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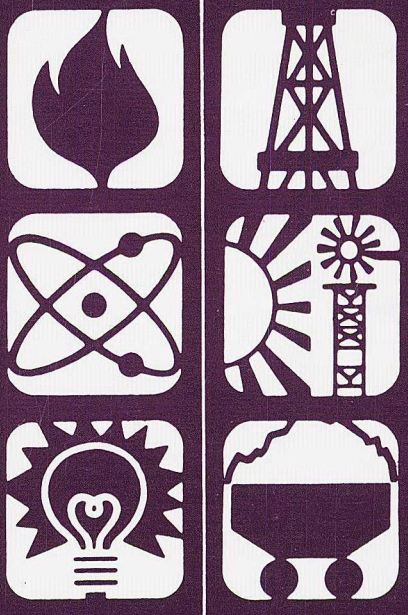
Monthly Energy Review

Energy Information Administration
U.S. Department of Energy

October 1982



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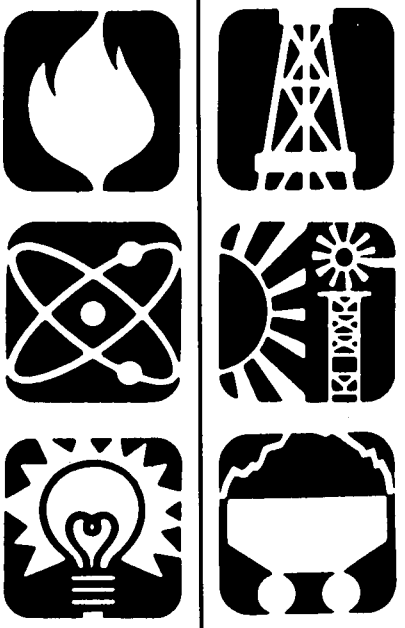

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The *Monthly Energy Review* presents current data for production, consumption, stocks, imports, exports, and prices for the principal energy commodities in the United States. Also included are data on international production of crude oil, consumption 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. . .

Occasionally feature articles on energy-related subjects and highlights from recently published Department of Energy reports are included in this publication. The following articles and highlights have appeared in previous issues:

Energy Consumption . . . . . March 1975
Nuclear Power . . . . . April 1975
The Price of Crude Oil . . . . . June 1975
U.S. Coal Resources and Reserves . . . . . July 1975
Propane, A National Energy Resource . . . . . September 1975
Short-Term Energy Supply and Demand Forecasting at FEA . . . . . October 1975
Curtailments of Natural Gas Service . . . . . January 1976
Home Heating Conservation Alternatives and the Solar Collector Industry . . . . . March 1976
Trends in United States Petroleum Imports . . . . . September 1976
Crude Oil Entitlements Program . . . . . January 1977
Motor Gasoline Supply and Demand . . . . . July 1977
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Highlights: *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report* . . . . . September 1982

Impacts of Financial Constraints on the Electric Utility Industry

by
Betsy O'Brien[1]

Energy Information Administration

Introduction

During the past decade, financing new investments has been difficult for investor-owned electric utilities, which comprise about 80 percent of the electric utility industry. Despite these difficulties, new investments will continue to be required. In addition to conservation programs, electric utilities will need new generating capacity and new transmission and distribution equipment in the next 15 years. New powerplants will be needed to satisfy increased demand, replace units scheduled for retirement, and possibly reduce consumption of the expensive fuels—oil and natural gas. The amount of future generating capacity that electric utilities will be able to finance and construct, however, is uncertain because of their current financial condition.

This article is based on the Energy Information Administration (EIA) report published in December 1981, *Impacts of Financial Constraints on the Electric Utility Industry*. Two possible futures for the utility industry through 1995 are examined to illustrate the potential impacts of financial constraints on the industry as a whole. In one case, it is assumed that electric utilities obtain the capital needed to finance all new construction currently planned and any additional powerplants justified by economics. In the second case, it is assumed that the current financial situation remains the same, and that electric utilities construct only those facilities for which they already have a major financial commitment. Projections of supply adequacy, utility fuel use, electricity prices, and capital expenditures are compared for each case.

[1] Operations Research Analyst, Data Analysis and Forecasting Branch, Electric Power Division.

Historic Perspective

The electric utility sector became a rapidly growing consumer of primary energy in the late 1960's (Figure 1) and is now a major consumer of primary energy. Since 1963, the electric utilities' yearly demand for primary energy has exceeded the demand of the residential and commercial sector, and, since 1977, it has exceeded the industrial sector demand. In 1981, the electric utilities consumed 33 percent of the total national demand for primary energy of 74 quadrillion Btu.

The residential and commercial sector demand for nonelectric energy decreased by 13 percent from 1973 to 1981, while the sector's demand for electric energy increased by 26 percent. Similarly, the industrial sector's nonelectric demand dropped by 19 percent from 1973 to 1981, while its electric energy demand increased by 19 percent. This change in energy consumption occurred during the 1970's in part because oil, natural gas, and coal prices increased between 9 and 16 percent annually in real terms while electricity prices rose only 4 percent annually. This smaller rate of increase in the price of electricity contributed to the financial problems of the electric utilities, because the total cost of service was not being recovered.

The electric utility industry is the most capital-intensive of all major industries. On an annual basis, investor-owned electric utilities account for about a fifth of all new industrial construction, a third of all corporate financing, and about half of all common stock issued for nonfinancial companies. In 1980, total electric utility capital expenditures were $37 billion, of which investor-owned utilities accounted for $24 billion.

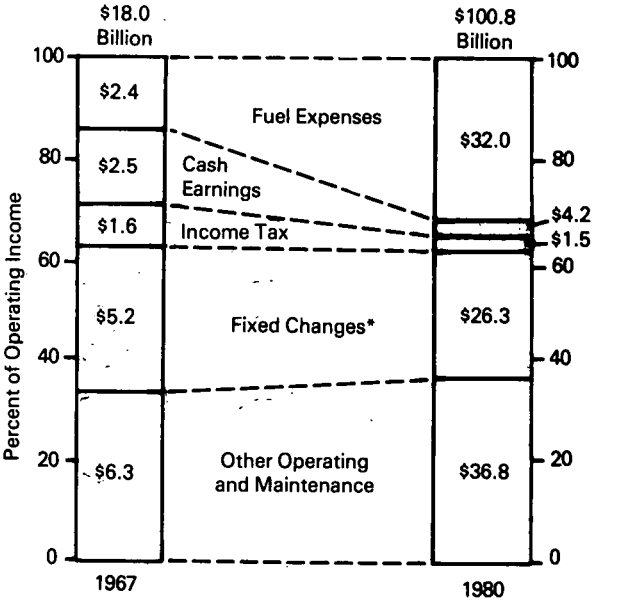
Over the last decade, significant changes occurred in the operating income for all investor-owned electric utilities. From 1967 to 1980, fuel

expenses for producing electricity rose from 13 percent to 32 percent of total operating income (Figure 2). Costs of long- and short-term securities, equity financing, fuel, and construction of generating and distribution facilities all increased. During this time, however, public utility commissions were slow to grant commensurate increases in rates. Because the demand for electricity was lower than anticipated, even the rates of return that were allowed by the commissions were not met. Combined, these factors resulted in a decrease in profits and in low earnings on utilities' common stock, which made such stock less attractive as investments. However, recent tax provisions of the Economic Recovery Act of 1981 helped renew the interest of investors in utility stock by deferring tax payments on reinvested dividends.

The Method of Analysis

Two scenarios, each assuming a different maximum level of generating capacity, are compared for differences in electricity demand, reliability, fuel consumption, and electricity prices. The projections for the two cases described below were developed with the Midterm Energy Forecasting System, which contains demand models,

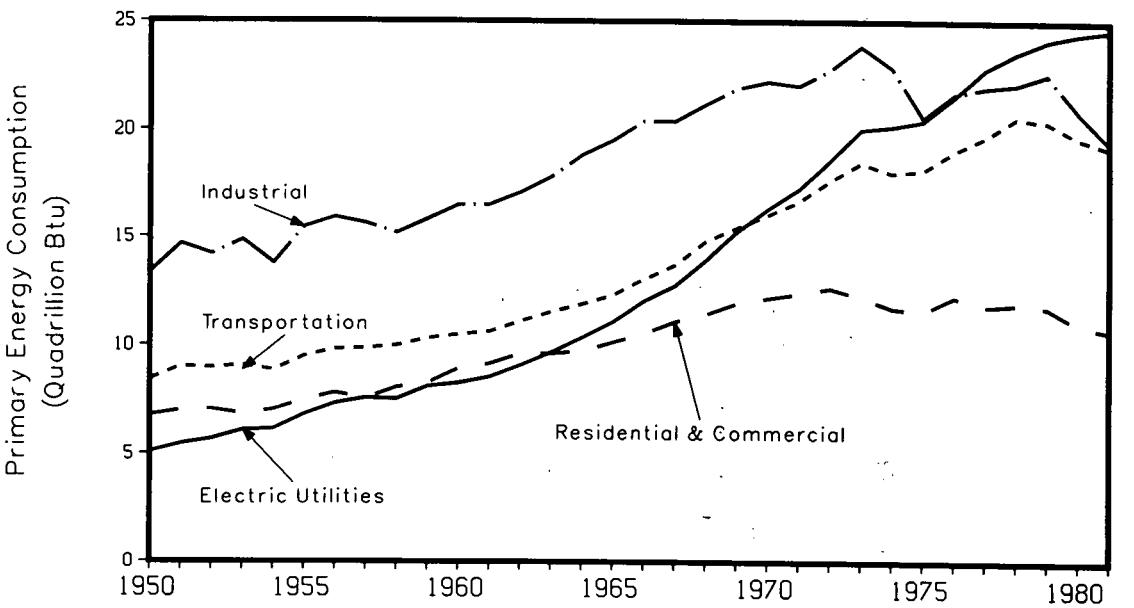
Figure 2. Changes in Composition of Investor-Owned Utility Income 1967-1980



*Interest, property taxes, preferred dividends, and depreciation.

Sources: Energy Information Administration (EIA), *Statistics of Privately-Owned Electric Utilities in the United States, 1980 Annual, Classes A and B Companies,* DOE/EIA-0044(80), October 1981, and EIA, *Statistics of Privately-Owned Electric Utilities in the United States, 1976, Classes A and B Companies,* DOE/EIA-0044(76), April 1978.

Figure 1: Consumption of Primary Energy by End-Use Sector, 1950-1981



Source: Energy Information Administration, *Annual Report to Congress, 1981,* Volume 2, DOE/EIA-0173(81)/2, May 1982, p. 9.

supply models, and a regional equilibrating mechanism balancing supply and demand. This is explained in detail in the EIA *Annual Report to Congress, 1980*.[2] The scenarios are:

The Base Case. Electric utilities are assumed to obtain financing for all new construction currently planned and, after 1990, for any additional powerplants justified by economic considerations.[3] The total supply and demand balance for this Base Case is illustrated in Table 1.

The Financially Constrained Case. Electric utilities are assumed to be unable to obtain financing for many new projects and are able to build only those facilities for which they have major financial commitments. The assumptions for coal-fired capacity available for each projected year are based on existing boiler orders and boiler delivery dates. Nuclear plants are assumed to be delayed on the basis of percentage of completed construction for each unit. By 1990, electric utilities complete only about 60 percent of those coal-fired powerplants currently under construction or planned, and by 1995, complete only 80 percent of the nuclear powerplants under construction or with construction permits.

All other assumptions (i.e., macroeconomic forces) for the two sets of projections are the same. In particular, both cases assume that the Nation's economy will grow at an average annual rate of approximately 2.4 percent through 1995.

Results

Supply Adequacy. The national reserve margins (the ratio of total capacity minus peak demand to peak demand) in the Financially Constrained Case are substantially less than in the Base Case (see Table 2). However, given national electricity demand growth projections of 3.2 percent annually from 1980 through 1995, many coal-fired and nuclear powerplants in the Base Case could be delayed and still permit a national reserve margin of 25 percent. The 3.2 percent rate of growth is higher than the 2.9 percent rate projected in the

[2] Energy Information Administration, U.S. Department of Energy, *Annual Report to Congress, 1980*, Volume 3, DOE/EIA-0173(80) (Washington, D.C., March 1981), pp. 220-234.

[3] This assumption is used in the Energy Information Administration service report *Revised ARC 80 Forecasts*, SR/IA/81-12, June 1981.

Table 1. U.S. Energy Supply/Demand Balance: Historic Data and Projections for the Base Case Scenario, 1965-1995
(Quadrillion Btu per Year)

	Historic Data[a]			Projections		
	1965	1973	1980	1985	1990	1995
World Oil Price (1980 dollars per barrel)	**6.56**	**7.11**	**33.96**	**40.48**	**44.85**	**54.70**
Domestic Energy Supply						
Oil	18.4	22.1	20.6	19.2	19.8	21.6
Gas	15.8	22.2	19.8	17.0	17.4	16.8
Coal	13.4	14.4	18.7	22.6	28.8	37.5
Nuclear	[b]	0.9	2.7	5.6	8.1	9.1
Other (Hydropower, Solar and Geothermal	2.1	2.9	3.0	3.4	3.6	4.2
Subtotal, Domestic Production	49.7	62.4	64.8	67.8	77.7	89.2
Net Oil Imports	5.0	13.0	13.4	11.1	10.1	6.9
Net Gas Imports	0.4	1.0	1.0	1.5	1.0	0.9
Net Coal Imports	−1.4	−1.4	−2.5	−2.2	−2.7	−3.6
Subtotal Net Imports	4.0	12.6	11.9	10.5	8.4	4.2
Total Supply	53.7	75.0	76.7	78.3	86.1	93.4
End-Use Demand						
Refined Petroleum Products	22.5	31.2	31.6	28.8	28.8	28.1
Natural Gas	13.4	18.8	16.6	16.2	16.4	16.8
Coal	6.1	4.6	3.3	5.1	7.7	10.6
Electricity	3.3	5.8	7.2	8.2	9.7	11.4
Total End-Use Consumption	45.2	60.4	58.7	58.2	62.7	66.9
Conversion Losses	7.8	14.1	17.2	20.1	23.4	26.5
Total Consumption	53.0	74.5	75.9	78.3	86.1	93.4

[a] Source for historic data is Energy Information Administration, *Annual Report to Congress, 1981*, Volume 2, DOE/EIA-0173(81)/2, May 1982.

[b] Less than 0.05 quadrillion Btu.

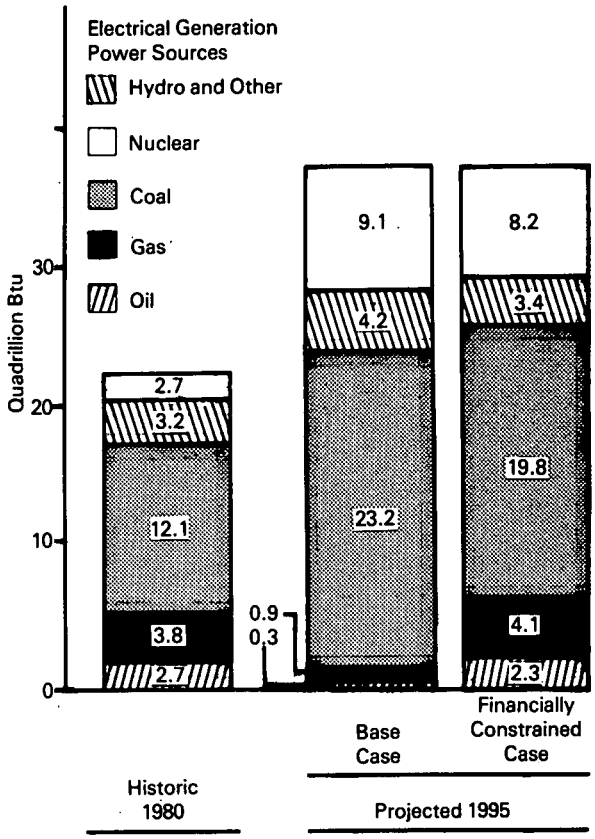
Note: Totals may not equal sum of components due to independent rounding.

Annual Report to Congress, 1981, Volume 3. At the lower rate of growth, supply adequacy can be maintained with less difficulty. For the Financially Constrained Case, additional oil- or gas-burning combustion turbines would have to be installed in some regions to assure reliability or to satisfy peak demand. A nationwide addition of significant amounts of combustion turbine capacity, i.e., up to 50 gigawatts by 1995, is not unprecedented; electric utilities added nearly 30 gigawatts of combustion turbine capacity between 1970 and 1974 to assure reliability during periods of peak demand.

Currently, electric utilities have very little combustion turbine capacity on order. However, lead-times for new turbines are relatively short, in some cases only 9 months from the date of order to the date of operation. Therefore, expanding turbine capacity to maintain reliability under financial constraints is a viable alternative.

Electric Utility Fuel Use. By 1995, electric utility consumption of fossil fuels is projected to shift when coal and nuclear plants are delayed in the Financially Constrained Case (Figure 3). In the Base Case, electric utilities eliminate about 82 percent of their current oil and gas use, but under the Financially Constrained Case, electric utilities will continue to consume approximately the same amount of oil and gas consumed at present, if

Figure 3. Historic and Projected Electrical Generation Power Sources



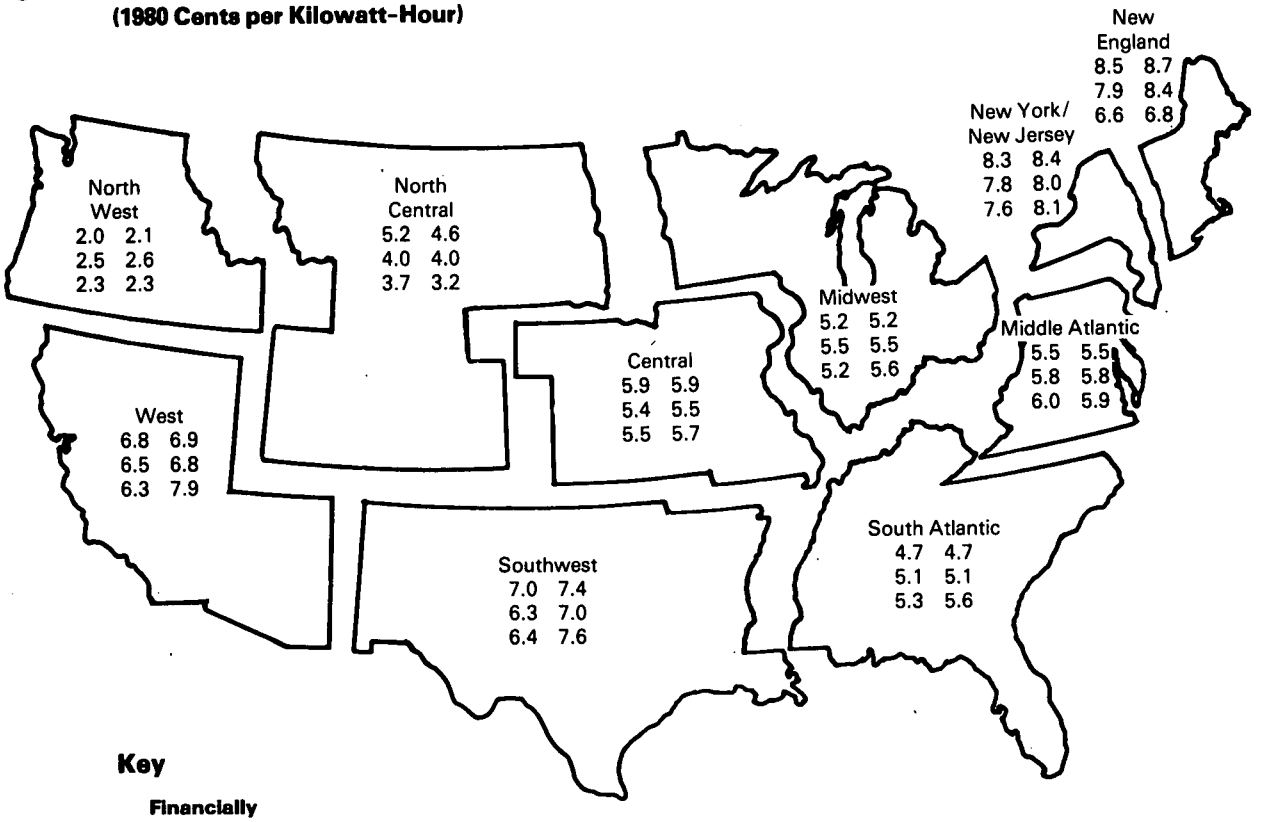
Source: Energy Information Administration, Midterm Energy Forecasting System.

Table 2. A Comparison of Projected Total Generation, Peak Load, Net Dependable Capability, Load Factor, and Reserve Margins[a]

	1980	1985		1990		1995	
	Historic	Base Case	Financially Constrained Case	Base Case	Financially Constrained Case	Base Case	Financially Constrained Case
Total Generation (Billion kWh)[b]	2,286	2,650	2,644	3,151	3,117	3,704	3,634
Peak Load (GWe)[c]	430	479	477	569	563	669	656
Net Dependable Capability (GWe)[d]							
Mean Hydro	570	696	671	806	746	972	843
Adverse Hydro/Modified Turbines[e]		687	663	791	723	961	821
Reserve Margin (Percent)							
Mean Hydro	32.6	45.5	40.7	41.6	32.5	45.3	28.4
Adverse Hydro/Modified Turbines[e]		43.7	39.1	39.0	28.5	43.7	25.0

[a]All data are calculated on a national basis for noncoincident peak demands.
[b]Energy Information Administration (EIA), *Annual Report to Congress, 1980*, Volume 2, p. 157, Table 66.
[c]EIA, *Energy Data Report*, "Electric Energy and Peak Load Data, 1980 Annual," p. 15, Table 17.
[d]Generating Unit Reference File as of January 1, 1980.
[e]Reserve margins under mean hydroconditions were calculated with a net dependable hydroelectric capability based on average water flows and including combustion turbine capacity built to satisfy reserve margin constraints. If adverse hydro capacity was used, and turbines built merely to satisfy reserve constraints eliminated, the reserve margins in 1985, 1990, and 1995 would be less, as illustrated in the table.

Figure 4. Projected Average Electricity Prices, by Region
(1980 Cents per Kilowatt-Hour)



Key

Base Case	Financially Constrained Case
1985	1985
1990	1990
1995	1995

U.S. Average Electricity Prices
(1980 Cents per Kilowatt-Hour)

Year	Base Case	Financially Constrained Case
1985	5.70	5.75
1990	5.67	5.84
1995	5.62	6.05

Source: Energy Information Administration, Midterm Energy Forecasting System.

electricity demand grows annually at approximately 3.2 percent. In 1995, net imports of oil would be 4.2 million barrels per day in the Financially Constrained Case versus 3.4 million barrels per day in the Base Case. In both projections, however, net imports are below the 5.4 million barrel per day rate of 1981.

In the Financially Constrained Case, oil consumption increases most along the Atlantic seaboard and in California where oil-fired units represent at least half of the existing powerplant capacity. Natural gas consumption rises sharply in the Southwest where 85 percent of the existing gas-fired steam capacity in the Nation is located. Gas consumption also increases in California where many oil-fired units can also use natural gas.

Electricity Prices. By 1995, electricity prices are projected to increase regionally by as much as 24 percent over the Base Case, and to increase nationally approximately 8 percent. Continued use of less economical oil- and gas-fired powerplants increases consumer costs even more than would the substantial capital outlays required for the greater capacity expansion in the Base Case. Even if the coal-fired plant utilization is as low as 20 percent, the cost of producing electricity with a new coal-fired plant, including recovery of capital expenditures, is less than with an oil-fired powerplant. A comparison of projected average prices of electricity by region is shown in Figure 4.

Capital Expenditures. The cumulative capital expenditures from 1979 through 1985 and 1990 required for system expansion in both cases are compared in Table 3. The capital expenditures for new coal-fired powerplants, nuclear powerplants, and new transmission and distribution facilities are listed separately.

Total capital expenditures in the Financially Constrained Case are approximately 18 percent lower than the Base Case estimate in 1985, and nearly 29 percent lower than in 1990. However, expenditures in the Financially Constrained Case may be underestimated, because they do not include the associated costs of delays in coal and nuclear plant construction that would actually be incurred.

Conclusions

These findings imply two conclusions. First, based on the projection of 3.2 percent growth in demand for electricity, electric utilities can satisfy customers' requirements up to 1995 and maintain a national reserve margin of 25 percent, even under the Financially Constrained Case, if combustion turbines are built to meet peak demand. During this period, national reserve generating capacity resulting from curtailed construction would not fall below acceptable levels (23 percent) except in the Far West, where additional gas turbines would have to be built to maintain minimum reliability levels as well as to meet peak demand. Electric utilities' consumption of oil and dependence on oil imports would remain less than their 1981 levels. Further, the effect of financial constraints may provide some short-term financial benefits. Lower capital expenditures would reduce electric utilities' requirements to secure investment funds at high interest rates and would reduce the pressure for higher electricity prices in the immediate future. Nonetheless, electric utilities must continue to make minimum capital expenditures to complete new construction, to maintain their facilities, and to conduct general operations. Thus, common stock prices and book values could continue to deteriorate, and the general financial condition of the industry might not be remedied, even if absolute levels of capital expenditures decline.

Second, continued financial pressure would not allow most electric utilities to expand generating capacity or to replace existing oil- and gas-fired powerplants with sufficient numbers of new nuclear and coal-fired plants. This constraint could produce serious adverse effects on the industry in the long run:

> The failure to build more economical coal-fired and nuclear plants could compel electric utilities to continue using large amounts of expensive oil and gas. The results would be higher fuel costs and attendant distortions for fuel consumption patterns in other sectors of the economy. In addition, this use of oil could contribute to continued U.S. dependence on imports.
>
> Given the long leadtimes for new coal-fired plants (7 to 9 years) and nuclear powerplants (11 to 13 years), continued delays and deferrals could render capacity insufficient to meet potential demand growth and to replace plants scheduled for retirement after 1995.

Table 3. Comparison of Cumulative Electric Utility Capital Expenditures—Base Case Versus Financially Constrained Case
(Billions of 1980 Dollars)

Category	1985		1990	
	Base Case	Financially Constrained Case	Base Case	Financially Constrained Case
Coal	48.4	23.4	131.8	58.4
Nuclear	63.1	55.1	86.0	61.9
New Transmission and Distribution Facilities	65.0	65.0	116.3	116.0
Other[a]	23.5	20.0	55.1	41.1
Total	200.0	163.5	389.2	277.4

[a]Includes new oil- and gas-fired units such as combustion turbines, hydroelectric powerplants, advanced technologies, and conversion costs for modifying a plant to use an alternate fuel.
Source: Energy Information Administration, Capital Requirements Estimating Model (CREMOD) for Electric Utilities.

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Part 1 Executive Summary

Overview

Production

Energy production during the first 7 months of 1982 totaled 38.3 quadrillion Btu, a 4.1-percent* increase compared to the level of production during the same period of 1981. Natural gas production decreased by 5.5 percent. Increases in production occurred for petroleum and coal. Petroleum production was up by 0.5 percent and coal by 16.9 percent. All other forms of energy production combined were up by 13.2 percent.

Consumption

Energy consumption during the first 7 months of 1982 totaled 42.4 quadrillion Btu, a 2.6-percent decrease compared to the level of consumption during the same period of 1981. Decreases occurred in the daily consumption rates of petroleum (5.1 percent), natural gas (4.0 percent), and coal (1.2 percent), accounting for the overall decline in energy consumption during this period. The daily consumption rate of all other forms of energy increased by 12.5 percent.

Imports

Net imports of energy during the first 7 months of 1982 totaled 4.0 quadrillion Btu, 32.9 percent below the level of the first 7 months of 1981. Net imports of petroleum decreased by 24.8 percent, and other (electricity and coal coke combined) decreased by 3.8 percent. Net exports of coal increased by 24.6 percent. Natural gas net imports increased by 10.5 percent

*All percentage increases/decreases are on a daily rate basis.

Energy Summary

(Quadrillion (10^{15}) Btu)

	July			Cumulative January through July				
	1982	1981	Percent Change	1982	1982 Daily Rate	1981	1981 Daily Rate	Percent Change[1]
Total Production	**5.174**	**5.611**	**-7.8**	**38.320**	**0.181**	**36.793**	**0.174**	**+4.1**
Petroleum[2]	1.740	1.716	+1.4	11.921	0.056	11.863	0.056	+0.5
Natural Gas	1.529	1.664	-8.1	11.077	0.052	11.716	0.055	-5.5
Coal	1.338	1.711	-21.8	11.506	0.054	9.842	0.046	+16.9
Other[3]	0.568	0.520	+9.3	3.816	0.018	3.372	0.016	+13.2
Total Consumption	**5.739**	**6.073**	**-5.5**	**42.431**	**0.200**	**43.555**	**0.205**	**-2.6**
Petroleum[4]	2.509	2.664	-5.8	17.910	0.084	18.878	0.089	-5.1
Natural Gas	1.231	1.386	-11.2	11.370	0.054	11.848	0.056	-4.0
Coal	1.414	1.483	-4.7	9.212	0.043	9.327	0.044	-1.2
Other[5]	0.585	0.540	+8.3	3.940	0.019	3.501	0.017	+12.5
Net Imports	**0.743**	**0.744**	**0.0**	**4.010**	**0.019**	**5.975**	**0.028**	**-32.9**
Petroleum[6]	0.901	0.942	-4.3	5.068	0.024	6.739	0.032	-24.8
Natural Gas	0.063	0.062	+1.6	0.547	0.003	0.495	0.002	+10.5
Coal[7]	(0.239)	(0.281)	(-15.1)	(1.729)	(0.008)	(1.388)	(0.007)	(+24.6)
Other[8]	0.017	0.020	-16.9	0.124	0.001	0.129	0.001	-3.8

[1] Based on daily rates.
[2] Includes crude oil, lease condensate, and natural gas plant liquids.
[3] Includes hydroelectric, nuclear, and geothermal power and and electricity produced from wood and waste.
[4] Includes refined petroleum products and natural gas plant liquids.
[5] Includes hydroelectric, nuclear, and geothermal power, electricity produced from wood and waste, and net imports of electricity and coal coke.
[6] Includes crude oil, lease condensate, refined petroleum products, unfinished oils, natural gasoline, plant condensate, and imports of crude oil for the Strategic Petroleum Reserve.
[7] Parentheses indicate exports are greater than imports.
[8] Includes net imports of electricity and coal coke.
Note: Totals may not equal sum of components due to independent rounding.

