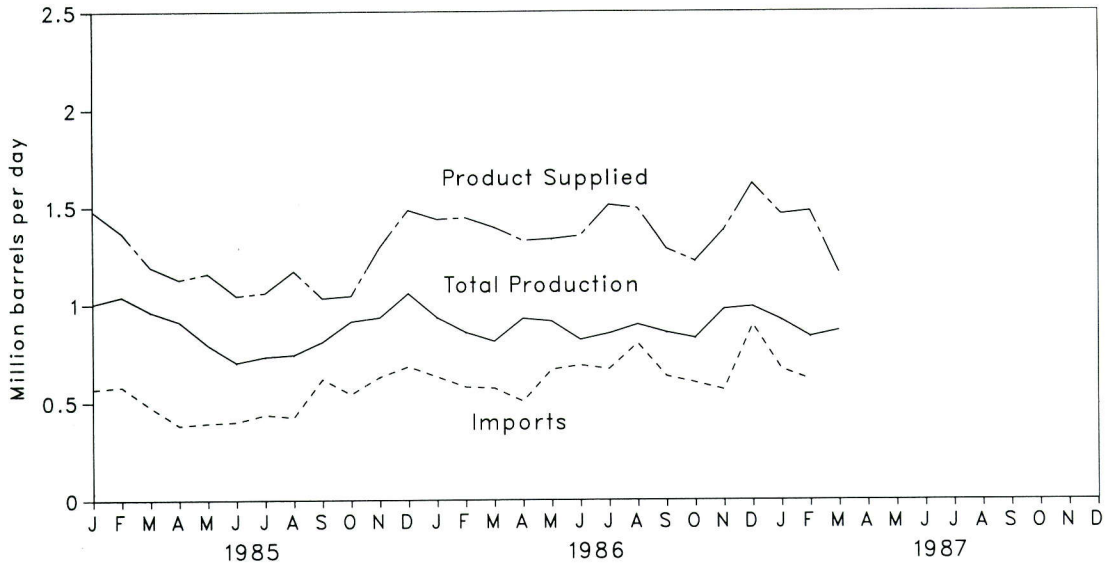


Figure 3.10 Residual Fuel Oil Ending Stocks

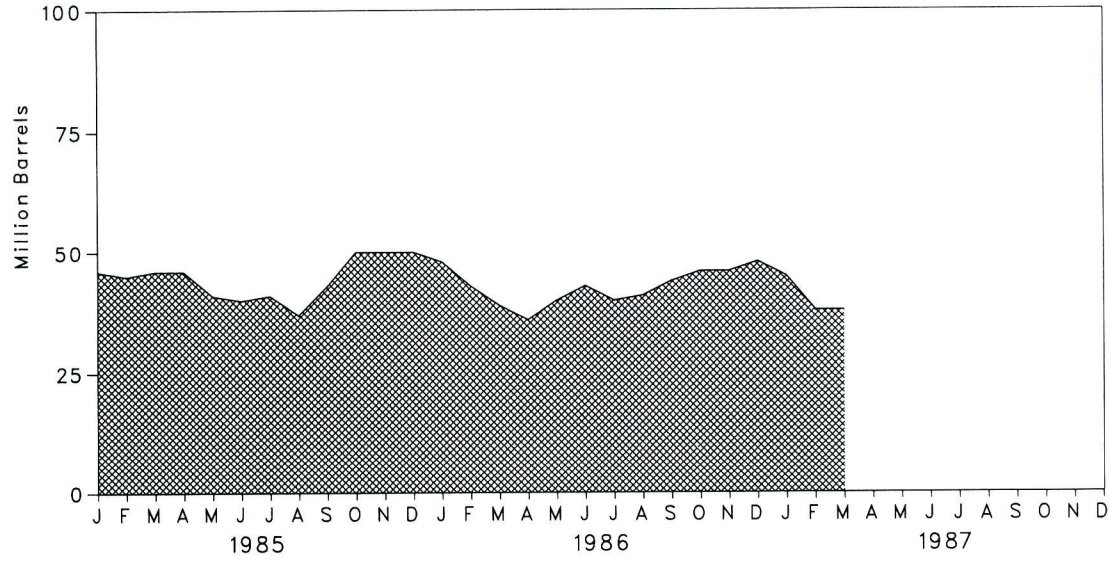


Table 3.6 Residual Fuel Oil Supply and Disposition

	Supply				Disposition		
	Total Production	Imports	Stock Withdrawal[a]	Crude Used Directly[b]	Exports	Product Supplied[b]	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**971**	**1,853**	**5**	**17**	**23**	**2,822**	**53**
1974 Average	**1,070**	**1,587**	**-17**	**13**	**14**	**2,639**	**[d] 60**
1975 Average	**1,235**	**1,223**	**[d] 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**	**[d] 92**
1981 Average[e]	**1,321**	**800**	**[d] 37**	**48**	**118**	**2,088**	**78**
1982 Average	**1,070**	**776**	**32**	**48**	**209**	**1,716**	**[d] 66**
1983 Average	**852**	**699**	**[d] 55**	**NA**	**185**	**1,421**	**49**
1984 Average	**891**	**681**	**-12**	**NA**	**190**	**1,369**	**53**
1985 January	1,004	568	219	NA	312	1,480	46
February	1,040	580	41	NA	295	1,366	45
March	963	477	-35	NA	216	1,190	46
April	912	383	-2	NA	167	1,126	46
May	793	394	155	NA	185	1,156	41
June	702	400	59	NA	118	1,043	40
July	732	437	-29	NA	83	1,058	41
August	742	424	108	NA	106	1,168	37
September	808	617	-207	NA	188	1,031	43
October	912	541	-228	NA	184	1,042	50
November	932	627	5	NA	275	1,290	50
December	1,055	681	-4	NA	250	1,483	50
Average	**882**	**510**	**7**	**NA**	**197**	**1,202**	
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	927	504	96	NA	202	1,325	36
May	913	665	-117	NA	129	1,333	40
June	818	687	-114	NA	43	1,349	43
July	850	668	82	NA	90	1,510	40
August	896	799	-26	NA	174	1,493	41
September	855	631	-92	NA	110	1,283	44
October	826	598	-59	NA	144	1,220	46
November	974	562	-15	NA	143	1,378	46
December	987	894	-39	NA	224	1,618	48
Average	**887**	**650**	**9**	**NA**	**147**	**1,399**	
1987 January	919	667	80	NA	204	1,462	45
February	[R] 833	[R] 612	[R] 246	NA	221	[R] 1,470	[R] 38
March	[E] 864	[E] 526	[E] -20	NA	**NA**	[E] 1,158	[E] 38
3-Mo. Average	**873**	**602**	**97**	**NA**	**NA**	**1,360**	
1986 3-Mo. Average	**867**	**593**	**132**	**NA**	**168**	**1,423**	
1985 3-Mo. Average	**1,001**	**540**	**76**	**NA**	**273**	**1,345**	

[a]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[b]Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Note 4 at end of section.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 at end of section.
[e]Beginning in January 1981, survey forms were modified. See Note 2 at end of section.
R=Revised data. NA=Not available. E=Estimated 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 end of section.

Figure 3.11 Liquefied Petroleum Gases Product Supplied, Production, and Imports

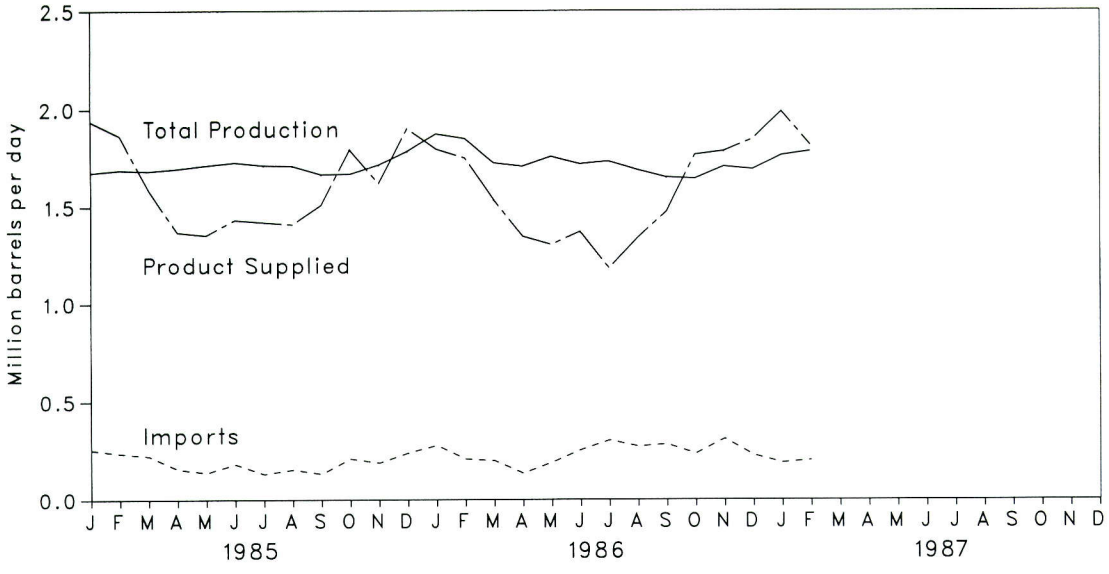


Figure 3.12 Liquefied Petroleum Gases Ending Stocks

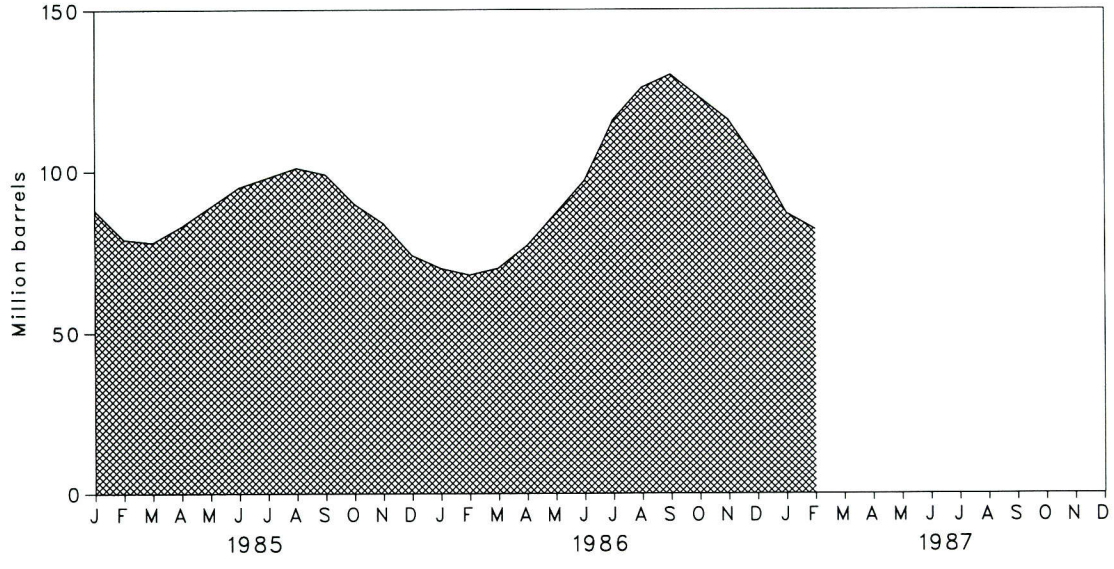


Table 3.7 Liquefied Petroleum Gases[a] Supply and Disposition

	Supply			Disposition			
	Total Production	Imports	Stock Withdrawal[b]	Refinery Inputs	Exports	Product Supplied	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**1,600**	**132**	**-35**	**220**	**27**	**1,449**	**99**
1974 Average	**1,565**	**123**	**-38**	**220**	**25**	**1,406**	**[d] 113**
1975 Average	**1,527**	**112**	**[d] -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**	**[d] 120**
1981 Average	**1,571**	**244**	**[d] -18**	**289**	**42**	**1,466**	**135**
1982 Average	**[e] 1,527**	**226**	**111**	**300**	**65**	**1,499**	**[d] 94**
1983 Average	**1,642**	**190**	**4**	**253**	**73**	**1,509**	**[d] 101**
1984 Average	**1,697**	**195**	**19**	**291**	**48**	**1,572**	**101**
1985 January	1,676	255	399	322	70	1,937	88
February	1,689	237	330	320	72	1,865	79
March	1,684	223	29	297	52	1,588	78
April	1,696	156	-143	262	78	1,368	83
May	1,713	138	-219	239	40	1,353	89
June	1,728	181	-175	250	51	1,432	95
July	1,713	131	-107	249	68	1,420	98
August	1,710	153	-98	277	80	1,409	101
September	1,667	132	61	321	29	1,510	99
October	1,669	209	304	340	47	1,794	90
November	1,716	188	192	387	88	1,620	84
December	1,786	239	337	386	75	1,901	74
Average	**1,704**	**187**	**75**	**304**	**62**	**1,599**	
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
May	1,759	189	-339	265	40	1,305	87
June	1,721	253	-348	230	25	1,371	97
July	1,734	303	-600	203	50	1,184	116
August	1,689	271	-326	243	53	1,338	126
September	1,651	282	-141	291	27	1,474	130
October	1,644	234	247	332	26	1,767	123
November	1,706	310	241	418	53	1,785	116
December	1,692	227	415	456	33	1,845	103
Average	**1,729**	**241**	**-82**	**305**	**42**	**1,540**	
1987 January	1,764	188	493	419	38	1,988	87
February	1,784	201	206	341	36	1,815	82
2-Mo. Average	**1,773**	**195**	**357**	**382**	**37**	**1,906**	
1986 2-Mo. Average	**1,863**	**244**	**86**	**357**	**60**	**1,775**	
1985 2-Mo. Average	**1,682**	**246**	**366**	**321**	**71**	**1,903**	

[a]Includes ethane, propane, normal butane, and isobutane.
[b]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[c]Stocks are totals as of end of period.
[d]In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 at end of section.
[e]Due to a rounding difference, this value is 1,528 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly.*
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Totals moy not equal sum of components due to independent rounding.
Sources: See end of section.

Table 3.8 Other Petroleum Products[a] Supply and Disposition

	Supply			Disposition			
	Total Production	Imports	Stock Withdrawal[b]	Refinery Inputs	Exports	Product Supplied	Ending Stocks[c]
	Thousand Barrels per Day						Million Barrels
1973 Average	**3,693**	**502**	**-9**	**750**	**166**	**3,270**	**208**
1974 Average	**3,558**	**432**	**-28**	**665**	**174**	**3,123**	**[d] 218**
1975 Average	**3,424**	**277**	**[d] 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**	**[d] 247**
1981 Average	**3,739**	**226**	**[d] 46**	**723**	**199**	**3,088**	**282**
1982 Average	**3,453**	**334**	**80**	**787**	**211**	**[e] 2,870**	**[d] 253**
1983 Average	**3,460**	**411**	**[d] 6**	**712**	**242**	**2,923**	**[d] 256**
1984 Average	**3,632**	**565**	**23**	**791**	**245**	**3,183**	**240**
1985 January	3,285	400	-88	556	223	2,815	243
February	3,422	498	-101	707	204	2,910	245
March	3,464	550	-421	633	190	2,769	259
April	3,618	628	-7	836	245	3,158	259
May	3,721	837	-113	991	191	3,263	262
June	3,924	612	80	995	261	3,360	260
July	3,994	658	19	975	241	3,455	259
August	4,087	640	372	1,328	218	3,549	248
September	3,878	529	-10	823	274	3,299	248
October	3,810	548	9	861	250	3,255	248
November	3,772	612	-183	906	277	3,016	253
December	3,658	542	226	1,006	305	3,118	246
Average	**3,721**	**588**	**-17**	**886**	**240**	**3,166**	
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
May	3,970	600	-68	803	298	3,400	263
June	4,138	655	-130	855	263	3,548	267
July	4,093	555	128	1,084	357	3,334	263
August	4,177	537	345	1,112	301	3,647	252
September	4,160	552	14	865	278	3,581	252
October	3,923	553	-120	712	375	3,273	255
November	3,872	524	40	976	342	3,118	254
December	3,879	461	101	1,124	325	2,992	251
Average	**3,924**	**528**	**-11**	**902**	**308**	**3,231**	
1987 January	3,835	428	-152	665	283	3,164	256
February	3,773	608	-354	385	320	3,322	266
2-Mo. Average	**3,806**	**514**	**-248**	**532**	**301**	**3,239**	
1986 2-Mo. Average	**3,783**	**441**	**-180**	**850**	**292**	**2,900**	
1985 2-Mo. Average	**3,350**	**447**	**-94**	**628**	**214**	**2,860**	

[a]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.

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

[c]Stocks are totals as of end of period.

[d]In January 1975, 1981, 1983, and 1984, a new stock basis was established affecting stocks reported and stock withdrawal calculations. See Note 5 at end of this section.

[e]Due to a rounding difference, this value is 2,869 in the *Petroleum Supply Annual* and the *Petroleum Supply Monthly.*

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 end of 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. That discrepancy 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. The imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of that difference was subtracted from distillate and one-third from residual. Beginning in January 1981, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment. 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 those 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 1985: EIA, *Petroleum Supply Annual*.

- January 1986 through February 1987: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly* (except domestic crude oil production).

- March 1987: Estimates based on EIA weekly data (except domestic crude oil production).

- January 1986 through March 1987: Domestic crude oil production estimate based on historical statistics from State conservation agencies and the U.S. Geological Survey.

Section 4. Natural Gas

Total dry natural gas production in the United States during February 1987 was an estimated 1.3 trillion cubic feet. This was 2.8 percent less than in February 1986.

Consumption of natural and supplemental gas in February 1987 was an estimated 1.7 trillion cubic feet. That level was 6.0 percent lower than in February 1986.

Deliveries to residential consumers during January 1987 (latest data available) were 747 billion cubic feet, 7.2 percent lower than in January 1986. Total deliveries to industrial consumers during January 1987 were an estimated 492 billion cubic feet. This was 16.2 percent lower than in January 1986.

Imports of natural gas in February 1987 were an estimated 97 billion cubic feet, 32.9 percent higher than in the previous February.

Stocks of working gas[2] in underground natural gas storage reservoirs at the end of February 1987 totaled 1,989 billion cubic feet. That total was 6.3 percent above stocks available 1 year earlier. Net withdrawals from storage during February 1987 were 293 billion cubic feet, 14.1 percent less than during the previous February.

[2]Gas available for withdrawal.

Table 4.1 Natural Gas Production
(Billion Cubic Feet)

	Gross Wet Gas Withdrawals[a]	Used for Repressuring[b]	Nonhydrocarbon Gas Removed[c]	Vented and Flared	Marketed Production (Wet)[d]	Extraction Loss[c]	Total Dry Gas Production[e]
1973 Total	**24,067**	**1,171**	**NA**	**248**	**[f] 22,648**	**917**	**[f] 21,731**
1974 Total	**22,850**	**1,080**	**NA**	**169**	**[f] 21,601**	**887**	**[f] 20,713**
1975 Total	**21,104**	**861**	**NA**	**134**	**[f] 20,109**	**872**	**[f] 19,236**
1976 Total	**20,944**	**859**	**NA**	**132**	**[f] 19,952**	**854**	**[f] 19,098**
1977 Total	**21,097**	**935**	**NA**	**137**	**[f] 20,025**	**863**	**[f] 19,163**
1978 Total	**21,309**	**1,181**	**NA**	**153**	**[f] 19,974**	**852**	**[f] 19,122**
1979 Total	**21,883**	**1,245**	**NA**	**167**	**[f] 20,471**	**808**	**[f] 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 Total	**20,192**	**1,630**	**224**	**108**	**18,230**	**838**	**17,392**
1985 January	1,826	154	29	8	1,636	77	1,559
February	1,667	148	26	7	1,486	70	1,416
March	1,684	165	28	7	1,484	71	1,413
April	1,595	163	27	8	1,397	66	1,331
May	1,579	161	27	8	1,383	66	1,317
June	1,521	154	23	8	1,336	63	1,273
July	1,565	161	27	8	1,368	65	1,303
August	1,554	153	27	8	1,365	65	1,300
September	1,530	159	25	8	1,338	64	1,274
October	1,589	160	27	8	1,394	66	1,328
November	1,599	164	29	8	1,398	66	1,332
December	1,825	173	32	8	1,613	76	1,537
Total	**19,534**	**1,915**	**326**	**95**	**17,198**	**816**	**16,382**
1986 January	1,771	147	20	7	1,596	73	1,523
February	1,539	135	18	7	1,379	63	1,316
March	1,655	152	20	7	1,475	68	1,407
April	1,495	138	19	6	1,331	61	1,270
May	1,517	140	18	6	1,353	62	1,291
June	1,457	129	16	6	1,305	60	1,245
July	1,504	132	19	6	1,346	62	1,284
August	1,495	134	18	6	1,337	62	1,275
September	1,460	131	17	6	1,306	60	1,246
October	1,521	135	18	6	1,362	63	1,299
November	1,529	137	18	6	1,368	63	1,305
December	1,765	158	21	7	1,579	73	1,506
Total	**18,708**	**1,668**	**222**	**76**	**16,737**	**770**	**15,967**
1987 January	[E] 1,789	[E] 160	[E] 21	[E] 7	[E] 1,601	[E] 74	[E] 1,527
February	[E] 1,501	[E] 134	[E] 18	[E] 6	[E] 1,343	[E] 64	[E] 1,279
2-Mo. Total	**3,290**	**294**	**39**	**13**	**2,944**	**138**	**2,806**
1986 2-Mo. Total	**3,310**	**282**	**38**	**14**	**2,975**	**136**	**2,839**
1985 2-Mo. Total	**3,493**	**302**	**55**	**15**	**3,122**	**147**	**2,975**

[a]Gas withdrawn from gas and oil wells.
[b]Gas returned to formations for repressuring, pressure maintenance, and cycling.
[c]For definitions and further explanations, see Notes at end of section.
[d]Equal to gross withdrawals minus volumes used for repressuring, volumes of nonhydrocarbon gases removed, and volumes vented and flared. See Note 2 at end of section.
[e]Equal to marketed production (wet) minus extraction loss.
[f]May include unknown quantities of nonhydrocarbon gases.
NA=Not available. E=Estimated 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 through 1985 are final. Subsequent data are preliminary.
Sources: See end of section.

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

	Supply					Disposition			
	Total Dry Gas Production	Withdrawals from Storage[a]	Supplemental Gaseous Fuels[b]	Imports[b]	Total Supply/ Disposition[c]	Additions to Storage[a]	Exports[b]	Consumption[b]	Unaccounted for[e]
1973 Total	[d] 21,731	1,533	NA	1,033	24,297	1,974	77	22,049	196
1974 Total	[d] 20,713	1,701	NA	959	23,373	1,784	77	21,223	289
1975 Total	[d] 19,236	1,760	NA	953	21,949	2,104	73	19,538	235
1976 Total	[d] 19,098	1,921	NA	964	21,983	1,756	65	19,946	216
1977 Total	[d] 19,163	1,750	NA	1,011	21,924	2,307	56	19,521	41
1978 Total	[d] 19,122	2,158	NA	966	22,245	2,278	53	19,627	287
1979 Total	[d] 19,663	2,047	NA	1,253	22,964	2,295	56	20,241	372
1980 Total	19,403	1,972	155	985	22,515	1,949	49	19,877	640
1981 Total	19,181	1,930	176	904	22,191	2,228	59	19,404	501
1982 Total	17,758	2,164	145	933	21,000	2,472	52	18,001	475
1983 Total	16,033	2,270	132	920	19,354	1,822	55	16,835	[e] 642
1984 Total	17,392	2,098	110	843	20,443	2,295	55	17,951	[e] 143
1985 January	1,559	661	13	104	2,337	35	5	2,101	196
February	1,416	438	9	99	1,962	48	5	2,148	-239
March	1,413	214	8	90	1,725	98	6	1,719	-98
April	1,331	94	11	76	1,512	209	5	1,447	-149
May	1,317	25	11	73	1,426	303	2	1,148	-27
June	1,273	33	10	65	1,381	262	5	1,077	37
July	1,303	45	12	59	1,419	312	6	1,120	-19
August	1,300	50	12	61	1,423	279	5	1,118	21
September	1,274	20	9	63	1,366	271	5	1,041	49
October	1,328	74	12	76	1,490	201	5	1,148	136
November	1,332	208	9	77	1,626	99	5	1,313	209
December	1,537	534	11	106	2,188	47	5	1,903	233
Total	**16,382**	**2,397**	**126**	**949**	**19,855**	**2,163**	**57**	**17,281**	**354**
1986 January	1,523	441	16	98	2,078	49	5	2,110	-86
February	1,316	400	14	73	1,803	59	5	1,857	-118
March	1,407	233	15	54	1,709	121	5	1,701	-118
April	1,270	81	12	43	1,406	152	4	[R] 1,321	[R] -71
May	1,291	50	13	48	1,402	278	4	1,149	-29
June	1,245	27	13	46	1,331	270	5	1,022	34
July	1,284	31	10	47	1,372	286	4	1,020	62
August	1,275	27	10	50	1,362	287	5	981	89
September	1,246	27	10	55	1,336	246	4	933	153
October	1,299	53	11	66	1,429	205	5	[R] 1,006	[R] 213
November	1,305	199	12	75	1,591	72	5	1,234	280
December	1,506	377	15	99	1,997	39	4	1,666	288
Total	**15,967**	**1,943**	**151**	**754**	**18,816**	**2,064**	**55**	[R] **16,000**	[R] **697**
1987 January	[E] 1,527	518	17	110	2,172	47	5	[R] 1,920	[R] 200
February	[E] 1,279	331	13	97	1,720	38	5	1,746	-69
2-Mo. Total	**2,806**	**849**	**30**	**207**	**3,892**	**85**	**10**	**3,666**	**131**
1986 2-Mo. Total	**2,839**	**841**	**30**	**171**	**3,881**	**108**	**10**	**3,967**	**-204**
1985 2-Mo. Total	**2,975**	**1,099**	**22**	**203**	**4,299**	**83**	**10**	**4,249**	**-43**

[a]Data for 1980 through 1985 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 at end of section.