Executive Summary

Energy Summary[1]

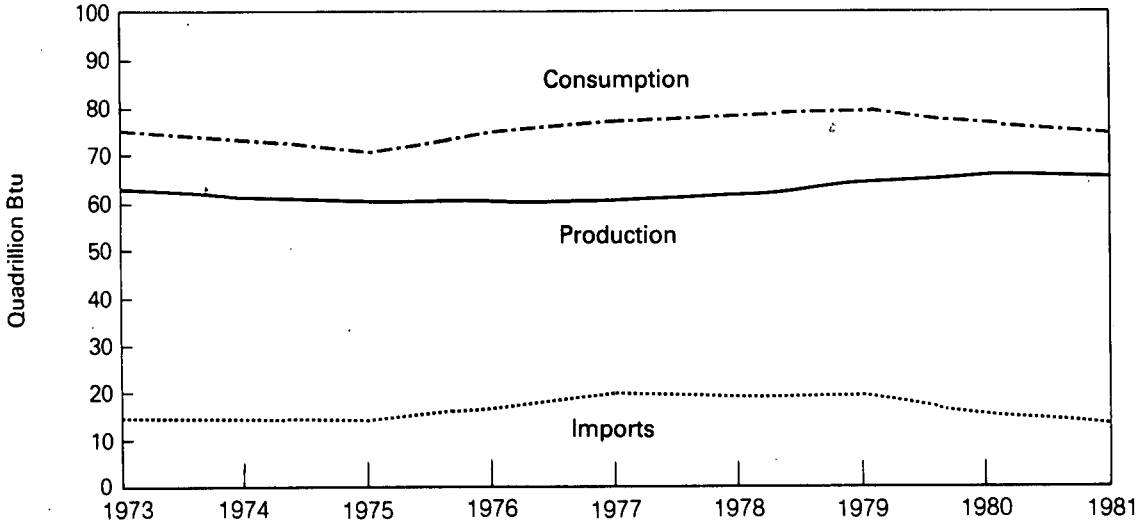
		Energy Production[2]	Energy Consumption[2]	Energy Imports[2]	Energy Exports
		Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**62.433**	**74.609**	**14.732**	**2.073**
1974	**TOTAL**	**61.229**	**72.759**	**14.417**	**2.241**
1975	**TOTAL**	**60.059**	**70.707**	**14.113**	**2.389**
1976	**TOTAL**	**60.091**	**74.510**	**16.838**	**2.213**
1977	**TOTAL**	**60.293**	**76.332**	**20.092**	**2.097**
1978	**TOTAL**	**61.231**	**78.175**	**19.261**	**1.952**
1979	**TOTAL**	**63.851**	**78.910**	**19.620**	**2.900**
1980	January	5.668	7.426	1.695	0.227
	February	5.308	6.988	1.473	0.210
	March	5.696	6.878	1.476	0.264
	April	5.458	5.988	1.339	0.287
	May	5.591	5.815	1.281	0.344
	June	5.398	5.670	1.287	0.359
	July	5.242	5.929	1.210	0.323
	August	5.335	5.818	1.203	0.313
	September	5.301	5.773	1.168	0.330
	October	5.491	6.148	1.248	0.370
	November	5.333	6.261	1.227	0.341
	December	5.678	7.221	1.363	0.338
	TOTAL	**65.499**	**75.913**	**15.971**	**3.706**
1981	January	5.502	7.419	1.346	0.264
	February	5.240	6.325	1.210	0.280
	March	5.740	6.435	1.192	0.372
	April	4.662	5.716	1.083	0.328
	May	4.760	5.767	1.130	0.277
	June	5.279	5.820	1.039	0.249
	July	5.611	6.073	1.139	0.395
	August	5.789	5.893	1.131	0.423
	September	5.576	5.653	1.201	0.414
	October	5.796	5.979	1.178	0.469
	November	5.473	5.963	1.109	0.443
	December	5.693	6.923	1.172	0.434
	TOTAL	**65.120**	**73.965**	**13.929**	**4.347**
1982	January	5.554	7.214	1.073	0.323
	February	5.273	6.307	0.880	0.377
	March	5.872	6.366	0.917	0.443
	April	5.530	5.891	0.847	0.430
	May	5.489	5.478	0.957	0.421
	June	R5.428	R5.436	1.001	0.414
	July	5.174	5.739	1.130	0.386

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]For definitions, see Notes on the last page of this section.
[2]The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds; shipments of anthracite to U.S. Armed Forces in Europe; and adjustments to account for discrepancies between reporting systems.
R=Revised data.
Source: •Energy Information Administration calculations based on data appearing elsewhere in this publication.

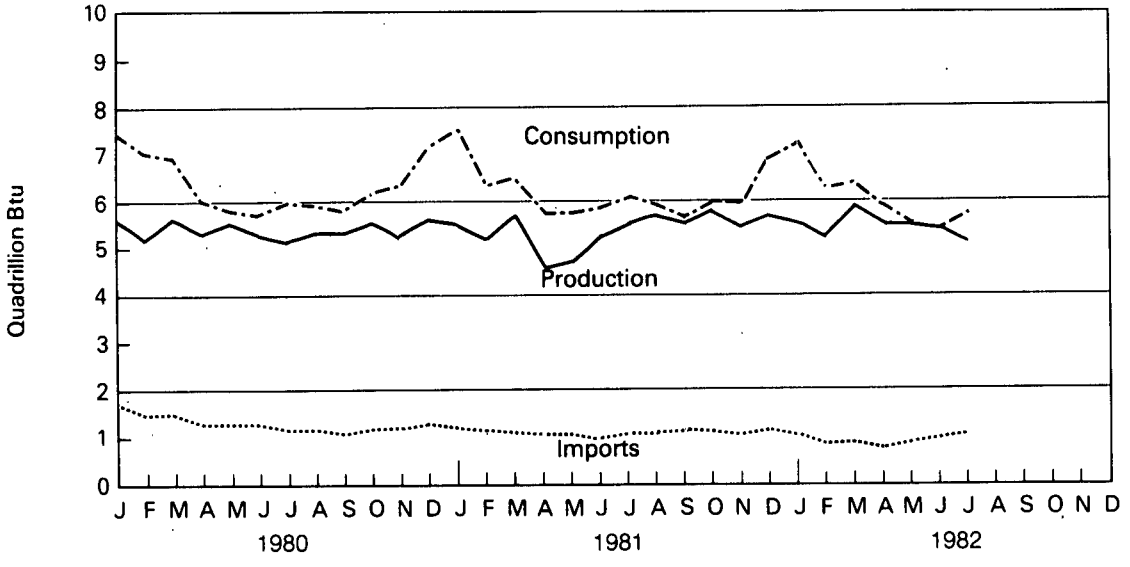
Executive Summary

Energy Summary

Yearly



Monthly



Executive Summary

Production of Energy by Type

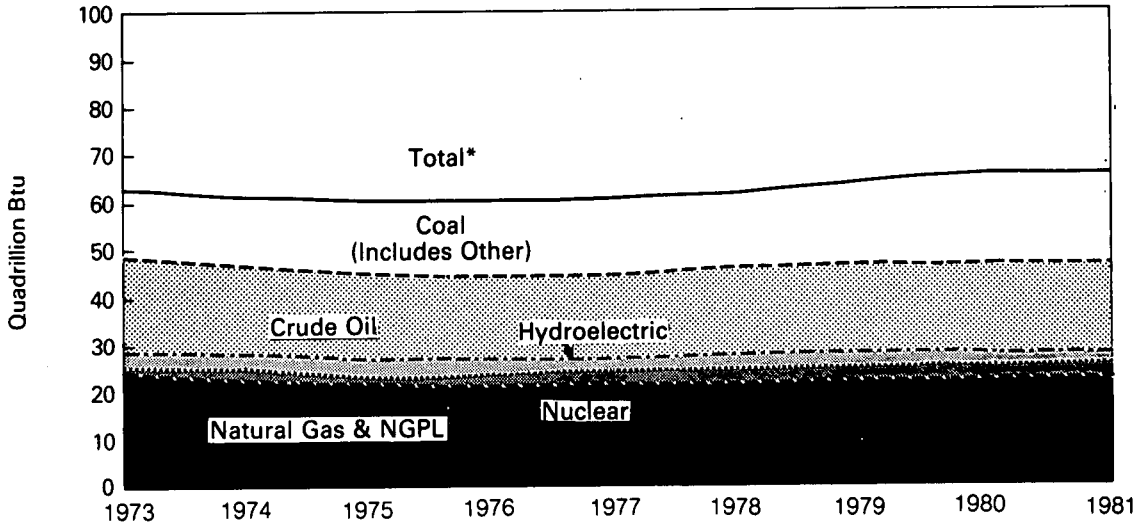
		Coal[1]	Crude Oil[2]	NGPL[3]	Natural Gas (Dry)	Hydro-electric Power[4]	Nuclear Electric Power	Other[5]	Total Energy Produced	Yearly Cumulative Energy Produced
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**14.366**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.433**	
1974	**TOTAL**	**14.468**	**18.575**	**2.471**	**21.210**	**3.177**	**1.272**	**0.056**	**61.229**	
1975	**TOTAL**	**15.189**	**17.729**	**2.374**	**19.640**	**3.155**	**1.900**	**0.072**	**60.059**	
1976	**TOTAL**	**15.853**	**17.262**	**2.327**	**19.480**	**2.976**	**2.111**	**0.081**	**60.091**	
1977	**TOTAL**	**15.829**	**17.454**	**2.327**	**19.565**	**2.333**	**2.702**	**0.082**	**60.293**	
1978	**TOTAL**	**15.037**	**18.434**	**2.245**	**19.485**	**2.937**	**3.024**	**0.068**	**61.231**	
1979	**TOTAL**	**17.651**	**18.104**	**2.286**	**20.076**	**2.931**	**2.715**	**0.089**	**63.851**	
1980	January	1.611	1.560	0.200	1.814	0.265	0.210	0.008	5.668	5.668
	February	1.517	1.464	0.188	1.702	0.224	0.205	0.008	5.308	10.976
	March	1.643	1.564	0.190	1.823	0.255	0.213	0.008	5.696	16.672
	April	1.613	1.511	0.191	1.664	0.270	0.200	0.008	5.458	22.130
	May	1.645	1.553	0.196	1.690	0.302	0.196	0.010	5.591	27.720
	June	1.652	1.488	0.183	1.581	0.290	0.195	0.009	5.398	33.119
	July	1.419	1.537	0.185	1.612	0.256	0.224	0.010	5.242	38.361
	August	1.584	1.513	0.184	1.571	0.214	0.259	0.011	5.335	43.696
	September	1.593	1.500	0.178	1.576	0.194	0.251	0.010	5.301	48.997
	October	1.674	1.534	0.184	1.641	0.187	0.261	0.011	5.491	54.489
	November	1.589	1.478	0.184	1.646	0.201	0.223	0.011	5.333	59.822
	December	1.670	1.547	0.189	1.792	0.233	0.235	0.011	5.678	65.499
	TOTAL	**19.209**	**18.249**	**2.254**	**20.112**	**2.890**	**2.672**	**0.114**	**65.499**	
1981	January	1.519	1.535	0.200	1.748	0.234	0.253	0.011	5.502	5.502
	February	1.632	1.397	0.181	1.569	0.221	0.230	0.010	5.240	10.742
	March	1.803	1.549	0.197	1.730	0.216	0.234	0.011	5.740	16.481
	April	0.864	1.489	0.188	1.673	0.218	0.220	0.010	4.662	21.143
	May	0.869	1.529	0.193	1.697	0.253	0.210	0.010	4.760	25.904
	June	1.444	1.501	0.187	1.634	0.276	0.225	0.010	5.279	31.182
	July	1.711	1.528	0.188	1.664	0.263	0.246	0.011	5.611	36.793
	August	1.823	1.543	0.196	1.703	0.226	0.287	0.011	5.789	42.582
	September	1.858	1.497	0.189	1.575	0.187	0.260	0.011	5.576	48.159
	October	2.003	1.540	0.194	1.640	0.189	0.219	0.011	5.796	53.954
	November	1.757	1.494	0.191	1.580	0.199	0.242	0.010	5.473	59.427
	December	1.705	1.544	0.193	1.715	0.250	0.277	0.010	5.693	65.120
	TOTAL	**18.987**	**18.146**	**2.298**	**19.929**	**2.732**	**2.901**	**0.127**	**65.120**	
1982	January	1.530	1.559	0.188	1.714	0.282	0.273	0.009	5.554	5.554
	February	1.621	1.411	0.167	1.573	0.279	0.215	0.008	5.273	10.827
	March	1.914	1.546	0.191	1.661	0.312	0.242	0.007	5.872	16.700
	April	1.737	1.505	0.186	1.571	0.292	0.232	0.007	5.530	22.230
	May	1.677	1.557	0.184	1.538	0.294	0.230	0.008	5.489	27.719
	June	1.691	1.510	0.177	R1.491	0.293	0.256	0.010	R5.428	R33.146
	July	1.338	1.555	0.185	1.529	0.287	0.271	0.010	5.174	38.320

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes bituminous coal, lignite, and anthracite.
[2]Includes lease condensate.
[3]Natural gas plant liquids.
[4]Includes industrial and utility production of hydropower.
[5]Includes geothermal power and electricity produced from wood and waste.
R=Revised data.
Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

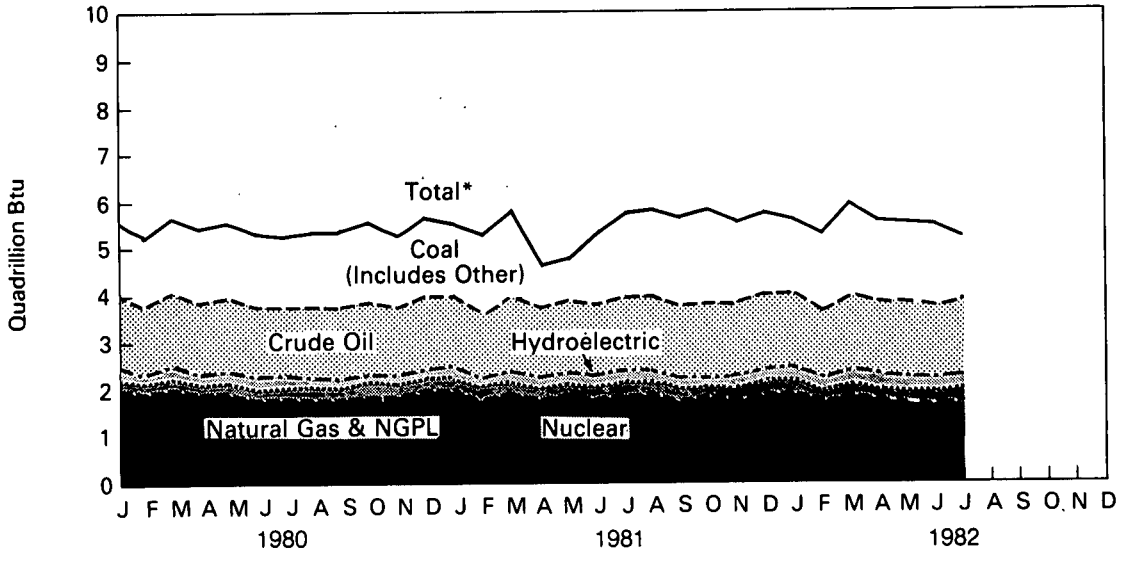
Executive Summary

Production of Energy by Type

Yearly



Monthly



*Btu equivalents for all fuels were cumulated to create total.

Executive Summary

Consumption of Energy by Type

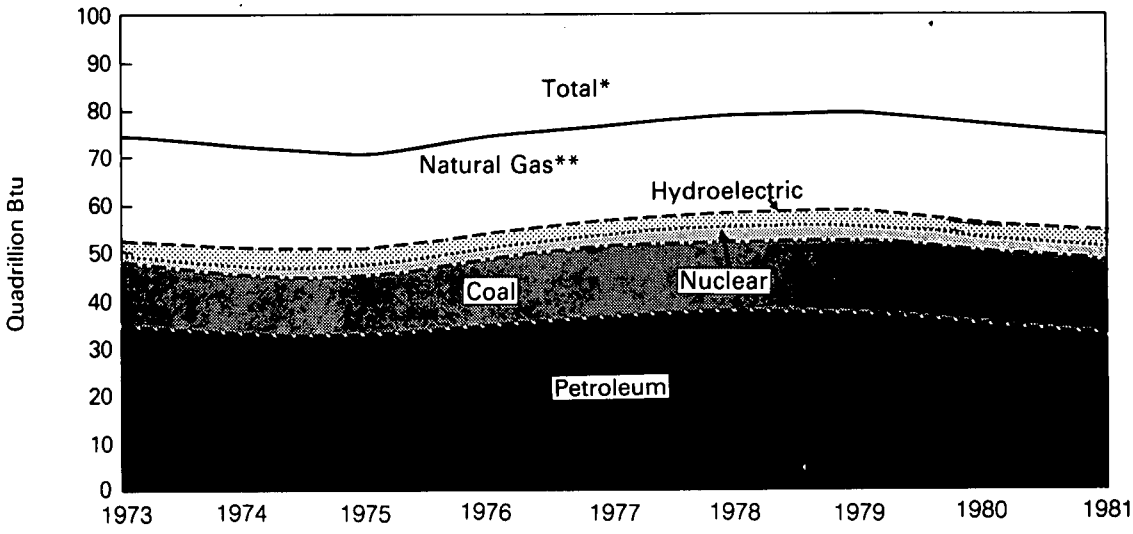
		Coal[1]	Natural Gas (Dry)	Petroleum	Hydroelectric Power[2]	Nuclear Electric Power	Net Imports of Coal Coke[3]	Other[4]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**13.300**	**22.512**	**34.840**	**3.010**	**0.910**	**(0.008)**	**0.046**	**74.609**	
1974	**TOTAL**	**12.876**	**21.732**	**33.455**	**3.309**	**1.272**	**0.059**	**0.056**	**72.759**	
1975	**TOTAL**	**12.823**	**19.948**	**32.731**	**3.219**	**1.900**	**0.014**	**0.072**	**70.707**	
1976	**TOTAL**	**13.733**	**20.345**	**35.175**	**3.066**	**2.111**	**0.000**	**0.081**	**74.510**	
1977	**TOTAL**	**13.964**	**19.931**	**37.122**	**2.515**	**2.702**	**0.015**	**0.082**	**76.332**	
1978	**TOTAL**	**13.846**	**20.000**	**37.965**	**3.141**	**3.024**	**0.131**	**0.068**	**78.175**	
1979	**TOTAL**	**15.109**	**20.666**	**37.123**	**3.141**	**2.715**	**0.066**	**0.089**	**78.910**	
1980	January	1.397	2.322	3.202	0.283	0.210	0.003	0.008	7.426	7.426
	February	1.313	2.232	2.990	0.241	0.205	(0.001)	0.008	6.988	14.413
	March	1.295	2.140	2.951	0.273	0.213	(0.003)	0.008	6.878	21.291
	April	1.158	1.580	2.759	0.287	0.200	(0.005)	0.008	5.988	27.279
	May	1.162	1.374	2.758	0.321	0.196	(0.006)	0.010	5.815	33.093
	June	1.234	1.267	2.661	0.307	0.195	(0.004)	0.009	5.670	38.763
	July	1.389	1.317	2.719	0.275	0.224	(0.004)	0.010	5.929	44.692
	August	1.381	1.263	2.676	0.232	0.259	(0.003)	0.011	5.818	50.510
	September	1.261	1.316	2.728	0.211	0.251	(0.004)	0.010	5.773	56.283
	October	1.227	1.564	2.887	0.205	0.261	(0.006)	0.011	6.148	62.431
	November	1.250	1.815	2.745	0.219	0.223	(0.002)	0.011	6.261	68.692
	December	1.394	2.204	3.127	0.252	0.235	(0.001)	0.011	7.221	75.913
	TOTAL	**15.461**	**20.394**	**34.202**	**3.107**	**2.672**	**(0.037)**	**0.114**	**75.913**	
1981	January	1.487	2.284	3.130	0.255	0.253	0.000	0.011	7.419	7.419
	February	1.311	1.929	2.606	0.239	0.230	(0.001)	0.010	6.325	13.744
	March	1.323	1.932	2.702	0.236	0.234	(0.003)	0.011	6.435	20.179
	April	1.202	1.525	2.523	0.237	0.220	(0.001)	0.010	5.716	25.895
	May	1.208	1.458	2.608	0.273	0.210	0.000	0.010	5.767	31.662
	June	1.313	1.335	2.645	0.296	0.225	(0.004)	0.010	5.820	37.482
	July	1.483	1.386	2.664	0.283	0.246	0.000	0.011	6.073	43.555
	August	1.449	1.307	2.592	0.246	0.287	0.000	0.011	5.893	49.447
	September	1.313	1.292	2.573	0.206	0.260	(0.002)	0.011	5.653	55.100
	October	1.302	1.553	2.687	0.210	0.219	(0.003)	0.011	5.979	61.079
	November	1.290	1.640	2.563	0.218	0.242	0.000	0.010	5.963	67.042
	December	1.429	2.122	2.819	0.270	0.277	(0.003)	0.010	6.923	73.965
	TOTAL	**16.109**	**19.762**	**32.113**	**2.970**	**2.901**	**(0.017)**	**0.127**	**73.965**	
1982	January	1.521	2.411	2.699	0.302	0.273	0.000	0.009	7.214	7.214
	February	1.313	2.029	2.446	0.297	0.215	(0.001)	0.008	6.307	13.521
	March	1.280	1.863	2.643	0.332	0.242	(0.002)	0.007	6.366	19.887
	April	1.191	1.513	2.638	0.312	0.232	(0.001)	0.007	5.891	25.778
	May	1.237	1.170	2.521	0.314	0.230	(0.003)	0.008	5.478	31.257
	June	1.255	R1.152	2.454	0.313	0.256	(0.004)	0.010	R5.436	R36.693
	July	1.414	1.231	2.509	0.307	0.271	(0.003)	0.010	5.739	42.431

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes bituminous coal, lignite, and anthracite.
[2]Includes industrial and utility production and net imports of electricity.
[3]Parentheses indicate exports are greater than imports.
[4]Includes geothermal power and electricity produced from wood and waste.
R=Revised data.
Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

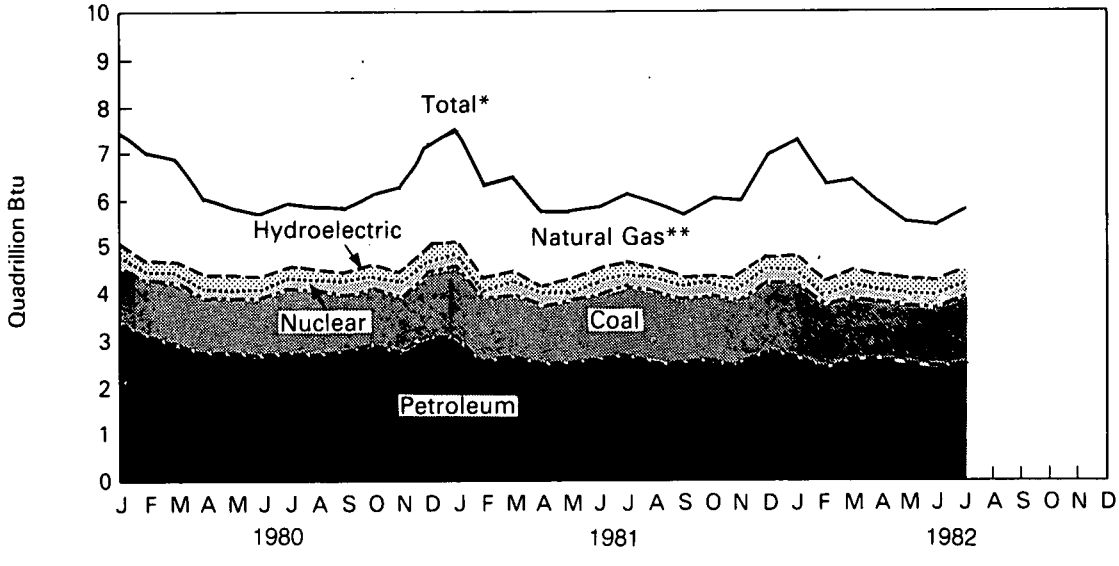
Executive Summary

Consumption of Energy by Type

Yearly



Monthly



*Btu equivalents for all fuels were cumulated to create total.
**Includes net imports of coal coke and other.

Executive Summary

Net Imports of Energy by Type[1]

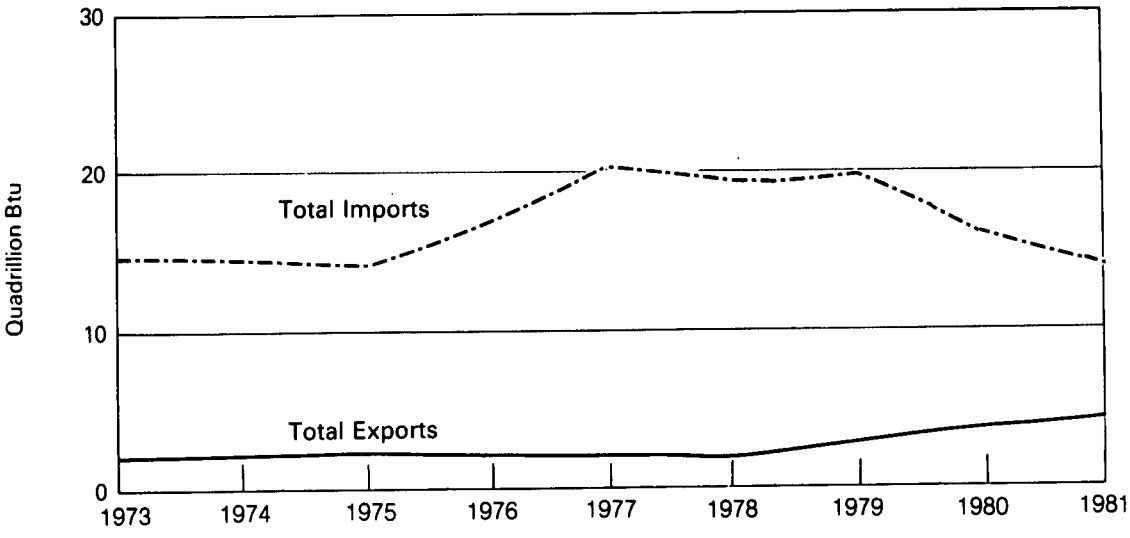
		Coal[2]	Crude Oil[3]	Refined Petroleum Products[4]	Natural Gas (Dry)	Electricity	Coal Coke	Net Imports	Yearly Cumulative Net Imports of Energy
		Quadrillion (10^{15}) Btu							
1973	**TOTAL**	**(1.443)**	**6.883**	**6.097**	**0.981**	**0.148**	**(0.008)**	**12.659**	
1974	**TOTAL**	**(1.585)**	**7.389**	**5.273**	**0.907**	**0.133**	**0.059**	**12.175**	
1975	**TOTAL**	**(1.766)**	**8.708**	**3.800**	**0.904**	**0.064**	**0.014**	**11.725**	
1976	**TOTAL**	**(1.590)**	**11.221**	**3.982**	**0.922**	**0.089**	**0.000**	**14.625**	
1977	**TOTAL**	**(1.424)**	**13.921**	**4.321**	**0.981**	**0.182**	**0.015**	**17.995**	
1978	**TOTAL**	**(1.024)**	**13.125**	**3.932**	**0.941**	**0.204**	**0.131**	**17.309**	
1979	**TOTAL**	**(1.730)**	**13.328**	**3.603**	**1.243**	**0.211**	**0.066**	**16.720**	
1980	January	(0.114)	1.096	0.349	0.115	0.018	0.003	1.468	1.468
	February	(0.101)	0.958	0.284	0.105	0.017	(0.001)	1.262	2.731
	March	(0.145)	0.967	0.269	0.106	0.018	(0.003)	1.212	3.943
	April	(0.196)	0.943	0.218	0.076	0.018	(0.005)	1.053	4.995
	May	(0.220)	0.861	0.214	0.069	0.018	(0.006)	0.937	5.933
	June	(0.230)	0.892	0.193	0.059	0.018	(0.004)	0.928	6.861
	July	(0.215)	0.830	0.199	0.059	0.018	(0.004)	0.887	7.748
	August	(0.238)	0.851	0.204	0.058	0.018	(0.003)	0.890	8.638
	September	(0.219)	0.765	0.223	0.056	0.018	(0.004)	0.839	9.477
	October	(0.244)	0.803	0.235	0.072	0.018	(0.006)	0.878	10.355
	November	(0.235)	0.766	0.252	0.087	0.018	(0.002)	0.885	11.240
	December	(0.214)	0.854	0.272	0.095	0.018	(0.001)	1.025	12.265
	TOTAL	**(2.371)**	**10.586**	**2.912**	**0.957**	**0.217**	**(0.037)**	**12.265**	
1981	January	(0.151)	0.828	0.298	0.088	0.020	0.000	1.083	1.083
	February	(0.175)	0.761	0.245	0.082	0.018	(0.001)	0.930	2.013
	March	(0.252)	0.777	0.200	0.077	0.020	(0.003)	0.819	2.832
	April	(0.215)	0.722	0.164	0.065	0.020	(0.001)	0.755	3.587
	May	(0.157)	0.716	0.214	0.059	0.020	0.000	0.853	4.440
	June	(0.158)	0.687	0.185	0.061	0.020	(0.004)	0.791	5.231
	July	(0.281)	0.728	0.214	0.062	0.020	0.000	0.744	5.975
	August	(0.292)	0.716	0.203	0.060	0.020	0.000	0.708	6.683
	September	(0.310)	0.793	0.223	0.062	0.020	(0.002)	0.786	7.469
	October	(0.321)	0.749	0.189	0.076	0.020	(0.003)	0.709	8.179
	November	(0.308)	0.657	0.218	0.079	0.020	0.000	0.666	8.844
	December	(0.299)	0.711	0.220	0.090	0.020	(0.003)	0.738	9.583
	TOTAL	**(2.918)**	**8.844**	**2.573**	**0.862**	**0.238**	**(0.017)**	**9.583**	
1982	January	(0.160)	0.614	0.175	0.100	0.020	0.000	0.750	0.750
	February	(0.234)	0.431	0.199	0.091	0.018	(0.001)	0.503	1.253
	March	(0.273)	0.457	0.184	0.087	0.020	(0.002)	0.474	1.727
	April	(0.283)	0.460	0.147	0.075	0.020	(0.001)	0.417	2.144
	May	(0.262)	0.550	0.164	0.066	0.020	(0.003)	0.536	2.680
	June	(0.279)	0.643	0.142	0.064	0.020	(0.004)	0.586	3.267
	July	(0.239)	0.724	0.178	0.063	0.020	(0.003)	0.743	4.010

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Net imports equals imports minus exports. Parentheses indicate exports are greater than imports.
[2]Includes bituminous coal, lignite, and anthracite.
[3]Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.
[4]Includes refined petroleum products, unfinished oils, natural gasoline, and plant condensate.
Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

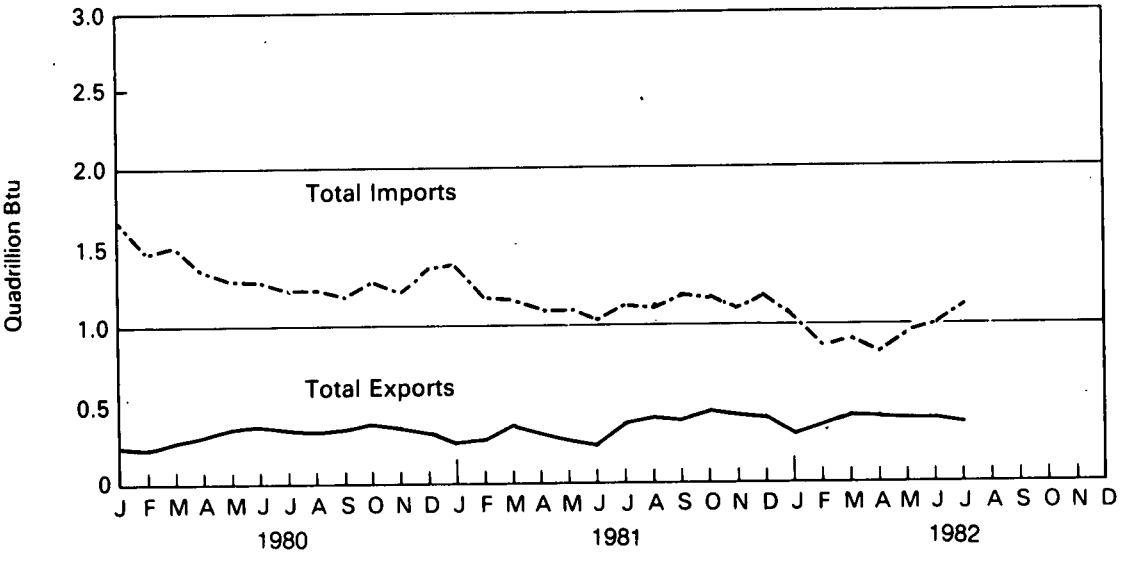
Executive Summary

Energy Imports and Exports

Yearly



Monthly



Executive Summary

Merchandise Trade Value

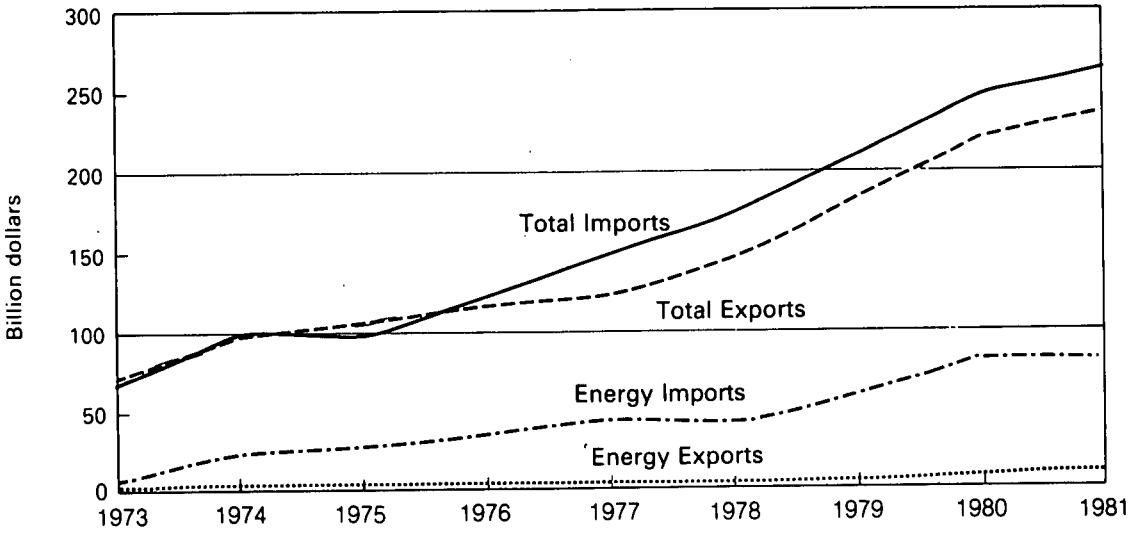
		Exports			Imports			Trade Balance		
		Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total
					Million dollars					
1973	**TOTAL**	**1,671**	**69,202**	**70,873**	**8,173**	**61,659**	**69,832**	**-6,502**	**+7,543**	**+1,041**
1974	**TOTAL**	**3,444**	**94,553**	**97,997**	**25,454**	**75,194**	**100,648**	**-22,010**	**+19,360**	**-2,650**
1975	**TOTAL**	**4,470**	**103,119**	**107,589**	**26,476**	**70,094**	**96,570**	**-22,006**	**+33,025**	**+11,019**
1976	**TOTAL**	**4,226**	**110,924**	**115,150**	**33,996**	**87,013**	**121,009**	**-29,770**	**+23,911**	**-5,859**
1977	**TOTAL**	**4,184**	**116,966**	**121,150**	**44,537**	**103,148**	**147,685**	**-40,353**	**+13,818**	**-26,535**
1978	**TOTAL**	**3,881**	**139,696**	**143,577**	**42,096**	**129,882**	**171,978**	**-38,215**	**+9,814**	**-28,401**
1979	**TOTAL**	**5,621**	**176,030**	**181,651**	**59,998**	**146,258**	**206,256**	**-54,377**	**+29,772**	**-24,605**
1980	January	619	16,801	17,419	7,118	14,024	21,142	-6,499	+2,776	-3,723
	February	584	16,400	16,984	8,152	13,626	21,779	-7,568	+2,774	-4,794
	March	636	17,629	18,265	7,564	13,384	20,947	-6,928	+4,246	-2,682
	April	607	17,960	18,567	6,797	12,969	19,766	-6,190	+4,992	-1,198
	May	660	16,987	17,647	7,150	13,437	20,587	-6,490	+3,549	-2,941
	June	656	17,784	18,440	7,276	13,077	20,353	-6,620	+4,708	-1,912
	July	695	17,572	18,267	5,986	13,153	19,139	-5,291	+4,419	-872
	August	702	18,385	19,087	6,461	13,252	19,713	-5,759	+5,133	-626
	September	710	18,119	18,828	6,278	13,662	19,941	-5,568	+4,456	-1,112
	October	662	18,552	19,214	6,601	13,747	20,347	-5,939	+4,805	-1,134
	November	709	18,006	18,715	6,128	13,732	19,860	-5,419	+4,274	-1,145
	December	706	18,545	19,251	7,413	14,023	21,436	-6,707	+4,522	-2,185
	TOTAL	**7,982**	**212,644**	**220,626**	**82,924**	**161,947**	**244,871**	**-74,942**	**+50,698**	**-24,244**
1981	January	756	18,146	18,902	8,007	14,609	22,616	-7,251	+3,537	-3,714
	February	999	18,789	19,788	7,939	13,977	21,916	-6,940	+4,813	-2,127
	March	939	20,339	21,278	6,471	14,558	21,029	-5,532	+5,781	+249
	April	738	19,048	19,786	7,831	14,418	22,249	-7,093	+4,630	-2,463
	May	593	18,306	18,899	6,075	15,157	21,232	-5,482	+3,149	-2,333
	June	565	19,185	19,750	7,252	14,753	22,005	-6,687	+4,432	-2,255
	July	847	18,442	19,289	5,687	14,427	20,114	-4,840	+4,015	-825
	August	884	18,147	19,031	6,876	16,366	23,242	-5,992	+1,780	-4,212
	September	939	18,612	19,551	6,555	14,719	21,274	-5,616	+3,892	-1,724
	October	991	18,172	19,163	6,638	16,439	23,077	-5,647	+1,733	-3,914
	November	997	18,156	19,153	6,608	15,900	22,508	-5,611	+2,255	-3,356
	December	1,067	17,818	18,885	5,422	14,324	19,746	-4,355	+3,494	-861
	TOTAL	**10,315**	**223,160**	**233,475**	**81,361**	**179,647**	**261,008**	**-71,046**	**+43,511**	**-27,535**
1982	January	1,269	17,468	18,737	7,439	15,390	22,829	-6,170	+2,078	-4,092
	February	1,493	17,211	18,704	5,107	13,983	19,090	-3,614	+3,227	-387
	March	1,411	17,191	18,602	5,009	15,340	20,349	-3,598	+1,851	-1,747
	April	1,183	16,660	17,843	4,312	13,075	17,387	-3,129	+3,585	+456
	May	1,068	17,150	18,218	4,167	16,391	20,558	-3,099	+759	-2,340
	June	1,005	17,817	18,822	5,427	15,883	21,310	-4,422	+1,934	-2,488
	July	918	17,109	18,027	5,943	13,616	19,559	-5,025	+3,493	-1,532
	August	915	16,583	17,498	6,353	17,141	23,494	-5,438	-558	-5,996

Totals may not equal sum of components due to independent rounding.
Note: 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. See Note at the end of this section.
Notes and Sources: • See the last page of this section.

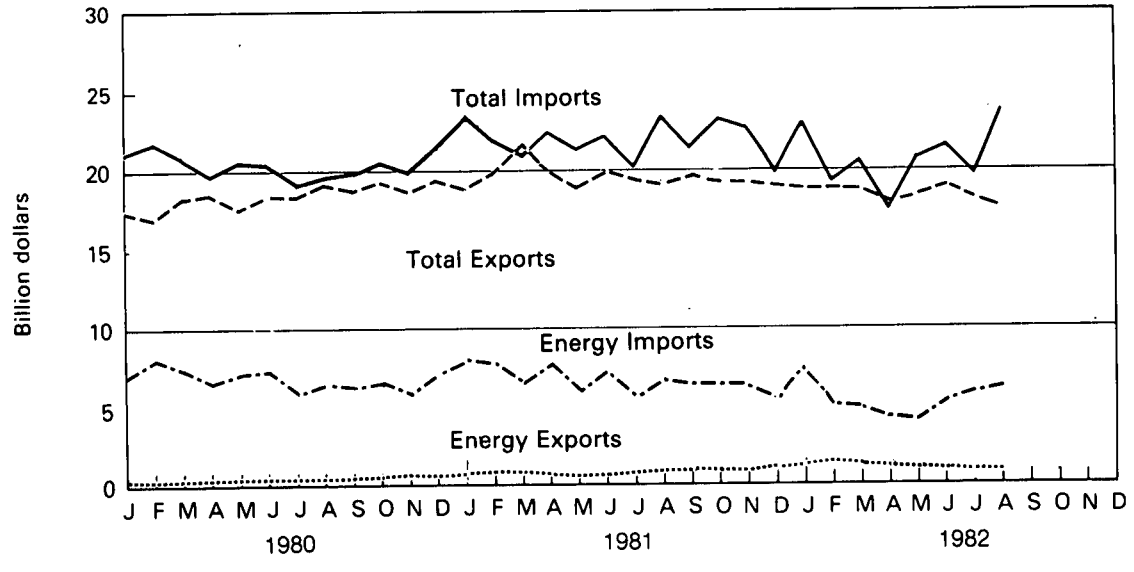
Executive Summary

Merchandise Trade Value

Yearly



Monthly



Executive Summary

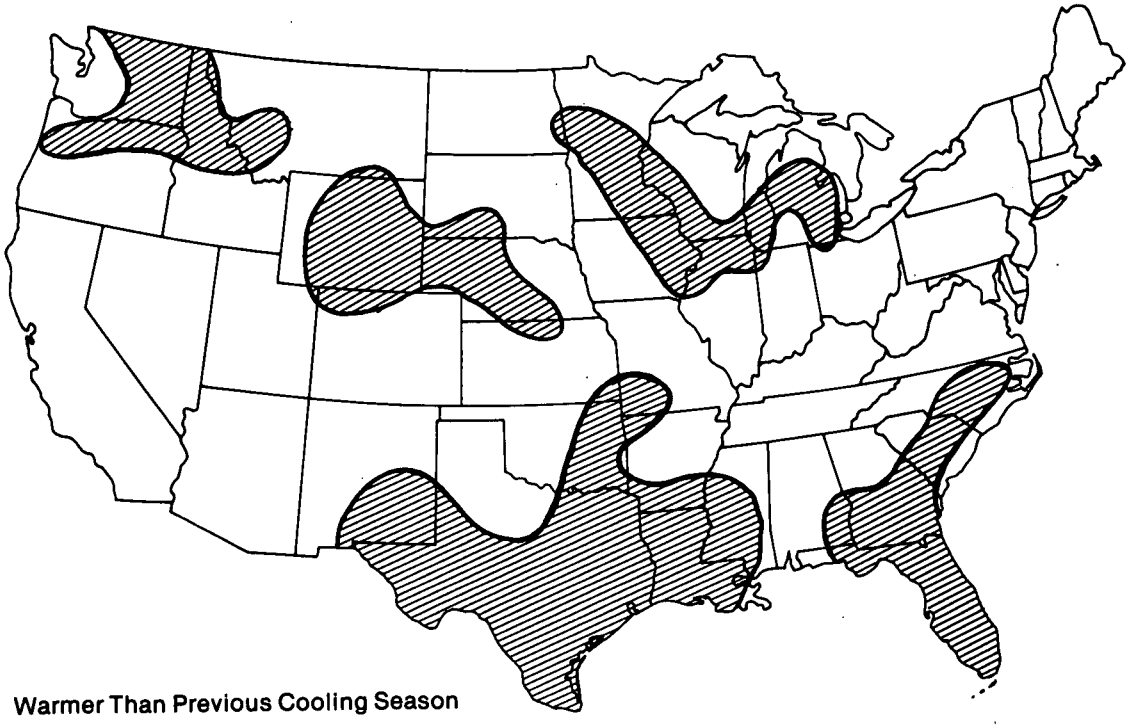
Cooling Degree-Days[1]

Petroleum Administration For Defense (PAD) Districts	August 30 through September 26					Cumulative January 1 through September 26				
	1982	1981[2]		Normal (1941-70)[2]		1982	1981[2]		Normal (1941-70)[2]	
PAD District I	145	153	(-4.8)	159	(-8.6)	1,123	1,260	(-10.8)	1,177	(-4.6)
New England Conn., Maine, Mass., N.H., R.I., Vt.	44	49	(-10.0)	55	(-19.7)	541	706	(-23.4)	573	(-5.5)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	95	111	(-15.0)	108	(-12.2)	762	972	(-21.6)	893	(-14.6)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W. Va.	266	261	(2.2)	282	(-5.6)	1,921	1,935	(-0.7)	1,870	(2.8)
PAD District II Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.	107	103	(3.5)	102	(5.4)	873	910	(-4.0)	911	(-4.1)
PAD District III Ala., Ark., La., Miss., N. Mex., Tex.	358	318	(12.3)	346	(3.3)	2,377	2,328	(2.1)	2,259	(5.3)
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	83	105	(-20.6)	70	(18.9)	703	847	(-17.0)	670	(4.8)
PAD District V Ariz., Calif., Nev., Oreg., Wash.	186	175	(6.6)	145	(28.5)	818	1,056	(-22.6)	749	(9.2)
U.S. AVERAGE[3]	**162**	**158**	**(2.5)**	**158**	**(2.5)**	**1,138**	**1,234**	**(-7.8)**	**1,146**	**(-0.7)**

[1] See Note on the last page of this section for explanation of degree-days.
[2] Percentage change in parentheses.
[3] Excludes Alaska and Hawaii.

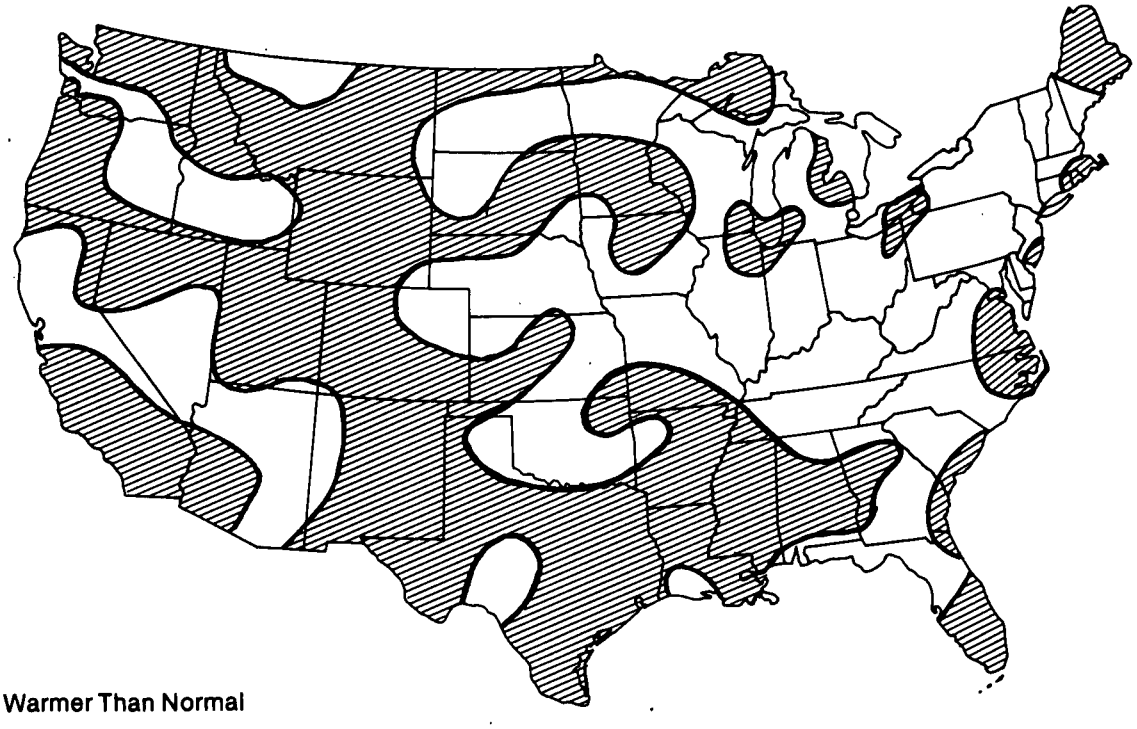
Cooling Degree-Days Accumulated from January 1, 1982, through September 26, 1982

Departure from Previous Cooling Season



Warmer Than Previous Cooling Season

Departure from Normal



Warmer Than Normal

Source: • Department of Commerce—National Oceanic and Atmospheric Administration.

Executive Summary

Energy Indicators—

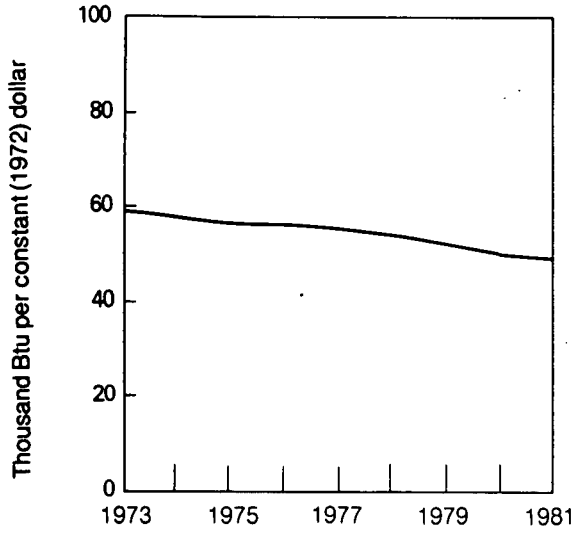
		Gross National Product and Energy Consumption				U.S. Dependence on Petroleum Imports[1]			
				Gross National Product (Annual rate)		Direct Imports			
		Energy Consumption per GNP Dollar[2]	Yearly Rate of Energy Consumption	Current Dollars	1972 Dollars[3]	From Arab/OPEC Countries	From OPEC Countries	Total All Countries	Domestic Petroleum Products Supplied
ANNUAL RATE			Quadrillion Btu	Trillion Dollars		Million barrels per day			
1973	**AVERAGE**	**R59.5**	**74.609**	**1.326**	**R1.254**	**0.92**	**2.99**	**6.26**	**17.31**
1974	**AVERAGE**	**R58.4**	**72.759**	**1.434**	**R1.246**	**0.75**	**3.28**	**6.11**	**16.65**
1975	**AVERAGE**	**R57.4**	**70.707**	**1.549**	**R1.232**	**1.38**	**3.60**	**6.06**	**16.32**
1976	**AVERAGE**	**R57.4**	**74.510**	**1.718**	**R1.298**	**2.42**	**5.07**	**7.31**	**17.46**
1977	**AVERAGE**	**55.7**	**76.332**	**1.918**	**1.370**	**3.19**	**6.19**	**8.81**	**18.43**
1978	**AVERAGE**	**54.3**	**78.175**	**2.164**	**1.439**	**2.96**	**5.75**	**8.36**	**18.85**
1979	**AVERAGE**	**53.4**	**78.910**	**2.418**	**1.479**	**3.06**	**5.64**	**8.46**	**18.51**
1980	1st Qtr	57.3	85.632	2.576	1.495	2.99	5.05	8.00	18.34
	2nd Qtr	48.2	70.272	2.573	1.458	2.59	4.29	6.86	16.40
	3rd Qtr	47.6	69.699	2.644	1.464	2.28	3.80	6.23	16.11
	4th Qtr	52.8	78.093	2.739	1.479	2.35	4.06	6.56	17.38
	AVERAGE	**51.5**	**75.913**	**2.633**	**1.474**	**2.55**	**4.30**	**6.91**	**17.06**
1981	1st Qtr	54.3	81.837	2.865	1.508	2.07	3.81	6.54	17.11
	2nd Qtr	46.2	69.402	2.902	1.502	1.79	3.12	5.63	15.60
	3rd Qtr	46.3	69.898	2.981	1.510	1.86	3.19	5.98	15.53
	4th Qtr	50.2	74.841	3.003	1.490	1.68	3.18	5.85	16.01
	AVERAGE	**49.2**	**73.965**	**2.938**	**1.503**	**1.85**	**3.32**	**6.00**	**16.06**
1982	1st Qtr	54.8	80.653	2.996	1.471	1.10	2.38	4.80	15.79
	2nd Qtr	R45.6	R67.409	R3.045	R1.478	0.80	1.90	4.77	15.27

Geographic coverage: the 50 United States and District of Columbia.
[1]Beginning in October 1977, Strategic Petroleum Reserve imports are included.
[2]Thousand Btu per 1972 constant dollar.
[3]Current dollars are converted to 1972 constant dollars by the Department of Commerce, Bureau of Economic Analysis. Gross national product rates are from the *Survey of Current Business*, published by the Bureau of Economic Analysis.
R = Revised.
Sources: • **See the last page of this section.**

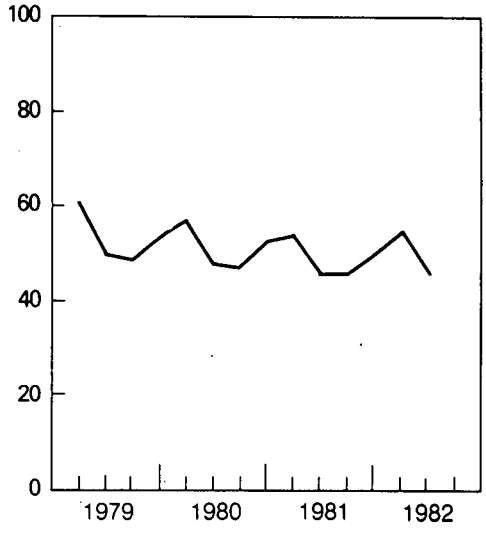
Executive Summary

Energy Consumption per GNP Dollar

Yearly

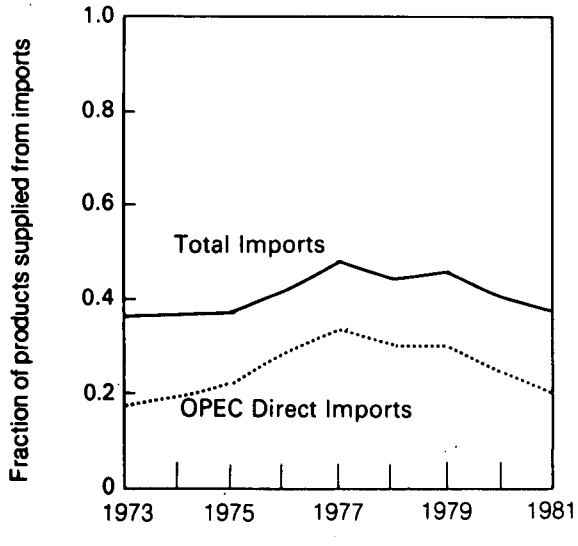


Quarterly

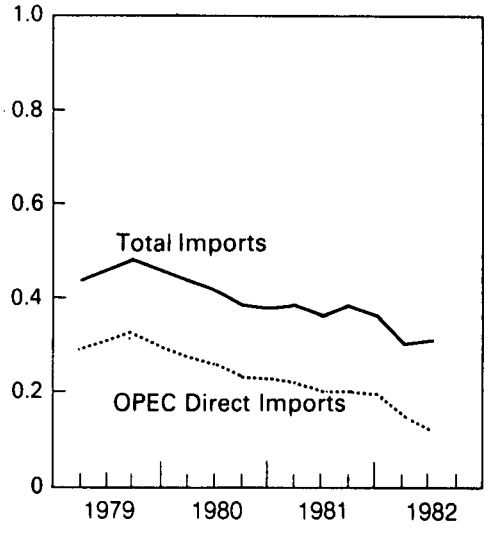


U.S. Dependence on Petroleum Imports

Yearly



Quarterly

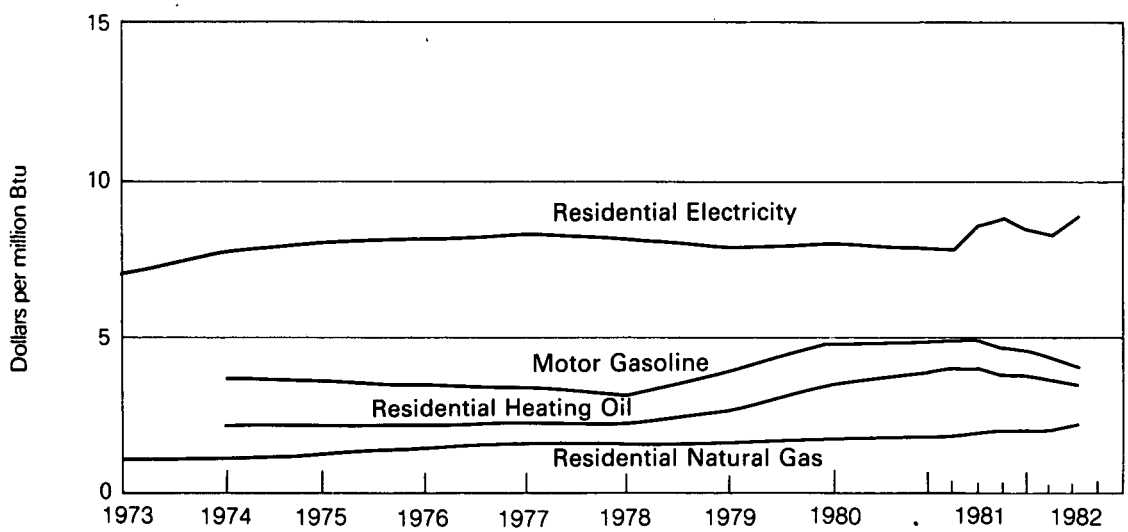


Executive Summary

Energy Indicator—Cost of Fuels to End Users in Constant (1972) Dollars

		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**	**121.2**	**1.19**	**2.39**	**7.00**
1974	**AVERAGE**	**45.1**	**3.61**	**29.4**	**2.12**	**121.4**	**1.19**	**2.63**	**7.71**
1975	**AVERAGE**	**44.1**	**3.53**	**29.3**	**2.11**	**132.8**	**1.30**	**2.73**	**8.00**
1976	**AVERAGE**	**43.4**	**3.47**	**29.8**	**2.15**	**145.4**	**1.43**	**2.74**	**8.03**
1977	**AVERAGE**	**42.9**	**3.43**	**31.8**	**2.29**	**162.2**	**1.59**	**2.80**	**8.21**
1978	**AVERAGE**	**40.1**	**3.21**	**31.7**	**2.29**	**164.4**	**1.62**	**2.76**	**8.09**
1979	**AVERAGE**	**49.4**	**3.95**	**37.8**	**2.73**	**171.5**	**1.68**	**2.67**	**7.83**
1980	**AVERAGE**	**60.5**	**4.84**	**49.7**	**3.58**	**186.9**	**1.83**	**2.72**	**7.97**
1981	1st Qtr	62.1	4.97	57.0	4.11	197.5	1.93	2.65	7.77
	2nd Qtr	62.1	4.97	57.2	4.12	209.1	2.04	2.91	8.53
	3rd Qtr	59.3	4.74	54.4	3.92	215.0	2.10	2.99	8.76
	4th Qtr	57.9	4.63	54.0	3.89	216.3	2.11	2.87	8.41
	AVERAGE	**60.4**	**4.83**	**55.7**	**4.01**	**209.7**	**2.05**	**2.85**	**8.35**
1982	1st Qtr	55.4	4.43	52.2	3.76	R218.2	R2.13	2.82	8.26
	2nd Qtr	51.7	4.13	49.8	3.59	238.6	2.33	3.01	8.82

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



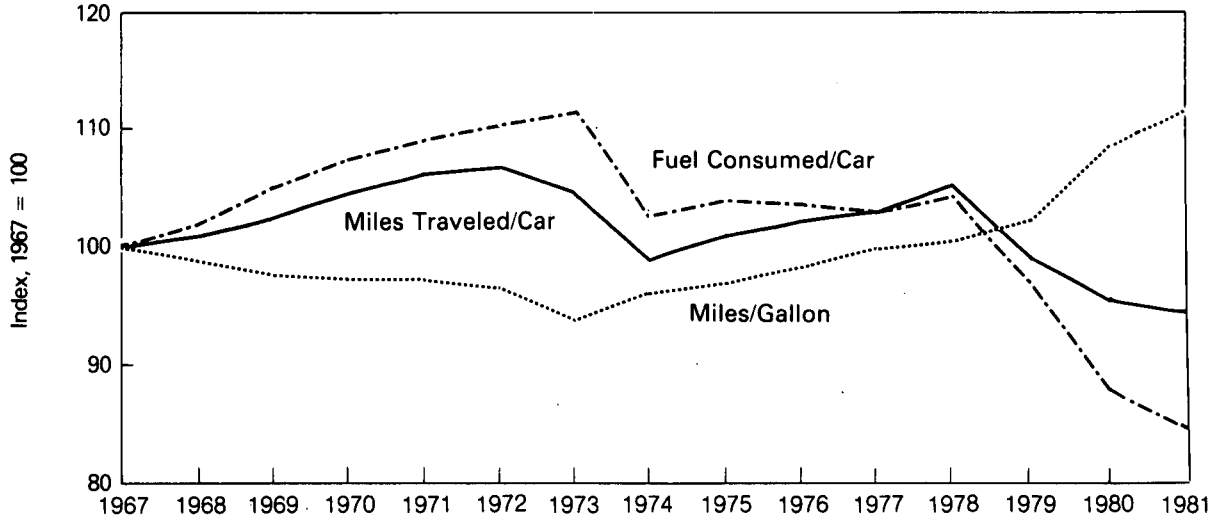
Geographic coverage: the 50 United States and District of Columbia.
R=Revised data. NA=Not available.
Sources: • See the last page of this section.