[b]For definitions and further explanations, see Notes at end of section.

[c]Data for 1978 through 1982 do not include intransit receipts and deliveries.

[d]May include unknown quantities of nonhydrocarbon gases.

[e]See Note 7 at end of section.

R=Revised data. NA=Not available. E=Estimated 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 through 1985 are final. Subsequent data are preliminary.

Sources: See end of section.

Table 4.3 Natural Gas[a] Consumption by End-Use Sector
(Billion Cubic Feet)

	Lease and Plant Fuel	Pipeline Fuel	Delivered to Consumers					Total Consumption
			Residential	Commercial[b]	Industrial	Electric Utilities	Total	
1973 Total	**1,496**	**728**	**4,879**	**2,597**	**8,689**	**3,660**	**19,825**	**22,049**
1974 Total	**1,477**	**669**	**4,786**	**2,556**	**8,292**	**3,443**	**19,077**	**21,223**
1975 Total	**1,396**	**583**	**4,924**	**2,508**	**6,968**	**3,158**	**17,558**	**19,538**
1976 Total	**1,634**	**548**	**5,051**	**2,668**	**6,964**	**3,081**	**17,764**	**19,946**
1977 Total	**1,659**	**533**	**4,821**	**2,501**	**6,815**	**3,191**	**17,329**	**19,521**
1978 Total	**1,648**	**530**	**4,903**	**2,601**	**6,757**	**3,188**	**17,449**	**19,627**
1979 Total	**1,499**	**601**	**4,965**	**2,786**	**6,899**	**3,491**	**18,141**	**20,241**
1980 Total	**1,026**	**635**	**4,752**	**2,611**	**7,172**	**3,682**	**18,216**	**19,877**
1981 Total	**928**	**642**	**4,546**	**2,520**	**7,128**	**3,640**	**17,834**	**19,404**
1982 Total	**1,109**	**596**	**4,633**	**2,606**	**5,831**	**3,226**	**16,295**	**18,001**
1983 Total	**978**	**490**	**4,381**	**2,433**	**5,643**	**2,911**	**15,367**	**16,835**
1984 Total	**1,077**	**529**	**4,555**	**2,524**	**6,154**	**3,111**	**16,345**	**17,951**
1985 January	91	54	743	372	615	226	1,957	2,101
February	84	46	837	412	566	203	2,017	2,148
March	83	42	566	290	531	207	1,595	1,719
April	79	39	397	206	492	234	1,328	1,447
May	78	40	212	128	454	236	1,029	1,148
June	75	38	157	100	425	282	964	1,077
July	77	40	130	96	440	337	1,002	1,120
August	77	39	119	93	435	355	1,002	1,118
September	75	37	129	98	427	275	929	1,041
October	78	39	190	125	466	250	1,030	1,148
November	79	39	306	180	479	230	1,195	1,313
December	91	51	647	333	571	210	1,762	1,903
Total	**966**	**504**	**4,433**	**2,432**	**5,901**	**3,044**	**15,811**	**17,281**
1986 January	90	49	805	395	587	184	1,971	2,110
February	77	43	698	348	534	157	1,737	1,857
March	83	42	592	294	520	170	1,576	1,701
April	75	36	371	191	449	R 198	R 1,210	R 1,321
May	76	38	242	134	428	231	R 1,036	1,149
June	73	37	158	99	395	260	912	1,022
July	76	38	129	89	387	301	906	1,020
August	75	38	120	91	381	276	R 869	981
September	73	36	133	93	351	R 247	824	933
October	77	38	189	119	367	R 217	R 891	R 1,006
November	77	38	355	192	385	R 187	1,119	1,234
December	89	47	610	302	443	175	1,530	1,666
Total	**941**	**480**	**4,404**	**2,348**	**5,226**	**R 2,602**	**R 14,581**	**R 16,000**
1987 January	90	51	747	355	492	185	1,779	R 1,920

[a]Includes supplemental gaseous fuels.
[b]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. • Data through 1985 are final. Subsequent data are preliminary.
Sources: See end of section.

Table 4.4 Underground Storage of Natural Gas
(Volumes in Billion Cubic Feet)

	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[a]	Volume	Percent	Injections	Withdrawals	Net[b]
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**	**.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 Total	**3,830**	**2,876**	**6,706**	**281**	10.8	**2,252**	**2,064**	**188**
1985 January	3,841	2,242	6,083	151	7.2	32	642	-610
February	3,841	1,853	5,694	-23	-1.2	47	438	-391
March	3,835	1,743	5,578	171	10.8	98	217	-119
April	3,831	1,859	5,691	239	14.8	204	91	113
May	3,837	2,129	5,965	286	15.5	294	23	272
June	3,839	2,351	6,191	211	9.8	252	31	221
July	3,849	2,605	6,454	149	6.1	309	45	263
August	3,849	2,832	6,681	92	3.4	278	50	228
September	3,849	3,081	6,930	85	2.8	272	20	253
October	3,851	3,204	7,055	29	.9	199	71	128
November	3,847	3,086	6,933	71	2.4	99	202	-103
December	3,842	2,607	6,448	-270	-9.4	44	529	-485
Total						**2,128**	**2,359**	**-231**
1986 January	3,842	2,214	6,056	-28	-1.3	49	441	-392
February	3,842	1,872	5,714	19	1.0	59	400	-341
March	3,838	1,764	5,602	21	1.2	121	233	-112
April	3,834	1,838	5,673	-21	-1.1	152	81	71
May	3,830	2,071	5,901	-58	-2.7	278	50	228
June	3,829	2,315	6,144	-37	-1.6	270	27	244
July	3,841	2,558	6,400	-47	-1.8	286	31	256
August	3,838	2,822	6,660	-10	-.3	287	27	261
September	3,838	3,042	6,880	-40	-1.3	246	27	219
October	3,840	3,199	7,039	-5	-.2	205	53	152
November	3,833	3,080	6,912	-7	-.2	72	199	-127
December	3,833	2,747	6,580	140	5.4	39	377	-338
Total						**2,064**	**1,943**	**121**
1987 January	3,821	2,279	6,100	66	3.0	47	518	-471
February	3,818	1,989	5,806	117	6.2	38	331	-293

[a]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 capacity is 8,145.

[b]Positive numbers indicate injections are greater than withdrawals. Negative numbers indicate withdrawals are greated than injections. Net injections or withdrawals may not equal the differance between applicable ending stocks. See Note 8 at end of 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 through 1985 are final. Subsequent data are preliminary.

Sources: See end of section.

Figure 4.1 Natural Gas Consumption, Production, and Imports

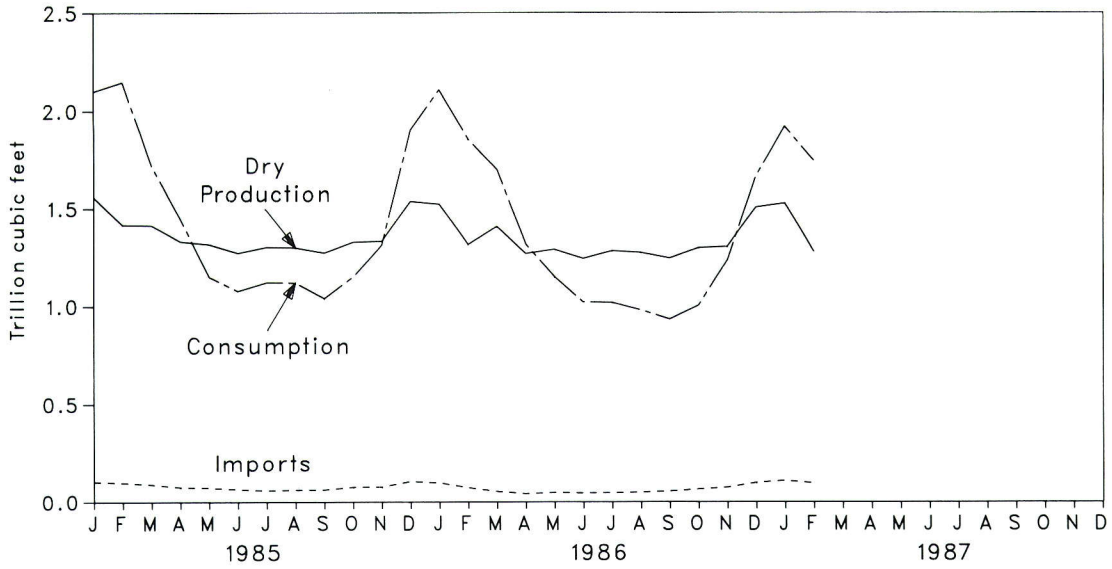
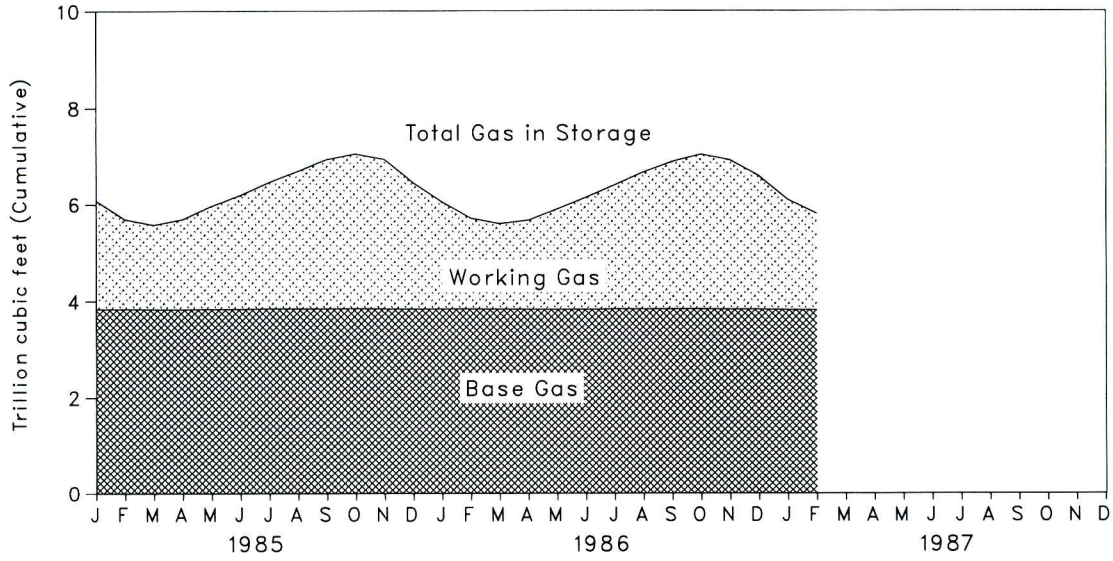


Figure 4.2 Natural Gas in Storage at End of Period



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 1985.* These data are not available for periods prior to 1980. For 1985, of the 32 producing States, 24 reported data on nonhydrocarbon gases removed. These 24 States accounted for 59 percent of total 1985 gross withdrawals. In addition, gross withdrawals data from two States, which together accounted for 37 percent of the 1985 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 1985.*

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 1985* 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 1985.* 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 monthy supplemental gaseous fuels figure.

5. Imports and Exports: The United States imports natural gas via pipeline from Mexico and Canada, and liquefied natural gas (until September 1985) 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 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 1985 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.

Sources

Production: 1973 through 1985: Energy Information Administration (EIA), *Natural Gas Annual 1985;* January 1986 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 1985: EIA, *Natural Gas Annual 1985;* January 1986 forward: EIA computations.

Withdrawals from and Additions to Storage: 1973 through 1985: EIA, *Natural Gas Annual 1985;* January 1986 forward: Form FPC-8 and Form EIA-191, "Underground Gas Storage Report."

Supplemental Gaseous Fuels: 1980 through 1985: EIA, *Natural Gas Annual 1985;* January 1986 forward: EIA computations.

Imports and Exports: 1973 through 1985: Form FPC-14, "Imports and Exports of Natural Gas"; January 1986 forward: EIA computations.

End-Use Consumption: All data except electric utility--1973 through 1985: EIA, *Natural Gas Annual, 1985;* January 1986 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."

Section 5. Oil and Gas Resource Development

In February 1987, 151 crews were engaged in seismic exploration, 48.8 percent fewer than the 295 in February 1986. The 19 marine vessels were 51.3 percent fewer and the 132 land crews were 48.4 percent fewer than those in February 1986. The total number of crews decreased 5.6 percent from the previous month, the largest monthly decrease since July 1986.

The March 1987 rotary rig count of 772 was 32.2 percent less than the 1,139 rigs active in March 1986 and 5.6 percent less than the rigs in February 1987. The 76 rigs operating offshore in March 1987 were 42.4 percent fewer than the 132 rigs operating offshore 1 year earlier. The 696 rigs operating onshore were 30.9 percent fewer than the 1,007 rigs operating onshore in March 1986.

Exploratory and development well completions during February 1987 were an estimated 1,840, 56.5 percent less than the 4,230 completions estimated in February 1986 and 34.3 percent less than completions in January 1987. This is the lowest number of completions since 1970, the earliest year the American Petroleum Institute has converted to completions assigned by date of completion rather than by date received. Oil well completions were an estimated 940, 60.2 percent lower than the 2,360 oil well completions in the previous February. The 340 gas well completions in February 1987 were 52.8 percent lower than the February 1986 number of 720. Total footage drilled in February 1987 was 9.1 million feet, a decrease of 54.2 percent compared with the 19.7 million feet drilled in February 1986 and a decrease of 27.5 percent from the footage drilled in January 1987.

Figure 5.1 Seismic Crews and Rotary Rigs In Operation, and Footage Drilled

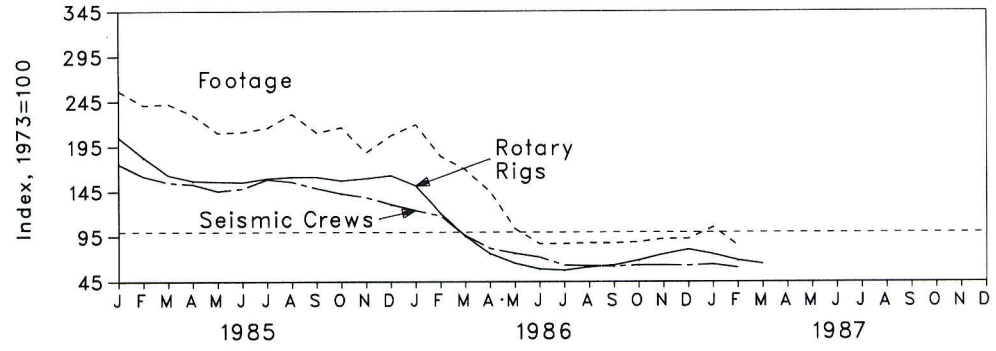


Figure 5.2 Exploratory and Development Well Completions

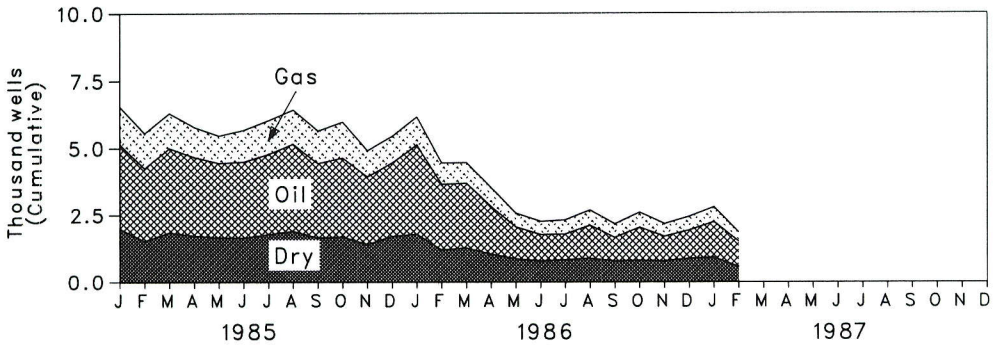


Table 5.1 Seismic Crew and Rotary Rig Count

	Crews Engaged in Seismic Exploration			Rotary Rigs in Operation[a]		
	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 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	19	172	191	94	687	781
June	18	162	180	73	632	705
July	20	138	158	65	621	686
August	19	137	156	65	665	730
September	24	131	155	74	681	755
October	22	136	158	80	739	819
November	19	139	158	79	820	899
December	18	139	157	89	874	963
Average	**24**	**176**	**201**	**99**	**865**	**964**
1987 January	18	142	160	88	812	900
February	19	132	151	75	743	818
March	NA	NA	NA	76	696	772

[a]Monthly data are averages of 4- or 5-week reporting periods and are not calendar months.
NA=Not available.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Table 5.2 Exploratory and Development Wells Completed and Footage Drilled

	Exploratory and Development Well Completions[a]				Total Footage[a]
	Oil	Gas	Dry	Total	
	Thousand Wells				Million Feet
1973 Total	**10.25**	**6.97**	**10.47**	**27.69**	**139.42**
1974 Total	**13.66**	**7.17**	**12.20**	**R 33.04**	**153.79**
1975 Total	**16.98**	**8.17**	**13.74**	**R 38.88**	**181.05**
1976 Total	**17.70**	**9.44**	**13.80**	**40.94**	**187.29**
1977 Total	**18.70**	**12.12**	**15.04**	**R 45.85**	**215.70**
1978 Total	**19.06**	**14.40**	**16.59**	**R 50.06**	**238.39**
1979 Total	**20.70**	**15.17**	**16.04**	**51.91**	**243.69**
1980 Total	**32.28**	**17.22**	**20.34**	**69.84**	**312.30**
1981 Total	**42.84**	**19.91**	**27.28**	**90.03**	**408.83**
1982 Total	**R 38.72**	**18.73**	**25.89**	**83.34**	**374.43**
1983 Total	**36.88**	**14.36**	**23.79**	**75.03**	**314.96**
1984 Total	**42.46**	**16.81**	**25.09**	**84.36**	**365.72**
1985 January	3.17	1.40	1.98	6.55	30.41
February	R 2.69	R 1.28	R 1.53	R 5.50	R 25.77
March	3.16	1.30	1.84	6.30	28.70
April	2.95	1.11	1.72	5.77	26.34
May	2.79	1.02	1.65	5.46	24.85
June	2.85	1.18	1.64	5.67	24.18
July	3.01	1.25	1.77	6.03	25.50
August	3.26	1.28	1.89	6.44	27.35
September	2.79	1.21	1.64	5.64	24.09
October	2.96	1.33	1.68	5.96	25.58
November	2.54	.98	1.39	4.91	21.59
December	2.75	.99	1.70	5.44	24.53
Total	**R 34.92**	**R 14.33**	**R 20.43**	**R 69.68**	**R 308.91**
1986 January	3.34	1.04	1.78	6.16	25.94
February	R 2.36	R .72	R 1.15	R 4.23	R 19.74
March	2.43	.77	1.26	4.46	20.11
April	1.79	.70	1.03	3.52	16.63
May	1.19	.52	.86	2.57	12.32
June	.98	.50	.78	2.26	9.97
July	.96	.53	.82	2.31	10.31
August	R .94	R .53	.87	R 2.33	R 10.07
September	.87	.51	.78	2.15	9.93
October	1.23	.57	.80	2.60	R 10.53
November	R 1.14	.48	.78	R 2.40	R 10.39
December	1.05	.52	.87	2.44	10.94
Total	**R 18.28**	**R 7.38**	**R 11.77**	**R 37.43**	**R 166.88**
1987 January	1.33	.56	.91	2.80	12.49
February	.94	.34	.56	1.84	9.05

[a]Data exclude service wells and stratigraphic and core tests.

R=Revised data.

Notes: • 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 end of section.

Source: See end of section.

Notes and Sources for the Oil and Gas Resource Development Section

Notes

Beginning in 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 data 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 10 percent during the first 5 months, more than 10 percent during the next 6 months, more than 5 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, 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.

Section 6. Coal

Coal production in February 1987 totaled 69.8 million short tons, 4.3 percent below the 72.9 million short tons produced in February 1986.

Electric utility coal consumption in January 1987 totaled 62.4 million short tons, 1.6 million short tons (2.5 percent) below the 64.0 million short tons consumed in January 1986.

Electric utility coal stocks at the end of January 1987 were 157.1 million short tons, 3.3 percent more than the 152.1 million short tons of stocks at the end of January 1986.

Exports of coal in January 1987 totaled 5.5 million short tons, 7.8 percent less than the 5.9 million short tons exported during January 1986. Of the coal exported during January 1987, most exports were to Japan, 1.2 million short tons. Coal imports totaled 134,000 short tons in January 1987, 13.0 percent less than the 154,000 short tons imported in January 1986.