Executive Summary

Energy Indicator—U.S. Passenger Car Efficiency

	Average Fuel Consumed per Car		Average Miles Traveled per Car		Average Miles Traveled per Gallon of Fuel Consumed	
	Gallons	Index	Miles	Index	Miles	Index
1967	684	100.0	9,531	100.0	13.93	100.0
1968	698	102.0	9,627	101.0	13.79	99.0
1969	718	105.0	9,782	102.6	13.63	97.8
1970	735	107.5	9,978	104.7	13.57	97.4
1971	746	109.1	10,121	106.2	13.57	97.4
1972	755	110.4	10,184	106.9	13.49	96.8
1973	763	111.5	9,992	104.8	13.10	94.0
1974	704	102.9	9,448	99.1	13.43	96.4
1975	712	104.1	9,634	101.1	13.53	97.1
1976	711	103.9	9,763	102.4	13.72	98.5
1977	706	103.2	9,839	103.2	13.94	100.1
1978	715	104.5	10,046	105.4	14.06	100.9
1979	664	97.1	9,485	99.5	14.29	102.6
1980	603	88.2	9,135	95.8	15.15	108.8
1981	581	84.9	9,026	94.7	15.54	111.6

U.S. Passenger Car Efficiency Index



Geographic coverage: the 50 United States and District of Columbia.
Source: • See the last page of this section.

Notes and Sources for the Executive Summary Section

Notes

1. **Domestic Production:** Domestic production of energy includes production of coal (anthracite, bituminous coal, and lignite), crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydropower, and electricity generated from nuclear power, geothermal power, and wood and waste. The volumetric data were converted to approximate heat contents (Btu values) of these energy sources using conversion factors listed in Conversion Factors.
2. **Domestic Consumption:** Domestic consumption of energy includes consumption of coal (anthracite, bituminous coal, and lignite), natural gas (dry), refined petroleum products supplied, electric utility and industrial production of hydropower, net imports of electricity produced from hydropower, net imports of coke made from coal, and electricity generated from nuclear power, geothermal power, and wood and waste. Approximate heat contents (Btu values) were derived using conversion factors listed in Conversion Factors.
3. **U.S. Energy Imports:** U.S. energy imports include imports of bituminous coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.
4. **U.S. Energy Exports:** U.S. energy exports include bituminous coal, crude oil, refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.
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. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions; as well as shipments between the United States and Puerto Rico, between the United States and U.S. possessions, and between any of these outlying areas. Also, U.S. Virgin Island trade with foreign countries is included in all import data and total export data beginning with January 1980 and is included in energy export data beginning with January 1981. Data presented are on a customs value basis (i.e., the value of imports as appraised by the U.S. Customs Service in accordance with the legal requirements of the Tariff Act of 1930) for 1973 and 1981 forward. Values for all other years are on a free alongside ship (f.a.s.) basis. Monthly data are adjusted for seasonal and working-day variation; annual data are unadjusted. Statistics include nonmonetary gold. Statistics exclude 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 surplus trade value and a negative balance indicates deficit trade value. The "All Other" columns are calculated by subtracting "energy" from "total." Totals may not equal sum of components due to independent rounding.
6. **Degree-Days:** Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65° F by convention. Heating degree-days are deviations of the mean daily temperature below 65° F. For example, if a weather station recorded a mean daily temperature of 78° F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40° F would report 25 heating degree-days (and 0 cooling degree-days).

There are two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather stations around the country. Monthly data are based on readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

Weekly weather reports are available much sooner than the monthly reports, and therefore the degree-day information published in the *Monthly Energy Review* is normally derived from the weekly source.

Sources

Merchandise Trade Value: • 1973 through 1978: U.S. Department of Commerce, International Trade Administration, *Overseas Business Reports,* "United States Foreign Trade Annual," 1973-1979;
• 1979 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December 1980 issue for 1979 data and most recent monthly issue for 1980 and forward.
Gross National Product: • U.S. Department of Commerce, Bureau of Economic Analysis, *Business Conditions Digest.*
Cost of Fuels to End Users in Constant (1972) Dollars: • Motor gasoline—Bureau of Labor Statistics.
• Heating oil—Energy Information Administration (EIA), 1974 and 1975: Form CLC-92, "No.2 Heating Oil Monthly Price Adjustment Report"; 1976 forward: FEA Form P112-M-1 and EIA-9, "No.2 Heating Oil Supply/Price Monitoring Report."
• Natural gas—1973 through 1980 annual numbers: Bureau of Mines and Energy Information Administration, Form 1340-A, "Supply and Disposition of Natural Gas to Non-Producing Distributors" and Form 1341-A, "Supply and Disposition of Natural Gas to Producers and Pipelines"; 1980 and 1981 quarterly numbers and 1981 annual numbers: Bureau of Labor Statistics.
• 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 Consumer Price Index)—U.S. Department of Commerce, Bureau of Economic Analysis, *Business Conditions Digest.*
U.S. Passenger Car Efficiency: • Indexes prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

Energy Consumption

Total U.S. energy consumption in July 1982 rose to 5.7 quadrillion Btu, 5.6 percent above the June 1982 level but 5.5 percent below the July 1981 level.

The residential and commercial sector consumption was 2.0 quadrillion Btu in July 1982, 10.6 percent higher than in June 1982 but 0.9 percent lower than in July 1981. The residential and commercial sector accounted for 34.1 percent of total consumption in July 1982, up from the sector's 32.5-percent share in July 1981.

The industrial sector consumption was 2.2 quadrillion Btu in July 1982, up 4.3 percent from June 1982 but down 10.1 percent from the consumption level in July 1981. The industrial sector consumed 38.6 percent of the July 1982 total, down from the sector's 40.6-percent share in July 1982.

The transportation sector consumption was 1.6 quadrillion Btu in July 1982, up 1.0 percent from the consumption level in June 1982 but down 4.6 percent from the consumption level in July 1981. This sector consumed 27.1 percent of the July 1982 total, as compared to the 26.9-percent share in July 1981.

The electric utilities consumption was an estimated 2.3 quadrillion Btu of energy in July 1982, 11.7 percent higher than in the previous month but 3.1 percent lower than in July 1981. Coal contributed 52.1 percent of the energy consumed by electric utilities in July 1982, while natural gas contributed 16.1 percent; hydroelectric power, 13.4 percent; nuclear power, 12.0 percent; petroleum, 5.9 percent; and geothermal and wood and waste, 0.4 percent.

Energy Consumption Summary for July 1982

(Quadrillion (10^{15}) Btu)

Primary Energy Source	Sector: Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL
Coal	0.009	0.215	0.000	1.178	1.414
Natural Gas (dry)	0.249	0.579	0.039	0.365	1.231
Petroleum	0.212	0.650	1.513	0.134	2.509
Hydroelectric	0.000	0.003	0.000	0.304	0.307
Nuclear	0.000	0.000	0.000	0.271	0.271
Net Coke Imports	0.000	(0.003)	0.000	0.000	(0.003)
Other	0.000	0.000	0.000	0.010	0.010
TOTAL PRIMARY ENERGY	**0.470**	**1.443**	**1.552**	**2.262**	**5.739**
Electricity Sales	0.412	0.214	0.001	(0.626)	
Net Energy Consumption	0.882	1.657	1.553		4.103
Electrical Energy Losses	1.075	0.558	0.003	(1.636)	1.636
TOTAL ENERGY CONSUMED	**1.957**	**2.214**	**1.556**		**5.739**

Totals may not equal sum of components due to independent rounding and, in the case of coal, the use of preliminary conversion factors.
Notes and sources for this table and all other tables in this section are provided on the last page of this section.

Consumption

Consumption of Energy by End-Use Sector

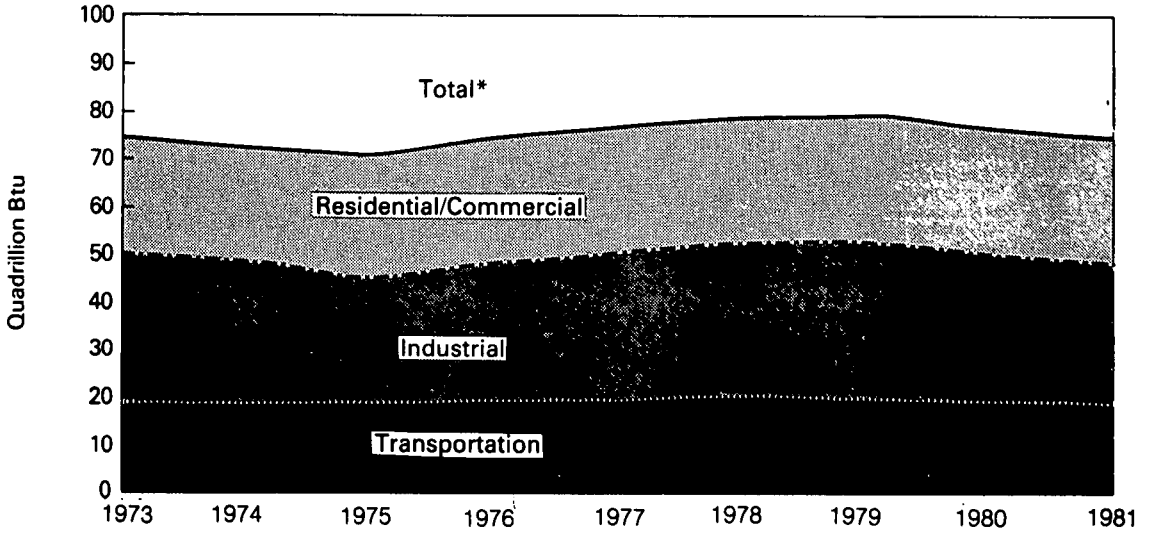
		Residential and Commercial	Industrial	Transportation	Total Energy Consumed
		Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**24.197**	**31.886**	**18.520**	**74.609**
1974	**TOTAL**	**23.774**	**30.943**	**18.035**	**72.759**
1975	**TOTAL**	**23.920**	**28.608**	**18.177**	**70.707**
1976	**TOTAL**	**25.004**	**30.435**	**19.064**	**74.510**
1977	**TOTAL**	**25.405**	**31.186**	**19.736**	**76.332**
1978	**TOTAL**	**25.990**	**31.570**	**20.614**	**78.175**
1979	**TOTAL**	**26.073**	**32.399**	**20.434**	**78.910**
1980	January	2.822	2.857	1.749	7.426
	February	2.752	2.562	1.676	6.988
	March	2.568	2.618	1.694	6.878
	April	2.028	2.337	1.631	5.988
	May	1.760	2.443	1.618	5.815
	June	1.761	2.349	1.559	5.670
	July	1.966	2.332	1.624	5.929
	August	1.947	2.278	1.586	5.818
	September	1.809	2.397	1.562	5.773
	October	1.813	2.673	1.663	6.148
	November	2.028	2.674	1.559	6.261
	December	2.618	2.841	1.761	7.221
	TOTAL	**25.870**	**30.361**	**19.682**	**75.913**
1981	January	3.105	2.533	1.779	7.419
	February	2.660	2.154	1.511	6.325
	March	2.405	2.417	1.613	6.435
	April	1.928	2.248	1.542	5.716
	May	1.786	2.413	1.567	5.767
	June	1.832	2.367	1.615	5.820
	July	R1.974	R2.463	1.631	6.073
	August	1.909	2.396	1.585	5.893
	September	1.728	2.376	1.549	5.653
	October	1.820	2.555	1.605	5.979
	November	1.999	2.429	1.536	5.963
	December	2.625	2.600	1.694	6.923
	TOTAL	**R25.770**	**R28.951**	**19.229**	**73.965**
1982	January	3.204	2.406	1.598	7.214
	February	2.811	2.035	1.458	6.307
	March	2.506	2.224	1.632	6.366
	April	2.161	2.107	1.625	5.891
	May	1.795	2.116	1.568	5.478
	June	1.770	R2.123	1.540	R5.436
	July	1.957	2.214	1.556	5.739

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1980.
R=Revised data.
Notes and Sources: • See the last two pages of this section.

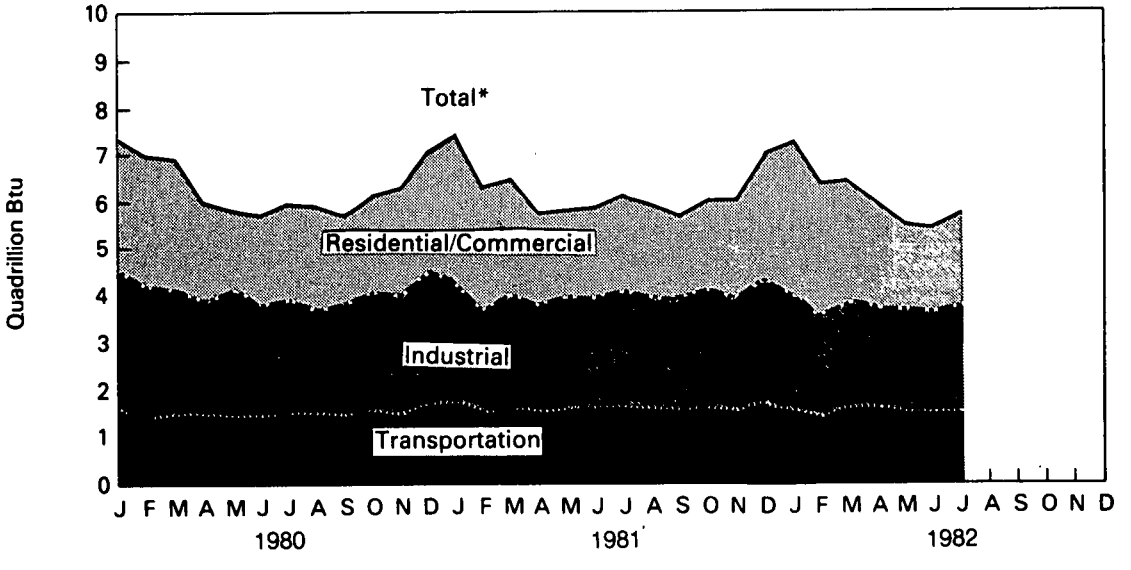
Consumption

Consumption of Energy by End-Use Sector

Yearly



Monthly



*Btu consumption for all sectors were cumulated to create total.

Consumption

Consumption of Energy by the Residential and Commercial Sector

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**0.291**	**7.626**	**4.321**	**3.495**	**8.464**	**24.197**	
1974	**TOTAL**	**0.292**	**7.518**	**3.932**	**3.475**	**8.558**	**23.774**	
1975	**TOTAL**	**0.238**	**7.581**	**3.760**	**3.604**	**8.736**	**23.920**	
1976	**TOTAL**	**0.227**	**7.866**	**4.160**	**3.747**	**9.005**	**25.004**	
1977	**TOTAL**	**0.225**	**7.461**	**4.148**	**3.955**	**9.615**	**25.405**	
1978	**TOTAL**	**0.239**	**7.624**	**4.062**	**4.116**	**9.950**	**25.990**	
1979	**TOTAL**	**0.210**	**7.891**	**3.687**	**4.184**	**10.101**	**26.073**	
1980	January	0.021	1.114	0.358	0.381	0.947	2.822	2.822
	February	0.019	1.176	0.329	0.375	0.853	2.752	5.574
	March	0.013	1.040	0.300	0.358	0.857	2.568	8.142
	April	0.014	0.707	0.245	0.319	0.742	2.028	10.170
	May	0.009	0.443	0.238	0.298	0.772	1.760	11.929
	June	0.007	0.324	0.224	0.334	0.872	1.761	13.690
	July	0.008	0.255	0.225	0.410	1.068	1.966	15.656
	August	0.008	0.239	0.221	0.439	1.039	1.947	17.603
	September	0.011	0.248	0.246	0.410	0.895	1.809	19.412
	October	0.014	0.369	0.279	0.343	0.808	1.813	21.225
	November	0.015	0.634	0.271	0.322	0.785	2.028	23.252
	December	0.020	0.992	0.343	0.364	0.899	2.618	25.870
	TOTAL	**0.160**	**7.540**	**3.280**	**4.355**	**10.536**	**25.870**	
1981	January	0.022	1.292	0.374	0.425	0.992	3.105	3.105
	February	0.014	1.140	0.287	0.391	0.828	2.660	5.765
	March	0.012	0.929	0.271	0.355	0.839	2.405	8.170
	April	0.014	0.605	0.229	0.325	0.755	1.928	10.098
	May	0.009	0.430	0.227	0.321	0.798	1.786	11.884
	June	0.007	0.302	0.228	0.365	0.929	1.832	13.716
	July	0.011	0.251	0.227	R0.429	R1.056	R1.974	R15.690
	August	0.010	0.243	0.223	0.421	1.011	1.909	R17.599
	September	0.013	0.253	0.233	0.383	0.845	1.728	R19.327
	October	0.015	0.399	0.264	0.339	0.802	1.820	R21.147
	November	0.019	0.596	0.259	0.327	0.798	1.999	R23.145
	December	0.024	0.962	0.300	0.368	0.970	2.625	R25.770
	TOTAL	**0.172**	**7.404**	**3.122**	**R4.448**	**R10.625**	**R25.770**	
1982	January	0.024	1.358	0.318	0.439	1.065	3.204	3.204
	February	0.015	1.234	0.271	0.408	0.882	2.811	6.015
	March	0.012	0.956	0.266	0.372	0.900	2.506	8.521
	April	0.014	0.716	0.263	0.346	0.822	2.161	10.682
	May	0.014	0.385	0.231	0.327	0.839	1.795	12.477
	June	0.014	0.283	0.217	0.357	R0.900	1.770	R14.247
	July	0.009	0.249	0.212	0.412	1.075	1.957	16.204

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
R = Revised data.
Notes and Sources: • See the last two pages of this section.

Consumption

Consumption of Energy by the Industrial Sector

		Coal	Natural Gas (Dry)	Petro-leum	Hydro-electric	Net Coke Imports	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
						Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**4.349**	**10.388**	**9.103**	**0.035**	**(0.008)**	**2.341**	**5.679**	**31.886**	
1974	**TOTAL**	**4.048**	**10.003**	**8.707**	**0.033**	**0.059**	**2.337**	**5.756**	**30.943**	
1975	**TOTAL**	**3.797**	**8.532**	**8.192**	**0.032**	**0.014**	**2.346**	**5.694**	**28.608**	
1976	**TOTAL**	**3.786**	**8.761**	**9.092**	**0.033**	**0.000**	**2.573**	**6.189**	**30.435**	
1977	**TOTAL**	**3.498**	**8.636**	**9.789**	**0.033**	**0.015**	**2.682**	**6.533**	**31.186**	
1978	**TOTAL**	**3.372**	**8.539**	**10.046**	**0.032**	**0.131**	**2.761**	**6.691**	**31.570**	
1979	**TOTAL**	**3.636**	**8.549**	**10.294**	**0.034**	**0.066**	**2.873**	**6.948**	**32.399**	
1980	January	0.308	0.845	0.895	0.003	0.003	0.230	0.572	2.857	2.857
	February	0.286	0.710	0.798	0.003	(0.001)	0.234	0.532	2.562	5.419
	March	0.291	0.738	0.790	0.003	(0.003)	0.236	0.564	2.618	8.037
	April	0.285	0.557	0.726	0.003	(0.005)	0.232	0.539	2.337	10.373
	May	0.276	0.595	0.750	0.003	(0.006)	0.229	0.594	2.443	12.816
	June	0.250	0.556	0.721	0.003	(0.004)	0.228	0.595	2.349	15.165
	July	0.229	0.588	0.710	0.003	(0.004)	0.224	0.583	2.332	17.496
	August	0.231	0.566	0.708	0.002	(0.003)	0.230	0.544	2.278	19.774
	September	0.225	0.658	0.762	0.002	(0.004)	0.237	0.517	2.397	22.172
	October	0.253	0.833	0.796	0.002	(0.006)	0.237	0.558	2.673	24.845
	November	0.263	0.858	0.761	0.002	(0.002)	0.231	0.563	2.674	27.520
	December	0.286	0.890	0.854	0.002	(0.001)	0.234	0.577	2.841	30.361
	TOTAL	**3.181**	**8.395**	**9.272**	**0.033**	**(0.037)**	**2.781**	**6.736**	**30.361**	
1981	January	0.301	0.677	0.790	0.003	0.000	0.229	0.534	2.533	2.533
	February	0.278	0.494	0.662	0.003	(0.001)	0.230	0.488	2.154	4.687
	March	0.282	0.657	0.690	0.003	(0.003)	0.234	0.554	2.417	7.103
	April	0.261	0.572	0.640	0.003	(0.001)	0.232	0.541	2.248	9.351
	May	0.239	0.655	0.698	0.003	0.000	0.234	0.582	2.413	11.764
	June	0.233	0.597	0.671	0.003	(0.004)	0.244	0.623	2.367	14.132
	July	0.271	0.668	0.674	0.003	0.000	0.245	R0.602	R2.463	R16.595
	August	0.274	0.621	0.662	0.002	0.000	0.246	0.590	2.396	R18.991
	September	0.267	0.662	0.670	0.002	(0.002)	0.242	0.534	2.376	R21.367
	October	0.269	0.793	0.699	0.002	(0.003)	0.236	0.559	2.555	R23.922
	November	0.271	0.723	0.655	0.002	0.000	0.226	0.552	2.429	R26.351
	December	0.272	0.843	0.691	0.002	(0.003)	0.219	0.576	2.600	R28.951
	TOTAL	**3.218**	**7.963**	**8.203**	**0.033**	**(0.017)**	**2.817**	**R6.734**	**R28.951**	
1982	January	0.274	0.728	0.666	0.003	0.000	0.215	0.520	2.406	2.406
	February	0.255	0.502	0.599	0.003	(0.001)	0.214	0.463	2.035	4.440
	March	0.246	0.592	0.633	0.003	(0.002)	0.220	0.532	2.224	6.664
	April	0.252	0.494	0.635	0.003	(0.001)	0.214	0.508	2.107	8.771
	May	0.252	0.481	0.621	0.003	(0.003)	0.213	0.547	2.116	10.887
	June	0.227	R0.528	0.604	0.003	(0.004)	0.217	0.547	R2.123	R13.009
	July	0.215	0.579	0.650	0.003	(0.003)	0.214	0.558	2.214	15.224

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
R=Revised data.
Notes and Sources: • See the last two pages of this section.

Consumption

Consumption of Energy by the Transportation Sector

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
				Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**0.003**	**0.743**	**17.745**	**0.009**	**0.021**	**18.520**	
1974	**TOTAL**	**0.002**	**0.685**	**17.317**	**0.009**	**0.022**	**18.035**	
1975	**TOTAL**	**0.001**	**0.595**	**17.547**	**0.010**	**0.025**	**18.177**	
1976	**TOTAL**	**(1)**	**0.559**	**18.469**	**0.010**	**0.025**	**19.064**	
1977	**TOTAL**	**(1)**	**0.543**	**19.157**	**0.010**	**0.025**	**19.736**	
1978	**TOTAL**	**(1)**	**0.539**	**20.044**	**0.009**	**0.022**	**20.614**	
1979	**TOTAL**	**(1)**	**0.612**	**19.786**	**0.010**	**0.025**	**20.434**	
1980	January	(1)	0.074	1.671	0.001	0.002	1.749	1.749
	February	(1)	0.071	1.602	0.001	0.002	1.676	3.424
	March	(1)	0.068	1.623	0.001	0.002	1.694	5.119
	April	(1)	0.050	1.578	0.001	0.002	1.631	6.749
	May	(1)	0.044	1.571	0.001	0.002	1.618	8.367
	June	(1)	0.040	1.516	0.001	0.002	1.559	9.927
	July	(1)	0.042	1.579	0.001	0.002	1.624	11.551
	August	(1)	0.040	1.543	0.001	0.002	1.586	13.137
	September	(1)	0.042	1.517	0.001	0.002	1.562	14.699
	October	(1)	0.050	1.610	0.001	0.002	1.663	16.361
	November	(1)	0.058	1.498	0.001	0.002	1.559	17.921
	December	(1)	0.070	1.688	0.001	0.002	1.761	19.682
	TOTAL	**(1)**	**0.650**	**18.996**	**0.011**	**0.026**	**19.682**	
1981	January	(1)	0.073	1.703	0.001	0.003	1.779	1.779
	February	(1)	0.061	1.446	0.001	0.002	1.511	3.291
	March	(1)	0.062	1.548	0.001	0.002	1.613	4.904
	April	(1)	0.049	1.491	0.001	0.002	1.542	6.446
	May	(1)	0.046	1.517	0.001	0.002	1.567	8.014
	June	(1)	0.043	1.569	0.001	0.002	1.615	9.629
	July	(1)	0.044	1.584	0.001	R0.003	1.631	11.260
	August	(1)	0.042	1.540	0.001	0.002	1.585	12.844
	September	(1)	0.041	1.505	0.001	0.002	1.549	14.394
	October	(1)	0.049	1.552	0.001	0.002	1.605	15.999
	November	(1)	0.052	1.481	0.001	0.002	1.536	17.535
	December	(1)	0.068	1.623	0.001	0.003	1.694	19.229
	TOTAL	**(1)**	**0.630**	**18.559**	**0.012**	**0.028**	**19.229**	
1982	January	(1)	0.077	1.517	0.001	0.003	1.598	1.598
	February	(1)	0.065	1.390	0.001	0.002	1.458	3.055
	March	(1)	0.059	1.569	0.001	0.003	1.632	4.687
	April	(1)	0.048	1.574	0.001	0.002	1.625	6.312
	May	(1)	0.037	1.527	0.001	0.003	1.568	7.880
	June	(1)	0.037	1.500	0.001	0.002	1.540	9.420
	July	(1)	0.039	1.513	0.001	0.003	1.556	10.976

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Since 1976 the amount of coal consumed by the transportation sector has been negligible.
R=Revised data.
Notes and Sources: • See the last two pages of this section.

Consumption

Energy Input at Electric Utilities

		Coal	Natural Gas (Dry)	Petroleum[1]	Hydroelectric power[2]	Nuclear Electric Power	Other[3]	Total Energy Input	Yearly Cumulative Energy Input
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**8.658**	**3.748**	**3.671**	**2.975**	**0.910**	**0.046**	**20.008**	
1974	**TOTAL**	**8.535**	**3.519**	**3.499**	**3.276**	**1.272**	**0.056**	**20.156**	
1975	**TOTAL**	**8.786**	**3.240**	**3.231**	**3.187**	**1.900**	**0.072**	**20.416**	
1976	**TOTAL**	**9.720**	**3.152**	**3.454**	**3.032**	**2.111**	**0.081**	**21.549**	
1977	**TOTAL**	**10.243**	**3.284**	**4.028**	**2.482**	**2.702**	**0.082**	**22.821**	
1978	**TOTAL**	**10.236**	**3.297**	**3.813**	**3.110**	**3.024**	**0.068**	**23.548**	
1979	**TOTAL**	**11.264**	**3.609**	**3.357**	**3.107**	**2.715**	**0.089**	**24.141**	
1980	January	1.073	0.286	0.277	0.280	0.210	0.008	2.134	2.134
	February	1.012	0.273	0.261	0.238	0.205	0.008	1.997	4.131
	March	0.994	0.294	0.238	0.270	0.213	0.008	2.017	6.148
	April	0.866	0.265	0.210	0.284	0.200	0.008	1.835	7.983
	May	0.883	0.291	0.199	0.317	0.196	0.010	1.896	9.879
	June	0.976	0.348	0.199	0.304	0.195	0.009	2.031	11.910
	July	1.143	0.435	0.204	0.272	0.224	0.010	2.287	14.197
	August	1.133	0.419	0.203	0.230	0.259	0.011	2.255	16.452
	September	1.020	0.369	0.203	0.209	0.251	0.010	2.063	18.515
	October	0.960	0.312	0.201	0.203	0.261	0.011	1.948	20.463
	November	0.973	0.264	0.215	0.217	0.223	0.011	1.903	22.366
	December	1.089	0.250	0.243	0.249	0.235	0.011	2.077	24.444
	TOTAL	**12.122**	**3.807**	**2.654**	**3.074**	**2.672**	**0.114**	**24.444**	
1981	January	1.165	0.239	0.264	0.252	0.253	0.011	2.184	2.184
	February	1.020	0.232	0.211	0.237	0.230	0.010	1.940	4.123
	March	1.031	0.283	0.192	0.233	0.234	0.011	1.984	6.108
	April	0.930	0.299	0.163	0.234	0.220	0.010	1.857	7.964
	May	0.958	0.327	0.165	0.270	0.210	0.010	1.939	9.904
	June	1.066	0.394	0.177	0.293	0.225	0.010	2.165	12.069
	July	1.196	0.425	0.178	0.280	0.246	0.011	2.335	14.404
	August	1.160	0.403	0.167	0.244	0.287	0.011	2.271	16.676
	September	1.032	0.336	0.165	0.204	0.260	0.011	2.008	18.684
	October	1.018	0.312	0.172	0.208	0.219	0.011	1.939	20.622
	November	1.001	0.268	0.169	0.216	0.242	0.010	1.905	22.528
	December	1.131	0.248	0.205	0.267	0.277	0.010	2.137	24.664
	TOTAL	**12.707**	**3.764**	**2.228**	**2.937**	**2.901**	**0.127**	**24.664**	
1982	January	1.220	0.246	0.198	0.299	0.273	0.009	2.244	2.244
	February	1.041	0.228	0.185	0.295	0.215	0.008	1.971	4.215
	March	1.020	0.255	0.174	0.330	0.242	0.007	2.027	6.242
	April	0.926	0.255	0.166	0.309	0.232	0.007	1.894	8.136
	May	0.971	0.267	0.142	0.311	0.230	0.008	1.929	10.066
	June	1.010	0.306	0.134	0.310	0.256	0.010	R2.025	12.090
	July	1.178	0.365	0.134	0.304	0.271	0.010	2.262	14.352

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Based on deliveries to utilities.
[2]Includes net imports of electricity.
[3]Includes geothermal power and electricity produced from wood and waste.
R=Revised data.
Notes and Sources: • See the last two pages of this section.

Notes and Sources for the Consumption Section

1. **End-Use Sectors:** Energy use is assigned to the major end-use sectors according to the following guidelines as closely as possible:
   - Residential and commercial sector—Energy consumed by private household establishments primarily for space heating, water heating, air conditioning, cooking, and clothes drying; by non-manufacturing business establishments, including motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; by health, social, and educational institutions; and by federal, state, and local governments.
   - Industrial sector—Energy consumed by manufacturing, construction, mining, agriculture, fishing, and forestry establishments.
   - Transportation sector—Energy consumed to move people and commodities in both the public and private sectors, including military, railroad, vessel bunkering, and marine uses, as well as the pipeline transmission of natural gas.
   - Electric utility sector—Energy consumed by privately- and publicly-owned establishments which generate electricity primarily for resale.

2. **Conversion Factors:** See the inside back cover of this publication for factors applied in converting physical unit data into British thermal units (Btu).

3. **Coal:** Coal is anthracite, bituminous coal, and lignite.

   Sources:
   - Anthracite—1973 through 1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, "Coal—Pennsylvania Anthracite, Annual."
     1977 forward: U.S. Department of Energy (DOE), Energy Information Administration (EIA), *Energy Data Reports* "Weekly Coal Report."
   - Bituminous coal and lignite—1973 through 1975: U.S. DOI, BOM, *Minerals Yearbook*, "Bituminous Coal and Lignite, Annual," Federal Power Commission (FPC), Form 4, "Monthly Power Plant Report."
     1976 forward: DOE, EIA, *Energy Data Reports*, "Weekly Coal Report."
   - Electric Utilities consumption of coal—same as Note 7 below.

4. **Natural Gas:** Total natural gas consumption is estimated monthly based on a supply disposition balance calculation. Residential and commercial sector monthly consumption is estimated by allocating the EIA annual residential and commercial sector consumption to the months in proportion to the American Gas Association (AGA) monthly sales to the residential and commercial Sector. For incomplete years, the AGA monthly sales data are used temporarily. Monthly transportation consumption (which is natural gas for pipeline use) for complete years is estimated by allocating the EIA annual transportation total to the months based on each month's total natural gas consumption as a share of the annual total natural gas consumption. For incomplete years, each month's transportation total is estimated by applying the percentage of total natural gas accounted for by the transportation sector in the same month a year ago to the current month's total natural gas consumption. Electric utilities consumption of natural gas is available monthly from EIA Form 759 (formerly FPC Form 4), "Monthly Power Plant Report." Each month's industrial sector consumption is estimated by subtracting the residential and commercial, transportation, and electric utilities sectors consumption from the total natural gas consumption.

   Sources:
   - 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
   - 1976 through 1978: DOE, EIA, *Energy Data Reports*, "Natural Gas, Annual."
   - 1979: DOE, EIA, *Natural Gas Production and Consumption 1979.*
   - 1980: DOE, EIA, *Natural Gas Annual.*
   - 1981 forward: EIA estimates based on a supply/disposition balance calculation.
   - Electric utilities consumption—1973 through 1976: FPC Form 4, "Monthly Power Plant Report."
     1977 through 1981: DOE, EIA, FPC Form 4, "Monthly Power Plant Report."
     1982 forward: DOE, EIA, EIA Form 759, "Monthly Power Plant Report."
   - American Gas Association, "Monthly Gas Utility Statistical Report."

5. **Petroleum:** Petroleum consumption by end-use is the sum of all individual petroleum products consumed in each end-use sector. First, total consumption by product is determined. Petroleum consumption in this section of the *Monthly Energy Review* uses the series called "products supplied" in the Petroleum Section.

   Sources for petroleum products supplied by individual products are:
   - 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
   - 1976 through 1980: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
   - 1981: DOE, EIA, *Petroleum Supply Annual.*
   - 1982: DOE, EIA, *Petroleum Supply Monthly.*

   Notes regarding specific petroleum products' end-use allocations follow:
   - Aviation gasoline—All product supplied is assigned to the transportation sector.
   - Asphalt—All product supplied is assigned to the industrial sector.
   - Distillate fuel—Total product supplied 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" reports as follows:
     —Residential deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
     —Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
     —Industrial sector deliveries for 1979 and 1980 are the sum of deliveries for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, each year's heating plus industrial subtotal 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;
     —Transportation deliveries are the sum of railroad, vessel bunkering, on-highway diesel, and military uses for all years; and
     —Electric utility deliveries are presented for all years.
     The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are available.
   - Jet fuel—Small amounts in 1975 through 1977 are used by the industrial sector, and small amounts in all periods are consumed by the electric utility sector. All remaining jet fuel is consumed by the transportation sector.
   - Kerosene—Total product supplied 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" reports as follows:
     —Residential deliveries are presented for 1979 and 1980. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares;
     —Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares; and
     —Industrial sector deliveries for 1979 and 1980 are the sum of deliveries for industrial, farm, and all other uses. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to all other uses.
     The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are available.

Notes and Sources for the Consumption Section (continued)

5. **Petroleum (continued):**

- Liquefied petroleum gases (LPG)—Total product supplied is allocated to the major end-use sectors in proportion to aggregations of sales categories formed from EIA's "Sales of Liquefied Petroleum Gases and Ethane." Year-specific categorizations are developed for 1973 through 1978 but, due to potential discontinuities with the sales data from the sales reports after 1978, the 1978 sales aggregations are continued for all following periods. Sales categories are formed as follows:
  - —Residential and commercial sales represent the residential and commercial sector;
  - —Industrial sales are the sum of industrial use, miscellaneous use, utility gas company use, chemical plant use, and an estimated 84 percent of the internal combustion engine fuel use; and
  - —Transportation sales are estimated to be the remaining 16 percent of sales for internal combustion engine fuel use.
- Lubricants—Total product supplied is allocated to the industrial sector and the transportation sector 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 is allocated to the major end-use sectors in proportion to aggregations of 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 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 portion is assigned to the industrial sector.
- Residual fuel—Total product supplied 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" reports as follows:
  - —Commercial deliveries are presented for 1979 and 1980. Prior to 1979, each year's subtotal of heating plus industrial is split into commercial and industrial in proportion to the 1979 shares;
  - —Industrial sector deliveries for 1979 and 1980 are the sum of industrial, oil company, and all other uses. Prior to 1979, each year's heating plus industrial subtotal is split into commercial and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to oil company and all other uses;
  - —Transportation deliveries are the sum of railroad, vessel bunkering, and military uses for all years; and
  - —Electric utility deliveries are presented for all years.

  The 1980 shares are used as estimates for succeeding periods until deliveries for more recent periods are developed.
- Road oil—All product supplied assigned to the industrial sector.
- All Other Petroleum Products—The product supplied of all remaining petroleum products is assigned to the industrial sector.

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

Sources for electric utilities sector:

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

Sources for imports and exports of electricity: Annual data from DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico." Monthly estimates are derived from annual data by dividing by the number of days in the year and multiplying by the number of days in the month. 1981 is estimated by assuming 10 percent growth over 1980, and the 1981 estimates are used temporarily as 1982 estimates.

7. **Nuclear:** *Sources:*

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

8. **Net Coke Imports:** This is coke made from coal. Net imports means imports minus exports, and parentheses indicate that exports are greater than imports.

Sources:

- 1973 through 1975, DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals, Annual."
- 1976 forward: DOE, EIA, *Energy Data Reports*, "Coke and Coal Chemicals, Monthly."

9. **Other Energy:** "Other" is electricity produced from geothermal power and from wood and waste.

Sources: same as Note 7 above, for Nuclear.

10. **Electricity Sales:** From the sources cited below the following sales categories are available: residential, commercial, industrial, and other. For the end-use estimates this section, the "other" category (which is primarily sales for use in government buildings) is added to the commercial sector except for approximately 4.2 percent which represents the transportation sector use of electricity. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatt-hour.

Sources of sales data: 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."

11. **Electrical Energy Losses:** Total electrical energy losses (i.e., incurred in the generation and transmission of electricity plus plant use and unaccounted for) are estimated as the difference between total energy input at utilities and electricity sold to the end-users. Total losses are disaggregated to the end-use sectors in proportion to each sector's share of total electricity sales. In general, about 65 percent of total energy input at utilities is lost in the form of heat, and an additional 3 percent is lost in the transmission and distribution of the electricity to the end-user.

Crude Oil and Refined Petroleum Products*

Domestic crude oil production during August 1982 was estimated to be 8.7 million barrels per day, 0.9 percent above the rate in July 1982 and 1.7 percent above the rate in August 1981.

Total petroleum imports averaged 4.9 million barrels per day in August 1982, 15.0 percent lower than the July 1982 rate and 15.1 percent lower than the August 1981 rate.

In August 1982, 14.6 million barrels per day of petroleum products were supplied for domestic use, down 1.1 percent from the level in July 1982 and down 4.3 percent from the level of 1 year earlier. Motor gasoline accounted for 45.9 percent of the total; distillate fuel oil, 14.7 percent; and residual fuel oil, 10.4 percent.

Motor gasoline supplied during August 1982 averaged 6.7 million barrels per day, 1.3 percent lower than in July 1982 but 1.1 percent higher than 1 year earlier. Stocks of motor gasoline totaled 224 million barrels at the end of August 1982, 2 million barrels below the inventories reported at the end of July 1982 and 9 million barrels lower than those reported for August 1981.

In August 1982, 2.1 million barrels of distillate fuel oil were supplied per day, 2.8 percent higher than the July 1982 rate but 10.3 percent lower the August 1981 level. Distillate fuel oil stocks were 156 million barrels at the end of August 1982, 8 million barrels higher than at the end of the previous month but 44 million barrels below the stock level 1 year earlier.

Residual fuel oil supplied in August 1982 averaged 1.5 million barrels per day, 3.8 percent higher than in July 1982 but 17.8 percent lower than the August 1981 rate. Residual fuel oil stocks measured 51 million barrels at the end of August 1982, 8 million barrels lower than at the end of the previous month and 24 million barrels below the ending stocks for the month of August 1981.

*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 May 1982. The total import data above include imports into the Strategic Petroleum Reserve.

Petroleum

Crude Oil[1] and Petroleum Products Overview

		Field Production			Stock Withdrawal[2]			Ending Stocks
		Total Domestic[3]	Crude Oil	Natural Gas Plant Production	Crude Oil[4]	Petroleum Products	Petroleum Products Supplied	Crude Oil[4] and Petroleum Products
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**10,975**	**9,208**	**1,738**	**11**	**-146**	**17,308**	**‡1,008**
1974	**AVERAGE**	**10,498**	**8,774**	**1,688**	**-62**	**-117**	**16,653**	**‡1,074**
1975	**AVERAGE**	**10,045**	**8,375**	**1,633**	**-17**	**-145**	**16,322**	**‡1,133**
1976	**AVERAGE**	**9,774**	**8,132**	**1,603**	**-39**	**96**	**17,461**	**‡1,112**
1977	**AVERAGE**	**9,913**	**8,245**	**1,618**	**-170**	**-378**	**18,431**	**‡1,312**
1978	**AVERAGE**	**10,328**	**8,707**	**1,567**	**-78**	**172**	**18,847**	**‡1,278**
1979	**AVERAGE**	**10,179**	**8,552**	**1,584**	**-148**	**-25**	**18,513**	**‡1,341**
1980	January	10,377	8,675	1,648	-594	270	18,851	1,351
	February	10,402	8,705	1,656	-292	563	18,817	1,343
	March	10,303	8,698	1,568	-47	-99	17,377	1,348
	April	10,356	8,685	1,630	-412	-229	16,784	1,367
	May	10,298	8,635	1,615	-117	-520	16,238	1,387
	June	10,164	8,554	1,561	65	-869	16,187	1,411
	July	10,113	8,547	1,524	88	-556	16,008	1,425
	August	9,974	8,414	1,519	-274	-473	15,753	1,449
	September	10,184	8,619	1,515	307	-259	16,598	1,447
	October	10,092	8,532	1,516	-191	756	16,995	1,430
	November	10,109	8,495	1,571	-8	-84	16,702	1,432
	December	10,204	8,606	1,560	304	993	18,410	1,392
	AVERAGE	**10,214**	**8,597**	**1,573**	**-98**	**-42**	**17,056**	
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	**10,230**	**8,572**	**1,609**	**-290**	**130**	**16,058**	
1982	January	10,257	8,669	1,548	-236	1,129	15,890	1,461
	February	10,261	8,690	1,524	-216	1,268	15,941	1,431
	March	10,212	8,597	1,570	-65	1,049	15,560	1,401
	April	10,296	8,652	1,588	107	1,594	16,048	1,350
	May	10,223	8,660	1,520	49	-34	14,845	1,349
	June	10,242	8,681	1,505	86	-515	14,931	1,362
	July	10,228	R8,649	1,521	R-155	R-865	R14,771	R1,394
	August†	NA	*8,731*	NA	*-401*	*-290*	*14,610*	*1,415*
	AVERAGE	**NA**	**8,666**	**NA**	**-104**	**405**	**15,316**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes lease condensate.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]Includes crude oil, natural gas plant production, other hydrocarbons, and alcohol.
[4]Includes stocks located in the Strategic Petroleum Reserve.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
Notes: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.
Sources: • See Notes and Sources on the last page of this section.

Petroleum

Crude Oil[1] and Petroleum Products Overview (continued)

		Imports[2]			Exports[3]			
		Total	Crude Oil[4]	Petroleum Products	Total	Crude Oil	Petroleum Products	Net Imports[5]
		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	January	8,598	6,406	2,192	550	322	228	8,048
	February	7,945	6,013	1,931	558	332	227	7,386
	March	7,452	5,695	1,757	573	330	243	6,879
	April	7,106	5,598	1,508	434	192	241	6,672
	May	6,579	5,106	1,472	591	326	266	5,987
	June	6,894	5,480	1,414	654	365	289	6,240
	July	6,257	4,843	1,414	531	238	293	5,727
	August	6,192	4,803	1,389	319	78	241	5,873
	September	6,239	4,707	1,532	557	322	235	5,682
	October	6,379	4,768	1,611	598	309	288	5,781
	November	6,408	4,680	1,728	549	289	260	5,859
	December	6,894	5,082	1,812	622	343	279	6,272
	AVERAGE	**6,909**	**5,263**	**1,646**	**544**	**287**	**258**	**6,365**
1981	January	6,827	4,932	1,895	558	339	219	6,270
	February	6,772	4,873	1,899	569	198	371	6,203
	March	6,028	4,521	1,507	586	210	376	5,442
	April	5,668	4,338	1,330	570	198	372	5,098
	May	5,775	4,287	1,489	595	312	283	5,180
	June	5,435	4,061	1,375	420	123	297	5,015
	July	5,816	4,296	1,521	571	257	314	5,245
	August	5,767	4,179	1,588	644	204	440	5,123
	September	6,365	4,740	1,624	519	194	325	5,845
	October	5,959	4,380	1,579	738	226	512	5,221
	November	5,741	4,046	1,695	701	278	423	5,041
	December	5,843	4,137	1,706	656	189	467	5,187
	AVERAGE	**5,996**	**4,396**	**1,599**	**595**	**228**	**367**	**5,401**
1982	January	5,232	3,648	1,585	829	238	591	4,404
	February	4,691	2,949	1,742	804	304	499	3,887
	March	4,461	2,856	1,606	882	321	561	3,579
	April	4,286	2,813	1,474	786	174	611	3,501
	May	4,784	3,314	1,471	803	262	542	3,981
	June	5,227	3,782	1,445	703	94	609	4,524
	July	R5,763	R4,245	R1,518	741	229	512	5,022
	August†	*4,899*	*3,638*	*1,261*	NA	NA	NA	NA
	AVERAGE	**4,922**	**3,412**	**1,510**	**NA**	**NA**	**NA**	**NA**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes lease condensate.
[2]Includes shipments from the U.S. possessions and territories.
[3]Includes shipments to the U.S. possessions and territories.
[4]Includes crude oil for storage in the Strategic Petroleum Reserve.
[5]Net Imports equals Imports minus Exports.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See Notes and Sources on the last page of this section.

Petroleum

Crude Oil[1] Supply and Disposition

		Supply						
		Field Production		Imports[2]			Stock Withdrawal[3]	
		Total Domestic	Alaskan	Total	SPR[4]	Other	SPR[4]	Other
		Thousand barrels per day						
1973	**AVERAGE**	**9,208**	**198**	**3,244**		**3,244**		**11**
1974	**AVERAGE**	**8,774**	**193**	**3,477**		**3,477**		**-62**
1975	**AVERAGE**	**8,375**	**191**	**4,105**		**4,105**		**-17**
1976	**AVERAGE**	**8,132**	**173**	**5,287**		**5,287**		**-39**
1977	**AVERAGE**	**8,245**	**464**	**6,615**	**21**	**6,594**	**-20**	**-150**
1978	**AVERAGE**	**8,707**	**1,229**	**6,356**	**162**	**6,195**	**-163**	**84**
1979	**AVERAGE**	**8,552**	**1,401**	**6,519**	**67**	**6,452**	**-67**	**-81**
1980	January	8,675	1,634	6,406	0	6,406	0	-594
	February	8,705	1,630	6,013	0	6,013	0	-292
	March	8,698	1,647	5,695	0	5,695	0	-47
	April	8,685	1,649	5,598	0	5,598	0	-412
	May	8,635	1,627	5,106	0	5,106	0	-117
	June	8,554	1,626	5,480	0	5,480	0	65
	July	8,547	1,612	4,843	0	4,843	0	88
	August	8,414	1,612	4,803	0	4,803	0	-274
	September	8,619	1,610	4,707	54	4,653	-54	361
	October	8,532	1,588	4,768	131	4,637	-123	-68
	November	8,495	1,561	4,680	142	4,538	-189	181
	December	8,606	1,602	5,082	198	4,884	-177	481
	AVERAGE	**8,597**	**1,617**	**5,263**	**44**	**5,219**	**-45**	**-52**
1981	January	8,540	1,606	4,932	106	4,826	-151	201
	February	8,604	1,619	4,873	80	4,793	-127	-150
	March	8,613	1,618	4,521	140	4,382	-155	-477
	April	8,557	1,608	4,338	272	4,066	-444	-151
	May	8,501	1,580	4,287	386	3,901	-513	122
	June	8,629	1,632	4,061	318	3,743	-434	299
	July	8,500	1,605	4,296	175	4,121	-324	-36
	August	8,583	1,602	4,179	257	3,922	-372	769
	September	8,604	1,607	4,740	435	4,305	-486	201
	October	8,563	1,596	4,380	453	3,927	-501	-259
	November	8,586	1,614	4,046	271	3,774	-259	-66
	December	8,585	1,623	4,137	165	3,971	-252	82
	AVERAGE	**8,572**	**1,609**	**4,396**	**256**	**4,141**	**-336**	**46**
1982	January	8,669	1,712	3,648	170	3,478	-159	-77
	February	8,690	1,715	2,949	159	2,790	-213	-3
	March	8,597	1,702	2,856	185	2,671	-235	170
	April	8,652	1,687	2,813	190	2,623	-233	341
	May	8,660	1,725	3,314	204	3,110	-176	225
	June	8,681	1,675	3,782	105	3,678	-105	191
	July	R8,649	R1,715	R4,245	R97	R4,147	R-97	R-58
	August†	*8,731*	*1,701*	*3,638*	*199*	*3,439*	*-199*	*-202*
	AVERAGE	**8,666**	**1,704**	**3,412**	**164**	**3,248**	**-177**	**73**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes lease condensate.
[2]Includes shipments from U.S. possessions and territories.
[3]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[4]Strategic Petroleum Reserve.
†Preliminary data. R=Revised data.
Sources: • See Notes and Sources on the last page of this section.

Petroleum

Crude Oil[1] Supply and Disposition (continued)

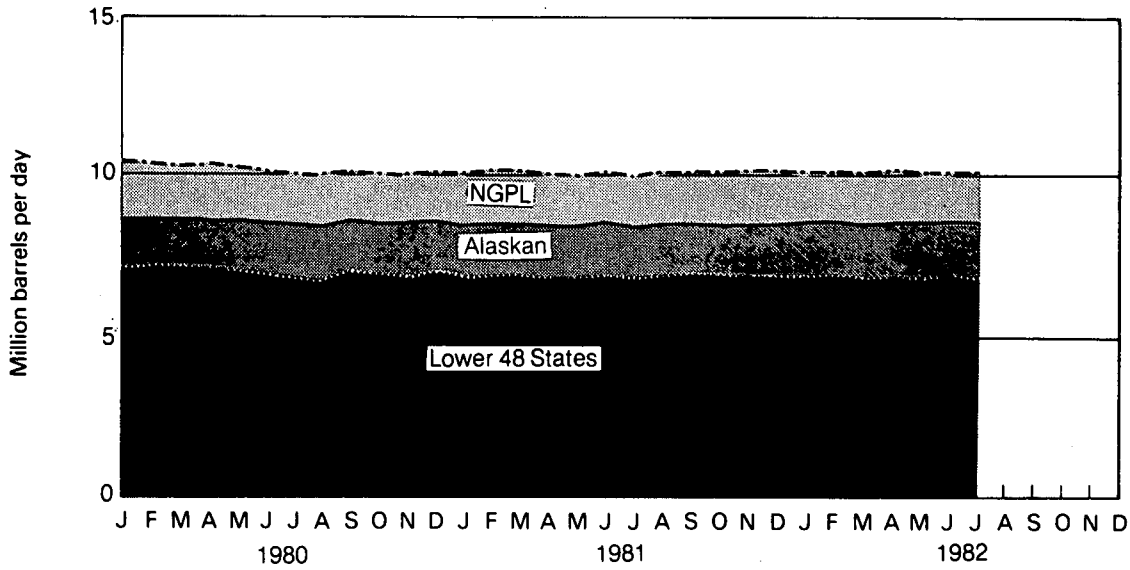
		Supply		Disposition		Ending Stocks		
		Unaccounted for Crude Oil	Crude Used Directly and Losses	Refinery Inputs	Exports[2]	Total	SPR[3]	Other Primary
		Thousand barrels per day				Million barrels		
1973	**AVERAGE**	**3**	**-32**	**12,431**	**2**	**‡242**		**‡242**
1974	**AVERAGE**	**-25**	**-28**	**12,133**	**3**	**‡265**		**‡265**
1975	**AVERAGE**	**17**	**-30**	**12,442**	**6**	**‡271**		**‡271**
1976	**AVERAGE**	**77**	**-33**	**13,416**	**8**	**‡285**		**‡285**
1977	**AVERAGE**	**-6**	**-30**	**14,602**	**50**	**‡348**	**‡7**	**‡340**
1978	**AVERAGE**	**-57**	**-30**	**14,739**	**158**	**‡376**	**‡67**	**‡309**
1979	**AVERAGE**	**-11**	**-29**	**14,648**	**235**	**‡430**	**‡91**	**‡339**
1980	January	166	-31	14,301	322	449	91	358
	February	124	-31	14,187	332	457	91	366
	March	-278	-30	13,709	330	459	91	367
	April	-165	-29	13,484	192	471	91	380
	May	55	-28	13,326	326	475	91	383
	June	1	-30	13,705	365	473	91	381
	July	52	-29	13,264	238	470	91	379
	August	147	-28	12,984	78	478	91	387
	September	27	-26	13,313	322	469	93	376
	October	-3	-25	12,772	309	475	97	379
	November	266	-26	13,119	289	475	102	373
	December	24	-26	13,648	343	466	108	358
	AVERAGE	**34**	**-28**	**13,481**	**287**			
1981	January	113	-49	13,247	339	486	112	374
	February	-41	-58	12,902	198	494	116	378
	March	154	-63	12,383	210	514	121	393
	April	51	-62	12,091	198	532	134	397
	May	286	-62	12,309	312	544	150	394
	June	49	-65	12,415	123	548	163	385
	July	147	-65	12,261	257	559	173	386
	August	16	-63	12,908	204	547	185	362
	September	-295	-65	12,505	194	555	199	356
	October	166	-66	12,057	226	579	215	364
	November	279	-68	12,240	278	589	223	366
	December	52	-67	12,349	189	594	230	363
	AVERAGE	**83**	**-63**	**12,470**	**228**			
1982	January	-138	-66	11,638	238	606	235	371
	February	199	-66	11,252	304	612	241	371
	March	278	-68	11,277	321	614	249	366
	April	56	-68	11,386	174	611	256	355
	May	105	-65	11,801	262	609	261	348
	June	110	-67	12,498	94	607	264	343
	July	1	-63	R12,447	229	R612	267	R345
	August†	NA	NA	*11,945*	NA	*630*	*274*	*356*
	AVERAGE	**NA**	**NA**	**11,786**	**NA**			

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes lease condensate.
[2]Includes shipments to the U.S. possessions and territories.
[3]Strategic Petroleum Reserve.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See Notes and Sources on the last page of this section.

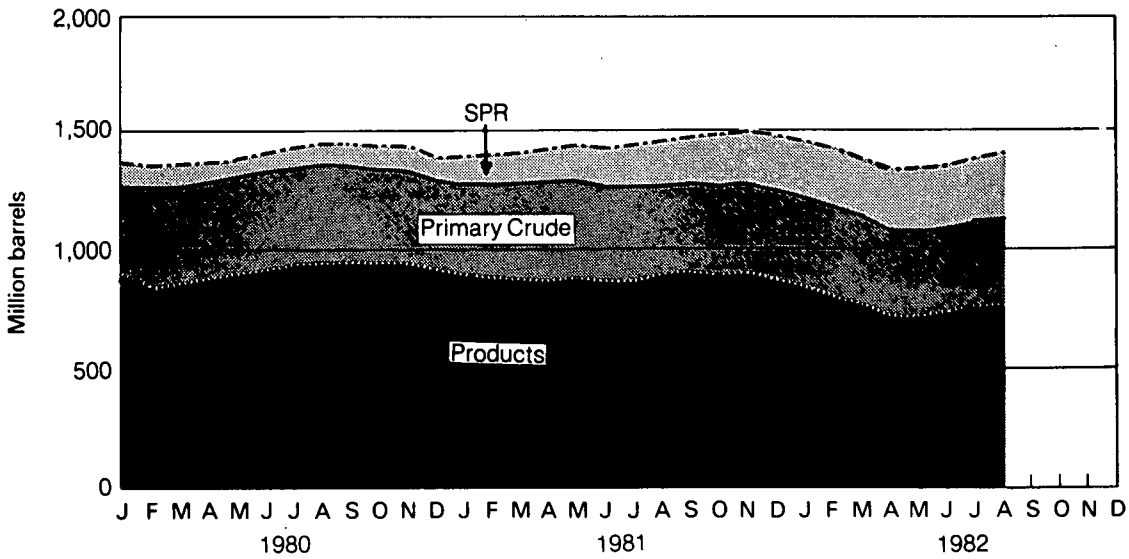
Petroleum

Overview

Production of Crude Oil and Natural Gas Plant Liquids



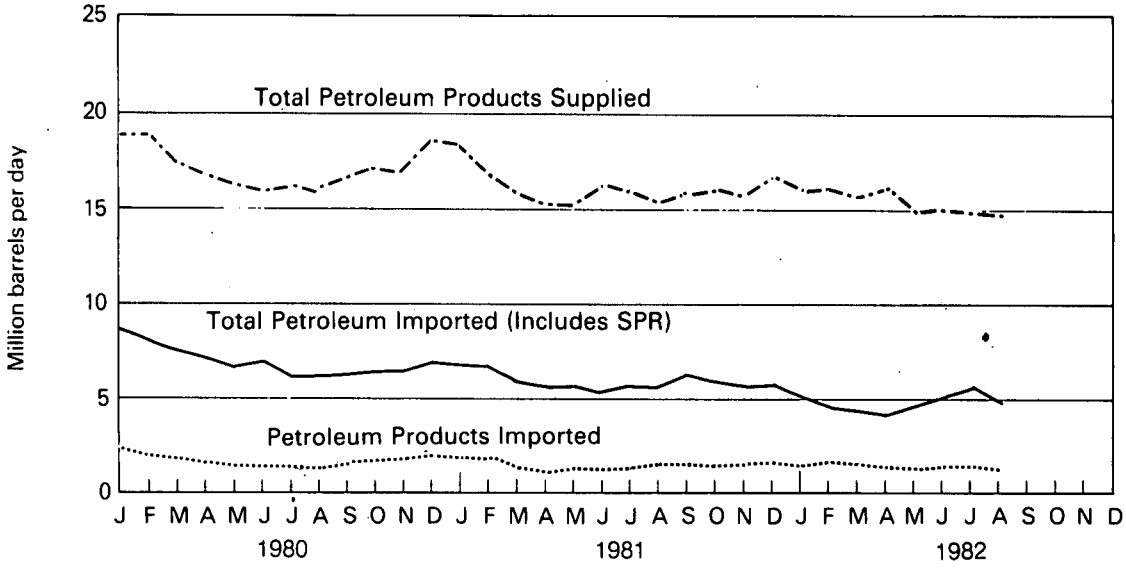
Stocks



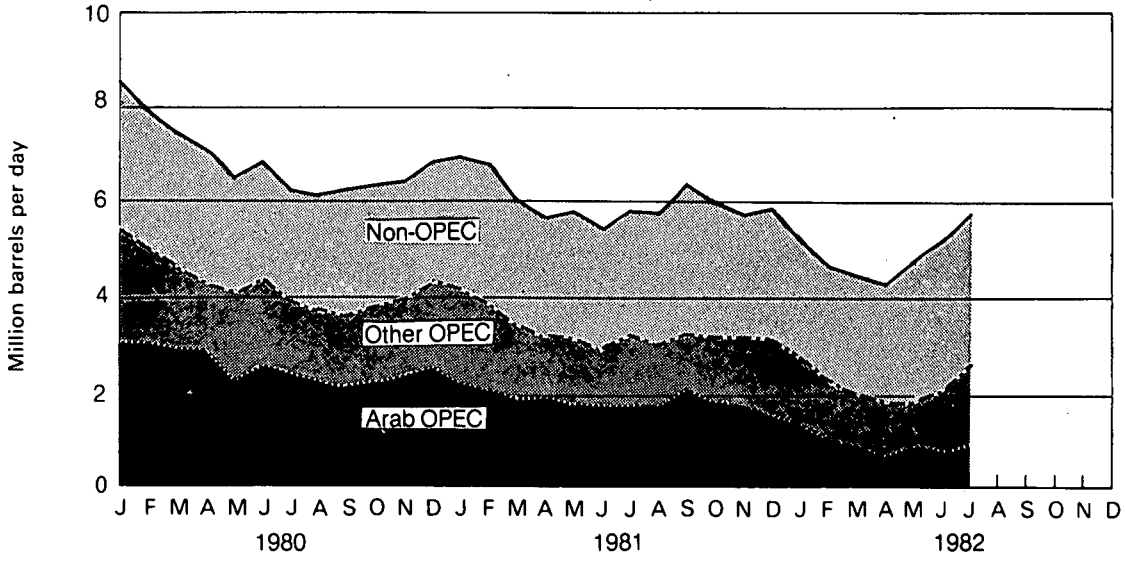
Petroleum

Overview

Products Supplied and Imports



Petroleum Imports by Source



Petroleum

Crude Oil and Petroleum Product Imports from OPEC Sources

		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC[1]	Total OPEC	Total Arab OPEC[2]
						Thousand barrels per day						
1973	**AVERAGE**	**136**	**164**	**486**	**71**	**213**	**223**	**459**	**1,135**	**106**	**2,993**	**915**
1974	**AVERAGE**	**190**	**4**	**461**	**74**	**300**	**469**	**713**	**979**	**88**	**3,280**	**752**
1975	**AVERAGE**	**282**	**232**	**715**	**117**	**390**	**280**	**762**	**702**	**122**	**3,601**	**1,383**
1976	**AVERAGE**	**432**	**453**	**1,230**	**254**	**539**	**298**	**1,025**	**700**	**134**	**5,066**	**2,424**
1977	**AVERAGE**	**559**	**723**	**1,380**	**335**	**541**	**535**	**1,143**	**690**	**287**	**6,193**	**3,185**
1978	**AVERAGE**	**649**	**654**	**1,144**	**385**	**573**	**555**	**919**	**645**	**226**	**5,751**	**2,963**
1979	**AVERAGE**	**636**	**658**	**1,356**	**281**	**420**	**304**	**1,080**	**690**	**212**	**5,637**	**3,056**
1980	January	503	618	1,576	202	454	95	1,054	786	179	5,467	3,034
	February	656	603	1,412	304	317	9	1,036	543	152	5,031	3,058
	March	472	654	1,380	289	405	0	924	352	175	4,652	2,889
	April	546	683	1,300	150	374	0	734	343	240	4,369	2,862
	May	441	468	1,149	172	360	0	955	405	147	4,098	2,329
	June	497	561	1,328	178	331	0	998	409	106	4,408	2,598
	July	557	492	1,192	158	365	0	752	417	62	3,995	2,418
	August	432	431	1,139	142	289	0	792	406	112	3,743	2,222
	September	375	505	1,112	107	299	0	735	425	111	3,670	2,185
	October	465	478	1,044	182	348	0	728	482	95	3,821	2,226
	November	493	500	1,201	105	348	0	624	595	78	3,944	2,338
	December	423	658	1,301	83	288	0	958	610	101	4,423	2,484
	AVERAGE	**488**	**554**	**1,261**	**172**	**348**	**9**	**857**	**481**	**130**	**4,300**	**2,551**
1981	January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
	February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
	March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
	April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
	May	393	443	933	17	297	0	664	331	124	3,203	1,796
	June	356	380	865	60	367	0	528	248	118	2,922	1,703
	July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
	August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
	September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
	October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
	November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
	December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
	AVERAGE	**311**	**319**	**1,129**	**81**	**366**	**0**	**620**	**406**	**90**	**3,323**	**1,848**
1982	January	254	161	877	87	273	0	662	376	128	2,818	1,378
	February	139	92	692	79	236	0	579	347	102	2,267	1,044
	March	91	37	555	155	200	0	503	399	91	2,032	860
	April	85	0	479	122	215	0	427	411	79	1,818	707
	May	179	0	601	116	236	0	211	414	54	1,811	897
	June	93	0	593	94	215	72	537	361	110	2,075	799
	July	122	0	644	123	327	69	910	349	95	2,640	927
	AVERAGE	**138**	**41**	**635**	**111**	**244**	**20**	**547**	**380**	**94**	**2,210**	**945**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.
[2]Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.
Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.
Sources: • See Notes and Sources on the last page of this section.