Figure 6.1 Coal Production, Consumption, Imports, and Exports

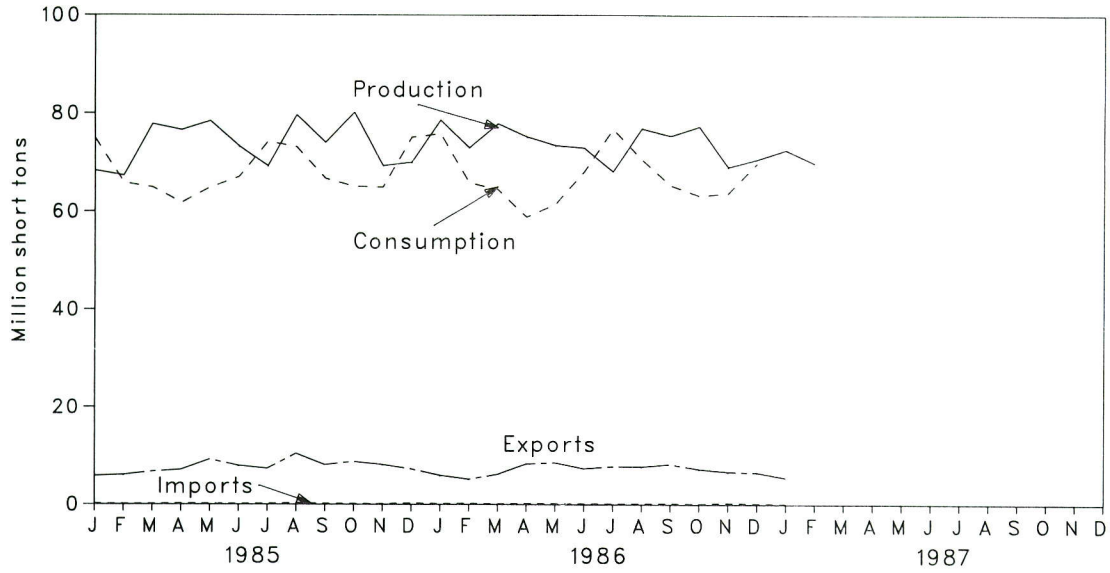


Figure 6.2 Coal Stocks at End of Period

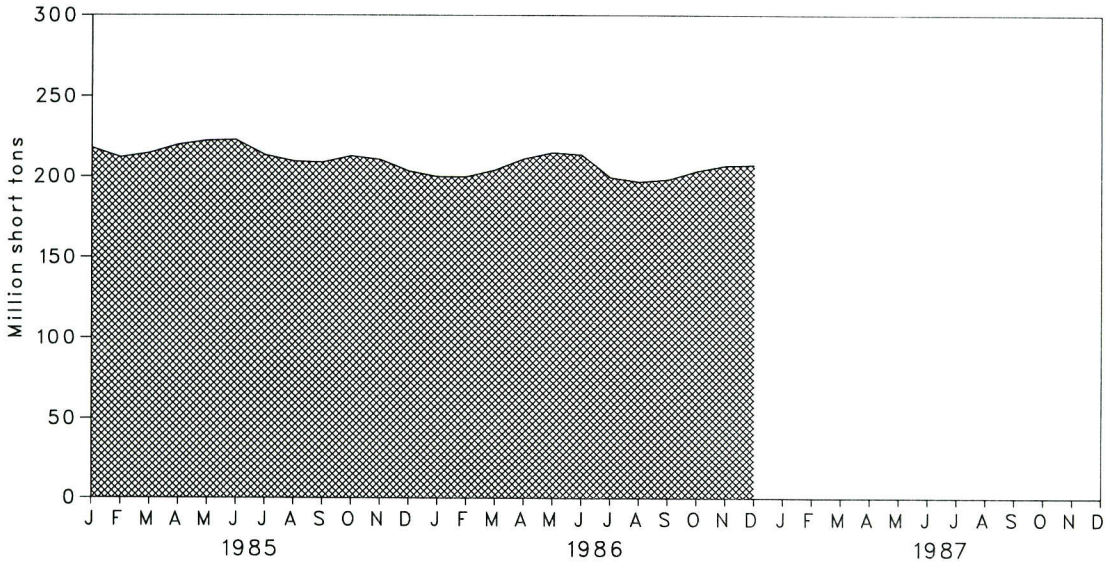


Table 6.1 Coal Overview
(Thousand Short Tons)

	Production	Consumption	Imports[a]	Exports[b]	Stocks[c]
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**	**562,640**	**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**	**732,628**	**1,043**	**112,541**	**209,423**
1982 Total	**838,111**	**706,910**	**742**	**106,277**	**232,037**
1983 Total	**782,091**	**736,671**	**1,271**	**77,772**	**202,585**
1984 Total	**895,921**	**791,291**	**1,286**	**81,483**	**231,300**
1985 January	68,261	74,846	126	5,817	218,131
February	67,233	65,776	101	6,030	212,035
March	77,744	64,862	103	6,696	214,825
April	76,541	61,753	203	7,065	220,230
May	78,382	64,796	159	9,231	222,798
June	73,237	66,978	138	7,913	223,210
July	69,228	74,163	177	7,314	213,601
August	79,622	73,102	264	10,422	209,555
September	73,977	66,673	182	8,095	208,827
October	80,158	65,032	128	8,744	212,920
November	69,268	64,865	111	8,134	210,656
December	69,989	75,080	260	7,220	203,367
Total	**883,638**	**817,925**	**1,952**	**92,680**	
1986 January	78,543	75,764	154	5,935	199,930
February	72,929	65,814	209	5,158	199,871
March	77,829	64,422	122	6,152	203,984
April	75,195	58,872	214	8,302	211,111
May	73,432	61,513	172	8,545	215,162
June	72,967	68,149	190	7,323	213,854
July	68,116	76,781	178	7,780	199,572
August	76,879	70,669	171	7,718	196,909
September	75,355	65,287	188	8,189	198,274
October	77,262	63,176	110	7,205	203,538
November	69,044	63,679	319	6,676	206,834
December	70,604	69,788	185	6,536	207,323
Total	**888,155**	**803,912**	**2,212**	**85,518**	
1987 January	72,547	NA	134	5,471	NA
February	69,814	NA	NA	NA	NA
2-Mo. Total	**142,361**	**NA**	**NA**	**NA**	
1986 2-Mo. Total	**151,472**	**141,577**	**363**	**11,093**	
1985 2-Mo. Total	**135,494**	**140,622**	**227**	**11,847**	

[a]Inculudes Puerto Rico.

[b]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).

[c]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.

NA=Not available.

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1985 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding. • See Note at end of section for methodology used to calculate production, consumption, and stocks.

Sources: See end of section.

Table 6.2 Coal Consumption by End-Use Sector[a]
(Thousand Short Tons)

	Electric Utilities	Industrial		Residential and Commercial	Total
		Coke Plants	Other Industrial Including Transportation		
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**	**562,640**
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**	**6,452**	**702,729**
1981 Total	**596,797**	**61,015**	**67,395**	**7,422**	**732,628**
1982 Total	**593,666**	**40,908**	**64,096**	**8,240**	**706,910**
1983 Total	**625,211**	**37,033**	**65,979**	**8,448**	**736,671**
1984 Total	**664,399**	**44,022**	**73,744**	**9,128**	**791,291**
1985 January	63,645	3,463	6,911	830	74,846
February	55,491	3,282	6,278	726	65,776
March	54,784	3,511	6,046	518	64,862
April	50,903	3,851	6,236	764	61,753
May	54,595	3,778	5,962	461	64,796
June	57,634	3,284	5,696	365	66,978
July	64,252	3,437	5,950	523	74,163
August	63,076	3,420	6,112	494	73,102
September	56,780	3,361	5,877	656	66,673
October	54,969	3,165	6,183	716	65,032
November	54,311	3,192	6,605	758	64,865
December	63,402	3,313	7,517	969	75,080
Total	**693,841**	**41,057**	**75,372**	**7,779**	**817,925**
1986 January	R 64,034	3,508	7,323	902	75,764
February	R 55,050	3,324	6,652	789	65,814
March	53,898	3,555	6,406	563	64,422
April	48,114	3,602	6,354	803	58,872
May	51,420	3,533	6,075	485	61,513
June	58,892	3,071	5,804	383	68,149
July	68,021	2,591	5,698	470	76,781
August	R 61,709	2,578	5,853	444	70,669
September	56,536	2,534	5,628	589	65,287
October	R 54,116	2,523	5,874	662	63,176
November	54,158	2,545	6,276	701	63,679
December	59,108	2,641	7,142	896	69,788
Total	**685,056**	**36,005**	**75,086**	**7,687**	**803,912**
1987 January	62,418	NA	NA	NA	NA

[a]See Note 2 at end of section.

R=Revised data. NA=Not available .

Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1985 are final. Subsequent data are preliminary. • Totals may not equal sum of components due to independent rounding.

Sources: See end of section.

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

	Consumer				Producers and Distributors	Total[a]
	Electric Utilities	Coke Plants	Other Industrial	Total[a]		
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**	**195,253**	**36,784**	**232,037**
1983 Year	**155,598**	**4,346**	**8,710**	**168,654**	**33,931**	**202,585**
1984 Year	**179,727**	**6,166**	**11,317**	**197,210**	**34,090**	**231,300**
1985 January	167,592	5,583	10,439	183,614	34,517	218,131
February	162,531	4,999	9,561	177,091	34,944	212,035
March	166,355	4,415	8,684	179,454	35,371	214,825
April	171,695	4,472	8,749	184,917	35,313	220,230
May	174,198	4,529	8,815	187,542	35,255	222,798
June	174,545	4,587	8,881	188,013	35,197	223,210
July	165,903	4,171	9,184	179,258	34,342	213,601
August	162,825	3,754	9,488	176,068	33,487	209,555
September	163,065	3,338	9,791	176,195	32,632	208,827
October	166,749	3,365	10,007	180,121	32,799	212,920
November	164,075	3,393	10,222	177,690	32,966	210,656
December	156,376	3,420	10,438	170,234	33,133	203,367
1986 January	152,078	3,302	9,879	165,260	34,670	199,930
February	151,157	3,185	9,321	163,663	36,208	199,871
March	R 154,415	3,067	8,763	166,239	37,745	203,984
April	161,076	3,224	8,965	173,264	37,847	211,111
May	164,667	3,380	9,166	177,213	37,949	215,162
June	R 162,909	3,537	9,367	175,803	38,051	213,854
July	R 149,803	3,313	9,555	162,958	36,614	199,572
August	R 149,163	3,090	9,743	161,731	35,178	196,909
September	R 151,945	2,866	9,930	164,533	33,741	198,274
October	R 157,202	2,908	10,195	170,305	33,233	203,538
November	R 160,908	2,950	10,314	174,171	32,663	206,834
December	R 161,806	2,992	10,433	175,230	32,093	207,323
1987 January	157,061	NA	NA	NA	NA	NA

[a]Total excludes stocks held at retail dealers for consumption by the residential and commercial sector.
R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia. • Data through 1985 are final. Subsequent data are preliminary.
• Totals may not equal sum of components due to independent rounding.
Sources: See end of 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 temperature 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).

Section 7. Electric Utilities

During January 1987, electric utilities generated 222.7 billion kilowatthours of electricity, 2.4 percent above the January 1986 generation level. Coal-fired generation totaled 126.6 billion kilowatthours, 2.7 percent below the level 1 year earlier. Nuclear generation totaled 40.0 billion kilowatthours, 10.4 percent above the January 1986 level. Hydroelectric generation was 25.4 billion kilowatthours in January 1987, 18.9 percent above the level 1 year earlier. Natural gas-fired generation was 17.8 billion kilowatthours, 1.8 percent above the January 1986 level. Petroleum-fired generation totaled 11.9 billion kilowatthours, 7.5 percent above the level 1 year earlier.

Sales of electricity to all ultimate consumers in the United States in January 1987 were 210.2 billion kilowatthours, 5.2 percent above December 1986 sales. Sales to residential consumers during January 1987 were 82.4 billion kilowatthours, 12.7 percent above the level of sales during the previous month. Commercial sales were 54.4 billion kilowatthours, 2.1 percent above the amount sold to commercial consumers 1 month earlier. Sales to industrial consumers totaled 65.9 billion kilowatthours in January 1987, slightly less than the previous month's figure. In January 1987 other sales totaled 7.4 billion kilowatthours, 2.0 percent above the December 1986 level.

Electric utility petroleum consumption (excluding petroleum coke) during January 1987 was 20.5 million barrels, 8.0 percent above the January 1986 level. Coal consumption during January 1987 was 62.4 million short tons, 2.5 percent below the January 1986 rate. During January 1987, electric utilities consumed 184.7 billion cubic feet of natural gas, a slight increase above the January 1986 consumption level.

On January 31, 1987, utility stocks of all types of coal totaled 157.1 million short tons. Those stockpiles were 3.3 percent above the level of January 31, 1986. Petroleum stocks (excluding petroleum coke) on January 31, 1987, totaled 70.4 million barrels, 2.1 percent below the level on the same date in 1986.

Table 7.1 Net Electricity Generation at Electric Utilities by Energy Source
(Million Kilowatthours)

	Coal	Petroleum[a]	Natural Gas[b]	Nuclear Electric Power	Hydro-electric Power	Other[c]	Total
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 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	184,877
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	R 130,190	11,088	R 17,472	36,219	R 21,377	1,123	R 217,470
February	R 110,982	R 9,529	14,925	32,721	R 23,222	956	R 192,336
March	110,390	R 10,073	16,149	30,773	R 28,465	984	R 196,834
April	R 98,995	R 9,227	R 18,961	30,477	R 27,523	891	R 186,074
May	R 104,900	R 10,435	21,947	31,924	R 27,205	R 903	R 197,315
June	120,154	11,563	R 24,767	31,334	R 26,223	R 973	R 215,015
July	136,654	16,296	R 28,712	35,894	R 24,072	1,045	R 242,672
August	123,618	15,466	R 26,352	37,483	R 21,189	R 1,058	R 225,166
September	113,957	R 10,677	R 23,457	36,593	R 21,114	R 895	R 206,692
October	R 108,584	R 9,873	R 20,876	36,214	R 21,335	R 872	R 197,754
November	109,045	R 10,464	R 18,044	R 34,944	23,153	R 781	R 196,432
December	R 118,362	11,894	16,845	R 39,463	R 25,965	1,022	R 213,551
Total	**R 1,385,831**	**R 136,585**	**R 248,508**	**R 414,038**	**R 290,844**	**R 11,503**	**R 2,487,310**
1987 January	126,624	11,924	17,788	39,975	25,409	1,017	222,736

[a]Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.
[b]Includes supplemental gaseous fuels.
[c]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.
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 EIA-759, "Monthly Power Plant Report."

Table 7.2 Electricity Sales[a] by End-Use Sector
(Million Kilowatthours)

	Residential	Commercial	Industrial	Other[b]	Total
1973 Total	**579,231**	**388,266**	**686,085**	**59,326**	**1,712,909**
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**	**488,155**	**815,067**	**73,732**	**2,094,449**
1981 Total	**722,265**	**514,338**	**825,743**	**84,756**	**2,147,103**
1982 Total	**729,520**	**526,397**	**744,949**	**85,575**	**2,086,441**
1983 Total	**750,948**	**543,788**	**775,999**	**80,219**	**2,150,955**
1984 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	70,140	6,903	177,596
June	60,652	51,521	70,091	6,848	189,112
July	70,966	56,128	69,760	7,135	203,989
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	**790,977**	**608,968**	**824,523**	**85,075**	**2,309,543**
1986 January[c]	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
April	62,434	51,138	74,040	7,843	195,455
May	54,808	49,201	68,083	7,261	179,353
June	63,843	56,947	67,083	6,874	194,747
July	80,495	61,130	68,979	7,554	218,158
August	80,574	60,583	68,934	7,304	217,394
September	68,644	57,736	69,561	7,189	203,130
October	62,999	53,289	69,648	7,466	193,402
November	59,451	51,092	67,256	6,836	184,634
December	73,131	53,301	66,149	7,296	199,876
Total	**825,730**	**646,615**	**818,005**	**86,549**	**2,376,898**
1987 January[c]	E 82,389	E 54,436	E 65,920	E 7,440	E 210,184

[a]Electricity sales to all ultimate consumers.
[b]Includes sales of electricity to Government, railways, street lighting authorities, and sales not included elsewhere.
[c]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."
E=Estimated 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."

Data for 1973 through 1985 are based on "Monthly Electric Utility Sales and Revenue with State Distributions," and predecessor forms, which provide data from a sample of electric utilities. Beginning with January 1986, the estimates are based on a new sample and on new expansion factors from data reported on Form EIA-861, "Annual Electric Utility Report." That form collects data from all electric utilities. Annual data for 1984 and 1985 are also available from Form EIA-861 and should be used for comparison with the 1986 estimates. Form EIA-861 data are shown below for 1984 and 1985 in million kilowatthours:

	Residential	Commercial	Industrial	Other	Total
1984	780,092	577,275	838,718	88,887	2,284,972
1985	793,828	604,679	835,207	91,988	2,325,702

Figure 7.1 Coal Consumed to Produce Electricity

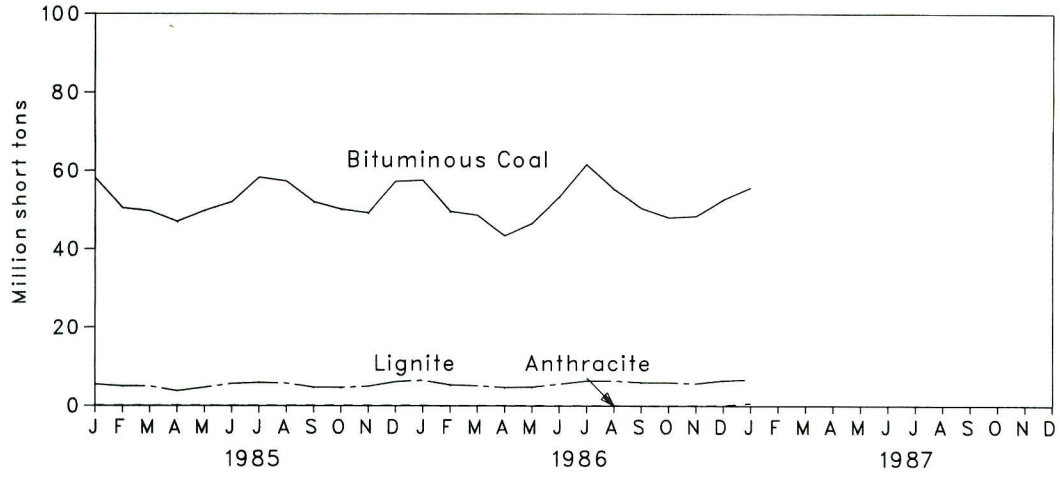


Figure 7.2 Petroleum Consumed to Produce Electricity

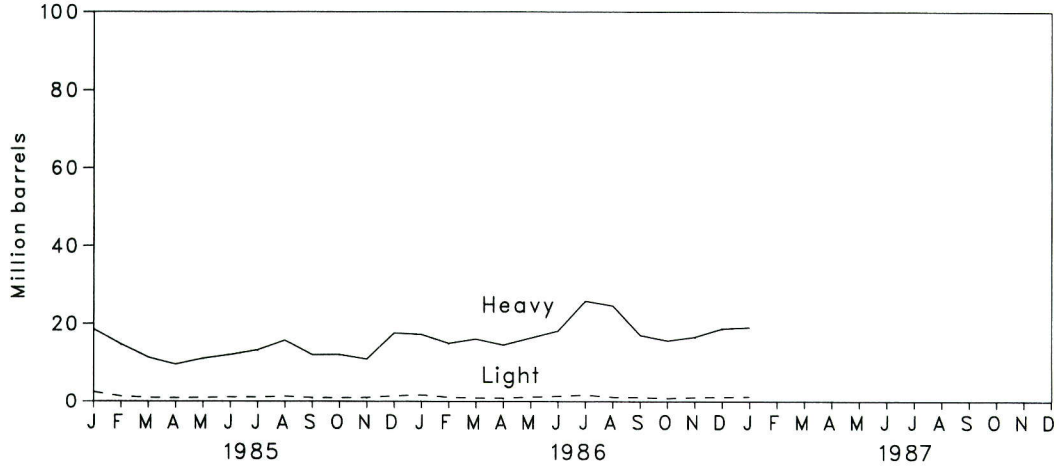


Figure 7.3 Natural Gas Consumed to Produce Electricity

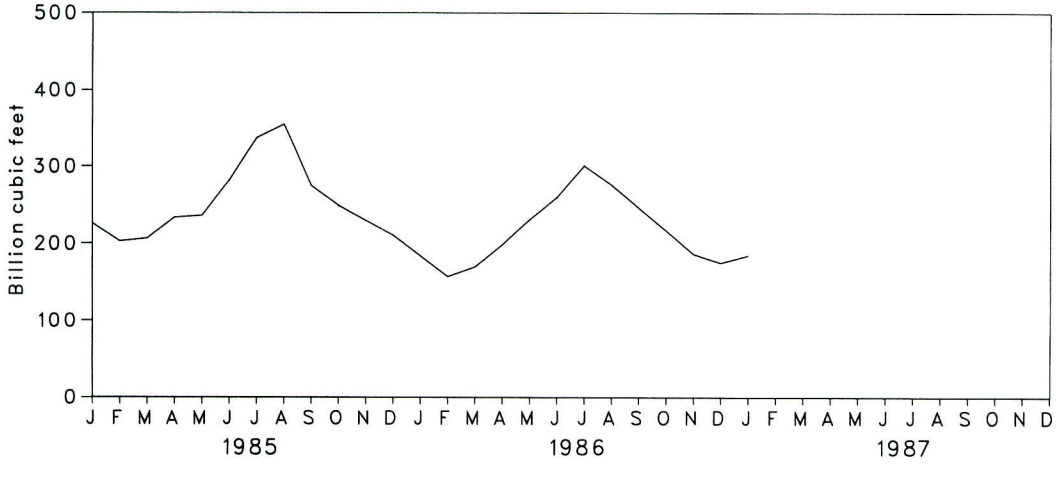


Table 7.3 Fossil Fuels Consumed at Electric Utilities to Generate Electricity

	Coal				Petroleum				
	Anthracite	Bituminous Coal	Lignite	Total	Heavy[a]	Light[b]	Total Liquids	Petroleum Coke	Natural Gas[c]
	Thousand Short Tons				Thousand Barrels			Thousand Short Tons	Million Cubic Feet
1973 Total	**1,443**	**376,975**	**10,794**	**389,212**	**([d])**	**([d])**	**560,248**	**507**	**3,660,172**
1974 Total	**1,498**	**378,643**	**11,670**	**391,811**	**([d])**	**([d])**	**536,274**	**625**	**3,443,428**
1975 Total	**1,480**	**388,523**	**15,960**	**405,962**	**([d])**	**([d])**	**506,128**	**70**	**3,157,669**
1976 Total	**1,350**	**425,205**	**21,817**	**448,371**	**([d])**	**([d])**	**555,920**	**68**	**3,080,868**
1977 Total	**1,425**	**451,051**	**24,650**	**477,126**	**([d])**	**([d])**	**623,705**	**98**	**3,191,200**
1978 Total	**1,064**	**448,763**	**31,407**	**481,235**	**([d])**	**([d])**	**635,839**	**398**	**3,188,363**
1979 Total	**1,046**	**488,129**	**37,876**	**527,051**	**([d])**	**([d])**	**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 Total	**1,070**	**606,339**	**56,990**	**664,399**	**189,289**	**15,190**	**204,479**	**252**	**3,111,342**
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	54,784	11,323	980	12,303	16	207,286
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	[R] 57,525	[R] 6,442	[R] 64,034	[R] 17,254	[R] 1,688	18,942	15	[R] 184,024
February	50	[R] 49,711	[R] 5,289	[R] 55,050	14,978	1,100	16,077	15	157,070
March	88	[R] 48,737	[R] 5,073	53,898	16,090	[R] 928	[R] 17,018	23	[R] 169,697
April	84	[R] 43,391	[R] 4,639	48,114	14,538	893	15,431	23	[R] 198,143
May	68	46,629	4,723	51,420	16,386	[R] 1,209	[R] 17,595	25	[R] 231,041
June	64	53,332	5,496	58,892	18,173	1,390	19,564	24	[R] 260,163
July	67	61,669	6,285	68,021	25,839	1,727	27,567	26	[R] 300,870
August	64	[R] 55,331	6,314	[R] 61,709	24,633	[R] 1,150	[R] 25,782	31	[R] 276,163
September	47	50,574	5,916	56,536	17,102	[R] 1,107	[R] 18,209	31	[R] 246,674
October	57	[R] 48,151	5,907	[R] 54,116	15,714	869	16,584	26	[R] 216,738
November	84	48,451	5,623	54,158	16,656	1,076	[R] 17,731	34	[R] 186,605
December	88	52,634	6,386	59,108	18,794	[R] 1,189	[R] 19,983	38	175,181
Total	**829**	**[R] 616,134**	**[R] 68,093**	**[R] 685,056**	**[R] 216,156**	**[R] 14,326**	**[R] 230,482**	**313**	**[R] 2,602,370**
1987 January	68	55,686	6,664	62,418	19,142	1,317	20,459	28	184,722

[a]Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b]Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c]Includes supplemental gaseous fuels.
[d]Prior to 1980, petroleum consumption data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in Table 7.5.
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 EIA-759, "Monthly Power Plant Report."