Petroleum

Crude Oil and Petroleum Product Imports from Non-OPEC Sources

		Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico[1]	Virgin Islands[1]	Other[2]	Total
						Thousand barrels per day					
1973	**AVERAGE**	**174**	**1,325**	**16**	**585**	**255**	**15**	**99**	**329**	**465**	**3,263**
1974	**AVERAGE**	**164**	**1,070**	**8**	**511**	**251**	**8**	**90**	**391**	**340**	**2,832**
1975	**AVERAGE**	**152**	**846**	**71**	**332**	**242**	**14**	**90**	**406**	**300**	**2,454**
1976	**AVERAGE**	**118**	**599**	**87**	**275**	**274**	**31**	**88**	**422**	**353**	**2,247**
1977	**AVERAGE**	**171**	**517**	**179**	**211**	**289**	**126**	**105**	**466**	**550**	**2,614**
1978	**AVERAGE**	**160**	**467**	**318**	**229**	**253**	**180**	**94**	**429**	**484**	**2,613**
1979	**AVERAGE**	**147**	**538**	**439**	**231**	**190**	**202**	**92**	**431**	**548**	**2,819**
1980	January	175	570	545	289	239	296	57	467	492	3,131
	February	111	540	477	205	192	105	95	536	652	2,914
	March	124	460	460	184	189	232	101	449	601	2,800
	April	56	459	546	231	143	182	76	425	619	2,737
	May	77	419	576	176	221	124	88	303	496	2,481
	June	77	409	627	197	162	146	91	314	465	2,486
	July	43	378	460	242	180	115	90	378	376	2,262
	August	62	319	646	255	159	196	85	264	463	2,449
	September	58	458	550	213	205	218	52	343	473	2,569
	October	70	475	605	230	114	134	107	372	450	2,557
	November	22	470	459	264	158	157	108	391	435	2,464
	December	54	502	445	212	149	199	109	423	378	2,471
	AVERAGE	**78**	**455**	**533**	**225**	**176**	**176**	**88**	**388**	**491**	**2,609**
1981	January	39	543	401	198	150	233	89	494	552	2,701
	February	84	546	437	227	163	271	46	481	626	2,881
	March	74	472	488	227	93	263	45	370	571	2,603
	April	68	412	418	198	139	402	40	365	380	2,423
	May	122	365	522	213	105	368	58	344	474	2,573
	June	51	353	538	196	124	397	67	262	525	2,513
	July	77	382	384	212	178	553	50	206	541	2,583
	August	69	378	489	255	123	592	68	184	539	2,698
	September	111	423	708	163	169	528	72	265	661	3,100
	October	63	449	669	161	121	351	60	303	562	2,739
	November	63	547	628	168	108	253	76	294	421	2,557
	December	70	501	587	148	125	280	73	367	563	2,714
	AVERAGE	**74**	**447**	**522**	**197**	**133**	**375**	**62**	**327**	**534**	**2,672**
1982	January	28	509	426	179	106	346	62	334	425	2,415
	February	50	533	489	221	120	132	38	354	487	2,424
	March	43	435	503	189	118	293	62	307	479	2,429
	April	67	357	467	180	166	247	36	266	682	2,468
	May	76	416	767	152	95	516	47	302	603	2,974
	June	32	462	797	141	129	539	58	322	673	3,153
	July	30	527	783	158	111	433	38	369	674	3,122
	AVERAGE	**46**	**462**	**606**	**174**	**120**	**361**	**49**	**322**	**575**	**2,715**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]U.S. possessions.
[2]Includes all non-OPEC countries except those shown above.
Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.
Sources: • See Notes and Sources on the last page of this section.

Petroleum

Finished Motor Gasoline Supply and Disposition

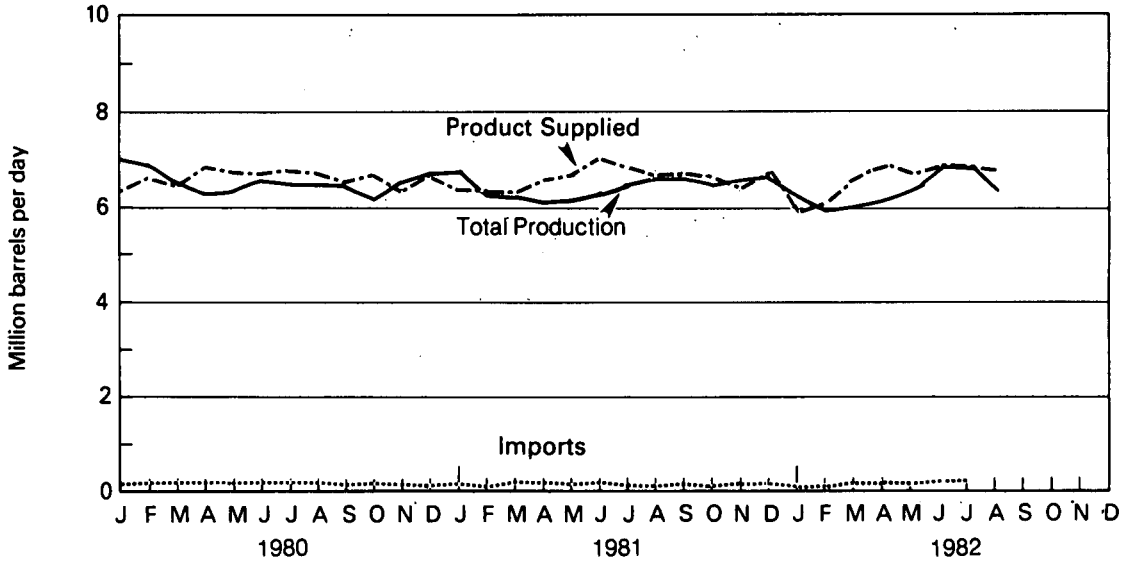
		Supply			Disposition				Ending Stocks	
						Product Supplied				
		Total Production	Imports[1]	Stock Withdrawal[1,2]	Exports	Total	Unleaded[3]	Unleaded Percent of Total	Total Motor Gasoline[4]	Finished Motor Gasoline
		Thousand barrels per day							Million barrels	
1973	**AVERAGE**	**6,535**	**134**	**9**	**4**	**6,674**			**‡209**	
1974	**AVERAGE**	**6,360**	**204**	**-24**	**2**	**6,537**			**‡218**	
1975	**AVERAGE**	**6,520**	**184**	**-28**	**2**	**6,675**			**‡235**	
1976	**AVERAGE**	**6,841**	**131**	**10**	**3**	**6,978**			**‡231**	
1977	**AVERAGE**	**7,033**	**217**	**-72**	**2**	**7,177**	**1,976**	**27.5**	**‡258**	
1978	**AVERAGE**	**7,169**	**190**	**54**	**1**	**7,412**	**2,521**	**34.0**	**‡238**	
1979	**AVERAGE**	**6,852**	**181**	**2**	**(s)**	**7,034**	**2,798**	**39.8**	**‡237**	
1980	January	6,991	141	-809	1	6,323	2,718	43.0	262	
	February	6,866	154	-423	(s)	6,596	2,969	45.0	275	
	March	6,519	155	-267	(s)	6,406	3,032	47.3	283	
	April	6,284	155	362	1	6,800	3,021	44.4	272	
	May	6,316	132	283	1	6,729	2,980	44.3	263	
	June	6,569	148	-59	1	6,657	3,099	46.6	265	
	July	6,465	149	-132	3	6,743	3,131	46.4	261	
	August	6,452	141	56	1	6,648	3,135	47.2	259	
	September	6,383	106	28	7	6,510	3,054	46.9	258	
	October	6,131	152	380	1	6,662	3,110	46.7	247	
	November	6,467	126	-359	(s)	6,234	3,123	50.1	257	
	December	6,644	121	-133	1	6,632	3,421	51.6	261	
	AVERAGE	**6,506**	**140**	**-66**	**1**	**6,579**	**3,067**	**46.6**		
1981	January	6,715	138	-421	(s)	6,431	3,141	48.8	276	227
	February	6,308	111	-118	1	6,301	3,095	49.1	284	230
	March	6,213	171	-81	(s)	6,303	3,097	49.1	285	232
	April	6,114	186	303	(s)	6,602	3,284	49.7	272	223
	May	6,122	150	344	1	6,615	3,115	47.1	259	213
	June	6,220	186	622	1	7,028	3,419	48.6	242	194
	July	6,405	151	268	(s)	6,823	3,424	50.2	228	186
	August	6,611	124	-95	3	6,637	3,344	50.4	233	189
	September	6,564	169	-70	2	6,662	3,338	50.1	237	191
	October	6,426	147	7	3	6,578	3,257	49.5	236	190
	November	6,564	148	-338	1	6,373	3,198	50.2	248	201
	December	6,586	197	-91	11	6,681	3,444	51.5	253	203
	AVERAGE	**6,405**	**157**	**28**	**2**	**6,588**	**3,264**	**49.5**		
1982	January	6,181	114	-358	18	5,920	3,033	51.2	262	214
	February	5,917	133	28	8	6,070	3,145	51.8	262	213
	March	6,004	183	469	44	6,612	3,396	51.4	248	199
	April	6,104	177	641	33	6,890	3,494	50.7	223	180
	May	6,322	163	188	23	6,650	3,415	51.3	215	174
	June	6,767	195	-136	14	6,812	3,561	52.3	220	178
	July	R6,788	200	-165	24	R6,799	3,574	52.6	226	183
	August†	*6,331*	NA	NA	NA	*6,708*	NA	NA	*224*	NA
	AVERAGE	**6,305**	**NA**	**NA**	**NA**	**6,561**	**NA**	**NA**		

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Beginning in 1981, excludes blending components.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]Includes gasohol.
[4]Includes motor gasoline blending components.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
†Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.
Notes: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions, and processing procedures. See Note 2 on the last page of this section.
Annual stock changes for 1975 and 1981 were calculated using expanded stock coverage.
Sources: • See Notes and Sources on the last page of this section.

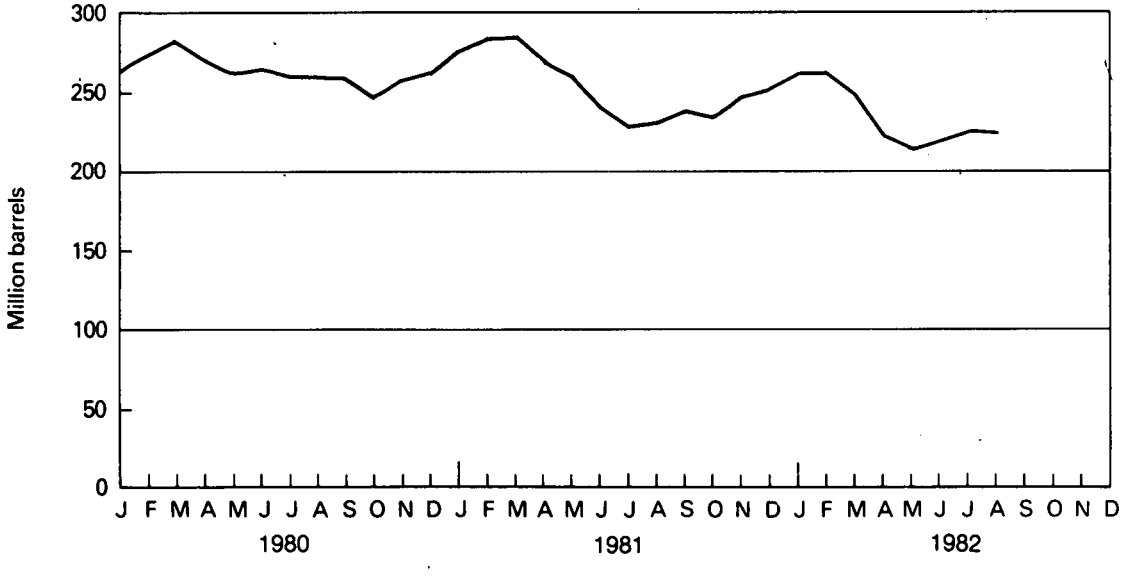
Petroleum

Motor Gasoline

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks
		Total Production	Imports	Stock Withdrawal[1]	Crude Used Directly	Exports	Product Supplied	
		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**	**‡200**
1975	**AVERAGE**	**2,654**	**155**	**40**	**2**	**1**	**2,851**	**‡209**
1976	**AVERAGE**	**2,924**	**146**	**62**	**1**	**1**	**3,133**	**‡186**
1977	**AVERAGE**	**3,278**	**250**	**-176**	**1**	**1**	**3,352**	**‡250**
1978	**AVERAGE**	**3,167**	**173**	**93**	**1**	**3**	**3,432**	**‡216**
1979	**AVERAGE**	**3,153**	**193**	**-34**	**1**	**3**	**3,311**	**‡229**
1980	January	3,014	179	526	1	7	3,714	212
	February	2,766	237	716	1	8	3,712	192
	March	2,558	193	445	1	19	3,179	178
	April	2,461	154	21	2	2	2,635	177
	May	2,474	126	-199	1	1	2,402	183
	June	2,647	108	-439	1	(s)	2,317	197
	July	2,690	117	-557	2	3	2,249	214
	August	2,462	77	-403	2	(s)	2,137	226
	September	2,686	101	-201	2	(s)	2,587	232
	October	2,590	115	215	1	(s)	2,920	226
	November	2,703	133	111	1	(s)	2,949	222
	December	2,891	166	556	1	(s)	3,615	205
	AVERAGE	**2,662**	**142**	**64**	**1**	**3**	**2,866**	
1981	January	2,989	273	836	11	(s)	4,109	179
	February	2,809	325	246	11	17	3,373	173
	March	2,484	147	264	9	(s)	2,904	164
	April	2,418	116	-9	10	3	2,532	165
	May	2,454	179	-232	10	(s)	2,411	172
	June	2,501	225	-270	9	(s)	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	(s)	2,388	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	9	5	2,803	201
	November	2,716	124	36	11	6	2,880	200
	December	2,856	95	277	11	26	3,212	192
	AVERAGE	**2,613**	**173**	**38**	**10**	**5**	**2,829**	
1982	January	2,615	96	780	10	90	3,410	166
	February	2,447	130	689	11	90	3,187	147
	March	2,294	48	612	10	84	2,881	128
	April	2,357	59	631	13	64	2,996	109
	May	2,618	74	-184	10	75	2,444	114
	June	2,731	100	-335	10	55	2,450	125
	July	R2,734	R124	R-761	11	24	R2,084	R148
	August†	*2,537*	*65*	*-447*	NA	NA	*2,142*	*156*
	AVERAGE	**2,543**	**87**	**116**	**NA**	**NA**	**2,693**	

Geographic coverage: the 50 United States and District of Columbia.
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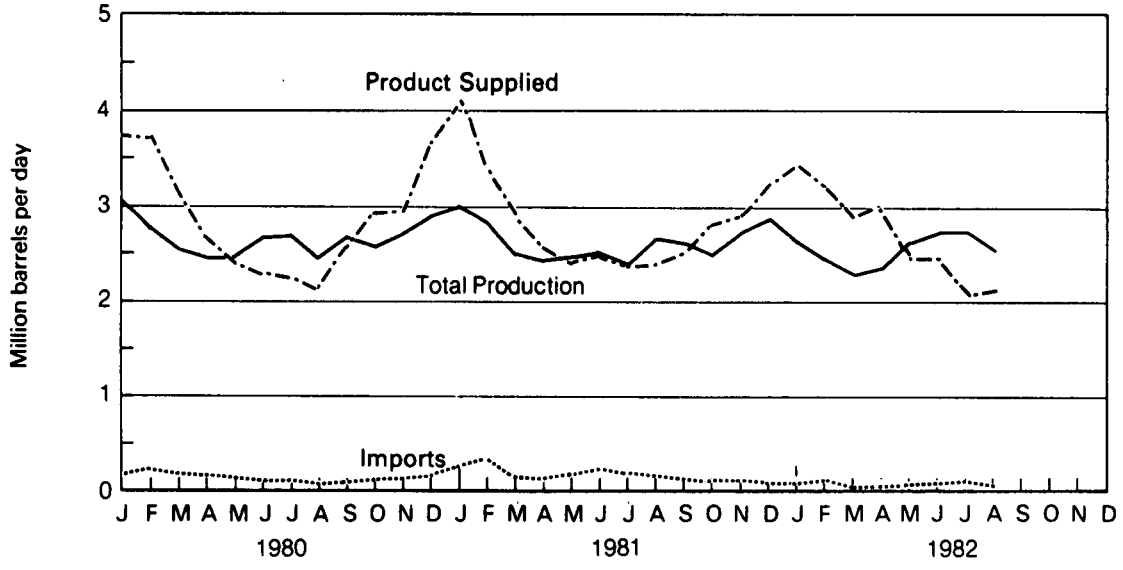
[1]A negative number indicates an increase in stocks and a positive number indicates a decrease.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
†Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.
Notes: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions and processing procedures. See Note 3 on the last page of this section.
Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.
Sources: • See Notes and Sources on the last page of this section.

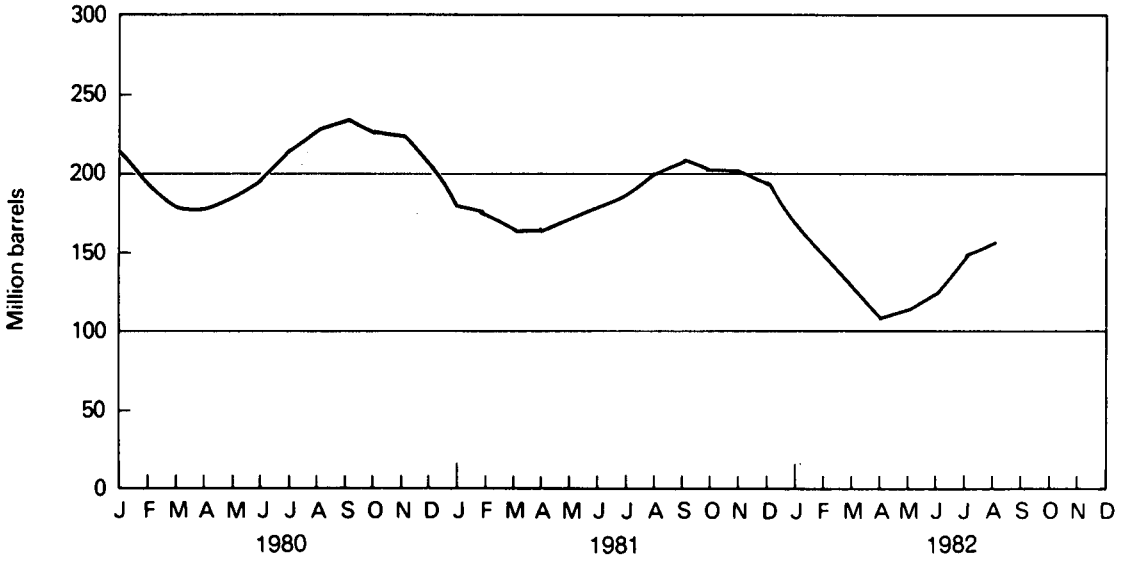
Petroleum

Distillate Fuel Oil

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks
		Total Production	Imports	Stock Withdrawal[1]	Crude Used Directly	Exports	Product Supplied	
		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**	**‡60**
1975	**AVERAGE**	**1,235**	**1,223**	**2**	**15**	**15**	**2,462**	**‡74**
1976	**AVERAGE**	**1,377**	**1,413**	**5**	**17**	**12**	**2,801**	**‡72**
1977	**AVERAGE**	**1,754**	**1,359**	**-48**	**13**	**6**	**3,071**	**‡90**
1978	**AVERAGE**	**1,667**	**1,355**	**-1**	**13**	**13**	**3,023**	**‡90**
1979	**AVERAGE**	**1,687**	**1,151**	**-15**	**12**	**9**	**2,826**	**‡96**
1980	January	1,771	1,338	-51	14	5	3,067	97
	February	1,773	1,122	214	14	17	3,105	91
	March	1,584	976	87	14	2	2,658	88
	April	1,595	775	102	13	40	2,444	85
	May	1,509	812	-78	12	20	2,235	88
	June	1,575	749	-4	14	14	2,321	88
	July	1,480	787	71	13	60	2,291	86
	August	1,444	875	-43	13	2	2,286	87
	September	1,495	906	-31	10	21	2,359	88
	October	1,512	875	-100	9	70	2,227	91
	November	1,579	1,024	-74	10	88	2,451	93
	December	1,660	1,025	46	10	62	2,679	92
	AVERAGE	**1,580**	**939**	**10**	**12**	**33**	**2,508**	
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,868	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	830	2	48	82	1,971	69
	August	1,231	819	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,238	786	8	54	202	1,884	80
	November	1,227	880	-49	53	203	1,909	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	**1,321**	**800**	**37**	**48**	**118**	**2,088**	
1982	January	R1,183	821	328	53	235	2,150	68
	February	1,136	928	358	53	213	2,261	58
	March	1,121	910	26	53	197	1,912	57
	April	1,162	762	124	52	234	1,867	54
	May	1,127	738	-175	52	191	1,551	59
	June	1,077	643	-49	50	217	1,504	61
	July	R1,029	R576	R51	49	239	R1,466	R59
	August†	*998*	*543*	*171*	NA	NA	*1,522*	*51*
	AVERAGE	**1,104**	**738**	**102**	**NA**	**NA**	**1,774**	

Geographic coverage: the 50 United States and District of Columbia.
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[1]A negative number indicates an increase in stocks and a positive number indicates a decrease.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
Notes: Beginning in January 1981, the Energy Information Administration modified survey forms, definitions, and processing procedures. See Note 3 on the last page of this section.
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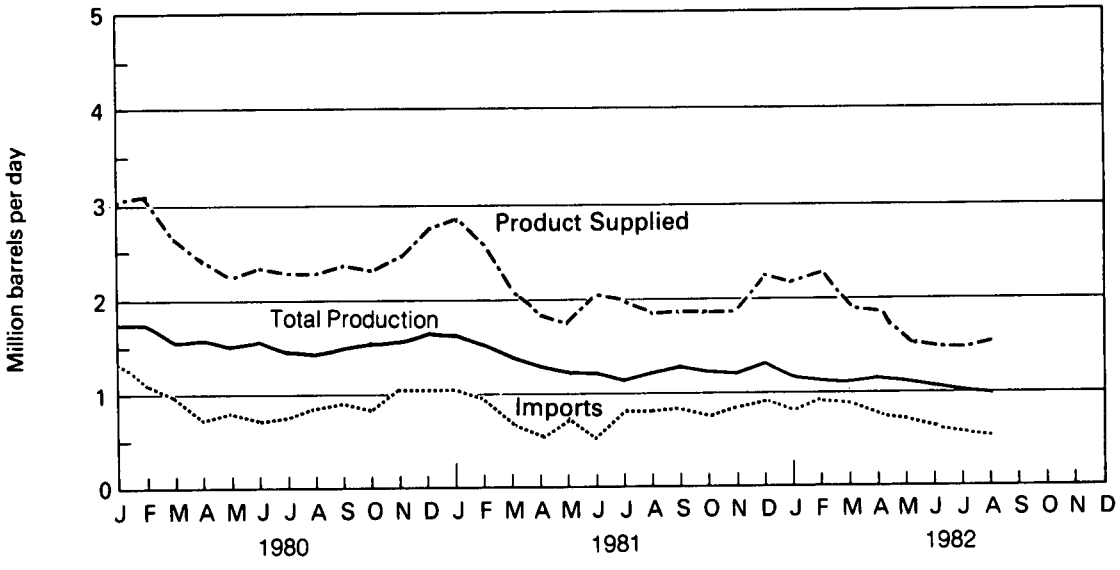
Sources: • See Notes and Sources on the last page of this section.

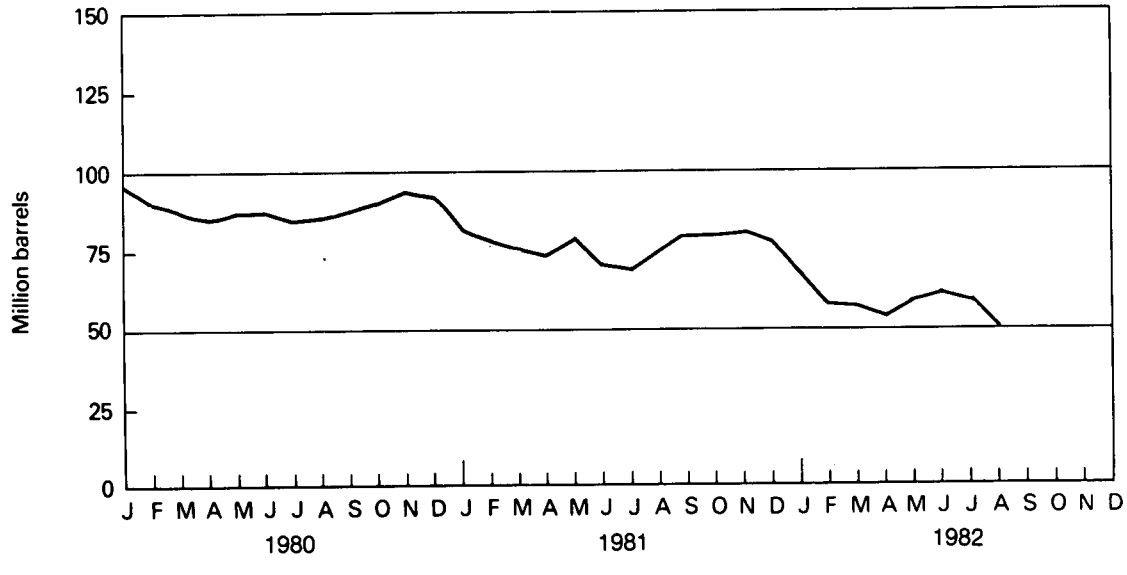
Petroleum

Residual Fuel Oil

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Liquefied Petroleum Gases and Ethane Supply and Disposition

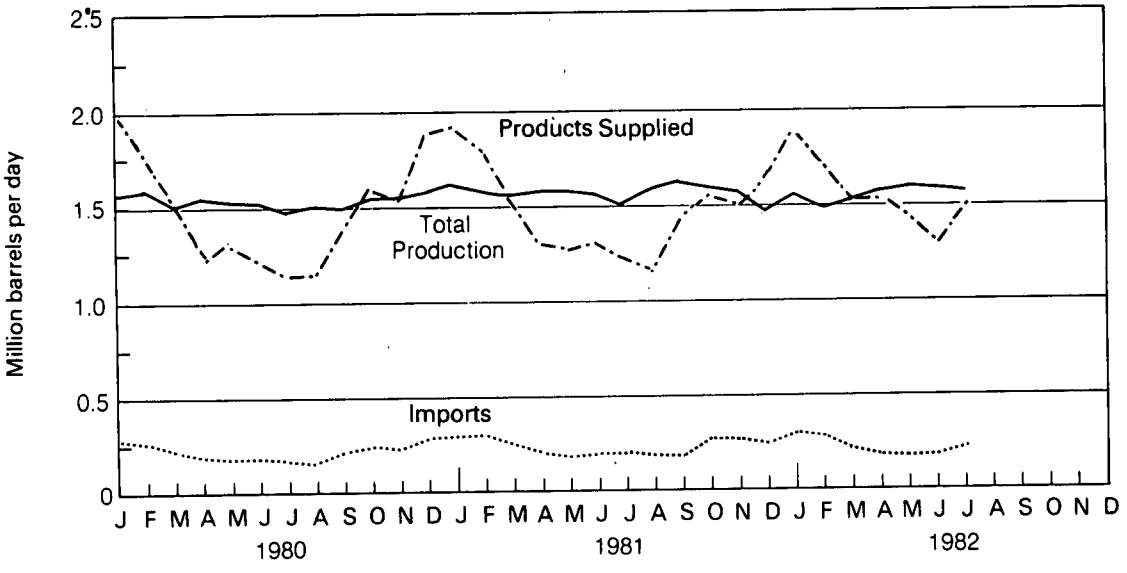
		Supply			Disposition			Ending Stocks
		Total Production	Imports	Stock Withdrawal[1]	Refinery Inputs	Exports	Product Supplied	
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**1,600**	**132**	**-35**	**220**	**27**	**1,449**	**‡99**
1974	**AVERAGE**	**1,565**	**123**	**-38**	**220**	**25**	**1,406**	**‡113**
1975	**AVERAGE**	**1,527**	**112**	**-35**	**246**	**26**	**1,333**	**‡125**
1976	**AVERAGE**	**1,535**	**130**	**24**	**260**	**25**	**1,404**	**‡116**
1977	**AVERAGE**	**1,566**	**161**	**-55**	**233**	**18**	**1,422**	**‡136**
1978	**AVERAGE**	**1,537**	**123**	**12**	**239**	**20**	**1,413**	**‡132**
1979	**AVERAGE**	**1,556**	**217**	**70**	**236**	**15**	**1,592**	**‡111**
1980	January	1,560	264	461	291	30	1,963	96
	February	1,581	252	209	252	26	1,764	90
	March	1,519	214	7	211	23	1,506	90
	April	1,546	186	-339	171	19	1,203	100
	May	1,538	181	-224	182	17	1,295	107
	June	1,528	184	-319	170	18	1,205	117
	July	1,485	172	-283	209	18	1,147	126
	August	1,507	158	-296	203	17	1,149	135
	September	1,495	213	-80	228	19	1,382	137
	October	1,546	249	86	259	24	1,597	134
	November	1,549	231	82	304	23	1,535	132
	December	1,567	289	373	319	23	1,888	120
	AVERAGE	**1,535**	**216**	**-27**	**233**	**21**	**1,469**	
1981	January	1,617	306	363	352	21	1,913	117
	February	1,593	327	173	303	21	1,769	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,586	214	-236	231	26	1,308	119
	May	1,587	189	-258	220	19	1,279	127
	June	1,567	206	-208	237	24	1,304	133
	July	1,507	213	-258	215	17	1,229	141
	August	1,592	195	-242	235	149	1,160	149
	September	1,622	199	-75	287	21	1,438	151
	October	1,593	287	72	320	76	1,556	149
	November	1,571	280	86	383	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	**1,571**	**244**	**-18**	**289**	**42**	**1,466**	
1982	January	1,546	314	480	398	67	1,873	122
	February	1,476	291	310	327	51	1,699	114
	March	1,523	223	145	289	74	1,528	109
	April	1,566	188	107	257	77	1,527	106
	May	1,583	186	-61	235	43	1,431	108
	June	1,571	192	-109	262	106	1,286	111
	July	1,556	227	-5	253	37	1,487	111
	AVERAGE	**1,547**	**231**	**122**	**288**	**65**	**1,546**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]A negative number indicates an increase in stocks and a positive number indicates a decrease.
‡Ending stocks for 1973 – 1979 are totals as of December 31.
Sources: • See Notes and Sources on the last page of this section.