Figure 7.4 Coal Stocks at Electric Utilities at End of Period

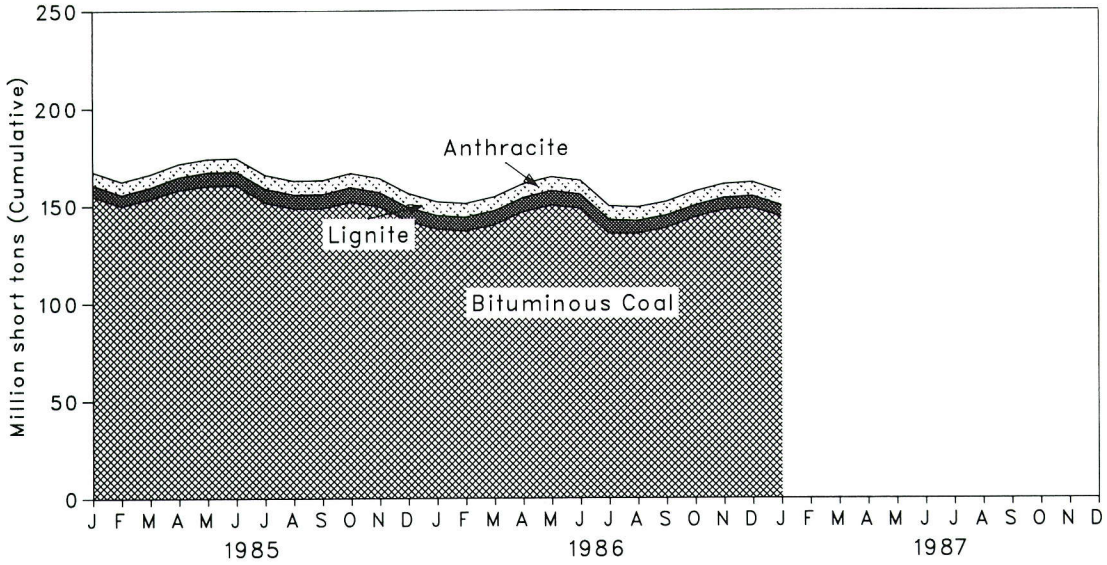


Figure 7.5 Petroleum Stocks at Electric Utilities at End of Period

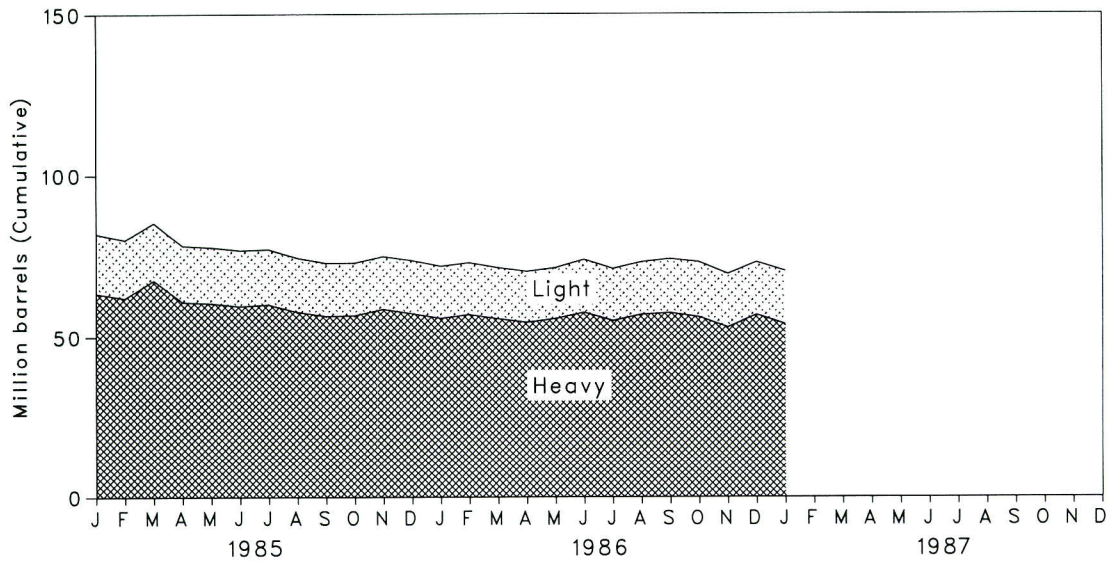


Table 7.4 Coal and Petroleum Stocks at Electric Utilities at End of Period

	Coal				Petroleum			
	Anthracite	Bituminous Coal	Lignite	Total	Heavy[a]	Light[b]	Total Liquids	Petroleum Coke
	Thousand Short Tons				Thousand Barrels			Thousand Short Tons
1973 Year	**1,066**	**84,941**	**961**	**86,967**	**(c)**	**(c)**	**89,216**	**312**
1974 Year	**930**	**81,712**	**867**	**83,509**	**(c)**	**(c)**	**112,917**	**35**
1975 Year	**982**	**107,927**	**1,815**	**110,724**	**(c)**	**(c)**	**125,257**	**31**
1976 Year	**1,000**	**114,130**	**2,306**	**117,436**	**(c)**	**(c)**	**121,696**	**32**
1977 Year	**2,321**	**128,210**	**2,688**	**133,219**	**(c)**	**(c)**	**144,031**	**44**
1978 Year	**2,178**	**123,020**	**3,027**	**128,225**	**(c)**	**(c)**	**118,788**	**198**
1979 Year	**3,274**	**152,981**	**3,459**	**159,714**	**(c)**	**(c)**	**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 Year	**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	R 138,077	R 6,819	152,078	R 55,797	R 16,147	R 71,943	52
February	7,172	R 136,944	R 7,042	151,157	R 56,956	R 16,020	72,976	50
March	7,146	R 140,023	R 7,246	R 154,415	R 55,649	R 15,821	R 71,470	36
April	7,127	R 146,639	R 7,310	161,076	54,556	R 15,793	R 70,350	28
May	7,133	150,164	7,370	164,667	R 55,665	R 15,764	R 71,429	34
June	7,148	R 148,686	7,075	R 162,909	R 57,611	R 16,319	R 73,930	36
July	7,158	R 135,630	7,016	R 149,803	R 55,023	R 16,145	R 71,168	43
August	7,117	R 135,542	6,504	R 149,163	R 56,964	R 16,221	R 73,185	42
September	7,146	R 138,396	6,403	R 151,945	R 57,474	R 16,686	R 74,160	45
October	7,158	R 143,855	6,189	R 157,202	56,148	R 17,009	R 73,157	41
November	7,119	R 147,597	6,191	R 160,908	R 53,000	R 16,575	R 69,575	42
December	7,099	R 148,665	6,042	R 161,806	56,841	R 16,269	R 73,111	40
1987 January	7,091	144,044	5,926	157,061	53,941	16,496	70,437	35

[a]Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[b]Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[c]Prior to 1980, petroleum stock data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in Table 7.5.
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 EIA-759, "Monthly Power Plant Report."

Table 7.5 Petroleum Consumption and Stocks at Electric Utilities by Prime Mover Type
(Thousand Barrels)

	Petroleum Consumption			Petroleum Stocks at End of Period		
	Steam Plants	GT/IC[a]	Total Liquids	Steam Plants	GT/IC[a]	Total Liquids
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 Total	**197,050**	**7,429**	**204,479**	**76,836**	**10,784**	**87,619**
1985 January	19,846	1,210	21,056	71,528	10,536	82,064
February	15,595	467	16,062	70,088	10,094	80,182
March	11,966	337	12,303	70,385	10,010	80,395
April	10,133	338	10,471	68,651	9,636	78,286
May	11,604	403	12,008	68,249	9,516	77,765
June	12,516	601	13,116	67,529	9,317	76,846
July	13,840	507	14,347	67,816	9,334	77,151
August	16,272	795	17,067	65,307	9,212	74,519
September	12,485	488	12,972	63,701	9,229	72,930
October	12,646	383	13,029	63,908	9,059	72,968
November	11,584	362	11,946	66,103	8,867	74,970
December	18,355	680	19,035	64,704	8,985	73,689
Total	**166,842**	**6,572**	**173,414**			
1986 January	17,915	1,027	18,942	R 63,043	R 8,901	R 71,943
February	15,536	541	16,077	R 64,134	R 8,842	72,976
March	R 16,585	433	R 17,018	R 62,671	R 8,799	R 71,470
April	14,982	449	15,431	61,758	R 8,591	R 70,350
May	16,933	R 662	R 17,595	R 63,010	R 8,419	R 71,429
June	18,796	768	19,564	R 65,115	R 8,816	R 73,930
July	26,373	1,193	27,567	R 62,322	R 8,845	R 71,168
August	25,104	R 678	R 25,782	R 64,167	R 9,018	R 73,185
September	17,500	R 709	R 18,209	R 65,183	R 8,976	R 74,160
October	16,194	390	16,584	R 63,937	R 9,220	R 73,157
November	R 17,171	561	R 17,731	R 60,527	R 9,048	R 69,575
December	19,410	R 572	R 19,983	64,258	R 8,853	R 73,111
Total	**R 222,500**	**R 7,983**	**R 230,482**			
1987 January	19,798	661	20,459	61,399	9,037	70,437

[a]GT/IC=Gas turbine and internal combustion plants.
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 EIA-759, "Monthly Power Plant Report."

Section 8. Nuclear

In January 1987, U.S. nuclear generating units produced a record high total of 40.0 billion net kilowatthours of electricity, 10.4 percent more generation than in January 1986. The 102 operable units generated at an average capacity factor of 61.6 percent, 1.2 percentage points higher than the January 1986 value. Nuclear power supplied 17.9 percent of the total electricity generated in January 1987, compared with 16.7 in January 1986.

Two nuclear generating units became operable in January 1987, both pressurized- water reactors. Full power amendments to the operating licenses for Carolina Power and Light's Shearon Harris 1 and Commonwealth Edison's Byron 2 were issued by the Nuclear Regulatory Commission on January 12, 1987 and January 30, 1987, respectively. Shearon Harris 1 is a 900-net-megawatt-electric unit that is operated in North Carolina. Byron 2, a 1,107-net-megawatt-electric unit, is the second operable nuclear unit on a plant site in Illinois. On January 16, 1987, an operating license was issued for Vogtle 1, a 1,198-net-megawatt-electric pressurized-water reactor operated by Georgia Power.

On January 31, 1987, there were 102 operable nuclear generating units in the United States, with a collective net summer generating capability of 87.2 million kilowatts of electricity. Six additional units had operating licenses from the Nuclear Regulatory Commission authorizing fuel loading and low power testing (Braidwood 1, Clinton 1, Nine Mile Point 2, Seabrook 1, Shoreham, and Vogtle 1). Of the 102 operable units, five were in full power ascension (Byron 2, Fermi 2, Shearon Harris 1, Hope Creek 1, and Perry 1). Of the 97 operable units having reached full power, 35 units (36 percent) generated above 90 percent of capacity, and 22 units (23 percent) generated below 25 percent of capacity. Of the 22 units generating below 25 percent of capacity, nine units were out-of-service at least part of the month for maintenance and refueling, and eight units remained shut down for more than 3 months for extended repairs or modifications.

As of January 31, 1987, there were 128 domestic nuclear power generating units in all stages of planning, construction, or operation, with an aggregate net design capacity of 119 million kilowatts.

Figure 8.1 Electricity Generated by Utilities and by Nuclear Power Plants

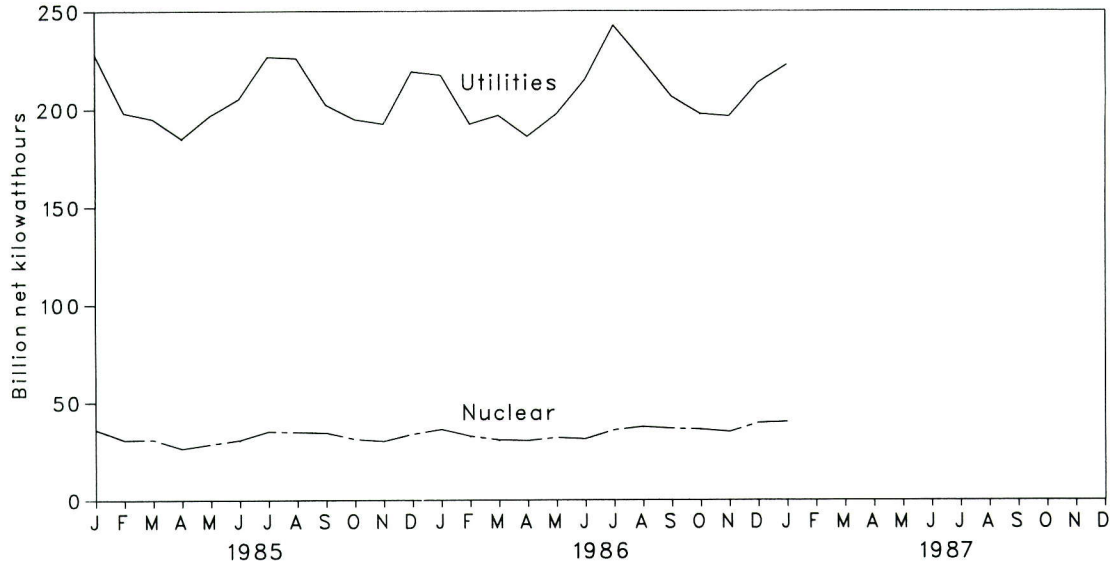


Figure 8.2 Nuclear Portion of Electricity Generation and Capacity Factor

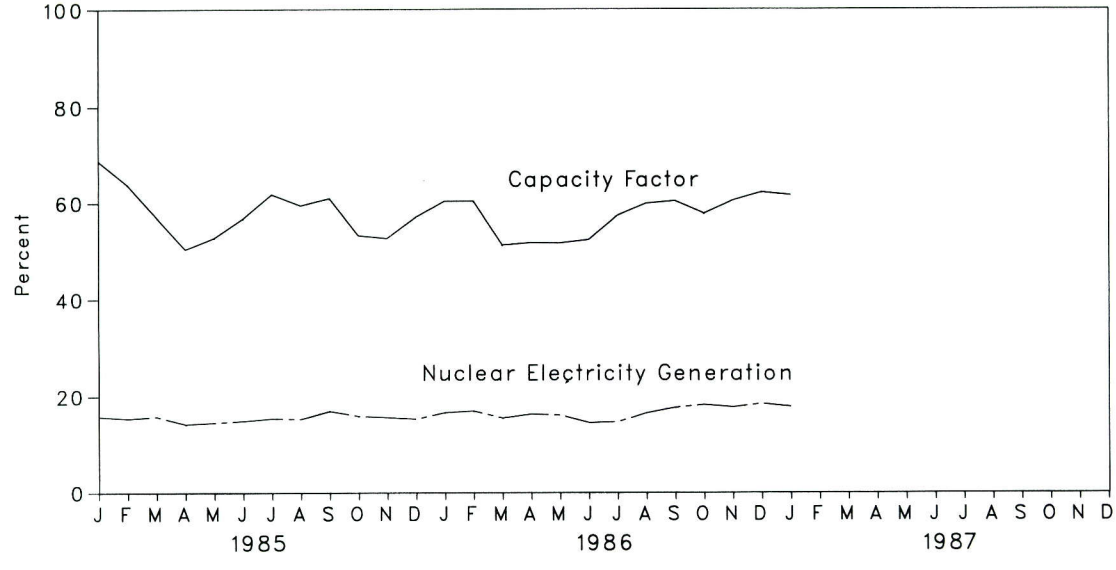


Table 8.1 Nuclear Power Plant Operations

	Operable Reactors[a] [b]	Nuclear-Based Electricity Generation	Nuclear Portion of Domestic Electricity Generation	Net Summer Capability of Operable Reactors[a] [c]	Capacity Factor[d]
	Number	Million Net Kilowatthours	Percent	Million Net Kilowatts	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 Year	**86**	**327,634**	**13.6**	**69.652**	**56.3**
1985 January	87	36,186	15.9	70.675	68.8
February	88	30,812	15.5	71.795	63.9
March	89	31,041	15.9	72.899	57.2
April	89	26,458	14.3	72.899	50.5
May	89	28,697	14.6	72.899	52.9
June	91	30,837	15.0	75.275	56.9
July	92	35,184	15.5	76.354	61.9
August	94	34,812	15.4	78.478	59.6
September	94	34,508	17.0	78.478	61.1
October	94	31,205	16.0	78.478	53.4
November	95	30,166	15.7	79.397	52.8
December	95	33,782	15.4	79.397	57.2
Year		**383,691**	**15.5**		**58.0**
1986 January	96	36,219	[R] 16.7	80.604	60.4
February	96	32,721	17.0	80.604	60.4
March	96	30,773	15.6	80.604	51.3
April	97	30,477	[R] 16.4	81.863	51.8
May	98	31,924	[R] 16.2	82.995	51.7
June	98	31,334	14.6	82.995	52.4
July	99	35,894	14.8	84.048	57.4
August	99	37,483	16.6	84.048	59.9
September	99	36,593	17.7	84.048	60.5
October	99	36,214	18.3	84.048	57.8
November	100	[R] 34,944	17.8	85.241	56.9
December	100	[R] 39,463	18.5	85.241	62.2
Year		[R] **414,038**	**16.6**		**56.9**
1987 January	102	39,975	17.9	87.248	61.6

[a]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.
[b]See Note 1 at end of section.
[c]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 at end of section.
[d]For an explanation of the method of calculating the capacity factor, see Note 4 at end of section.
R=Revised data.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Table 8.2 Status of Nuclear Reactor Units[a]

	Licensed for Operation		Construction Permits		On Order	Announced	Total	Total Design Capacity[d]
	Operable[b]	In Startup[c]	Granted	Pending				
	Number of Reactor Units							Million Net Kilowatts
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 Year	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	33	0	2	0	130	121
May	89	6	33	0	2	0	130	121
June	91	4	33	0	2	0	130	121
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
April	97	4	27	0	2	0	130	121
May	98	3	27	0	2	0	130	121
June	98	3	27	0	2	0	130	121
July	99	2	25	0	2	0	128	119
August	99	2	25	0	2	0	128	119
September	99	3	24	0	2	0	128	119
October	99	7	20	0	2	0	128	119
November	100	7	19	0	2	0	128	119
December	100	7	19	0	2	0	128	119
1987 January	102	6	18	0	2	0	128	119

[a]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.
[b]See Note 1 at end of section.
[c]See Note 2 at end of section.
[d]Net design electrical rating (DER) is used because many of the units were canceled prior to being assigned a net summer capability. See Note 3 at end of section.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Notes and Sources for the Nuclear Section

Notes

1. Operable Reactors: Units that have been issued Operating Licenses, completed low-power testing, and are authorized to operate at full power (i.e., in receipt of a Full Power Amendment) by the Nuclear Regulatory Commission (NRC), plus the Hanford-N reactor operated by the Department of Energy (DOE). The Hanford-N reactor, with a net capacity of 860 megawatts electric (MWe), is included, although it is not licensed by the NRC, because electricity produced from its output steam is distributed commercially. Similarly, the Shippingport reactor (net capacity of 60 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 capacity of 40 MWe) and Indian Point-1 (net capacity of 265 MWe), both out of service since November 1974; Humboldt Bay (net capacity of 65 MWe), down since August 1976 for major seismic modifications and subsequently officially retired; Dresden-1 (net capacity of 200 MWe), out of service since January 1979 for major modifications and officially retired in August 1984; and Three Mile Island-2 (net capacity of 906 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979. A sister unit, Three Mile Island-1 (net capacity of 819 MWe), continues to be listed as "Operable" because it could, in theory, return to service once the restraining order imposed by the NRC is lifted.

2. In Startup: Units that have been issued an operating license 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 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."

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."

Section 9. Price

Crude Oil. The average price of domestic crude oil purchased at the wellhead was $13.88 per barrel in January 1987, 40.6 percent below the level in January 1986. The refiner acquisition cost of imported crude oil in January 1987 was $16.46 per barrel, 33.9 percent below the January 1986 level. The cost of domestic crude oil in January 1987 was $16.04, a decrease of 38.2 percent from the January 1986 average.

Motor Gasoline. The national city average retail price of leaded regular gasoline at all types of stations was 85 cents per gallon in February 1987, 5.2 percent higher than the price in January 1987. The price of unleaded regular gasoline at all types of stations was 91 cents per gallon in February 1987, 5.7 percent higher than the price in the previous month. The price of unleaded premium gasoline averaged $1.05 per gallon in February 1987, 4.0 percent higher than during January 1987.

Residual Fuel Oil. The average price, excluding taxes, of residual fuel oil sold to end users in January 1987 was 42 cents per gallon, 19.6 percent above the previous month's price, but 27.3 percent below the January 1986 average. The average price, excluding taxes, of residual fuel oil sold to other-than-ultimate consumers for resale in January 1987 was 38 cents per gallon, 24.4 percent above the December 1986 average, but 27.1 percent below the January 1986 average.

Aviation Fuel. The average price, excluding taxes, of aviation gasoline sold to end users in January 1987 was 88 cents per gallon, 1.0 percent below the price in the previous month and 24.4 percent below the price in January 1986. The average price, excluding taxes, of kerosene-type jet fuel sold to end users in January 1987 was 46 cents per gallon, up 7.0 percent from the previous month's price, but down 43.0 percent from the price 1 year earlier.

No. 2 Distillate Fuel Oil. The national average price of heating oil sold to residential customers in January 1987 was 78 cents per gallon. This was 8.1 percent above the price in December 1986, but 26.3 percent below the January 1986 price. The average price for resale was 51 cents per gallon in January 1987, 14.5 percent above the price in the previous month, but 31.3 percent below the price in January 1986.

Natural Gas. During 1986, the average wellhead price of marketed natural gas production was 25.5 percent below the 1985 price. The average price of natural gas delivered to electric utility plants was $2.35 per thousand cubic feet in December 1986, 28.6 percent below the December 1985 price. During 1986, the average price of natural gas delivered to electric utilities was 31.5 percent below the 1985 average price. The average price of natural gas used by residential consumers in January 1987 was $5.32 per thousand cubic feet, 5.5 percent less than the January 1986 price. The average price of natural gas used by industrial consumers in January 1987 was $2.88 per thousand cubic feet, 25.6 percent less than the January 1986 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. Previously, 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 January 1987 was 6.93 cents per kilowatthour, 1.2 percent[3] below the December 1986 price. The price of electricity to commercial consumers averaged 6.85 cents per kilowatthour in January 1987, slightly below the previous month's price. The average electricity price to industrial users during January 1987 was 4.71 cents per kilowatthour, 0.7 percent above the price 1 month earlier. The January national retail price of electricity to other consumers was 6.47 cents per kilowatthour, 3.4 percent above the December 1986 price.

[3]Percentages in this paragraph are based on unrounded numbers not shown in the following tables.

Figure 9.1 Crude Oil Prices

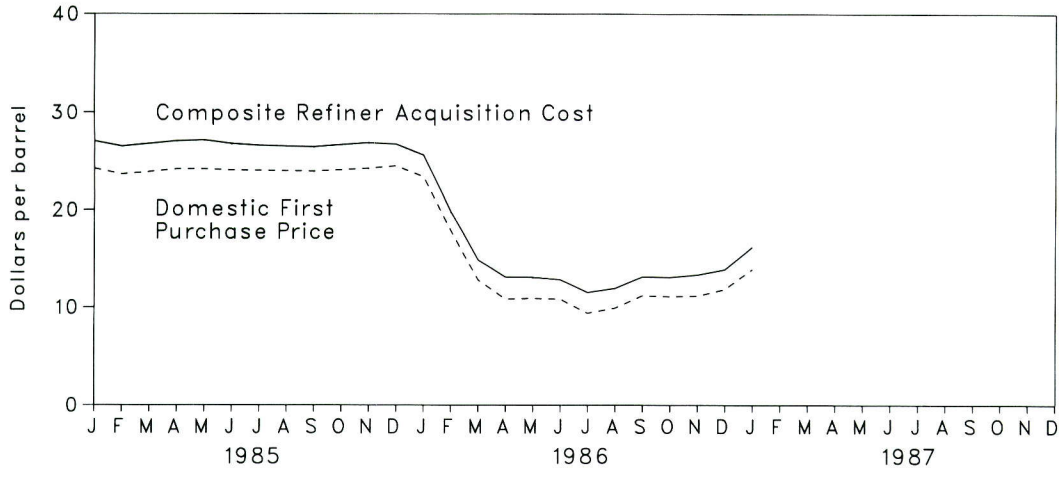


Figure 9.2 Refiner and Gas Plant Operator Sales Prices to End Users: Motor Gasoline, Diesel Fuel, and Jet Fuel

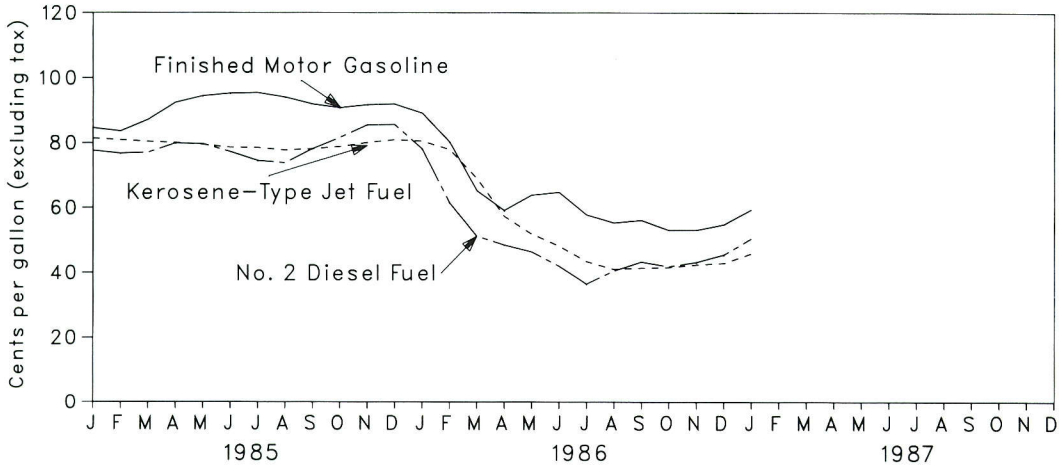


Figure 9.3 Refiner and Gas Plant Operator Sales Prices to End Users: No. 2 Fuel Oil, Propane, and Residual Fuel Oil

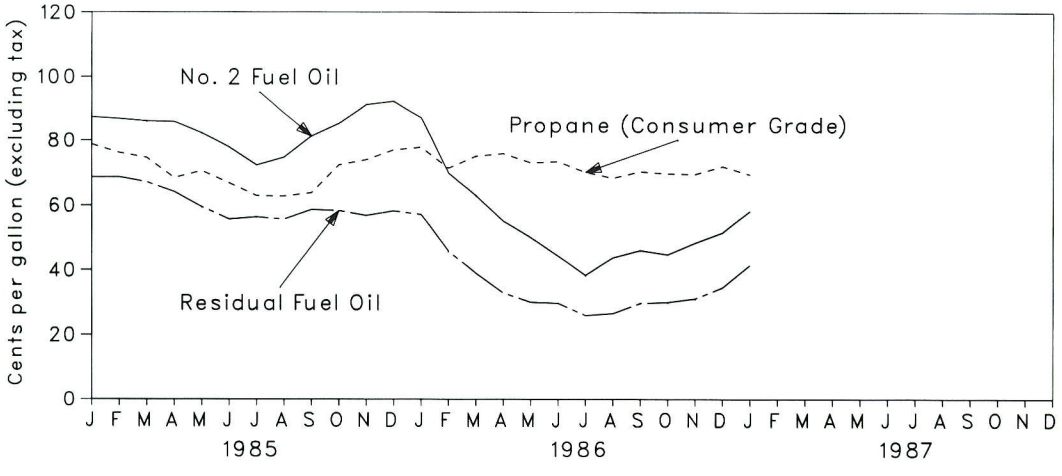


Table 9.1 Crude Oil Price Summary
(Dollars per Barrel)

	Average Domestic First Purchase Price[a]	Average FOB Cost of Crude Oil Imports[b]	Average Landed Cost of Crude Oil Imports[c]	Refiner Acquisition Cost of Crude Oil[d]		
				Domestic	Imported	Composite
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 Average	**25.88**	**27.44**	**28.46**	**28.53**	**28.88**	**28.63**
1985 January	24.26	26.34	27.02	26.89	27.49	27.02
February	23.64	26.23	26.86	26.35	26.99	26.49
March	23.89	26.50	27.13	26.60	27.20	26.76
April	24.19	26.75	27.51	26.79	27.59	27.03
May	24.18	26.38	27.21	26.91	27.60	27.12
June	24.07	25.71	26.49	26.60	27.25	26.76
July	24.04	25.43	26.37	26.60	26.57	26.59
August	23.99	25.51	26.26	26.46	26.61	26.50
September	23.96	25.56	26.48	26.41	26.56	26.45
October	24.10	25.74	26.71	26.60	26.79	26.66
November	24.27	25.81	26.73	26.73	27.12	26.86
December	24.51	24.12	25.19	26.93	26.21	26.72
Average	**24.09**	**25.83**	**26.66**	**26.66**	**26.99**	**26.75**
1986 January	23.38	21.45	22.76	25.94	24.92	25.64
February	17.84	15.17	16.28	20.42	18.02	19.81
March	12.78	12.56	13.52	15.11	14.21	14.87
April	10.83	11.58	12.46	13.06	13.14	13.08
May	10.90	10.94	12.15	12.99	13.17	13.05
June	10.84	10.82	11.88	13.11	12.25	12.82
July	9.39	9.72	10.87	11.82	10.91	11.51
August	9.92	10.56	11.50	11.95	11.87	11.92
September	11.20	11.78	12.71	13.27	12.85	13.11
October	11.10	11.97	13.10	13.20	12.78	13.05
November	11.15	R 12.62	R 13.53	13.21	13.46	13.30
December	R 11.83	R 13.80	R 14.46	R 13.67	R 14.17	R 13.85
Average	**12.66**	**R 12.44**	**R 13.41**	**14.83**	**13.98**	**14.55**
1987 January	13.88	15.53	16.25	16.04	16.46	16.19

[a]See Note 1 at end of section.
[b]See Note 2 at end of section.
[c]See Note 3 at end of section.
[d]See Note 4 at end of section.
R=Revised data.

Notes: • Geographic coverage is the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions. • Values for Average Domestic First Purchase Price and Refiner Acquisition Cost of Crude Oil for the current month, and for Average FOB and Average Landed Cost of Crude Oil Imports for the current two months, are preliminary.

Sources: See end of section.

Table 9.2 FOB Cost of U.S. Crude Oil Imports from Selected Countries[a]
(Dollars per Barrel)

	Algeria	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
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**	**[b]**	**31.11**	**35.82**	**28.53**	**34.58**	**24.78**
1981 Average	**39.09**	**35.93**	**[b]**	**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 Average	**28.04**	**29.10**	**26.93**	**26.37**	**29.39**	**27.60**	**28.90**	**24.16**
1985 January	25.47	27.43	NA	26.43	27.22	W	W	24.32
February	W	27.62	NA	26.13	27.41	W	W	24.36
March	26.50	27.01	W	26.45	28.20	NA	W	24.91
April	27.34	27.46	W	26.42	27.95	NA	27.99	24.57
May	W	27.30	W	26.34	27.81	NA	27.37	24.51
June	W	27.06	W	24.99	27.09	NA	26.65	24.32
July	W	27.44	W	24.49	27.86	NA	26.51	23.13
August	NA	26.74	W	24.81	27.83	NA	26.98	22.59
September	W	25.29	W	24.72	27.97	W	27.60	22.49
October	W	26.95	W	24.76	28.30	W	28.22	22.84
November	W	27.24	W	24.57	28.67	W	28.69	23.08
December	W	27.49	W	23.57	29.19	18.48	28.08	22.78
Average	**26.84**	**27.12**	**W**	**25.33**	**28.04**	**22.04**	**27.63**	**23.64**
1986 January	W	26.68	NA	19.81	26.18	12.60	25.15	21.40
February	W	W	W	14.24	19.93	W	18.31	12.56
March	W	13.32	W	11.55	15.77	12.07	W	10.40
April	W	10.77	W	10.22	14.61	12.13	11.78	10.48
May	12.17	11.36	W	10.47	13.64	8.03	13.25	10.90
June	W	11.81	W	9.77	12.39	8.54	12.91	9.55
July	W	10.00	W	8.43	10.98	10.15	10.38	7.71
August	W	9.74	W	10.55	11.53	9.34	10.45	9.96
September	W	12.22	NA	11.58	13.45	10.51	13.47	10.16
October	W	12.47	W	11.40	13.86	11.34	13.65	10.26
November	W	12.05	NA	11.78	[R] 13.88	[R] 13.65	14.05	[R] 10.73
December	W	W	W	[R] 12.73	[R] 14.65	15.27	15.26	[R] 12.29
Average	**[R] 13.18**	**13.17**	**W**	**[R] 11.75**	**14.35**	**[R] 11.26**	**[R] 13.77**	**[R] 10.86**
1987 January	16.50	W	NA	15.55	17.39	W	17.26	13.37

[a]The Free on Board (FOB) cost at the country of origin excludes all costs related to insurance and transportation. See Note 2 at end of section.
[b]No crude oil was imported.
R=Revised data. NA=Not available. W=Value withheld to avoid disclosure of company data.
Notes: • Values for the current two months are preliminary. • 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. • Cargoes that were purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported.
Sources: See end of section.

Table 9.3 Landed Cost of U.S. Crude Oil Imports from Selected Countries[a]
(Dollars per Barrel)

	Algeria	Canada	Indonesia	Iran	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela
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**	**(b)**	**31.80**	**37.05**	**30.02**	**35.88**	**25.86**
1981 Average	**40.49**	**32.16**	**37.57**	**(b)**	**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 Average	**29.08**	**26.59**	**30.64**	**28.67**	**26.87**	**30.50**	**29.50**	**29.60**	**25.15**
1985 January	26.28	25.30	29.26	NA	26.80	28.70	W	W	25.36
February	26.06	24.00	28.84	NA	26.51	28.55	W	W	25.37
March	27.09	25.17	28.40	W	26.72	29.42	NA	W	25.73
April	28.18	26.14	28.99	W	26.67	28.99	W	28.70	25.44
May	W	26.30	28.98	W	26.66	28.73	NA	28.07	25.26
June	W	26.24	28.73	24.55	25.29	27.81	NA	27.54	25.13
July	27.35	25.97	28.95	24.33	24.76	28.56	W	27.60	23.81
August	W	26.05	28.14	25.76	24.96	28.54	NA	27.61	23.45
September	W	25.94	26.79	26.47	25.00	28.76	W	28.23	23.38
October	W	25.90	28.47	26.56	25.09	29.06	26.69	29.00	23.57
November	W	25.91	29.00	27.00	24.91	29.61	24.72	29.45	23.80
December	W	25.56	28.82	W	23.94	30.38	21.09	28.75	23.53
Average	**27.46**	**25.71**	**28.67**	**25.79**	**25.63**	**28.96**	**24.72**	**28.35**	**24.43**
1986 January	W	23.92	28.44	NA	20.17	27.83	14.41	25.38	22.21
February	W	17.31	W	W	14.58	21.43	14.08	18.62	13.27
March	W	13.02	14.94	W	11.87	16.57	13.66	W	11.01
April	W	11.57	12.29	W	10.53	15.21	13.64	12.46	11.19
May	13.05	12.04	12.80	W	10.81	14.55	10.57	14.17	11.58
June	W	12.71	13.20	11.29	10.08	14.01	10.49	13.65	10.24
July	W	11.20	11.72	W	8.73	12.12	11.33	11.83	8.45
August	W	11.70	11.37	11.18	10.87	12.38	11.27	11.56	10.66
September	12.88	12.50	13.67	W	11.95	14.13	12.11	14.15	10.86
October	W	12.47	14.18	W	11.74	14.64	12.84	14.76	10.87
November	13.19	R 12.49	13.96	NA	12.13	R 14.64	R 14.57	14.63	R 11.24
December	W	R 12.84	14.32	W	R 13.04	R 15.29	R 16.14	R 15.42	R 12.88
Average	**14.33**	**13.37**	**14.59**	R **12.28**	R **12.07**	**15.25**	R **12.77**	R **14.51**	R **11.48**
1987 January	17.08	14.56	16.23	NA	15.91	18.02	16.36	17.44	14.21

[a]See Note 3 at end of section.
[b]No crude oil was imported.
R=Revised data. NA=Not available. W=Value withheld to avoid disclosure of company data.
Notes: • Values for the current two months are preliminary. • 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. • Cargoes that were purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported.
Sources: See end of section.

Table 9.4 U.S. City Average Retail Prices for Motor Gasoline[a]
(Cents per Gallon, Including Tax)

	Leaded Regular	Unleaded Regular	Unleaded Premium	Average for All Types[b]
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[c]	**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 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
May	85.2	92.3	107.5	92.7
June	88.5	95.5	110.0	95.8
July	82.2	89.0	104.5	89.5
August	77.8	84.3	99.9	84.8
September	79.7	86.0	101.0	86.4
October	77.1	83.1	98.7	83.7
November	76.2	82.1	98.0	82.7
December	76.4	82.3	98.4	83.0
Average	**85.7**	**92.7**	**108.5**	**93.1**
1987 January	80.6	86.2	100.7	86.8
February	84.8	91.1	104.7	85.1

[a]See Note 5 at end of section.
[b]Also includes types of gasoline not shown separately.
[c]In September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. From September 1981 forward, the average for all types category, gasohol is 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 end of section.

Table 9.5 Refiner and Gas Plant Operator Sales Prices of Residual Fuel Oil[a]
(Cents per Gallon, Excluding Tax)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	**29.3**	**31.4**	**24.5**	**27.5**	**26.3**	**29.8**
1979 Average	**45.0**	**46.8**	**36.6**	**38.9**	**39.9**	**43.6**
1980 Average	**60.8**	**67.5**	**47.9**	**52.3**	**52.8**	**60.7**
1981 Average	**74.8**	**82.9**	**62.2**	**67.3**	**66.3**	**75.6**
1982 Average	**69.5**	**74.7**	**57.2**	**61.1**	**61.2**	**67.6**
1983 Average	**64.3**	**69.5**	**59.1**	**61.1**	**60.9**	**65.1**
1984 Average	**68.5**	**72.0**	**63.9**	**65.9**	**65.4**	**68.7**
1985 January	67.6	71.2	63.4	66.5	64.8	68.6
February	67.6	71.1	63.4	66.0	65.0	68.6
March	66.2	69.8	60.8	65.0	62.4	67.1
April	63.0	67.5	58.8	61.9	60.3	64.1
May	58.1	61.2	53.5	58.0	55.0	59.5
June	54.9	59.9	50.6	52.7	52.4	55.6
July	56.4	58.9	52.8	54.5	53.9	56.3
August	55.2	57.1	52.0	53.8	53.2	55.6
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	52.3	54.4	55.1	58.2
Average	**61.0**	**64.4**	**56.0**	**58.2**	**57.7**	**61.0**
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	37.6	42.7	28.3	35.7	31.6	39.0
April	31.7	36.8	25.8	30.1	28.0	33.0
May	30.5	35.0	23.5	26.8	26.5	30.1
June	30.1	32.3	22.9	26.8	26.2	29.8
July	23.8	27.4	20.3	24.4	21.9	25.9
August	26.9	29.3	21.8	23.2	23.6	26.5
September	29.9	31.5	26.4	28.2	28.1	29.8
October	28.9	31.9	26.2	28.8	27.6	30.1
November	29.5	33.7	25.1	29.0	27.4	31.2
December	34.1	37.7	[R] 27.7	31.6	30.3	34.7
Average	**33.0**	**37.2**	**28.8**	**31.7**	**30.5**	**34.3**
1987 January	39.9	44.5	35.7	37.9	37.7	41.5

[a]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 commercial customers.

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

Sources: See end of section.

Table 9.6 Refiner and Gas Plant Operator Sales Prices of Petroleum Products for Resale[a]

(Cents per Gallon, Excluding Tax)

	Finished Motor Gasoline[b]	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	**43.4**	**53.7**	**38.6**	**40.4**	**36.9**	**36.5**	**23.7**
1979 Average	**63.7**	**72.1**	**66.0**	**62.4**	**56.9**	**57.4**	**29.1**
1980 Average	**94.1**	**112.8**	**86.8**	**86.4**	**80.3**	**80.1**	**41.5**
1981 Average	**106.4**	**125.0**	**101.2**	**106.6**	**97.6**	**97.2**	**46.6**
1982 Average	**97.3**	**122.8**	**95.3**	**101.8**	**91.4**	**91.4**	**42.7**
1983 Average	**88.2**	**117.8**	**85.4**	**89.2**	**81.5**	**80.8**	**48.4**
1984 Average	**83.2**	**116.5**	**83.0**	**91.6**	**82.1**	**80.3**	**45.0**
1985 January	75.2	114.5	79.6	85.8	75.7	74.9	40.1
February	76.4	114.0	79.5	86.5	75.2	74.2	39.3
March	81.1	113.6	78.9	85.7	76.1	75.6	38.0
April	86.0	112.6	79.4	84.7	79.3	79.2	37.9
May	87.5	113.2	78.2	80.4	76.5	78.9	38.1
June	87.7	113.7	76.1	75.9	72.9	75.5	37.0
July	87.3	113.6	75.2	76.9	70.3	72.3	36.3
August	85.0	113.3	76.8	79.7	72.1	72.5	36.5
September	83.2	113.0	79.2	85.9	77.0	76.3	37.6
October	83.1	113.0	81.6	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	46.8
Average	**83.5**	**113.0**	**79.4**	**87.4**	**77.6**	**77.2**	**39.8**
1986 January	76.7	109.8	77.0	83.8	73.7	73.3	43.9
February	65.0	108.9	68.0	67.2	56.4	56.0	35.4
March	52.4	102.2	58.1	60.9	51.9	47.4	29.2
April	51.8	98.5	49.4	52.6	45.9	46.3	27.3
May	57.9	95.6	46.7	50.4	45.2	44.1	28.5
June	54.5	92.2	44.5	50.1	40.0	39.6	28.3
July	45.8	86.7	39.9	40.7	34.8	34.0	25.3
August	47.9	83.0	39.3	48.1	40.0	38.8	24.6
September	48.7	81.6	42.2	49.2	41.6	41.8	24.8
October	46.1	82.9	43.7	47.8	41.0	40.9	25.1
November	47.1	81.8	43.5	51.2	42.4	41.8	24.3
December	47.3	81.3	45.3	53.3	44.2	R 43.4	23.6
Average	**53.1**	**91.1**	**49.7**	**60.6**	**48.7**	**45.2**	**29.0**
1987 January	53.3	82.9	49.0	59.1	50.6	49.5	25.0

[a]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.

[b]See Note 5 at end of section.

R=Revised data.

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

Sources: See end of section.

Table 9.7 Refiner and Gas Plant Operator Sales Prices of Petroleum Products to End Users[a]

(Cents per Gallon, Excluding Tax)

	Finished Motor Gasoline[b]	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	**48.4**	**51.6**	**38.7**	**42.1**	**40.0**	**37.7**	**33.5**
1979 Average	**71.3**	**68.9**	**54.7**	**58.5**	**51.6**	**58.5**	**35.7**
1980 Average	**103.5**	**108.4**	**86.8**	**90.2**	**78.8**	**81.8**	**48.2**
1981 Average	**114.7**	**130.3**	**102.4**	**112.3**	**91.4**	**99.5**	**56.5**
1982 Average	**106.0**	**131.2**	**96.3**	**108.9**	**90.5**	**94.2**	**59.2**
1983 Average	**95.4**	**125.5**	**87.8**	**96.1**	**91.6**	**82.6**	**70.9**
1984 Average	**90.7**	**123.4**	**84.2**	**103.6**	**91.6**	**82.3**	**73.7**
1985 January	84.6	121.7	81.4	105.9	87.4	77.6	78.7
February	83.6	121.1	80.9	103.7	86.8	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	68.4
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	78.5	86.0	72.3	74.5	62.9
August	94.0	118.9	77.7	89.9	74.7	73.8	62.8
September	91.9	119.5	78.1	96.1	81.2	78.1	63.8
October	90.8	118.9	78.8	100.6	85.2	81.6	72.4
November	91.7	118.3	80.1	106.8	91.3	85.5	74.0
December	91.9	117.0	80.9	111.5	92.3	85.6	77.0
Average	**91.2**	**120.1**	**79.6**	**103.0**	**84.9**	**78.9**	**71.7**
1986 January	89.1	116.2	80.5	105.4	87.1	78.1	77.8
February	80.3	117.2	77.9	93.4	69.9	61.5	71.4
March	65.2	111.5	69.0	85.0	63.0	51.2	75.1
April	59.1	102.9	57.3	79.4	55.0	48.5	75.9
May	63.8	102.2	51.9	67.2	50.0	46.4	73.1
June	64.7	97.0	48.2	49.3	44.4	42.0	73.5
July	57.8	94.3	43.4	48.2	38.4	36.5	70.2
August	55.3	94.9	41.0	62.5	43.8	40.5	68.4
September	56.1	93.2	41.4	75.1	46.1	43.3	70.4
October	53.1	91.1	41.6	69.5	44.8	41.9	69.8
November	53.1	87.2	42.4	74.5	48.3	43.2	69.6
December	54.8	88.8	42.9	76.8	51.5	45.5	72.0
Average	**62.3**	**100.1**	**R 52.9**	**79.3**	**56.0**	**47.9**	**72.5**
1987 January	59.4	87.9	45.9	82.8	58.2	50.5	69.5

[a]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.

[b]See Note 5 at end of section.

R=Revised data.

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

Sources: See end of section.

Table 9.8a Sales Prices of No. 2 Distillate to Residences for Selected States[a]
(Cents per Gallon, Excluding Tax)

	CT	ME	MA	NH	RI	VT	DE	DC
1978 Average	**50.1**	**48.6**	**48.8**	**50.3**	**50.7**	**50.8**	**47.8**	**50.7**
1979 Average	**72.0**	**68.8**	**70.9**	**72.5**	**72.8**	**72.5**	**68.2**	**74.2**
1980 Average	**98.0**	**96.3**	**97.8**	**100.4**	**101.1**	**101.5**	**95.4**	**102.6**
1981 Average	**121.7**	**120.4**	**121.3**	**123.7**	**123.8**	**125.4**	**117.3**	**127.4**
1982 Average	**118.3**	**115.5**	**117.6**	**117.4**	**120.1**	**120.1**	**111.3**	**124.5**
1983 Average	**109.1**	**102.8**	**109.1**	**104.1**	**110.5**	**112.9**	**106.0**	**117.0**
1984 Average	**112.1**	**103.9**	**111.6**	**108.4**	**111.4**	**111.9**	**109.6**	**118.7**
1985 January	106.9	97.9	107.2	100.7	108.1	106.9	103.8	112.1
February	107.2	98.5	107.1	102.7	106.9	107.3	104.0	117.1
March	106.8	100.6	107.3	103.3	106.2	107.9	104.6	115.9
April	107.0	101.5	106.6	102.3	106.8	106.5	104.1	113.9
May	106.2	99.4	104.5	99.9	102.1	105.4	100.7	112.4
June	103.5	95.4	101.0	94.4	98.6	103.7	96.4	107.2
July	100.6	91.4	98.3	91.2	97.4	101.4	96.2	107.3
August	99.6	90.5	96.2	91.8	95.9	101.4	97.5	105.5
September	100.5	94.0	100.7	97.6	101.0	104.7	98.8	107.1
October	106.6	99.5	104.6	102.3	104.4	106.7	102.7	109.9
November	111.4	103.7	110.7	108.0	111.6	111.1	107.0	114.4
December	114.2	105.5	111.1	108.9	110.9	113.0	110.5	117.2
Average	**108.0**	**99.7**	**107.0**	**102.4**	**106.7**	**107.7**	**104.6**	**114.3**
1986 January	111.6	101.1	105.9	103.2	101.9	109.0	102.3	116.3
February	99.5	90.9	90.6	88.5	93.5	100.2	93.9	105.4
March	93.4	86.5	85.9	84.2	84.6	95.6	87.1	97.6
April	86.2	77.9	76.7	74.4	72.1	89.0	77.1	93.2
May	80.8	74.5	74.2	70.6	76.6	84.7	74.2	87.9
June	77.7	68.5	68.8	65.4	72.6	78.9	73.7	81.7
July	68.5	59.3	64.6	62.9	69.1	70.9	67.3	74.7
August	67.0	58.5	65.1	63.4	69.0	68.9	66.6	70.7
September	68.4	58.2	67.9	62.7	69.2	70.1	66.9	72.1
October	68.6	59.1	68.4	63.8	68.7	70.3	66.1	74.2
November	69.5	59.7	70.0	65.0	72.1	71.3	67.9	76.9
December	72.5	[R] 67.1	73.2	69.9	[R] 74.6	[R] 72.6	[R] 71.2	[R] 80.7
Average	**89.0**	**74.4**	**82.3**	**75.6**	**82.3**	**86.7**	**85.0**	[R] **93.1**
1987 January	80.0	73.1	80.6	76.5	79.5	78.2	78.2	87.2

[a]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 - Minnesota, OH - Ohio, WI - Wisconsin, ID - Idaho, AK - Alaska, OR - Oregon, WA - Washington.

Footnotes continued on following page.