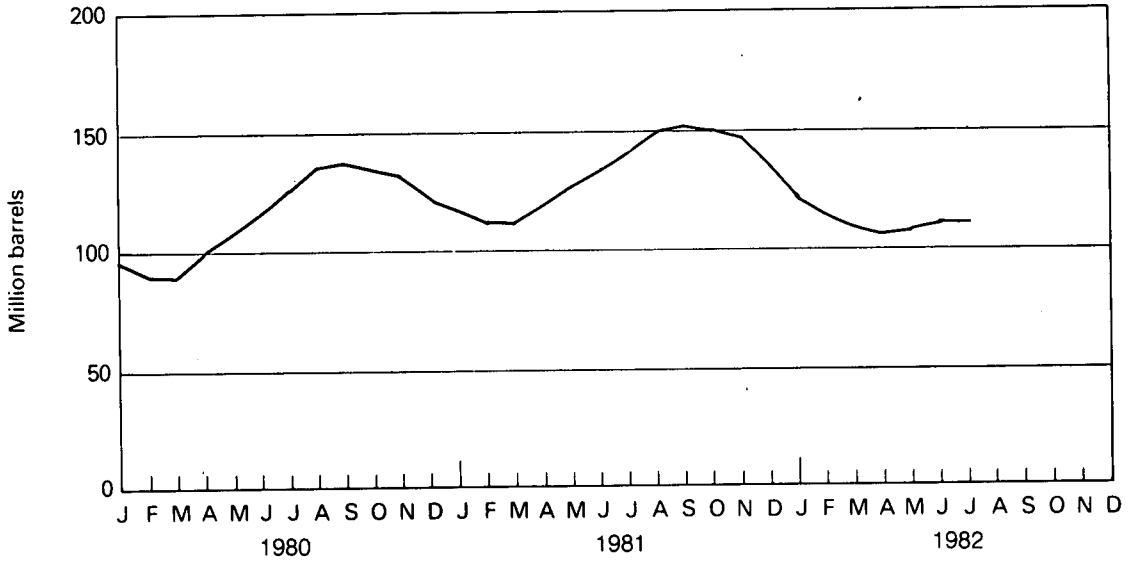
Petroleum

Liquefied Petroleum Gases and Ethane

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Other Petroleum Products[1] Supply and Disposition

		Supply			Disposition			Ending Stocks
		Total Production	Imports	Stock Withdrawal[2]	Refinery Inputs	Exports	Product Supplied	
		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**	**‡218**
1975	**AVERAGE**	**3,424**	**277**	**-2**	**537**	**160**	**3,002**	**‡219**
1976	**AVERAGE**	**3,643**	**206**	**-5**	**524**	**175**	**3,145**	**‡220**
1977	**AVERAGE**	**3,912**	**205**	**-27**	**514**	**165**	**3,410**	**‡230**
1978	**AVERAGE**	**4,046**	**166**	**14**	**492**	**167**	**3,568**	**‡225**
1979	**AVERAGE**	**4,153**	**195**	**-37**	**352**	**209**	**3,749**	**‡238**
1980	January	4,157	269	135	591	186	3,785	234
	February	4,181	167	-153	380	174	3,641	239
	March	4,128	219	-370	149	200	3,627	250
	April	4,105	238	-374	86	180	3,703	261
	May	4,018	222	-301	135	227	3,577	271
	June	4,016	226	-49	250	256	3,687	272
	July	3,873	188	82	356	209	3,578	270
	August	3,753	139	212	351	221	3,532	263
	September	3,952	206	25	234	188	3,761	262
	October	3,737	220	175	351	193	3,588	257
	November	3,787	213	156	475	148	3,533	252
	December	3,792	209	151	362	194	3,596	247
	AVERAGE	**3,956**	**210**	**-23**	**311**	**198**	**3,634**	
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	538	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	286	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	**3,739**	**226**	**46**	**723**	**199**	**3,088**	
1982	January	3,181	240	-102	602	180	2,536	284
	February	3,364	260	-116	646	138	2,724	287
	March	3,485	241	-204	734	161	2,627	294
	April	3,394	287	91	801	204	2,767	291
	May	3,296	309	198	823	210	2,769	285
	June	3,481	315	115	815	216	2,879	281
	July	3,578	391	15	862	187	2,935	281
	AVERAGE	**3,397**	**292**	**0**	**756**	**186**	**2,748**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and ethane.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
‡Ending stocks for 1973 - 1979 are totals as of December 31.
Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.
Sources: • See Notes and Sources on the last page of this section.

Notes and Sources for the Petroleum Section

Notes

1. Research conducted by the Energy Information Administration (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.
2. **Motor Gasoline:** Beginning in January 1981, the EIA expanded its universe to include non-refinery blenders; redefined motor gasoline into three categories (finished leaded, finished unleaded, and gasohol); and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to more accurately describe refinery operations. For further details see the EIA, *Petroleum Supply Monthly.*
3. **Distillate and Residual Fuel Oils:** Previous to January 1981, the refinery input of unfinished oils number typically exceeded the number for available supply of unfinished oils. This was assumed to be due to the redesignation of distillate and residual fuel oils received as such, but used as an unfinished oil input by the receiving refinery. This imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of this difference was subtracted from distillate and one-third from residual. Beginning in January 1981, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment. For further details see the EIA, *Petroleum Supply Monthly.*

Sources

- 1973 through 1976: Bureau of Mines, *Mineral Industry Surveys,* "Petroleum Statement, Annual" (except unleaded gasoline) and "PAD Districts Supply/Demand, Annual."
- Unleaded gasoline—1977 through 1980: Energy Information Administration (EIA), *Monthly Petroleum Statistics Report.*
- 1977 through 1981: EIA, *Energy Data Reports,* "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
- January 1982 through July 1982: EIA, *Petroleum Supply Monthly.*
- Data for the most recent month are estimates based on EIA weekly data (except domestic production).
- Domestic production for the most recent month is an EIA estimate based on historical data from State Conservation Agencies and the U.S. Geological Survey.
- Sources for the *Energy Data Reports,* the *Petroleum Supply Monthly,* and the *Monthly Petroleum Statistics Report* are: EIA Forms EIA-64 (Natural Gas Liquids Operations Report), EIA-87 (Refinery Report), EIA-88 (Bulk Terminals Report), EIA-89 (Pipeline Report), and EIA-90 (Crude Oil Stock Report); Economic Regulatory Administration (ERA) Forms ERA-60 (Imports) and FEA P133 (Imports from Puerto Rico); Bureau of the Census IM 145 (Imports), EM 522 (Exports), and EM 594 (Exports); U.S. Geological Survey (Crude Production); and State Conservation Agencies (Crude Production).

Natural Gas

Total dry natural gas production, including nonhydrocarbon gases, in the United States during August 1982 was an estimated 1.5 trillion cubic feet (Tcf). This was 0.7 percent higher than in July 1982 but 9.6 percent lower than in August 1981. Output during the first 8 months of 1982 totaled 12.3 Tcf, 6.0 percent lower than during the period January through August 1981.

Consumption of natural and supplemental gas in August 1982 was an estimated 1.2 Tcf, 4.3 percent higher than in July 1982 but 5.8 percent lower than in August 1981. Estimated consumption during the first 8 months of 1982 totaled 12.2 Tcf, 4.6 percent less than during the comparable 1981 period.

Imports of natural gas in August 1982 were an estimated 63 billion cubic feet (Bcf), 1.6 percent lower than in the previous August. During the first 8 months of 1982, imports of natural gas totaled an estimated 631 Bcf, 8.4 percent higher than during the comparable 1981 period. No shipments of Algerian liquefied natural gas were received during August 1982.

Domestic producer sales to major interstate pipelines in June 1982 (latest data available) totaled 814 Bcf, 7.2 percent lower than during the previous June. Total sales during the first 6 months of 1982 were 5.4 Tcf, 1.6 percent less than during the comparable 1981 period.

Stocks of working gas* in underground natural gas storage reservoirs at the end of August 1982 totaled 3.0 Tcf, 4.1 percent above stocks available a year earlier. Net additions to storage during August 1982 were 295 Bcf, 22.4 percent lower than during the previous August.

*Gas available for withdrawal.

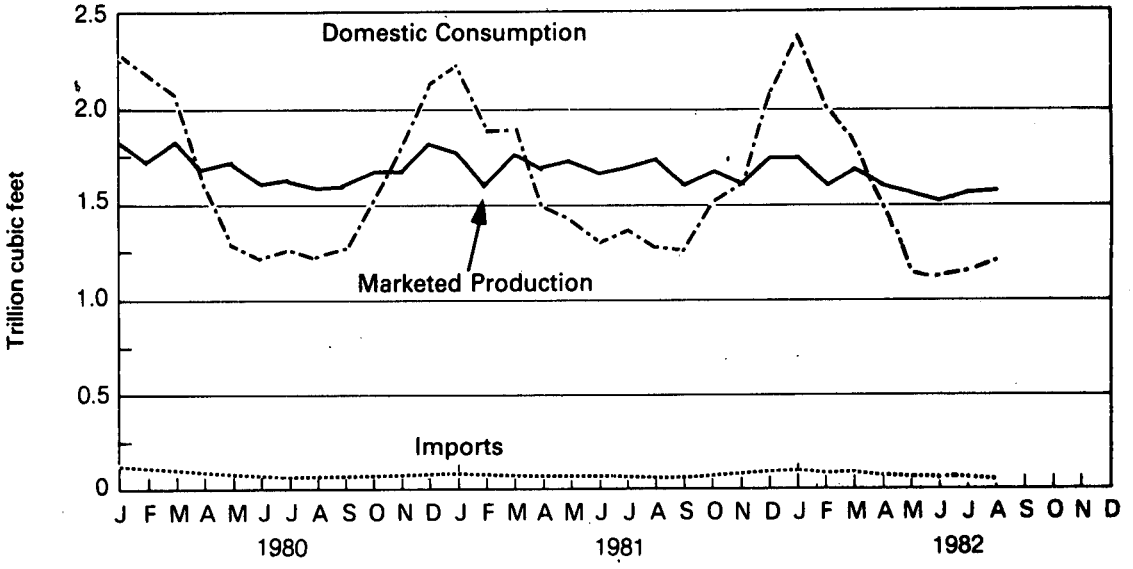
Natural Gas

		Production			Supplemental Gaseous Fuels	Total Domestic Consumption[3]	Imports	Exports	Domestic Producer Sales to Major Interstate Pipelines
		Total Marketed[1]	Total Dry[2]	Nonhydrocarbon Gases Removed					
		Billion cubic feet							
1973	**TOTAL**	**22,648**	**21,731**	**NA**	**NA**	**22,049**	**1,033**	**77**	**12,067**
1974	**TOTAL**	**21,601**	**20,713**	**NA**	**NA**	**21,223**	**959**	**77**	**11,462**
1975	**TOTAL**	**20,109**	**19,236**	**NA**	**NA**	**19,538**	**953**	**73**	**10,652**
1976	**TOTAL**	**19,952**	**19,098**	**NA**	**NA**	**19,946**	**964**	**65**	**10,140**
1977	**TOTAL**	**20,025**	**19,163**	**NA**	**NA**	**19,521**	**1,011**	**56**	**9,883**
1978	**TOTAL**	**19,974**	**19,122**	**NA**	**NA**	**19,627**	**966**	**53**	**9,911**
1979	**TOTAL**	**20,471**	**19,663**	**NA**	**NA**	**20,241**	**1,253**	**56**	**10,496**
1980	January	1,838	1,768	45	18	2,263	118	6	981
	February	1,725	1,659	41	17	2,175	108	5	898
	March	1,847	1,777	43	16	2,086	109	5	958
	April	1,686	1,622	41	12	1,540	77	3	895
	May	1,712	1,647	43	10	1,339	70	3	851
	June	1,602	1,541	40	9	1,235	61	3	791
	July	1,633	1,571	41	10	1,284	61	3	822
	August	1,592	1,531	40	10	1,231	60	3	825
	September	1,596	1,536	40	10	1,283	60	5	797
	October	1,663	1,599	38	12	1,524	75	5	891
	November	1,669	1,604	40	14	1,769	88	3	900
	December	1,816	1,747	43	17	2,148	98	5	969
	TOTAL	**20,379**	**19,602**	**495**	**155**	**19,877**	**985**	**49**	**10,578**
1981	January	1,772	1,704	45	17	2,226	91	5	968
	February	1,590	1,529	40	15	1,880	85	5	883
	March	1,753	1,686	43	15	1,883	80	5	910
	April	1,696	1,631	42	12	1,486	69	5	900
	May	1,720	1,654	42	11	1,421	62	4	909
	June	1,656	1,593	42	10	1,301	65	5	877
	July	1,686	1,622	44	11	1,351	66	5	889
	August	1,726	1,660	42	10	1,274	64	5	864
	September	1,596	1,535	40	9	1,259	67	6	869
	October	1,661	1,598	42	12	1,514	79	5	889
	November	1,601	1,540	40	12	1,598	82	5	904
	December	1,738	1,672	43	16	2,068	93	5	1,055
	TOTAL	**20,195**	**19,424**	**505**	**150**	**19,261**	**904**	**59**	**10,917**
1982	January	1,737	1,671	41	18	2,350	104	6	969
	February	1,595	1,533	37	15	1,978	94	5	901
	March	1,683	1,619	42	14	1,816	90	5	909
	April	1,592	1,531	38	11	1,475	77	4	853
	May	1,558	1,499	37	9	1,140	69	4	912
	June	R1,511	R1,453	R36	9	R1,123	67	4	814
	July	*1,550*	*1,490*	40	9	1,150	R67	5	NA
	August	*1,560*	*1,500*	38	9	1,200	63	4	NA

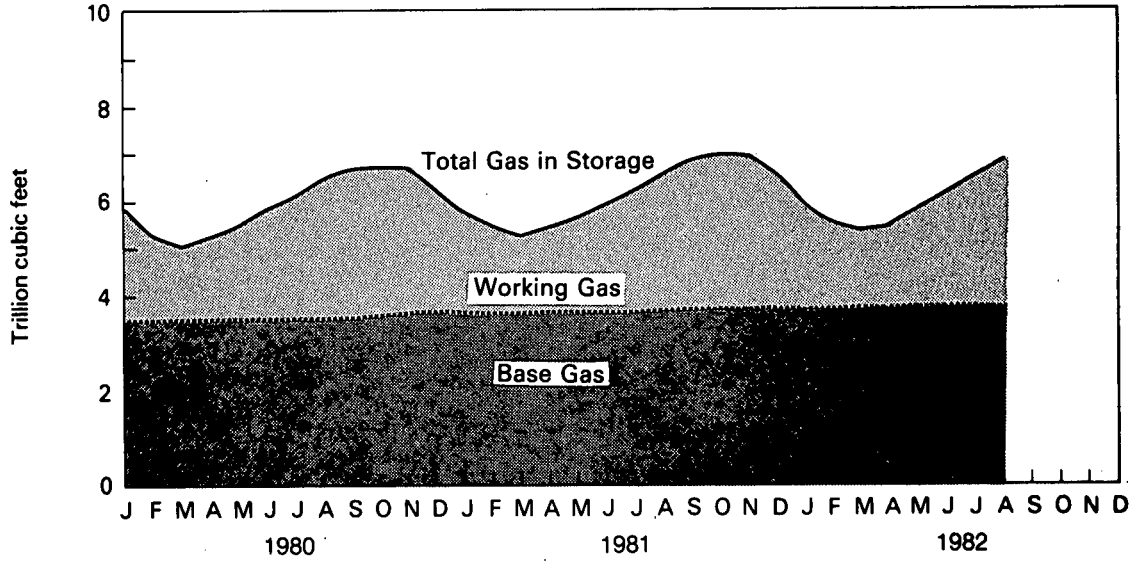
Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes nonhydrocarbon gases removed such as carbon dioxide, hydrogen sulfide, helium, and nitrogen. See Note 1 on the last page of this section.
[2]Total net dry marketed production is the volume of total marketed production, including nonhydrocarbon gases, remaining after the extraction of natural gas plant liquids, such as ethane, propane, butanes, etc. See Note 1 on the last page of this section.
[3]Includes supplemental gaseous fuels such as synthetic natural gas, propane-air, and refinery (still) gas normally mixed with natural gas prior to consumption. See Note 1 on the last page of this section.
R=Revised data. NA=Not available.
Note: Estimated data are in italics and are likely to be revised.
Sources: • See the last page of this section.

Natural Gas

Domestic Consumption, Marketed Production, and Imports



Gas in Storage



Natural Gas

Natural Gas in Underground Storage[1]

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections[2]
		Billion cubic feet					
1973	**TOTAL**	**‡4,898**	**‡2,864**	**‡2,034**	**NA**	**NA**	**NA**
1974	**TOTAL**	**‡4,962**	**‡2,912**	**‡2,050**	**NA**	**NA**	**NA**
1975	**TOTAL**	**‡5,358**	**‡3,150**	**‡2,208**	**NA**	**NA**	**NA**
1976	**TOTAL**	**‡5,231**	**‡3,310**	**‡1,922**	**1,952**	**2,074**	**(122)**
1977	**TOTAL**	**‡5,844**	**‡3,377**	**‡2,466**	**2,390**	**1,767**	**623**
1978	**TOTAL**	**‡5,999**	**‡3,459**	**‡2,540**	**2,330**	**2,176**	**154**
1979	**TOTAL**	**‡6,297**	**‡3,537**	**‡2,761**	**2,384**	**2,041**	**343**
1980	January	5,865	3,535	2,330	21	465	(444)
	February	5,397	3,536	1,861	24	493	(469)
	March	5,131	3,542	1,589	41	307	(266)
	April	5,227	3,547	1,680	174	78	96
	May	5,538	3,553	1,985	319	8	311
	June	5,841	3,560	2,281	316	13	303
	July	6,127	3,564	2,563	302	18	284
	August	6,444	3,594	2,850	328	30	298
	September	6,692	3,596	3,096	260	11	249
	October	6,782	3,598	3,184	141	53	88
	November	6,639	3,620	3,019	66	203	(137)
	December	6,272	3,629	2,643	34	402	(368)
1981	January	5,794	3,642	2,152	33	535	(502)
	February	5,472	3,648	1,824	59	388	(329)
	March	5,284	3,654	1,630	55	243	(188)
	April	5,434	3,670	1,764	207	58	149
	May	5,659	3,683	1,976	254	28	226
	June	5,932	3,680	2,252	314	27	287
	July	6,204	3,649	2,555	295	27	268
	August	6,591	3,709	2,882	399	19	380
	September	6,870	3,719	3,151	285	7	278
	October	6,967	3,724	3,243	149	53	96
	November	6,927	3,728	3,199	85	124	(39)
	December	6,561	3,748	2,813	31	398	(367)
1982	January	5,927	3,747	2,180	20	656	(636)
	February	5,525	3,748	1,777	44	451	(407)
	March	5,373	3,772	1,601	85	256	(171)
	April	5,427	3,757	1,670	178	105	73
	May	5,786	3,758	2,028	378	11	367
	June	6,120	3,754	2,366	349	11	338
	July	6,479	3,774	2,705	352	12	340
	August	6,781	3,780	3,001	328	33	295

Geographic coverage: the 50 United States and District of Columbia.
[1]See Note 2 on the last page of this section.
[2]Net storage injections are storage injections minus storage withdrawals. Parentheses indicate withdrawals greater than injections.
‡Total as of December 31. NA=Not available.
Sources: • See the last page of this section.

Notes and Sources for the Natural Gas Section

Notes

1. Domestic consumption of natural gas includes quantities of gas delivered to consumers plus gas used for lease, plant, and pipeline fuel after natural gas liquids have been extracted. Delivered quantities include sizable amounts of supplemental gaseous fuels (synthetic natural gas, etc.) that are not quantified for 1979 and previous years. Beginning with January 1980, the amounts of supplemental gaseous fuels included in domestic consumption are provided.

Marketed production for 1979 and previous years represents gross withdrawals (full well-stream volume excluding lease condensate separated at the lease) less gas used for repressuring and quantities vented and flared. This definition includes the nonhydrocarbon gases subsequently removed. Beginning with January 1980 data, the marketed production series was expanded into two series. They both represent gross withdrawals less gas used for repressuring and quantities vented or flared. However, one series includes the nonhydrocarbon gases subsequently removed, and the other series excludes the nonhydrocarbon gases removed. For the purpose of maintaining a continuous series, those data that include the nonhydrocarbon gases subsequently removed are displayed as "Total Marketed" in this publication and the quantities of nonhydrocarbons subsequently removed are shown separately. Also, for the purpose of maintaining a continuous series the "Total Dry" displayed in this publication represents total marketed production including nonhydrocarbon gases subsequently removed less extraction loss due to removal of natural gas plant liquids.

2. The Federal Energy Administration and Federal Power Commission began the coordinated collection and compilation of monthly underground storage information from all underground storage operators in the United States in October 1975. Initial storage information reported was for the month of September 1975. Comparable monthly information for total U.S. storage operations is not available for prior periods.

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all native gas in place at the time of conversion to storage, needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas includes the volumes that will not be recoverable upon termination of storage operations. Working gas is the volume of gas above the designated base gas level available for withdrawal.

Sources

Domestic Consumption: 1973 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* "Natural Gas" chapter; 1976 through 1979: Energy Information Administration (EIA), *Energy Data Report,* "Natural Gas Production and Consumption"; 1980: EIA, *Natural Gas Annual;* January 1981 forward: EIA estimates based on a supply/disposition balance calculation.
Domestic Production: State reports to the Interstate Oil Compact Commission, data from the U.S. Geological Survey through January 1982 and the U.S. Minerals Management Service from February 1982 forward, and EIA estimates for States that do not report monthly data on a regular or timely basis.
Domestic Producer Sales: EIA, FERC Form 11, "Natural Gas Pipeline Company Monthly Statement."
Imports: 1973 through 1980: EIA, FPC Form 14, "Imports and Exports of Natural Gas"; January 1981 forward: EIA estimates based on import data from FPC Form 11.
Exports: 1973 through 1980: EIA, FPC Form 14; January 1981 forward: EIA estimates based primarily on historical data reported on FPC Form 14.
Underground Storage: 1973 and 1974: American Gas Association, *Gas Facts;* 1975 forward: EIA, EIA Form 191 and FPC Form 8, "Underground Gas Storage Report."

Part 5 Oil and Gas Resource Development

Oil and Gas Resource Development

The August 1982 rotary rig count of 2,620 was 4.6 percent lower than the previous month and 36.6 percent lower than the August 1981 count (4,131). The 235 rigs operating offshore were 11.1 percent fewer than those working in August 1981.

Cumulative well completions reported through August 1982 totaled 56,964, a 24.2-percent increase from the 45,854 reported for the first 8 months of 1981. This increase in well completions does not match the declining trend for rotary rigs. The divergence is attributed principally to delays of several months or more in reporting well completions.

Cumulative 1982 oil well completions through August (26,744 reported) were up 20.1 percent from the comparable 1981 figure (22,275 reported). During the first 8 months of 1982, 12,517 gas well completions were reported, a 26.9-percent increase from the comparable 1981 period (9,866 reported). Total reported footage drilled through August of this year increased 27.9 percent (270.4 million feet as compared with 211.4 million feet) from the same period last year.

The count of 562 crews engaged in seismic exploration in August 1982 was 23.5 percent less than the count for August 1981. Onshore seismic activity in August 1982 was 500 crews, 27.4 percent lower than activity during August 1981. Offshore seismic activity in August 1982 was 62 crews, 34.8 percent higher than in August 1981.

Oil and Gas Resource Development

		Rotary Rigs In Operation[1]		Exploratory and Development Wells Completed [2]				Total Footage of Wells Completed [2]
		Monthly average		Oil	Gas	Dry	Total	Thousand feet
1973	**AVERAGE**	**1,194**	**TOTAL**	**9,902**	**6,385**	**10,305**	**26,592**	**136,391**
1974	**AVERAGE**	**1,472**	**TOTAL**	**12,784**	**7,240**	**11,674**	**31,698**	**150,551**
1975	**AVERAGE**	**1,660**	**TOTAL**	**16,408**	**7,580**	**13,247**	**37,235**	**174,434**
1976	**AVERAGE**	**1,658**	**TOTAL**	**17,059**	**9,085**	**13,621**	**39,765**	**181,780**
1977	**AVERAGE**	**2,001**	**TOTAL**	**18,912**	**11,378**	**14,692**	**44,982**	**210,848**
1978	**AVERAGE**	**2,259**	**TOTAL**	**17,775**	**13,064**	**16,218**	**47,057**	**227,110**
1979	**AVERAGE**	**2,177**	**TOTAL**	**19,383**	**14,681**	**15,752**	**49,816**	**238,659**
1980	January	2,571		1,436	782	1,240	3,458	16,475
	February	2,613		1,635	1,000	1,297	3,932	18,891
	March	2,658		2,390	1,834	1,542	5,766	27,691
	April	2,682		1,841	1,121	1,158	4,120	18,855
	May	2,797		2,059	1,070	1,191	4,320	19,899
	June	2,850		2,228	1,282	1,451	4,961	24,479
	July	2,953		2,079	1,042	1,337	4,458	21,734
	August	3,045		2,357	1,275	1,539	5,171	24,112
	September	3,099		2,641	1,720	1,767	6,128	28,171
	October	3,148		2,417	1,190	1,697	5,304	24,600
	November	3,220		2,258	1,503	1,617	5,378	25,417
	December	3,286		3,685	1,910	2,257	7,852	34,161
	AVERAGE	**2,909**	**TOTAL**	**27,026**	**15,730**	**18,089**	**60,845**	**284,461**
1981	January	3,386		1,794	964	1,339	4,097	19,907
	February	3,502		2,459	1,046	1,610	5,115	22,726
	March	3,595		3,099	1,423	1,883	6,405	30,166
	April	3,728		2,905	1,600	1,546	6,051	27,836
	May	3,816		2,604	1,159	1,675	5,438	24,842
	June	3,926		3,497	1,320	2,105	6,922	31,689
	July	3,998		2,790	1,116	1,698	5,604	25,542
	August	4,131		R3,140	R1,260	R1,874	R6,274	R28,933
	September	4,242		3,416	1,967	2,019	7,402	33,608
	October	4,352		3,775	1,875	2,091	7,741	35,500
	November	4,436		3,587	1,577	2,057	7,221	32,149
	December	4,520		4,581	2,572	3,055	10,208	48,275
	AVERAGE	**3,970**	**TOTAL**	**37,671**	**17,894**	**22,973**	**78,538**	**361,407**
1982	January	4,436		2,790	957	2,143	5,890	28,288
	February	4,160		3,049	1,433	2,245	6,727	32,085
	March	3,816		3,750	1,487	2,499	7,736	38,093
	April	3,460		3,683	1,546	2,289	7,518	36,489
	May	3,178		3,459	1,948	2,215	7,622	37,049
	June	2,908		3,899	1,892	2,524	8,315	39,008
	July	2,746		3,286	1,705	1,929	6,920	31,202
	August	2,620		2,848	1,575	1,903	6,326	28,556

Geographic coverage: the 50 United States and District of Columbia.
[1]These data are for operating rotary rigs reported by the Hughes Tool Company during the reporting period. Monthly figures are averages of a 4- or 5-week reporting period and are not calendar months.
[2]These data are for well completions reported to the American Petroleum Institute (API) during the reporting period. They exclude service wells and stratigraphic and core tests. Data reported for the first 2 months of each quarter cover 4 weeks of drilling activity, and data for the last month of the quarter cover 5 weeks of drilling activity.
R=Revised data.
Note: Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.
Sources: • Rotary Rigs: Hughes Tool Company, "Rotary Rigs Running—By State."
• Wells: API, "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

Oil and Gas Resource Development

		Crews Engaged in Seismic Exploration			Line-Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore[1]	Onshore[1]	Total[1]
		Monthly average			Annual total		
1973	**AVERAGE**	**23**	**227**	**250**	**258,944**	**127,160**	**386,104**
1974	**AVERAGE**	**31**	**274**	**305**	**341,784**	**158,629**	**500,413**
1975	**AVERAGE**	**30**	**254**	**284**	**309,283**	**150,694**	**459,977**
1976	**AVERAGE**	**25**	**237**	**262**	**226,303**	**142,926**	**369,229**
1977	**AVERAGE**	**27**	**281**	**308**	**124,676**	**120,072**	**244,748**
1978	**AVERAGE**	**25**	**327**	**352**	**174,607**	**135,899**	**310,506**
1979	**AVERAGE**	**30**	**370**	**400**	**193,212**	**163,929**	**357,141**
1980	January	29	439	468			
	February	29	440	469			
	March	29	448	477			
	April	31	465	496			
	May	34	468	502			
	June	39	496	535			
	July	42	514	556			
	August	44	521	565			
	September	44	523	567			
	October	41	530	571			
	November	41	531	572			
	December	40	540	580			
	AVERAGE	**37**	**493**	**530**	**202,694**	**184,088**	**386,782**
1981	January	38	553	591			
	February	41	561	602			
	March	40	570	610			
	April	40	605	645			
	May	42	619	661			
	June	44	652	696			
	July	43	668	711			
	August	46	689	735			
	September	47	697	744			
	October	52	689	741			
	November	52	681	733			
	December	47	656	703			
	AVERAGE	**44**	**637**	**681**	**338,201**	**256,201**	**594,402**
1982	January	53	642	695			
	February	53	625	678			
	March	52	597	649			
	April	55	571	626			
	May	61	551	612			
	June	69	546	615			
	July	66	527	593			
	August	62	500	562			

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Monthly data not available.
Sources: • Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bulletin, *Geophysics.*

Part 6

Coal

Coal production in August 1982 was 68.4 million short tons, 13.1 percent less than the 78.7 million short tons produced in August 1981.

Electric utility coal consumption in July 1982 totaled 55.3 million short tons, 1.5 percent less than consumption in July 1981.