Table 9.8b Sales Prices of No. 2 Distillate to Residences for Selected States[a] (continued)

(Cents per Gallon, Excluding Tax)

	MD	NJ	NY	PA	VA	WV	IL	IN
1978 Average	**49.2**	**49.6**	**50.1**	**48.8**	**49.1**	**46.2**	**46.5**	**48.5**
1979 Average	**70.1**	**71.0**	**71.2**	**69.8**	**70.4**	**65.1**	**68.8**	**72.7**
1980 Average	**97.9**	**97.9**	**98.2**	**96.4**	**98.5**	**92.2**	**95.8**	**99.6**
1981 Average	**121.4**	**121.5**	**123.2**	**118.1**	**120.5**	**115.0**	**114.9**	**118.5**
1982 Average	**117.1**	**117.4**	**120.5**	**113.7**	**117.7**	**109.3**	**110.9**	**114.3**
1983 Average	**110.3**	**107.9**	**112.1**	**105.8**	**108.7**	**101.0**	**100.4**	**100.7**
1984 Average	**113.5**	**111.0**	**115.5**	**107.9**	**110.5**	**102.1**	**100.1**	**103.1**
1985 January	107.5	105.0	111.3	102.9	106.2	98.4	95.2	98.6
February	108.6	105.7	112.0	103.2	106.8	98.3	94.4	97.8
March	108.3	105.1	111.3	102.1	105.8	98.1	94.5	96.3
April	109.6	105.2	111.0	101.0	105.4	96.0	96.6	98.6
May	108.2	103.3	109.8	99.7	105.9	93.8	96.4	97.4
June	104.4	99.6	108.1	94.9	104.3	90.7	92.0	97.6
July	101.2	97.4	105.3	92.1	99.3	90.3	89.7	93.3
August	98.9	97.5	105.5	92.5	98.9	88.6	90.6	92.9
September	103.3	101.3	104.5	96.8	101.9	96.2	95.6	96.5
October	106.2	103.3	107.1	98.6	105.6	98.7	100.1	101.2
November	111.9	109.3	114.4	105.5	108.4	104.4	104.0	105.3
December	112.7	112.0	115.0	109.0	109.9	104.7	103.4	105.3
Average	**108.8**	**105.9**	**111.3**	**102.3**	**106.3**	**98.0**	**97.5**	**99.1**
1986 January	112.2	107.7	111.4	104.7	107.0	100.1	97.6	99.8
February	99.9	98.3	102.6	95.3	98.2	87.8	83.1	84.9
March	93.9	91.7	96.3	86.9	90.9	79.7	74.7	75.5
April	88.6	84.0	87.5	77.9	84.2	70.8	68.6	73.9
May	85.0	80.1	85.1	72.6	74.6	67.4	72.9	67.2
June	79.7	75.6	81.3	66.0	74.4	63.4	67.3	66.5
July	75.8	76.8	72.9	64.1	67.8	53.9	69.4	60.1
August	70.7	72.3	71.6	62.6	71.1	59.7	66.5	65.6
September	70.3	73.4	74.0	66.6	70.5	62.1	68.4	66.7
October	72.4	74.7	74.0	66.5	69.6	64.0	63.0	65.2
November	73.4	74.6	76.1	66.4	68.3	68.3	72.8	65.4
December	77.2	[R] 76.7	[R] 78.5	[R] 68.3	70.4	72.6	72.8	[R] 68.7
Average	**91.4**	[R] **90.2**	**91.1**	**81.5**	**86.2**	**74.9**	**74.3**	[R] **74.8**
1987 January	82.4	83.0	83.4	74.9	78.1	74.0	76.8	73.1

Footnotes continued on following page.

Table 9.8c Sales Prices of No. 2 Distillate to Residences for Selected States[a] (continued)

(Cents per Gallon, Excluding Tax)

	MI	MN	OH	WI	ID	AK	OR	WA	U.S. Average
1978 Average	**47.9**	**47.8**	**47.4**	**44.7**	**43.6**	**53.2**	**45.8**	**48.6**	**49.0**
1979 Average	**70.9**	**72.4**	**68.6**	**67.3**	**62.1**	**68.2**	**68.0**	**69.7**	**70.4**
1980 Average	**97.8**	**99.9**	**91.9**	**91.5**	**91.6**	**97.8**	**97.3**	**100.8**	**97.4**
1981 Average	**118.3**	**118.4**	**113.2**	**109.1**	**110.4**	**118.0**	**111.4**	**116.5**	**119.4**
1982 Average	**113.9**	**115.1**	**110.2**	**107.8**	**110.4**	**117.4**	**111.6**	**117.6**	**116.0**
1983 Average	**106.4**	**103.1**	**101.3**	**101.2**	**101.8**	**108.8**	**103.6**	**109.0**	**107.8**
1984 Average	**105.0**	**104.1**	**102.1**	**101.0**	**98.5**	**106.9**	**99.3**	**102.6**	**109.1**
1985 January	102.1	99.5	98.3	97.3	97.4	108.6	97.0	100.6	104.9
February	101.0	99.8	98.7	96.2	96.9	107.6	96.6	99.8	105.4
March	101.3	101.0	97.9	96.4	96.6	112.8	95.7	100.3	105.0
April	100.0	101.1	99.8	97.7	95.7	107.0	96.5	99.2	105.3
May	98.3	103.8	99.6	99.5	96.0	106.9	96.7	98.1	103.6
June	98.4	104.3	97.1	94.2	95.9	107.3	95.5	99.2	100.7
July	97.4	100.5	92.9	93.0	94.8	108.4	95.3	97.3	98.0
August	97.2	100.1	91.8	93.0	94.5	106.9	93.0	96.7	97.3
September	99.1	98.7	95.6	94.9	94.3	109.2	93.4	97.6	99.6
October	101.8	101.1	97.9	99.1	97.2	109.1	94.0	100.0	103.0
November	103.5	105.7	104.4	102.0	97.9	106.1	98.8	104.4	108.6
December	107.1	105.2	105.9	103.2	98.8	106.5	102.3	106.1	110.5
Average	**102.1**	**101.9**	**99.7**	**98.3**	**97.2**	**108.3**	**97.1**	**101.1**	**105.3**
1986 January	102.6	100.5	100.7	96.4	97.1	106.8	100.1	104.5	106.4
February	91.9	86.3	91.9	83.9	90.9	104.9	83.7	90.4	95.8
March	80.5	80.1	80.8	76.0	76.5	113.6	66.9	75.3	88.7
April	74.6	76.3	78.2	74.0	69.8	95.6	62.5	74.9	80.7
May	72.3	79.4	75.2	71.8	74.7	94.3	64.1	71.1	77.4
June	65.3	74.5	69.1	69.2	66.8	89.3	60.0	65.2	72.9
July	66.6	69.6	62.3	62.7	63.8	84.5	54.6	60.2	66.9
August	69.9	67.6	62.5	63.6	58.5	84.3	55.6	60.5	66.4
September	70.8	70.0	64.2	67.1	60.5	89.3	61.9	66.9	68.5
October	70.0	67.8	61.5	62.7	62.1	79.1	62.5	68.2	67.8
November	70.4	68.0	61.0	65.6	63.5	80.0	62.7	68.8	69.8
December	R 72.8	68.7	R 64.8	R 68.3	63.5	85.3	63.9	R 68.4	72.5
Average	**81.2**	**79.3**	**R 77.7**	**R 75.3**	**73.8**	**94.4**	**70.4**	**R 77.6**	**84.4**
1987 January	76.3	70.6	69.1	72.2	63.8	89.0	68.1	72.9	78.4

Footnotes continued.

R=Revised data.

Notes: • Values for the current month are preliminary. • Prices prior to 1983 are Energy Information Administration estimates. See Note 6 at end of section.

Sources: See end of section.

Table 9.9 Average Retail Electricity Prices[a]
(Cents per kilowatthour)

	Residential		Commercial		Industrial		Other		Total[b]	
	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series	Old Series[c]	New Series
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 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**		**7.47**		**5.16**		**6.96**		**6.71**	
1986 January[d]	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
April	7.79	7.41	7.45	7.21	5.01	4.83	7.25	7.04	6.60	6.36
May	7.82	7.43	7.39	7.11	5.05	4.87	7.22	6.85	6.59	6.33
June	8.11	[e] 7.42	7.56	7.26	5.02	4.84	7.21	6.71	6.81	6.45
July	8.20	7.77	7.49	7.08	5.32	5.08	7.19	6.77	7.01	6.67
August	8.19	7.71	7.50	7.23	5.33	5.08	6.99	6.57	7.01	6.68
September	8.16	7.77	7.57	7.29	5.20	4.99	7.33	6.91	6.91	6.62
October	7.78	7.43	7.33	7.13	5.05	4.84	6.89	6.21	6.60	6.34
November	7.67	7.39	7.31	6.97	4.90	4.44	7.01	6.52	6.51	6.09
December	7.29	7.01	7.05	6.86	4.83	4.68	6.65	6.26	6.36	6.15
Average	**7.79**	**7.41**	**7.40**	**7.13**	**5.09**	**4.87**	**7.09**	**6.64**	**6.70**	**6.40**
1987 January[d]	[E] 7.24	[E] 6.93	[E] 7.06	[E] 6.85	[E] 4.85	[E] 4.71	[E] 6.86	[E] 6.47	[E] 6.40	[E] 6.18

[a]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.

[b]Average price for total sales to ultimate consumers.

[c]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.

[d]See Note 7 at end of section.

[e]The residential price reflects unbilled sales for eight utilities. Major unbilled residential sales were reported in the West South Central Census Division.

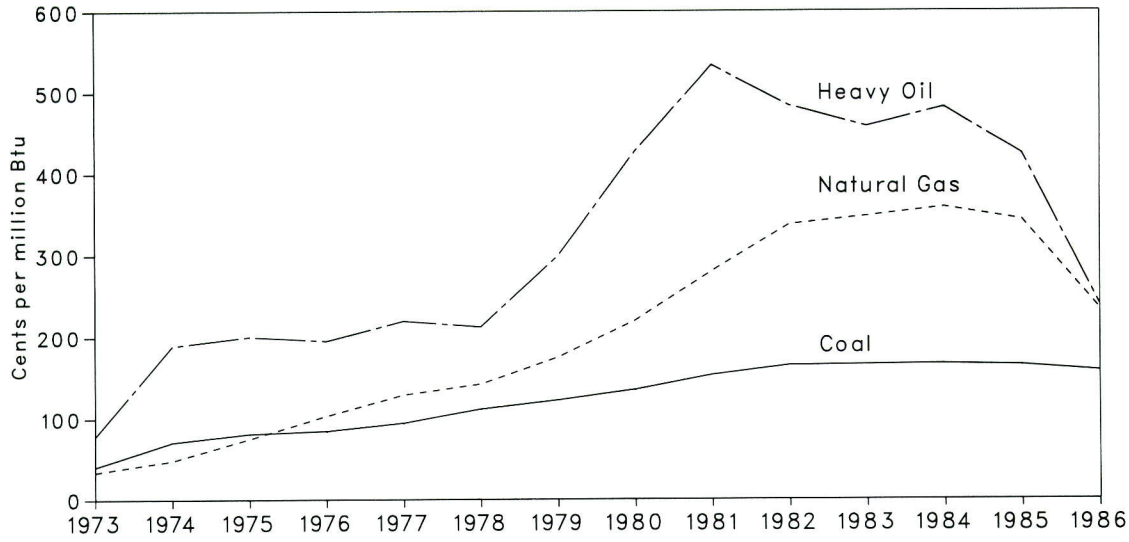
E=Estimated data.

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

Sources: See end of section.

Figure 9.4 Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants

Yearly



Monthly

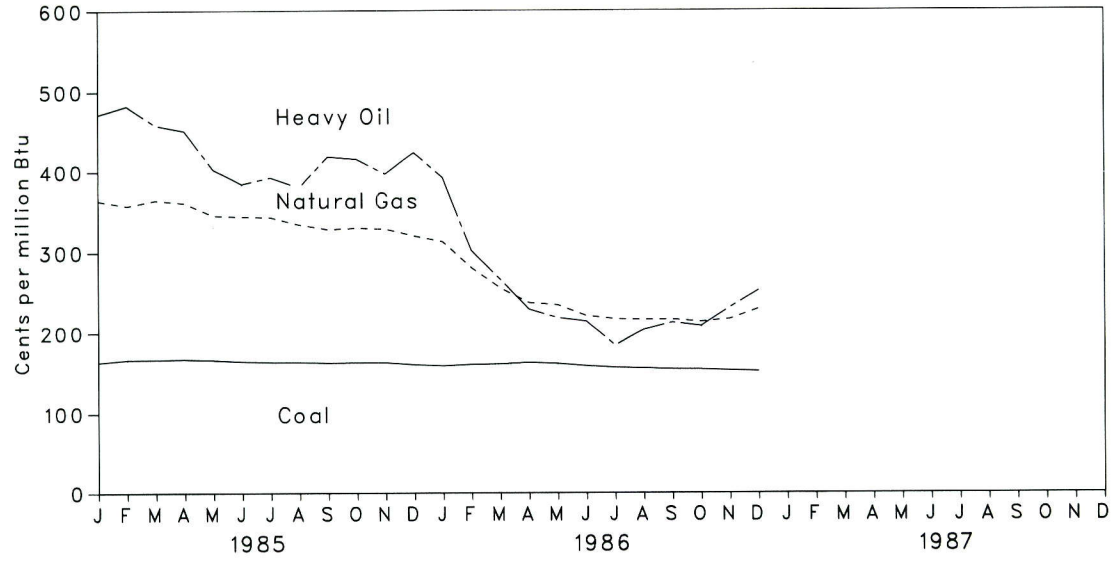


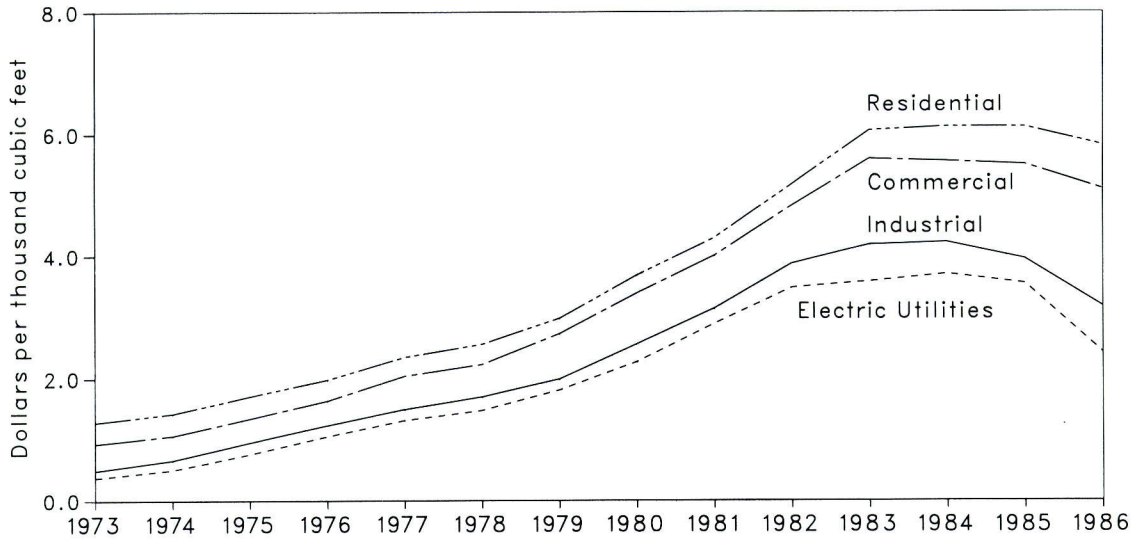
Table 9.10 Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants[a]
(Cents per million Btu)

	Coal	Heavy Oil[b]	Natural Gas[c]	All Fossil Fuels[b]
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 Average	**166.4**	**481.2**	**358.3**	**219.2**
1985 January	164.1	472.0	364.4	218.7
February	167.0	482.4	358.1	218.1
March	167.1	458.8	364.9	209.5
April	167.6	452.1	361.6	210.6
May	166.8	403.1	346.1	206.3
June	165.0	384.9	344.8	208.1
July	164.2	392.8	344.0	217.4
August	164.0	380.5	334.8	211.1
September	163.2	419.0	328.7	204.9
October	163.5	415.8	330.4	204.3
November	163.6	397.2	329.3	204.5
December	161.0	424.3	320.9	202.9
Average	**164.8**	**424.4**	**343.1**	**209.6**
1986 January	159.5	392.6	313.5	194.7
February	161.1	302.3	281.0	185.4
March	161.7	266.5	255.8	179.8
April	163.6	229.7	237.8	177.7
May	162.3	218.9	235.1	177.7
June	159.2	214.4	221.4	174.1
July	157.0	184.3	217.2	171.1
August	156.1	203.8	216.4	170.4
September	154.9	213.0	216.7	168.6
October	154.7	208.6	214.0	165.9
November	153.3	231.8	217.3	166.1
December	152.2	252.7	230.0	170.3
Average	**157.9**	**239.3**	**234.2**	**174.9**

[a]Data through 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 1983, data cover steam-electric utility plants with a capacity of 50 megawatts or greater.
[b]See Note 8 at end of section.
[c]Includes supplemental gaseous fuels.
Note: Geographic coverage is the 50 States and the District of Columbia.
Sources: See end of section.

Figure 9.5 Natural Gas Prices To Consumers

Yearly



Monthly

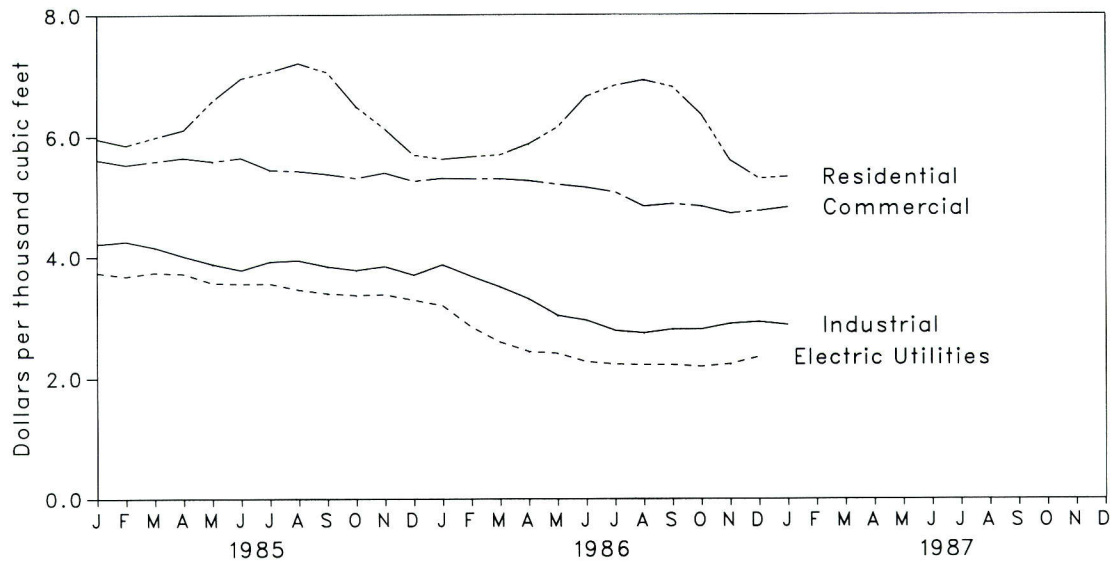


Table 9.11 Natural Gas Prices[a]
(Dollars per Thousand Cubic Feet)

	Wellhead	Major Interstate Pipeline Companies		City Gate	Delivered to Consumers[b]				
		Imports	Purchases from Producers		Residential	Commercial	Industrial	Electric Utilities[c]	Average
1973 Average	**0.22**	**NA**	**NA**	**NA**	**1.29**	**0.94**	**0.50**	**0.38**	**0.73**
1974 Average	**.30**	**NA**	**NA**	**NA**	**1.43**	**1.07**	**.67**	**.51**	**.89**
1975 Average	**.45**	**NA**	**NA**	**NA**	**1.71**	**1.35**	**.96**	**.77**	**1.19**
1976 Average	**.58**	**NA**	**NA**	**NA**	**1.98**	**1.64**	**1.24**	**1.06**	**1.47**
1977 Average	**.79**	**NA**	**NA**	**NA**	**2.35**	**2.04**	**1.50**	**1.32**	**1.78**
1978 Average	**.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 Average	**2.66**	**4.08**	**2.91**	**3.95**	**6.12**	**5.55**	**4.22**	**3.70**	**4.85**
1985 January	2.64	3.21	2.89	3.89	5.97	5.62	4.22	3.74	5.12
February	2.71	3.08	2.87	3.94	5.86	5.53	4.26	3.68	5.16
March	2.62	3.29	2.90	3.97	5.99	5.59	4.16	3.74	5.06
April	2.64	3.39	2.86	3.91	6.11	5.65	4.01	3.72	4.89
May	2.53	3.32	2.89	3.89	6.59	5.59	3.88	3.57	4.64
June	2.58	3.40	3.00	3.86	6.96	5.65	3.78	3.56	4.50
July	2.51	3.41	2.82	3.69	7.07	5.44	3.92	3.56	4.51
August	2.47	3.28	2.69	3.70	7.21	5.42	3.94	3.46	4.43
September	2.42	3.28	2.76	3.68	7.06	5.37	3.84	3.40	4.44
October	2.37	3.16	2.68	3.59	6.50	5.30	3.78	3.37	4.48
November	2.36	2.88	2.62	3.46	6.13	5.39	3.84	3.38	4.67
December	2.28	2.79	2.67	3.45	5.70	5.25	3.70	3.29	4.74
Average	**2.51**	**3.18**	**2.81**	**3.75**	**6.12**	**5.50**	**3.95**	**3.55**	**4.72**
1986 January	2.28	2.81	2.64	3.52	5.63	5.30	3.87	R 3.20	R 4.89
February	2.26	2.79	2.60	3.52	5.67	5.29	3.68	R 2.85	4.82
March	2.16	3.05	2.48	3.50	5.70	5.29	3.51	R 2.60	R 4.67
April	2.00	3.14	2.37	3.33	5.88	5.26	3.31	R 2.44	R 4.37
May	1.87	2.75	2.47	3.15	6.15	5.20	3.04	2.41	4.02
June	1.76	2.56	2.48	3.11	6.66	5.15	2.96	R 2.27	R 3.73
July	1.70	2.78	2.40	3.08	6.84	5.07	2.79	R 2.23	R 3.49
August	1.67	2.22	2.59	3.04	6.93	4.84	2.75	R 2.22	3.47
September	1.67	2.26	2.06	3.02	6.82	4.88	2.81	R 2.22	R 3.61
October	1.66	2.22	2.27	2.94	6.36	4.84	2.81	R 2.19	R 3.79
November	1.65	1.84	2.10	2.90	5.60	4.72	2.90	R 2.23	R 4.07
December	1.64	1.99	2.16	2.99	5.29	4.76	2.93	2.35	4.27
Average	**1.87**	**2.51**	**2.38**	**3.22**	**5.82**	**5.10**	**3.18**	**2.43**	**4.26**
1987 January	NA	1.90	2.16	2.98	5.32	4.82	2.88	NA	NA

[a]Prices shown on this page are intended to include all taxes. See Note 9 at end of section.
[b]Includes supplemental gaseous fuels.
[c]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.
[d]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 through 1985 are final. Subsequent data are preliminary.
Sources: See end of section.

Notes and Sources for the Price Section

Notes

1. The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the price represented an estimate of the average of posted prices; after February 1976, the price represents an average of actual first purchase prices. The data series was previously called "Actual Domestic Wellhead Price."

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. 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.

7. 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. 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. Data are shown for both the old and new series. Publication of both series will continue until sufficient information exists to estimate historical data based on the new series.

8. 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.

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:

- 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."

Section 10. International

Crude Oil Production. World crude oil production during January 1987 was 54.4 million barrels per day, down 1.2 million from the level in the previous month.

Organization of Petroleum Exporting Countries (OPEC) production during January 1987 averaged 16.6 million barrels per day, down 1.5 million from the level during the previous month. Production by the Arab members of OPEC during January 1987 averaged 9.8 million barrels per day, down 1.5 million from the December 1986 level. During January 1987, production decreased in Saudia Arabia by 1.5 million barrels per day, in Kuwait by 150,000, in Libya by 40,000, in the United Arab Emirates by 20,000, and in Qatar by 15,000 barrels per day. Production increased in Iraq by 150,000 barrels per day, but remained the same in Algeria as during the previous month. Among non-Arab OPEC countries, production decreased in Venezuela by 140,000 barrels per day, in Nigeria by 85,000, and in Indonesia by 50,000 barrels per day. Production increased in Iran by 350,000 barrels per day.

Among the non-OPEC nations in January 1987, production increased in the United Kingdom by 291,000 barrels per day, in Canada by 55,000, and in the United States by 6,000 barrels per day. Production decreased in Mexico by 69,000 barrels per day.

Petroleum Consumption. For all Organization for Economic Cooperation and Development (OECD) countries, consumption in 1986 was 2.3 percent higher than in 1985. In December 1986, consumption in all OECD countries was 37.5 million barrels per day, 3.7 percent higher than the level in December 1985. Consumption was higher in Japan by 3.5 percent and in the United States by 1.7 percent, but lower in Canada by 1.1 percent, compared with levels 1 year earlier. Consumption in all European OECD countries during 1986 was 3.1 percent higher than in 1985. In December 1986 consumption in all European OECD countries combined was 12.5 million barrels per day, 7.1 percent above the level in the previous December. Consumption was higher in the United Kingdom by 12.5 percent, in France by 8.9 percent, in West Germany by 4.4 percent, and in Italy by 2.6 percent, compared with levels 1 year earlier.

Petroleum Stocks. For all OECD countries, petroleum ending stocks in December 1986 totaled 3.4 billion barrels, 4.2 percent higher than at the end of December 1985. Stocks were higher in the United States by 4.9 percent and in Japan by 3.0 percent, but lower in Canada by 1.8 percent, compared with levels 1 year earlier. Ending stock levels in all European OECD countries in December 1986 were 1.1 billion barrels, 4.1 percent higher than in December 1985. Stocks were up in West Germany by 8.6 percent and the United Kingdom by 0.8 percent, but down in France by 9.4 percent and in Italy by 1.3 percent, compared with levels 1 year earlier.

Nuclear Electricity Generation. In January 1987, the 20 non-Communist countries with nuclear power capacity generated 134.3 gross terawatthours (billion kilowatthours) of nuclear generated electricity, 4.8 percent more than the January 1986 generation. Five of those 20 countries accounted for over 75 percent of the total generation: the United States (30.6 percent), France (20.3 percent), Japan (10.9 percent), West Germany (8.9 percent), and Sweden (5.4 percent).

Based on *Nucleonics Week* information, as of January 31, 1987, there were 321 operable nuclear power generating units in the 20 non-Communist countries. These units had a collective gross generating capacity of 251.8 gigawatts (million kilowatts). In January 1987, the 102 operable U.S. units accounted for 93.0 gross gigawatts, 36.9 percent of the total non-Communist nuclear generating capacity.

Table 10.1a Crude Oil Production by Major Petroleum Producing Countries
(Thousand Barrels per Day)

	Algeria	Iraq	Kuwait[a]	Libya	Qatar	Saudi Arabia[a]	United Arab Emirates	Arab Members of OPEC[b]	Indonesia	Iran	Nigeria
1973 Average	**1,097**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**18,009**	**1,339**	**5,861**	**2,054**
1974 Average	**1,009**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,724**	**1,375**	**6,022**	**2,255**
1975 Average	**983**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,986**	**1,307**	**5,350**	**1,783**
1976 Average	**1,075**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,578**	**1,504**	**5,883**	**2,067**
1977 Average	**1,152**	**2,348**	**1,969**	**2,063**	**445**	**9,245**	**1,999**	**19,221**	**1,686**	**5,663**	**2,085**
1978 Average	**1,161**	**2,563**	**2,131**	**1,983**	**487**	**8,301**	**1,831**	**18,457**	**1,635**	**5,242**	**1,897**
1979 Average	**1,154**	**3,477**	**2,500**	**2,092**	**508**	**9,532**	**1,831**	**21,094**	**1,591**	**3,168**	**2,302**
1980 Average	**1,012**	**2,514**	**1,656**	**1,787**	**472**	**9,900**	**1,709**	**19,050**	**1,577**	**1,662**	**2,055**
1981 Average	**805**	**1,000**	**1,125**	**1,140**	**405**	**9,815**	**1,474**	**15,764**	**1,605**	**1,380**	**1,433**
1982 Average	**710**	**1,012**	**823**	**1,150**	**330**	**6,483**	**1,250**	**11,758**	**1,339**	**2,214**	**1,295**
1983 Average	**660**	**1,005**	**1,064**	**1,105**	**295**	**5,086**	**1,149**	**10,364**	**1,343**	**2,440**	**1,241**
1984 Average	**638**	**1,209**	**1,157**	**1,087**	**394**	**4,663**	**1,146**	**10,294**	**1,412**	**2,174**	**1,388**
1985 January	640	1,250	1,110	1,000	270	3,510	1,100	8,880	1,310	1,900	1,400
February	660	1,250	1,125	1,000	290	4,025	1,160	9,510	1,330	2,100	1,690
March	690	1,200	1,085	1,000	315	3,835	1,215	9,340	1,300	2,200	1,700
April	650	1,370	970	1,000	260	3,470	1,215	8,935	1,300	2,300	1,600
May	650	1,300	940	1,100	290	2,590	1,160	8,030	1,200	2,000	1,450
June	600	1,370	920	980	300	2,420	1,100	7,690	1,050	2,200	1,100
July	600	1,450	940	910	320	2,740	1,155	8,115	1,300	2,200	1,000
August	600	1,400	940	910	320	2,340	1,200	7,710	1,300	2,400	1,200
September	650	1,600	980	1,100	295	2,980	1,285	8,890	1,200	2,200	1,450
October	650	1,650	1,055	1,200	320	3,910	1,255	10,040	1,260	2,300	1,700
November	680	1,700	1,050	1,200	300	4,200	1,250	10,380	1,300	2,200	1,760
December	650	1,650	1,080	1,300	335	4,680	1,225	10,920	1,250	2,400	1,620
Average	**643**	**1,433**	**1,016**	**1,059**	**301**	**3,388**	**1,193**	**9,033**	**1,258**	**2,201**	**1,471**
1986 January	650	1,650	1,115	1,100	360	4,465	R 1,245	R 10,585	1,420	2,100	1,200
February	550	1,650	1,315	900	325	4,715	R 1,445	R 10,900	1,300	2,000	1,400
March	600	1,650	1,515	900	350	4,115	R 1,395	R 10,525	1,300	1,800	1,600
April	600	1,500	1,520	900	180	4,720	R 1,345	R 10,765	1,340	2,000	1,700
May	600	1,700	1,510	1,100	360	4,360	R 1,495	R 11,125	1,425	2,100	1,600
June	600	1,800	1,650	1,200	430	5,250	R 1,595	R 12,525	1,350	2,200	1,540
July	600	1,800	1,805	1,150	400	5,905	R 1,595	R 13,255	1,345	2,200	1,555
August	600	1,800	1,733	1,150	400	6,433	R 1,625	R 13,741	1,423	1,700	1,765
September	600	1,800	1,118	990	280	4,818	R 1,345	R 10,951	1,310	1,500	1,300
October	600	1,800	1,130	1,000	300	5,030	R 1,355	R 11,215	1,325	1,500	1,325
November	600	1,600	1,350	1,000	300	5,350	R 1,195	R 11,395	1,370	1,600	1,325
December	600	1,500	1,350	1,000	300	5,350	R 1,215	R 11,315	1,330	1,850	1,325
Average	**600**	**1,688**	**1,427**	**1,034**	**333**	**5,045**	**R 1,404**	**R 11,531**	**1,354**	**1,879**	**1,470**
1987 January	600	1,650	1,200	960	285	3,900	1,195	9,790	1,280	2,200	1,240

[a]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In January 1987, total production in that region amounted to approximately 400,000 barrels per day.

[b]Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

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

[d]Other is a calculated total derived from the difference between world production and the nations represented above.

R=Revised data.

Footnotes continued on following page.

Table 10.1b Crude Oil Production by Major Petroleum Producing Countries (continued)
(Thousand Barrels per Day)

	Venezuela	Total OPEC[c]	Canada	Mexico	United Kingdom	United States	China	USSR	Other[d]	World
1973 Average	**3,366**	**30,989**	**1,800**	**465**	**2**	**9,208**	**1,090**	**8,329**	**3,690**	**55,573**
1974 Average	**2,976**	**30,729**	**1,684**	**571**	**2**	**8,774**	**1,315**	**8,856**	**3,838**	**55,769**
1975 Average	**2,346**	**27,155**	**1,439**	**705**	**12**	**8,375**	**1,490**	**9,472**	**4,116**	**52,764**
1976 Average	**2,294**	**30,738**	**1,295**	**831**	**245**	**8,132**	**1,670**	**9,985**	**4,297**	**57,193**
1977 Average	**2,238**	**31,298**	**1,320**	**981**	**768**	**8,245**	**1,874**	**10,485**	**4,551**	**59,522**
1978 Average	**2,165**	**29,805**	**1,313**	**1,209**	**1,082**	**8,707**	**2,082**	**10,950**	**4,720**	**59,868**
1979 Average	**2,356**	**30,928**	**1,496**	**1,461**	**1,568**	**8,552**	**2,122**	**11,187**	**5,039**	**62,353**
1980 Average	**2,168**	**26,891**	**1,435**	**1,936**	**1,622**	**8,597**	**2,114**	**11,460**	**5,170**	**59,225**
1981 Average	**2,102**	**22,646**	**1,285**	**2,313**	**1,811**	**8,572**	**2,012**	**11,552**	**5,355**	**55,546**
1982 Average	**1,895**	**18,868**	**1,271**	**2,748**	**2,065**	**8,649**	**2,045**	**11,615**	**5,639**	**52,900**
1983 Average	**1,801**	**17,583**	**1,356**	**2,689**	**2,291**	**8,688**	**2,120**	**11,684**	**6,243**	**52,654**
1984 Average	**1,798**	**17,481**	**1,438**	**2,780**	**2,480**	**8,879**	**2,296**	**11,576**	**6,904**	**53,834**
1985 January	1,670	15,570	1,450	2,635	2,755	8,740	2,450	11,150	7,255	52,005
February	1,675	16,725	1,450	2,685	2,625	9,025	2,450	11,150	7,294	53,404
March	1,680	16,650	1,500	2,810	2,575	9,095	2,450	11,150	7,367	53,597
April	1,675	16,240	1,465	2,825	2,610	9,043	2,480	11,150	7,447	53,260
May	1,685	14,795	1,475	2,790	2,520	9,132	2,480	11,190	7,412	51,794
June	1,670	14,110	1,450	2,555	2,430	9,022	2,480	11,130	7,179	50,356
July	1,670	14,715	1,430	2,620	2,365	8,949	2,490	11,250	7,511	51,330
August	1,670	14,710	1,450	2,795	2,195	8,803	2,490	11,290	7,502	51,235
September	1,670	15,855	1,450	2,815	2,575	8,954	2,490	11,350	7,595	53,084
October	1,670	17,420	1,450	2,750	2,645	8,970	2,500	11,390	7,593	54,718
November	1,675	17,765	1,450	2,795	2,655	8,902	2,500	11,400	7,661	55,128
December	1,680	18,320	1,553	2,740	2,420	9,030	2,500	11,390	7,633	55,586
Average	**1,674**	**16,068**	**1,465**	**2,735**	**2,530**	**8,971**	**2,480**	**11,250**	**7,455**	**52,954**
1986 January	1,670	R 17,425	1,540	2,510	2,666	9,121	2,500	11,360	7,656	R 54,778
February	1,670	R 17,720	1,475	2,123	2,725	9,181	2,500	11,420	7,798	R 54,942
March	1,670	R 17,355	1,480	2,219	2,710	9,002	2,500	11,520	7,695	R 54,481
April	1,670	R 17,935	1,475	2,358	2,580	8,850	2,500	11,570	7,271	R 54,539
May	1,670	R 18,380	1,425	2,527	2,545	8,842	2,500	11,650	7,726	R 55,595
June	1,690	R 19,775	1,400	2,547	2,198	8,591	2,500	11,660	R 7,675	R 56,346
July	1,700	R 20,525	1,460	2,536	2,608	8,636	2,500	11,690	R 7,674	R 57,629
August	2,040	R 21,104	1,545	2,567	2,598	8,391	2,500	11,740	R 7,875	R 58,320
September	1,695	R 17,131	1,500	2,371	2,558	8,333	2,560	11,760	R 7,999	R 54,212
October	1,684	R 17,439	1,530	2,324	2,573	8,434	2,560	11,785	R 7,939	R 54,584
November	1,714	R 17,834	1,450	2,452	2,476	8,321	R 2,690	11,835	R 8,234	R 55,292
December	1,790	R 18,040	1,475	R 2,569	2,346	8,348	R 2,690	R 11,830	R 8,247	R 55,545
Average	**1,723**	**R 18,396**	**1,480**	**R 2,428**	**2,548**	**8,668**	**R 2,542**	**R 11,653**	**7,816**	**R 55,531**
1987 January	1,650	16,580	1,530	2,500	2,637	8,354	2,690	11,830	8,244	54,365

Footnotes continued.

Note: • 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: • 1973-1985 annual data (except the United States): Energy Information Administration (EIA), *International Energy Annual 1985.* • 1973-1986 U.S. annual and monthly data: EIA, *Petroleum Supply Monthly.* • 1984-1986 monthly data (except United States and world): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources. • 1984-1986 monthly data for world: Sum of data for all countries using above sources.

Figure 10.1 Petroleum Consumption for OECD Countries

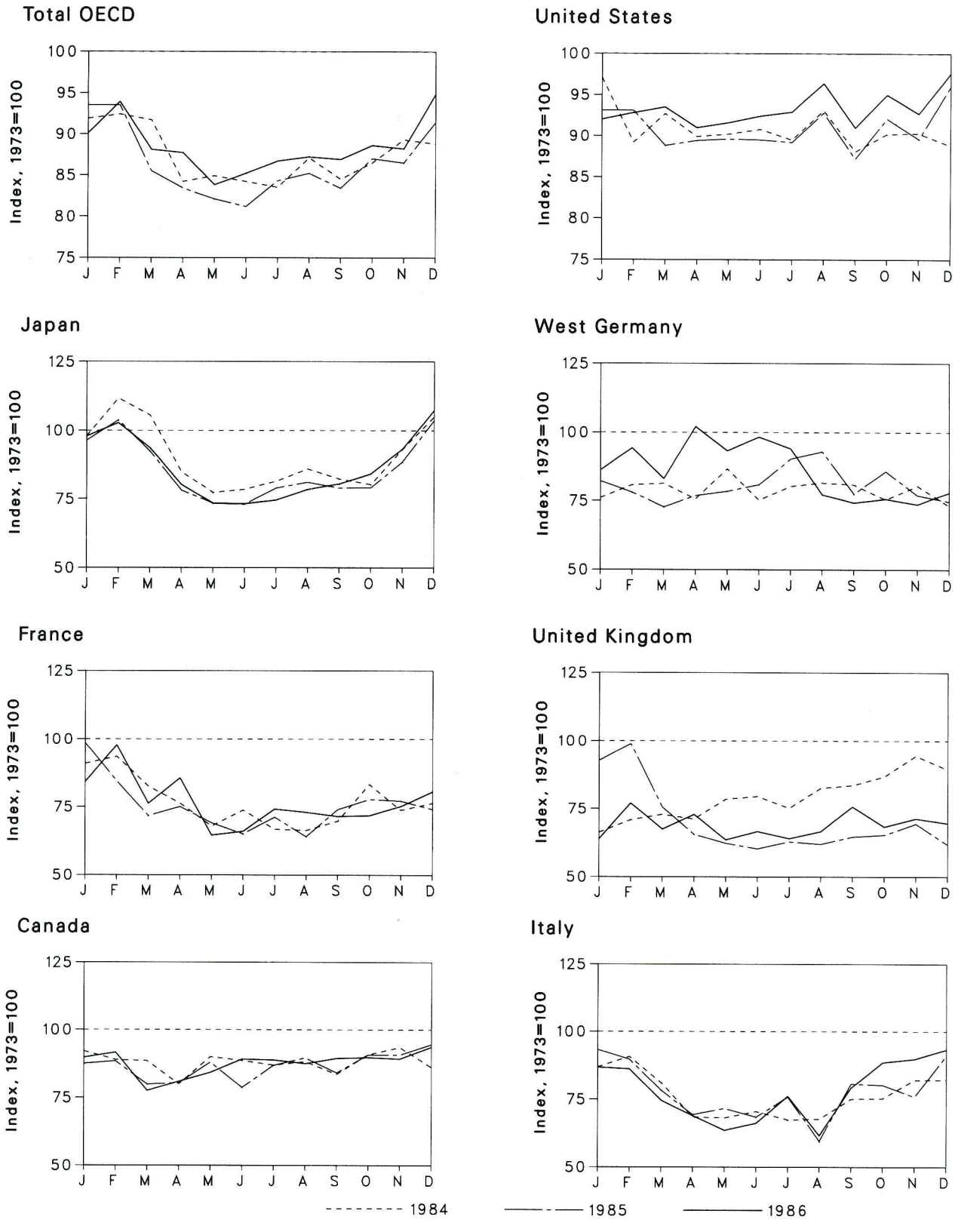


Table 10.2 Petroleum Consumption for OECD Countries[a]
(Thousand Barrels per Day)

	Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Total OECD Europe[b]	Other OECD[c]	Total OECD[a]
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**	**1,018**	**38,078**
1975 Average	**1,694**	**2,136**	**1,940**	**4,502**	**1,872**	**16,322**	**2,515**	**13,059**	**955**	**36,531**
1976 Average	**1,743**	**2,280**	**1,991**	**4,771**	**1,856**	**17,461**	**2,708**	**13,813**	**1,024**	**38,812**
1977 Average	**1,751**	**2,235**	**1,907**	**5,231**	**1,880**	**18,431**	**2,837**	**13,795**	**1,079**	**40,287**
1978 Average	**1,737**	**2,169**	**1,948**	**5,142**	**1,850**	**18,847**	**3,048**	**13,963**	**1,070**	**40,759**
1979 Average	**1,857**	**2,385**	**2,013**	**5,480**	**1,930**	**18,513**	**3,073**	**14,670**	**1,045**	**41,565**
1980 Average	**1,947**	**2,256**	**1,934**	**4,960**	**1,725**	**17,056**	**2,707**	**13,634**	**1,041**	**38,638**
1981 Average	**1,836**	**2,023**	**1,874**	**4,848**	**1,590**	**16,058**	**2,449**	**12,515**	**1,056**	**36,313**
1982 Average	**1,616**	**1,940**	**1,782**	**4,554**	**1,587**	**15,296**	**2,324**	**12,094**	**1,083**	**34,642**
1983 Average	**1,490**	**1,911**	**1,730**	**4,368**	**1,520**	**15,231**	**2,290**	**11,808**	**R 947**	**R 33,844**
1984 Average	**1,503**	**1,857**	**1,637**	**4,577**	**1,824**	**15,726**	**2,300**	**11,834**	**R 960**	**R 34,600**
1985 January	1,491	2,383	2,001	4,887	2,130	16,109	2,393	13,564	R 948	R 36,998
February	1,508	2,043	1,923	5,262	2,274	16,121	2,274	13,137	R 1,001	R 37,028
March	1,364	1,734	1,682	4,680	1,738	15,373	2,120	11,405	R 1,001	R 33,823
April	1,372	1,817	1,487	3,962	1,507	15,472	2,238	11,136	R 1,078	R 33,020
May	1,501	1,671	1,537	3,721	1,432	15,504	2,284	10,739	R 1,023	R 32,487
June	1,344	1,575	1,469	3,701	1,385	15,483	2,356	10,617	R 984	R 32,129
July	1,483	1,723	1,627	4,003	1,445	15,434	2,630	11,451	R 1,016	R 33,387
August	1,527	1,551	1,281	4,109	1,425	16,060	2,708	11,099	R 940	R 33,735
September	1,435	1,792	1,733	4,002	1,487	15,099	2,259	11,485	R 996	R 33,018
October	1,546	1,884	1,723	4,008	1,503	15,944	2,499	12,044	R 901	R 34,443
November	1,546	1,869	1,629	4,487	1,596	15,503	2,245	11,695	R 1,024	R 34,254
December	1,614	1,794	1,951	5,259	1,423	16,611	2,176	11,701	R 1,010	R 36,194
Average	**1,478**	**1,818**	**1,669**	**4,336**	**1,608**	**15,726**	**2,350**	**11,666**	**R 993**	**R 34,198**
1986 January	R 1,530	2,036	1,861	4,963	1,468	15,923	2,509	12,390	R 864	R 35,669
February	R 1,561	2,365	1,848	5,215	1,772	16,056	2,746	13,408	R 934	R 37,173
March	R 1,322	1,846	1,603	4,747	1,551	16,188	2,419	11,718	R 908	R 34,883
April	1,382	2,070	1,480	4,061	1,676	15,743	2,976	R 12,623	R 914	R 34,722
May	1,438	1,563	1,364	3,721	1,462	15,852	2,715	R 11,153	R 993	R 33,157
June	1,519	1,596	1,419	3,713	1,532	15,998	2,865	R 11,566	R 915	R 33,710
July	R 1,514	R 1,794	1,634	R 3,777	R 1,473	16,075	2,739	R 12,036	R 915	R 34,317
August	R 1,492	R 1,766	1,322	R 3,975	R 1,532	16,686	2,250	R 11,386	R 965	R 34,505
September	R 1,524	R 1,728	1,701	R 4,076	R 1,742	15,755	2,165	R 12,052	R 1,008	R 34,415
October	1,530	1,737	1,901	R 4,266	1,572	16,441	2,203	R 11,818	R 1,005	R 35,060
November	R 1,521	1,821	1,926	R 4,728	R 1,639	16,051	2,148	R 11,782	R 826	R 34,908
December	1,597	1,953	2,001	5,442	1,601	16,897	2,272	12,530	1,066	37,532
Average	**R 1,494**	**R 1,852**	**R 1,671**	**R 4,386**	**R 1,583**	**R 16,142**	**R 2,498**	**R 12,027**	**R 943**	**R 34,992**

[a]Organization for Economic Cooperation and Development (OECD) includes Canada, Japan, and the United States, as well as "Total OECD Europe" and "Other OECD."

[b]"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.

[c]"Other OECD" includes Australia, New Zealand, and the U.S. Territories.

R=Revised data.

Notes: • U.S. geographic coverage is the 50 States and the District of Columbia. • Data through 1984 are final. Subsequent data are preliminary.

Sources: • U.S. data: EIA, *Petroleum Supply Monthly.* • OECD data: OECD, *Quarterly Oil Statistics, Monthly Oil Statistics.*

Figure 10.2 Petroleum Stocks for OECD Countries at End of Period

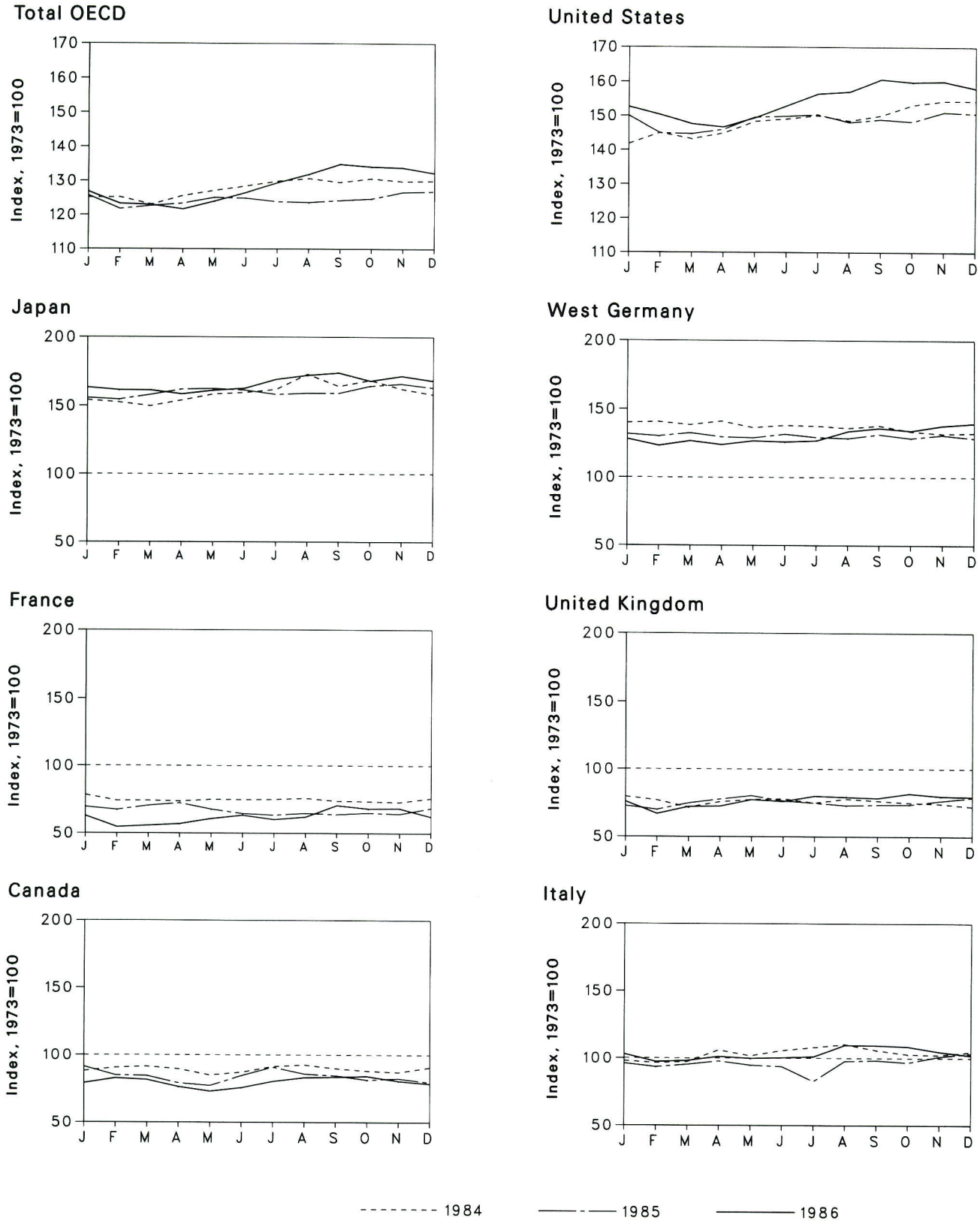


Table 10.3 Petroleum Stocks[a] for OECD Countries [b] at End of Period
(Million Barrels)

	Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Total OECD Europe[c]	Other OECD[d]	Total OECD[b]
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**	**R 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 Year	**127**	**153**	**159**	**480**	**113**	**1,556**	**240**	**1,132**	**69**	**3,364**
1985 January	128	140	146	472	114	1,512	239	1,071	70	3,253
February	119	135	142	468	109	1,462	236	1,032	71	3,153
March	118	142	145	479	117	1,460	240	1,053	65	3,175
April	111	146	148	491	121	1,473	235	1,053	67	R 3,195
May	108	136	144	492	125	1,508	234	1,063	65	3,237
June	119	130	142	489	119	1,511	239	1,050	64	3,233
July	127	128	126	480	117	1,516	234	1,022	62	3,207
August	120	130	149	482	114	1,494	233	1,042	62	3,200
September	119	129	149	483	115	1,502	238	1,052	62	3,218
October	114	131	147	498	115	1,496	233	1,056	65	3,230
November	116	130	154	503	119	1,523	237	1,072	65	3,279
December	112	138	157	495	123	1,519	233	1,093	67	3,285
1986 January	111	127	157	495	118	1,538	232	1,071	66	3,281
February	116	110	148	489	104	1,515	223	1,004	68	3,191
March	114	112	149	489	113	1,489	229	1,023	70	3,184
April	107	114	154	480	113	1,480	224	1,016	65	3,148
May	102	122	151	488	121	1,506	230	1,053	60	3,209
June	106	127	152	493	119	1,541	228	R 1,067	67	3,274
July	112	121	154	513	125	1,578	230	1,076	68	R 3,348
August	116	125	167	522	124	1,584	242	R 1,125	68	3,415
September	R 117	R 142	167	R 527	123	1,620	247	R 1,156	R 72	R 3,492
October	118	137	165	510	128	1,612	243	R 1,161	72	R 3,473
November	R 113	138	159	R 520	125	1,614	250	R 1,147	R 71	R 3,465
December	110	125	155	510	124	1,594	253	1,138	71	3,423
Year	110	125	155	510	124	1,594	253	1,138	71	3,423

[a]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.

[b]Organization for Economic Cooperation and Development (OECD) includes Canada, Japan, and the United States, as well as "Total OECD Europe" and "Other OECD."

[c]"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.

[d]"Other OECD" includes Australia, New Zealand, and the U.S. Territories.

R=Revised data.

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: • U.S. data: EIA, *Petroleum Supply Monthly.* • OECD data: OECD, *Quarterly Oil Statistics, Monthly Oil Statistics.*

Table 10.4a Nuclear Electricity Generation by Non-Communist Countries[a]
(Billion Gross Kilowatthours)

	Argentina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Netherlands	Pakistan
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**	**.6**
1975 Total	**2.5**	**6.8**	**0**	**13.2**	**0**	**18.3**	**2.5**	**3.8**	**21.3**	**3.3**	**.5**
1976 Total	**2.6**	**10.0**	**0**	**18.0**	**0**	**15.8**	**3.2**	**3.8**	**36.6**	**3.9**	**.5**
1977 Total	**1.6**	**11.9**	**0**	**26.6**	**2.7**	**17.9**	**2.8**	**3.4**	**28.2**	**3.7**	**.3**
1978 Total	**2.9**	**12.5**	**0**	**33.0**	**3.3**	**30.6**	**2.3**	**4.5**	**53.1**	**4.1**	**.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**	**.1**
1981 Total	**2.8**	**12.8**	**0**	**43.3**	**14.5**	**105.2**	**3.1**	**2.7**	**86.0**	**3.7**	**.2**
1982 Total	**1.9**	**15.6**	**0.1**	**42.6**	**16.5**	**108.9**	**2.2**	**6.8**	**104.5**	**3.9**	**.1**
1983 Total	**3.4**	**24.1**	**.2**	**53.0**	**17.4**	**144.2**	**2.9**	**5.8**	**109.1**	**3.6**	**.2**
1984 Total	**4.5**	**27.7**	**2.1**	**53.8**	**18.5**	**191.2**	**4.1**	**6.9**	**127.2**	**3.8**	**.3**
1985 January	.2	2.5	.4	5.7	1.7	21.9	.2	.8	12.2	.4	(s)
February	.4	1.7	.3	5.0	1.6	19.2	.2	.7	10.7	.3	(s)
March	.5	2.0	.3	5.9	1.8	20.6	.4	.8	12.0	.2	0
April	.4	2.2	.1	5.2	1.6	17.7	.6	.7	11.8	(s)	0
May	.4	2.8	.2	2.4	1.2	15.9	.5	.7	13.0	.2	0
June	.4	2.8	.4	4.2	1.2	13.6	.4	.6	12.6	.4	(s)
July	.5	2.5	.3	5.7	1.4	16.1	.4	.6	12.5	.4	.1
August	.5	3.2	.1	6.0	1.5	15.4	.2	.5	12.9	.4	(s)
September	.5	3.3	.3	5.4	1.6	17.2	.3	.3	12.8	.4	0
October	.6	3.9	.4	5.1	1.7	20.0	.4	.3	13.9	.4	(s)
November	.7	3.9	.3	5.8	1.7	22.1	.4	.3	13.1	.4	.1
December	.7	3.8	.3	6.5	1.7	24.4	.4	.6	14.7	.4	.1
Total	**5.8**	**34.5**	**3.4**	**62.9**	**18.8**	**224.0**	**4.5**	**7.0**	**152.0**	**3.9**	**.3**
1986 January	.6	3.8	(s)	6.5	1.8	25.6	.5	.9	15.0	.4	(s)
February	.6	2.8	0	6.2	1.6	22.8	.4	.5	13.5	.1	(s)
March	.5	3.6	0	7.0	1.8	23.6	.5	.9	14.5	.3	(s)
April	.5	3.7	0	6.0	1.7	21.0	.3	.9	12.4	.4	(s)
May	.7	3.2	0	5.7	1.4	16.3	.4	.7	12.8	.4	(s)
June	.4	2.9	0	5.4	1.1	16.7	.4	.9	15.0	.4	(s)
July	.4	3.0	0	5.3	1.3	18.8	.5	.9	15.2	.4	(s)
August	.6	3.1	0	6.6	1.4	16.5	.5	.9	14.8	.4	.1
September	.6	3.1	0	6.2	1.5	19.0	.4	.9	13.4	.4	.1
October	.2	3.2	0	6.6	1.8	22.4	.3	.8	12.7	.4	(s)
November	.2	3.0	(s)	6.4	1.7	24.1	.5	.3	11.7	.3	(s)
December	.3	3.3	.1	6.7	1.7	27.4	.5	.1	13.8	.4	(s)
Total	**5.7**	**38.6**	**.1**	**74.6**	**18.8**	**254.3**	**5.1**	**8.7**	**164.8**	**4.2**	**.5**
1987 January	.7	4.1	0	6.7	1.8	27.3	.5	.1	14.7	.2	.1

[a]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.

[b]The United Kingdom assesses generation at 4-, 5-, or 6-week intervals, rather than by calendar month.

(s)=Less than 0.05 billion gross kilowatthours.

Footnotes continued on following page.

Table 10.4b Nuclear Electricity Generation by Non-Communist Countries[a] (continued)

(Billion Gross Kilowatthours)

	South Africa	South Korea	Spain	Sweden	Switzerland	Taiwan	United Kingdom[b]	West Germany	Non-Communist World Excluding U.S.	United States	Total Non-Communist World
1973 Total	**0**	**0**	**6.5**	**2.1**	**6.2**	**0**	**28.2**	**11.9**	**101.4**	**87.8**	**189.3**
1974 Total	**0**	**0**	**7.2**	**2.3**	**7.0**	**0**	**33.8**	**12.0**	**121.7**	**124.3**	**246.0**
1975 Total	**0**	**0**	**7.5**	**12.0**	**7.7**	**0**	**30.5**	**21.7**	**151.8**	**182.3**	**334.1**
1976 Total	**0**	**0**	**7.6**	**16.0**	**7.9**	**0**	**36.8**	**24.5**	**187.1**	**201.8**	**388.9**
1977 Total	**0**	**0.1**	**6.5**	**19.9**	**8.1**	**0.1**	**38.1**	**36.0**	**207.8**	**264.2**	**472.0**
1978 Total	**0**	**2.3**	**7.6**	**23.8**	**8.3**	**2.7**	**36.6**	**35.7**	**263.5**	**292.4**	**555.9**
1979 Total	**0**	**3.2**	**6.7**	**21.0**	**11.8**	**6.3**	**38.5**	**42.2**	**300.1**	**270.6**	**570.7**
1980 Total	**0**	**3.5**	**5.2**	**26.7**	**14.3**	**8.2**	**37.2**	**43.7**	**354.3**	**265.4**	**619.8**
1981 Total	**0**	**2.9**	**9.4**	**37.7**	**15.2**	**10.7**	**38.9**	**53.4**	**442.4**	**288.5**	**730.9**
1982 Total	**0**	**3.8**	**8.8**	**38.8**	**15.0**	**13.1**	**44.1**	**63.4**	**489.9**	**298.6**	**788.5**
1983 Total	**0**	**9.0**	**10.7**	**40.4**	**15.5**	**18.9**	**49.6**	**65.8**	**573.9**	**313.6**	**887.5**
1984 Total	**4.2**	**11.8**	**23.1**	**51.3**	**16.3**	**24.3**	**54.1**	**92.6**	**717.7**	**343.8**	**1,061.5**
1985 January	.3	1.1	2.2	5.4	2.2	2.4	5.7	10.8	76.1	38.0	114.1
February	0	1.3	1.9	5.0	2.0	2.1	5.6	10.1	68.3	32.4	100.6
March	0	1.5	2.8	5.6	2.2	2.5	6.6	11.7	77.4	32.5	109.9
April	0	1.3	2.4	4.5	2.2	2.7	5.1	10.6	69.0	28.3	97.3
May	0	1.5	2.3	3.9	1.9	2.8	4.7	9.3	63.8	31.8	95.6
June	.1	1.2	3.1	2.6	1.2	2.6	5.1	9.6	62.0	31.0	93.0
July	.8	1.1	2.2	3.1	1.3	2.2	4.1	8.4	63.7	36.4	100.2
August	.8	1.2	2.1	4.3	1.0	2.2	3.8	9.5	65.5	36.8	102.3
September	1.0	1.3	2.1	4.7	1.7	2.6	4.9	10.3	70.7	35.9	106.6
October	1.1	1.4	2.2	5.4	2.2	2.6	4.3	11.3	77.2	32.1	109.3
November	.8	1.7	2.2	7.0	2.2	1.7	3.7	11.7	79.6	31.7	111.3
December	.9	1.9	2.6	6.9	2.2	2.5	6.0	12.3	89.0	35.7	124.6
Total	**5.7**	**R 16.5**	**28.0**	**58.6**	**22.4**	**28.7**	**59.6**	**125.7**	**R 862.3**	**402.6**	**R 1,264.9**
1986 January	1.0	2.0	3.1	6.8	2.3	2.9	4.8	12.0	90.0	38.1	128.1
February	.6	1.7	2.5	6.4	2.1	2.1	5.3	10.4	79.7	34.1	113.8
March	.7	1.5	2.4	7.2	2.3	2.2	6.4	10.7	86.0	31.2	117.2
April	.7	1.6	3.0	6.7	2.2	2.0	4.2	9.6	76.8	32.2	109.0
May	.7	2.4	3.6	4.8	2.1	2.0	4.4	9.5	71.2	33.7	104.9
June	.2	2.2	3.9	4.1	1.2	1.6	5.1	9.0	70.4	33.2	103.6
July	.6	2.0	3.1	3.8	.9	1.8	4.1	7.9	70.0	38.0	108.1
August	.7	2.4	2.9	4.3	1.0	1.9	4.2	8.0	70.3	39.2	109.6
September	.9	2.1	2.7	5.1	1.9	2.0	4.9	9.1	74.2	37.9	112.0
October	1.0	3.0	3.4	6.5	2.3	2.4	4.1	8.8	80.0	37.9	117.9
November	1.3	2.2	3.4	6.9	2.1	2.8	4.8	10.5	82.4	36.2	118.6
December	.9	3.1	3.2	7.3	2.2	3.1	6.1	11.9	92.3	40.9	133.1
Total	**9.3**	**26.1**	**37.5**	**69.9**	**22.5**	**26.9**	**58.2**	**R 117.4**	**943.3**	**432.5**	**1,375.8**
1987 January	.7	3.2	3.4	7.2	2.3	3.2	4.9	12.0	93.1	41.2	134.3

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: *Nucleonics Week* (New York: McGraw-Hill Publishing Company).

Conversion Factors

Units of Measure

Coal		
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
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
Uranium		
1 short ton (U_3O_8)	contains	0.769 metric tons of uranium
1 short ton (UF_6)	contains	0.613 metric tons of uranium
1 metric ton (UF_6)	contains	0.676 metric tons of uranium

Approximate Heat Content of Petroleum Products

	Million Btu per Barrel
Asphalt	6.636
Aviation gasoline	5.048
Butane	4.326
Butane-propane mixture[a]	4.130
Distillate fuel oil	5.825
Ethane	3.082
Ethane-propane mixture[b]	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

[a]60 percent butane and 40 percent propane.
[b]70 percent ethane and 30 percent propane.

Approximate Heat Content of Fuels, 1973-1979

	Units	1973	1974	1975	1976	1977	1978	1979
Coal								
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
Anthracite								
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
Bituminous coal and lignite								
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 and 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
Coal coke, imports and exports	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800	24.800
Crude oil[a]								
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
Crude oil and petroleum products								
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
Petroleum Products[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
Natural gas plant liquids								
Production	Million Btu/barrel	4.049	4.011	3.984	3.964	3.941	3.925	3.955
Natural gas								
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[c]	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

[a]Includes lease condensate.

[b]Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.

[c]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.

Approximate Heat Content of Fuels, 1980-1987

	Units	1980	1981	1982	1983	1984	1985	1986-87[d]
Coal								
Production	Million Btu/short ton	22.415	22.309	22.240	22.056	22.014	21.874	21.934
Consumption	Million Btu/short ton	21.947	21.714	21.675	21.581	21.577	21.370	21.485
Non-electric utility users	Million Btu/short ton	24.731	24.477	24.195	24.093	24.069	23.664	23.609
Electric utilities	Million Btu/short ton	21.295	21.085	21.194	21.133	21.101	20.959	21.110
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.384	26.160	26.223	26.291	26.402	26.307	26.292
Anthracite								
Production	Million Btu/short ton	22.869	23.291	23.289	22.734	23.107	22.428	22.429
Consumption	Million Btu/short ton	21.405	22.080	22.518	21.583	22.322	20.817	20.690
Non-electric utility users	Million Btu/short ton	22.719	23.749	24.578	24.536	25.128	23.031	23.061
Electric utilities	Million Btu/short ton	17.652	18.168	18.160	16.516	17.018	16.784	15.486
Imports and exports	Million Btu/short ton	25.400	25.400	25.400	25.400	25.400	25.400	25.400
Bituminous coal and lignite								
Production	Million Btu/short ton	22.411	22.302	22.234	22.053	22.009	21.871	21.932
Consumption	Million Btu/short ton	21.950	21.712	21.671	21.581	21.574	21.372	21.488
Residential and commercial	Million Btu/short ton	22.488	22.191	22.373	22.934	22.880	23.072	23.381
Coke plants	Million Btu/short ton	26.800	26.800	26.800	26.800	26.800	26.800	26.800
Other industrial and transportation	Million Btu/short ton	22.690	22.572	22.694	22.679	22.524	22.012	22.078
Electric utilities	Million Btu/short ton	21.301	21.091	21.200	21.141	21.108	20.965	21.117
Imports	Million Btu/short ton	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Exports	Million Btu/short ton	26.404	26.176	26.231	26.300	26.410	26.320	26.308
Coal coke, imports and exports	Million Btu/short ton	24.800	24.800	24.800	24.800	24.800	24.800	24.800
Crude oil[a]								
Production	Million Btu/barrel	5.800	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	5.832	5.832
Exports	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Crude oil and petroleum products								
Imports	Million Btu/barrel	5.796	5.775	5.775	5.774	5.745	5.736	5.768
Exports	Million Btu/barrel	5.820	5.821	5.820	5.800	5.850	5.814	5.844
Petroleum products[b]								
Consumption	Million Btu/barrel	5.479	5.448	5.415	5.406	5.395	5.387	5.412
Residential and commercial	Million Btu/barrel	5.468	5.409	5.392	5.286	5.261	5.203	5.233
Industrial	Million Btu/barrel	5.376	5.310	5.262	5.273	5.256	5.265	5.311
Transportation	Million Btu/barrel	5.440	5.434	5.423	5.416	5.423	5.421	5.422
Electric utilities	Million Btu/barrel	6.254	6.258	6.258	6.255	6.251	6.247	6.256
Imports	Million Btu/barrel	5.748	5.659	5.664	5.677	5.613	5.572	5.630
Exports	Million Btu/barrel	5.841	5.837	5.829	5.800	5.867	5.819	5.855
LPG consumption	Million Btu/barrel	3.674	3.643	3.615	3.614	3.599	3.603	3.633
Natural gas plant liquids								
Production	Million Btu/barrel	3.914	3.930	3.872	3.839	3.812	3.815	3.792
Natural gas								
Production, dry	Btu/cubic foot	1,026	1,027	1,028	1,031	1,031	1,033	1,033
Production, wet	Btu/cubic foot	1,098	1,103	1,107	1,115	1,109	1,113	1,113
Consumption	Btu/cubic foot	1,026	1,027	1,028	1,031	1,031	1,033	1,033
Non-electric utility users	Btu/cubic foot	1,024	1,025	1,026	1,031	1,030	1,032	1,032
Electric utilities	Btu/cubic foot	1,035	1,035	1,036	1,030	1,035	1,038	1,038
Imports	Btu/cubic foot	1,022	1,014	1,018	1,024	1,005	1,002	1,002
Exports	Btu/cubic foot	1,013	1,011	1,011	1,010	1,010	1,011	1,011

Approximate Heat Rates for Electricity

Fossil fuel steam-electric power plant generation[c]	Btu/kilowatthour	10,388	10,453	10,423	10,445	10,211	10,339	10,339
Nuclear power plant generation	Btu/kilowatthour	10,908	11,030	11,073	10,905	10,843	10,809	10,809
Geothermal energy power plant generation	Btu/kilowatthour	21,639	21,639	21,629	21,290	21,303	R 21,263	R 21,263
Electricity Consumption	Btu/kilowatthour	3,412	3,412	3,412	3,412	3,412	3,412	3,412

[a]Includes lease condensate.
[b]Weighted averages of the products included in each category are calculated using heat content values shown on the first page of this section.
[c]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.
[d]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."

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 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. 1973-1985: 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.* 1986 forward: Estimated by EIA.

Petroleum Products, Consumption by Industrial Users. 1973-1985: 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.* 1986 forward: Estimated by EIA.

Petroleum Products, Consumption by Residential and Commercial Users. 1973-1985: 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.* 1986 forward: Estimated by EIA.

Petroleum Products, Consumption by Transportation Users. 1973-1985: 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.* 1986 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.

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 util-

ities. 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 25.40 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 a 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 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 forward: 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

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 the 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 (°*F*) at or near 39.2 °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 (C_4H_{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 (C_4H_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 °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 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 or 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 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, 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 gaoline 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 of 89 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.

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 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 Specifications D1835. Propane is used primarily for residential and commercial heating and cooling, and also as a fuel for transportation and industrial uses, including petrochemical feedstocks.

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.

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 hy-

drocarbons 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.

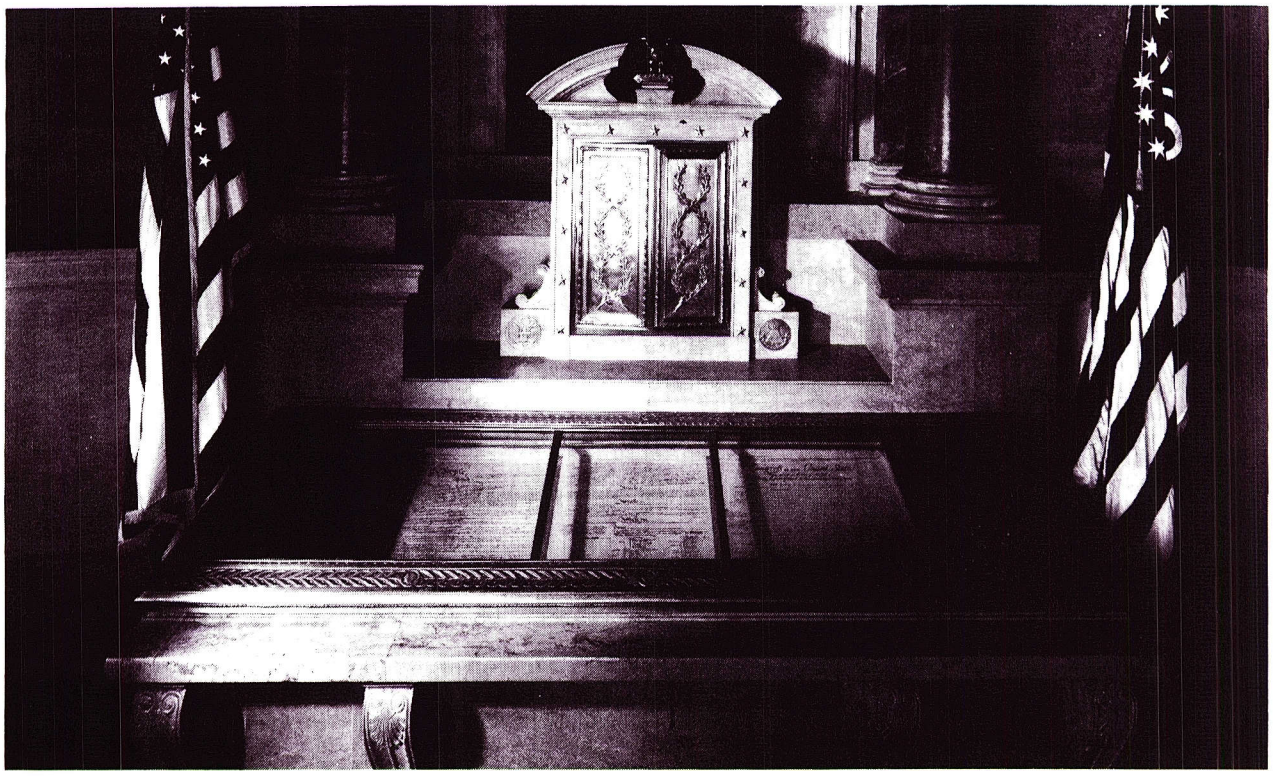
Wood Energy. Wood and wood products used as fuel. Included are round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, pulp waste, and spent pulping liquor.

Working Gas. The total volume of gas in a storage reservoir that is in excess of the base gas.

*U.S. G.P.O. 1987-181-163:40007

THE PRESIDENT DOESN'T TAKE AN OATH TO DEFEND THE AMERICAN FLAG OR THE STATUE OF LIBERTY.

The President takes an oath to defend something even more important than a majestic symbol of our country.



The President takes an oath to defend the Constitution of the United States. A document that has been described as the greatest leap forward for freedom in human history. A document that is the foundation of our country. And the means by which we achieve the rule of law and protect our freedom.

As we commemorate the Bicentennial of the Constitution, there is no better way for you as an American to reaffirm the principles for which our country stands than to learn more about the Constitution.

The words we live by.

THE CONSTITUTION

The words we live by

To learn more about the Constitution write: Constitution, Washington, D.C. 20599. The Commission on the Bicentennial of The U.S. Constitution. Ad Council

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