Electric utility coal stocks of 174.5 million short tons at the end of July 1982 were 34.4 million short tons (24.5 percent) above the level 1 year earlier.

Imports of coal in July 1982 totaled 69 thousand short tons. Exports of coal in July 1982 totaled 9.2 million short tons, 1.6 million short tons (14.7 percent) less than the amount exported during July 1981. Coal exports in July 1982 were principally to Canada (25.4 percent), Japan (21.5 percent), and Europe (44.8 percent).

Coal

Bituminous Coal, Lignite, and Anthracite

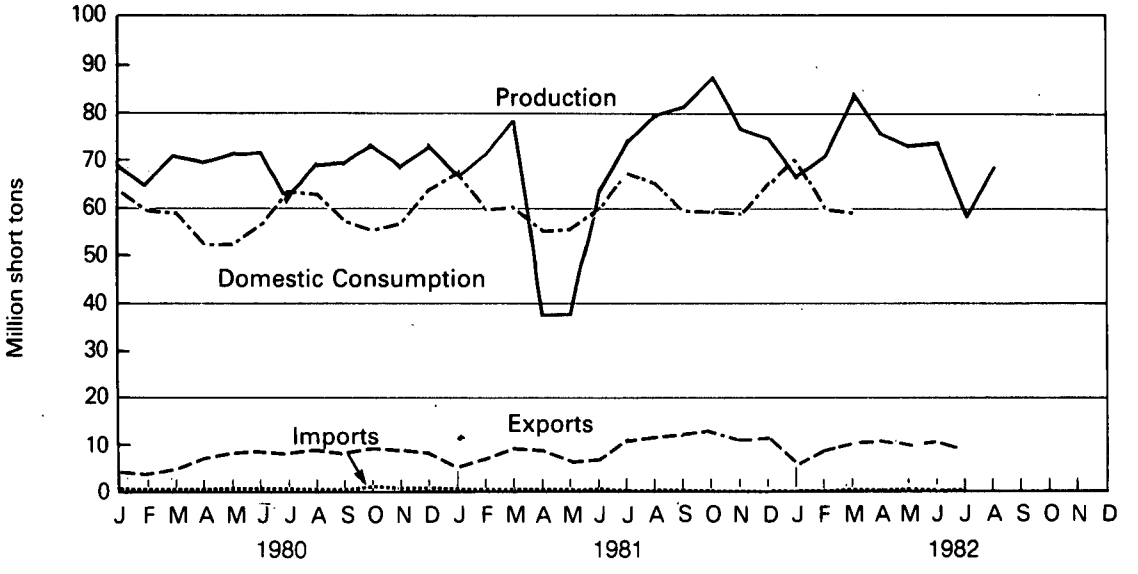
		Production	Domestic Consumption	Imports[1]	Exports[2]	Stocks[3]
				Thousand short tons		
1973	**TOTAL**	**598,568**	**562,584**	**127**	**53,587**	**104,335**
1974	**TOTAL**	**610,023**	**558,402**	**2,080**	**60,661**	**96,323**
1975	**TOTAL**	**654,641**	**562,641**	**940**	**66,309**	**128,050**
1976	**TOTAL**	**684,913**	**603,790**	**1,203**	**60,021**	**134,438**
1977	**TOTAL**	**697,205**	**625,291**	**1,647**	**54,312**	**157,098**
1978	**TOTAL**	**670,164**	**625,225**	**2,953**	**40,714**	**145,551**
1979	**TOTAL**	**781,134**	**680,524**	**2,059**	**66,042**	**181,646**
1980	January	69,594	63,517	121	4,460	179,450
	February	65,546	59,679	193	4,041	176,808
	March	70,953	58,852	93	5,633	176,649
	April	69,658	52,636	63	7,563	185,367
	May	71,043	52,834	207	8,597	193,920
	June	71,338	56,098	104	8,899	199,299
	July	61,285	63,122	32	8,247	187,913
	August	68,399	62,752	166	9,270	190,689
	September	68,822	57,306	2	8,364	194,447
	October	72,290	55,775	139	9,454	201,975
	November	68,655	56,799	3	8,987	204,436
	December	72,117	63,359	70	8,228	204,028
	TOTAL	**829,700**	**702,730**	**1,194**	**91,742**	
1981	January†	65,601	67,580	35	5,795	198,603
	February†	70,498	59,601	104	6,771	197,962
	March†	77,873	60,114	77	9,710	207,340
	April†	37,332	54,649	63	8,271	187,143
	May†	37,516	54,925	96	6,086	168,126
	June†	62,379	59,666	138	6,158	158,274
	July†	73,911	67,394	13	10,762	154,423
	August†	78,738	65,846	150	11,315	157,141
	September†	80,240	59,671	69	11,900	164,970
	October†	86,531	59,161	94	12,360	175,384
	November†	75,876	58,620	76	11,849	183,044
	December†	73,644	64,962	127	11,564	185,274
	TOTAL	**820,139**	**R732,190**	**1,043**	**112,541**	
1982	January†	66,073	69,153	71	6,177	173,833
	February†	70,002	59,683	30	8,964	173,193
	March†	82,667	58,192	12	10,423	179,171
	April†	75,016	NA	10	10,831	NA
	May†	72,433	NA	109	10,110	NA
	June†	73,033	NA	9	10,680	NA
	July†	57,781	NA	69	9,182	NA
	August†	68,394	NA	NA	NA	NA

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
See Note on the last page of this section for methodology used to calculate production, consumption, and stocks.
[1]Bituminous coal is the only type of coal imported during the years shown above.
[2]Excludes shipments of anthracite to U.S. Armed Forces overseas (340,000 short tons in 1980).
[3]Stocks held by electric utilities, coke plants, and general industry at the end of period. Excludes stocks at retail dealers that are consumed by the residential and commercial sector.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last page of this section.

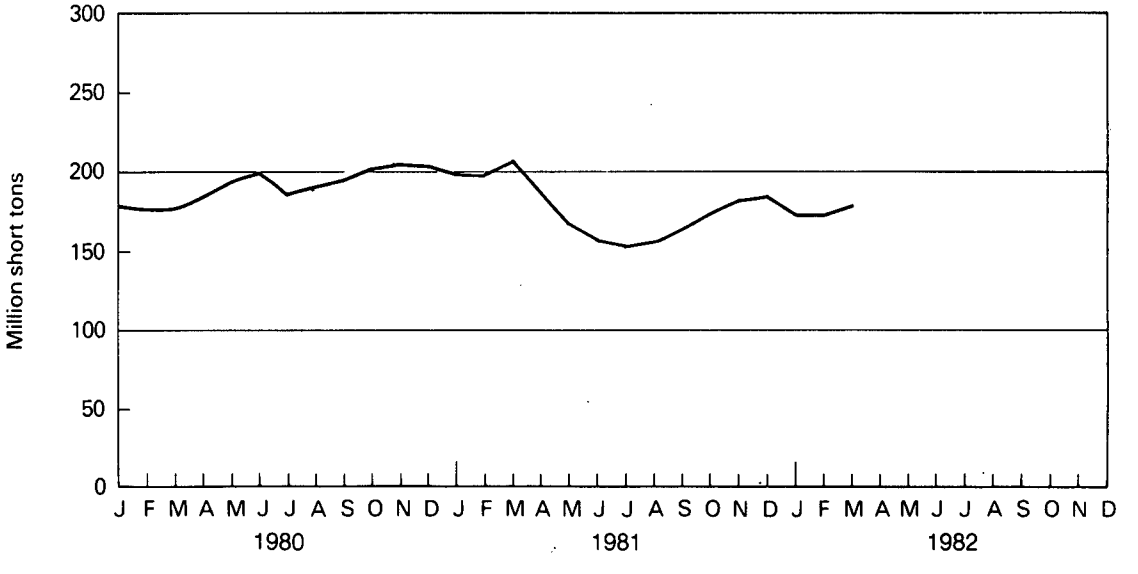
Coal

Bituminous Coal, Lignite, and Anthracite

Production, Consumption, Imports, and Exports



Stocks



Coal

Consumption—Bituminous Coal, Lignite, and Anthracite

			Industrial			
		Electric Utilities	Coke Plants[1]	Other Industrial[2] Including Transportation	Residential and Commercial	Total
			Thousand short tons			
1973	**TOTAL**	**389,212**	**94,101**	**68,154**	**11,117**	**562,584**
1974	**TOTAL**	**391,811**	**90,191**	**64,983**	**11,417**	**558,402**
1975	**TOTAL**	**405,962**	**83,598**	**63,670**	**9,410**	**562,641**
1976	**TOTAL**	**448,371**	**84,704**	**61,799**	**8,916**	**603,790**
1977	**TOTAL**	**477,126**	**77,739**	**61,472**	**8,954**	**625,291**
1978	**TOTAL**	**481,235**	**71,394**	**63,085**	**9,511**	**625,225**
1979	**TOTAL**	**527,051**	**77,368**	**67,717**	**8,388**	**680,524**
1980	January	50,371	6,339	5,944	864	63,517
	February	47,512	6,010	5,400	756	59,679
	March	46,685	6,429	5,199	539	58,852
	April	40,692	6,247	5,118	578	52,636
	May	41,464	6,127	4,894	349	52,834
	June	45,821	5,326	4,675	276	56,098
	July	53,655	4,903	4,222	342	63,122
	August	53,214	4,878	4,337	323	62,752
	September	47,913	4,794	4,170	429	57,306
	October	45,092	5,107	4,990	585	55,775
	November	45,698	5,152	5,331	619	56,799
	December	51,157	5,343	6,067	792	63,359
	TOTAL	**569,274**	**66,657**	**60,347**	**6,451**	**702,729**
1981	January	54,688	5,465	6,532	895	67,580
	February	47,914	5,177	5,932	578	59,601
	March	48,398	5,532	5,710	474	60,114
	April	43,677	4,862	5,548	562	54,649
	May	44,999	4,259	5,297	370	54,925
	June	50,080	4,460	4,826	300	59,666
	July	56,144	5,449	5,371	430	67,394
	August	54,483	5,434	5,520	409	65,846
	September	48,483	5,340	5,302	546	59,671
	October	47,800	5,158	5,577	626	59,161
	November	47,014	5,037	5,793	776	58,620
	December	53,116	4,842	6,021	983	64,962
	TOTAL	**596,797**	**61,014**	**67,429**	**6,949**	**R732,190**
1982	January†	57,284	4,444	6,474	951	69,153
	February†	48,878	4,340	5,858	607	59,683
	March†	47,884	4,172	5,641	495	58,192
	April†	43,490	NA	NA	NA	NA
	May†	45,622	NA	NA	NA	NA
	June†	47,424	NA	NA	NA	NA
	July†	55,313	NA	NA	NA	NA

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Bituminous coal and anthracite only. Lignite is not used at coke plants.
[2]See Note on the last page of this section.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last page of this section.

Coal

Stocks[1]—Bituminous Coal, Lignite, and Anthracite

		Electric Utilities	Industrial		Total[3]
			Coke Plants[2]	Other Industrial	
		Thousand short tons			
1973		**86,967**	**6,998**	**10,370**	**104,335**
1974		**83,509**	**6,209**	**6,605**	**96,323**
1975		**110,724**	**8,797**	**8,529**	**128,050**
1976		**117,436**	**9,902**	**7,100**	**134,438**
1977		**133,219**	**12,816**	**11,063**	**157,098**
1978		**128,225**	**8,278**	**9,048**	**145,551**
1979		**159,714**	**10,155**	**11,777**	**181,646**
1980	January	158,717	9,634	11,099	179,450
	February	157,124	9,263	10,421	176,808
	March	157,625	9,317	9,707	176,649
	April	165,817	9,579	9,971	185,367
	May	174,029	9,692	10,199	193,920
	June	178,959	9,913	10,427	199,299
	July	168,806	8,427	10,680	187,913
	August	171,891	7,866	10,932	190,689
	September	175,067	8,213	11,167	194,447
	October	182,045	8,488	11,442	201,975
	November	184,133	8,606	11,697	204,436
	December	183,010	9,067	11,951	204,028
1981	January	176,975	9,634	11,994	198,603
	February	175,715	10,211	12,036	197,962
	March	183,983	10,788	12,569	207,340
	April	169,221	6,952	10,970	187,143
	May	153,415	4,850	9,861	168,126
	June	144,520	4,500	9,254	158,274
	July	140,124	5,074	9,225	154,423
	August	142,318	5,648	9,175	157,141
	September	149,526	6,163	9,281	164,970
	October	159,676	6,308	9,400	175,384
	November	167,002	6,392	9,650	183,044
	December	168,893	6,475	9,906	185,274
1982	January†	158,371	6,207	9,255	173,833
	February†	158,136	5,909	9,148	173,193
	March†	164,518	5,612	9,041	179,171
	April†	171,390	NA	NA	NA
	May†	177,461	NA	NA	NA
	June†	182,513	NA	NA	NA
	July†	174,502	NA	NA	NA

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Stocks held by electric utilities, coke plants, and general industry at end of period.
[2]Bituminous coal and anthracite only. Lignite is not used at coke plants.
[3]Total excludes stocks at retail dealers that are consumed by the residential and commercial sector.
†Preliminary data. NA=Not available.
Sources: • See the last page of this section.

Notes and Sources for the Coal Section

Note

Preliminary estimates of monthly coal production are based on the number of railcars loaded at mines as reported weekly to the Association of American Railroads and the average coal tonnage carried per railcar as reported quarterly to the Interstate Commerce Commission by Class 1 railroads. The amount of coal production shipped by rail (estimated for each railroad by multiplying the number of railcars of coal loaded by the average coal tonnage carried per railcar) is multiplied by the ratio of total production as reported on Form EIA-6, "Coal Distribution Report," to production shipped by rail for the corresponding quarter of the previous year to arrive at the monthly coal production estimate. Final monthly and annual coal production data are derived from the Form EIA-6 and State coal production reports.

Domestic coal consumption data in this series approximate actual consumption. Coal consumption at electric utility plants is derived directly from Form EIA-759, "Monthly Power Plant Report." Prior to 1980, monthly coal consumption at coke plants was derived directly from Form EIA-5, "Coke and Coal Chemicals Monthly." For 1980 and subsequent years, monthly coal consumption at coke plants is derived from the quarterly coal consumption reported on Form EIA-5, "Coke Plant Report—Quarterly." These quarterly coal consumption figures are converted to monthly coal consumption figures using the ratios of monthly to quarterly consumption in 1979, the last year that coke plant data was collected monthly on Form EIA-5. These ratios by month (January-December) are: 0.3377, 0.3200, 0.3423; 0.3529, 0.3462, 0.3009; 0.3364, 0.3347, 0.3289; and 0.3273, 0.3301, 0.3426.

Prior to 1978, coal consumption for the "Other Industrial" sector (i.e. industrial users minus coke plants) was derived by using monthly data reported on Form EIA-3, "Monthly Fuel Consumption Report—Manufacturing Plants" to modify baseline coal consumption figures from the most recent Census of Manufacturers or Annual Survey of Manufacturers, Bureau of the Census, U.S. Department of Commerce. For 1978 and subsequent years, the data sources used to compute monthly coal consumption for the "Other Industrial" sector are:

(a) Form EIA-3, "Quarterly Coal Consumption Report—Manufacturing Plants."
(b) Form EIA-6, "Coal Distribution Report." (Quarterly)

The basic assumption used in deriving a quarterly estimate for coal consumption for the "Other Industrial" sector is that consumption is equal to beginning stocks plus receipts minus ending stocks. In terms of an equation, consumption can be expressed as

$$C = S_b + R - S_e \quad (1)$$

where S_b = beginning stocks
R = receipts
S_e = ending stocks.

The change in stocks ($S_b - S_e$) can be denoted by ΔS. From equation (1), consumption is

$$C = \Delta S + R. \quad (2)$$

Form EIA-6 provides complete coverage of the "Other Industrial" sector. The quarterly receipts (R) are equated to the coal distribution to the "Other Industrial" sector as reported on Form EIA-6. Form EIA-3 provides almost total coverage of the stock change for the "Other Industrial" sector and hence ΔS is equated to this figure.

Given the estimated quarterly consumption for the "Other Industrial" sector (C), the monthly consumption for the sector (C_m) can be estimated for each month in the quarter as

$$C_m = (C_{m3}/C_3) \times C \quad (3)$$

where C_{m3}/C_3 is the ratio of monthly to quarterly coal consumption as reported on Form EIA-3. For the 1978 coal consumption figures, the ratios used are based on 1978 EIA-3 data. For 1979 and subsequent years, the ratios used are based on the 1979 EIA-3 data. These 1979 ratios by month (January-December) are: 0.3593, 0.3264, 0.3143; 0.3485, 0.3332, 0.3183; 0.3317, 0.3407, 0.3276; and 0.3045, 0.3253, 0.3702.

For 1980 and subsequent years, quarterly coal consumption in the residential and commercial sector is equated to the quarterly coal distribution to that sector as reported on Form EIA-6, "Coal Distribution Report." These quarterly coal consumption figures are converted to monthly coal consumption figures using the ratios of monthly to quarterly coal deliveries to this sector in 1979 as reported on Form EIA-2, "Monthly Coal Report—Retail Dealers and Upper Lake Docks." These 1979 ratios by month (January-December) are: 0.4002, 0.3502, 0.2496; 0.4805, 0.2901, 0.2294; 0.3126, 0.2952, 0.3922; and 0.2931, 0.3101, 0.3968.

Prior to 1980, monthly coal consumption for the residential and commercial sector was derived by using monthly data reported on Form EIA-2 to modify baseline coal consumption figures developed by the Bureau of Mines, U.S. Department of the Interior.

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 Report" from selected State agencies and EIA Form 6, "Coal Distribution Report."
Consumption and Stocks: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;*
• Electric Utilities—October 1977 forward: 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."
Imports/Exports: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Bureau of the Census, Monthly Reports IM-145 (Imports) and EM-522 (Exports).

Part 7 Electric Utilities

Electric Utilities

July 1982 production of electricity by utilities was 210.5 billion kilowatt-hours, 4.5 percent lower than the July 1981 production level. Coal-fired production totaled 110.5 billion kilowatt-hours, 2.1 percent lower than the July 1981 level. Natural gas-fired production totaled 33.3 billion kilowatt-hours, 13.9 percent below the July 1981 level. Hydroelectric production was 27.4 billion kilowatt-hours in July 1982, 9.1 percent above the July 1981 level. Nuclear production was 25.5 billion kilowatt-hours, 10.3 percent above the level 1 year earlier. Petroleum-fired production totaled 13.4 billion kilowatt-hours, 33.3 percent below the July 1981 level.

Sales of electricity to all ultimate consumers in the United States in July 1982 were 183.6 billion kilowatt-hours, an increase of 8.8 percent from sales of the month before but 7.2 percent below July 1981 sales. Sales to residential consumers during July 1982 were 65.7 billion kilowatt-hours, 6.1 percent below sales for the corresponding month in 1981. Commercial sales were 48.2 billion kilowatt-hours, 1.6 percent less than the amount sold to commercial consumers in July 1981. Sales to industrial consumers totaled 62.6 billion kilowatt-hours in July 1982, 12.7 percent less than the July 1981 figure. In July 1982, other sales totaled 7.0 billion kilowatt-hours, 1.2 percent below the July 1981 level.

Electric utility petroleum consumption (excluding petroleum coke) during July 1982 was 22.9 million barrels, a 33.1-percent drop from the July 1981 level. Coal consumption for July 1982 was 55.3 million short tons, 1.5 percent below the July 1981 rate. During July 1982, consumption of natural gas by electric utilities was 352.8 billion cubic feet, 14.1 percent below the July 1981 consumption level.

On July 31, 1982, utility stocks of anthracite, bituminous coal, and lignite totaled 174.5 million short tons. Stockpiles were 24.5 percent above the level of July 1981. Petroleum stocks (excluding petroleum coke) on July 31, 1982, totaled 120.0 million barrels, 5.8 percent below the level for the same month of 1981.

Electric Utilities

Net Electricity Production by Primary Energy Source

		Coal[1]	Petroleum[2]	Natural Gas	Nuclear	Hydro	Other[3]	Total
				Million kilowatt-hours				
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	January	103,258	24,986	26,349	19,746	25,278	388	200,005
	February	98,151	24,781	24,755	19,277	21,378	373	188,715
	March	95,386	20,415	26,891	20,039	24,332	401	187,464
	April	83,562	16,025	24,181	18,794	25,748	410	168,720
	May	84,884	16,545	26,587	18,385	28,865	468	175,734
	June	93,692	18,020	31,295	18,322	27,656	445	189,430
	July	108,457	23,289	39,063	21,024	24,469	475	216,776
	August	107,580	24,885	37,647	24,333	20,431	517	215,393
	September	97,557	17,815	33,580	23,572	18,491	469	191,485
	October	91,196	15,858	28,592	24,510	17,866	533	178,555
	November	93,501	19,989	24,338	20,984	19,217	520	178,550
	December	104,339	23,386	22,961	22,130	22,290	506	195,613
	TOTAL	**1,161,562**	**245,994**	**346,240**	**251,116**	**276,021**	**5,506**	**2,286,439**
1981	January	111,765	25,963	22,081	23,779	22,338	540	206,467
	February	97,653	17,444	21,339	21,595	21,099	483	179,613
	March	99,482	16,957	25,997	22,004	20,572	541	185,553
	April	88,109	15,106	27,460	20,646	20,723	500	172,545
	May	88,941	14,508	30,070	19,723	24,081	483	177,806
	June	99,837	18,972	35,885	21,166	26,370	473	202,702
	July	112,854	20,072	38,712	23,080	25,133	523	220,373
	August	108,403	16,001	36,918	26,946	21,615	520	210,403
	September	97,664	15,566	30,850	24,398	17,822	538	186,838
	October	97,046	16,213	28,917	20,556	18,088	531	181,352
	November	94,841	13,847	24,670	22,783	18,963	465	175,570
	December	106,608	15,772	22,877	25,997	23,879	457	195,590
	TOTAL	**1,203,203**	**206,421**	**345,777**	**272,674**	**260,684**	**6,054**	**2,294,812**
1982	January	113,818	20,677	22,611	25,678	26,904	411	210,098
	February	96,906	15,220	20,920	20,188	26,698	380	180,310
	March	97,625	13,474	23,598	22,756	29,879	330	187,662
	April	88,124	11,192	23,232	21,785	27,928	328	172,588
	May	93,011	9,851	24,318	21,639	28,063	381	177,261
	June	95,308	10,418	27,968	24,026	28,027	458	186,204
	July	110,458	13,382	33,339	25,467	27,412	485	210,543

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes bituminous coal, lignite, and anthracite.
[2]Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.
[3]Includes geothermal and wood and waste.
Source: • Energy Information Administration Form 759, "Monthly Power Plant Report."

Electric Utilities

Electricity Sales[1]

		Residential	Commercial	Industrial	Other[2]	Total
				Million kilowatt-hours		
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	January	65,841	39,578	67,532	6,634	179,585
	February	64,514	39,528	68,508	6,171	178,720
	March	60,497	38,762	69,086	6,028	174,373
	April	51,749	36,453	67,908	5,591	161,702
	May	45,699	36,110	67,235	5,807	154,851
	June	52,267	40,129	66,739	5,737	164,872
	July	68,611	45,525	65,531	6,215	185,882
	August	75,020	47,763	67,415	6,266	196,464
	September	67,969	46,028	69,570	6,572	190,139
	October	54,014	40,479	69,413	6,174	170,080
	November	50,539	37,954	67,613	6,068	162,174
	December	60,775	39,846	68,517	6,469	175,607
	TOTAL	**717,495**	**488,156**	**815,067**	**73,732**	**2,094,449**
1981	January	74,087	43,229	67,076	7,557	191,949
	February	66,359	41,345	67,411	7,092	182,207
	March	57,660	39,541	68,590	7,035	172,826
	April	50,914	37,910	68,138	6,562	163,525
	May	48,348	39,331	68,714	6,780	163,173
	June	56,165	44,244	71,641	6,777	178,827
	July	R69,990	R48,989	R71,712	R7,124	R197,814
	August	69,224	47,842	72,021	6,553	195,640
	September	60,173	45,877	70,986	6,585	183,620
	October	51,985	41,175	69,132	6,388	168,679
	November	50,754	38,746	66,139	6,490	162,129
	December	60,826	40,782	64,130	6,637	172,375
	TOTAL	**R716,485**	**R509,011**	**R825,690**	**R81,580**	**R2,132,764**
1982	January	76,264	44,947	62,939	7,929	192,079
	February	69,128	43,459	62,778	7,441	182,805
	March	60,498	41,710	64,496	7,255	173,959
	April	54,918	40,036	62,723	6,836	164,512
	May	49,092	40,021	62,480	6,976	158,569
	June	R54,083	R44,206	R63,684	R6,766	R168,739
	July†	65,704	48,211	62,617	7,035	183,567

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Electricity sales to all ultimate consumers.
[2]Includes street lighting and transportation uses.
†Preliminary data.
R=Revised data. For further explanation of factors used in revising data, see the Technical Notes section of the Energy Information Administration, *Electric Power Monthly.*
Source: •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."

Electric Utilities

Primary Energy Consumed to Produce Electricity

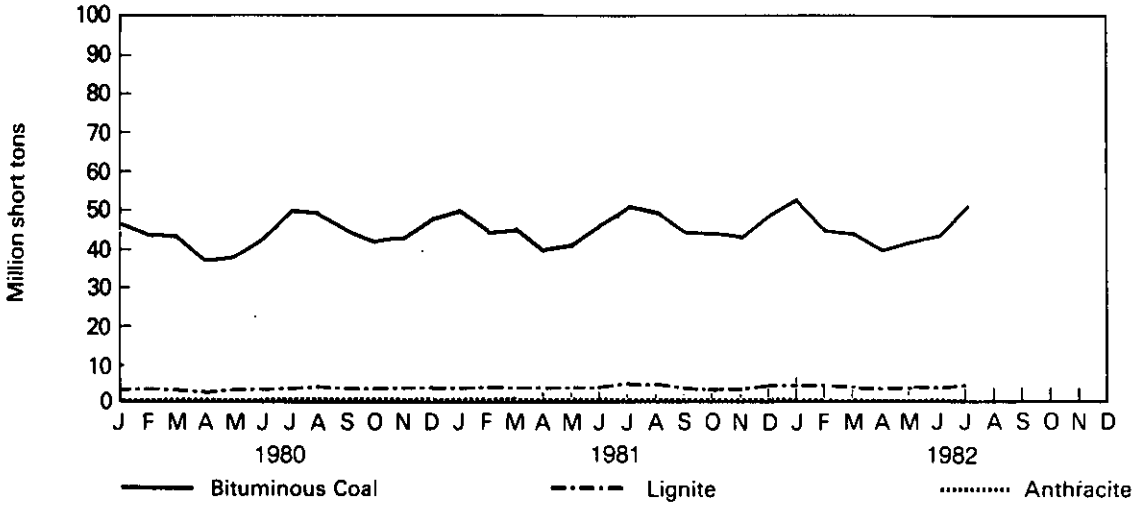
		Coal				Petroleum				Natural Gas
		Anthracite	Bituminous Coal	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Total Liquids	Petroleum Coke	
		Thousand short tons				Thousand barrels			Thousand short tons	Million cubic feet
1973	**TOTAL**	**1,443**	**376,975**	**10,794**	**389,212**	**513,190**	**47,058**	**560,248**	**507**	**3,660,172**
1974	**TOTAL**	**1,498**	**378,643**	**11,670**	**391,811**	**483,146**	**53,128**	**536,274**	**625**	**3,443,428**
1975	**TOTAL**	**1,480**	**388,523**	**15,960**	**405,962**	**467,221**	**38,907**	**506,128**	**70**	**3,157,669**
1976	**TOTAL**	**1,350**	**425,205**	**21,817**	**448,371**	**514,077**	**41,843**	**555,920**	**68**	**3,080,868**
1977	**TOTAL**	**1,425**	**451,051**	**24,650**	**477,126**	**574,869**	**48,837**	**623,705**	**98**	**3,191,200**
1978	**TOTAL**	**1,064**	**448,763**	**31,407**	**481,235**	**588,319**	**47,520**	**635,839**	**398**	**3,188,363**
1979	**TOTAL**	**1,046**	**488,129**	**37,876**	**527,051**	**492,606**	**30,691**	**523,297**	**268**	**3,490,523**
1980	January	74	46,518	3,779	50,371	40,695	2,197	42,892	54	276,743
	February	72	43,969	3,471	47,512	40,231	1,919	42,150	21	263,771
	March	83	43,244	3,357	46,685	33,406	1,379	34,785	13	283,945
	April	71	37,971	2,651	40,692	26,867	673	27,540	7	256,606
	May	86	38,116	3,262	41,464	26,991	840	27,831	11	281,886
	June	89	42,073	3,658	45,821	29,551	1,138	30,689	11	336,894
	July	93	49,815	3,746	53,655	37,297	2,791	40,088	11	420,339
	August	80	49,077	4,057	53,214	40,019	2,833	42,852	15	405,343
	September	84	44,487	3,342	47,913	29,367	1,286	30,653	11	357,286
	October	73	41,819	3,200	45,092	26,269	689	26,958	8	301,266
	November	56	42,379	3,263	45,698	32,782	1,320	34,102	7	255,559
	December	89	47,212	3,856	51,157	38,387	1,285	39,672	9	241,957
	TOTAL	**951**	**526,680**	**41,642**	**569,274**	**401,863**	**18,351**	**420,214**	**179**	**3,681,595**
1981	January	81	50,635	3,972	54,688	41,904	2,027	43,931	10	231,606
	February	58	44,583	3,272	47,914	28,948	1,049	29,997	9	224,003
	March	75	45,168	3,155	48,398	28,492	775	29,267	9	273,431
	April	73	40,535	3,069	43,677	25,028	557	25,585	7	289,053
	May	91	41,405	3,503	44,999	23,958	967	24,925	14	316,310
	June	105	46,503	3,471	50,080	30,673	1,731	32,404	13	380,775
	July	102	51,705	4,337	56,144	32,577	1,666	34,243	11	410,666
	August	133	50,010	4,339	54,483	26,598	584	27,182	13	389,564
	September	98	44,557	3,828	48,483	25,762	520	26,282	13	324,828
	October	115	44,161	3,524	47,800	26,646	556	27,201	15	301,670
	November	141	43,032	3,841	47,014	22,749	432	23,181	12	258,811
	December	148	48,487	4,481	53,116	26,345	567	26,912	12	239,436
	TOTAL	**1,221**	**550,784**	**44,792**	**596,797**	**339,680**	**11,431**	**351,111**	**139**	**3,640,154**
1982	January	89	52,472	4,723	57,284	33,774	1,567	35,341	10	237,533
	February	83	44,478	4,317	48,878	25,249	535	25,784	9	220,031
	March	73	43,751	4,060	47,884	22,371	558	22,929	4	246,550
	April	88	39,888	3,515	43,490	18,553	493	19,046	11	246,339
	May	98	41,845	3,678	45,622	16,592	316	16,909	12	258,078
	June	94	43,340	3,990	47,424	17,241	351	17,592	13	295,546
	July	108	50,835	4,371	55,313	22,192	732	22,924	11	352,831

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
Source: • Energy Information Administration Form 759, "Monthly Power Plant Report."

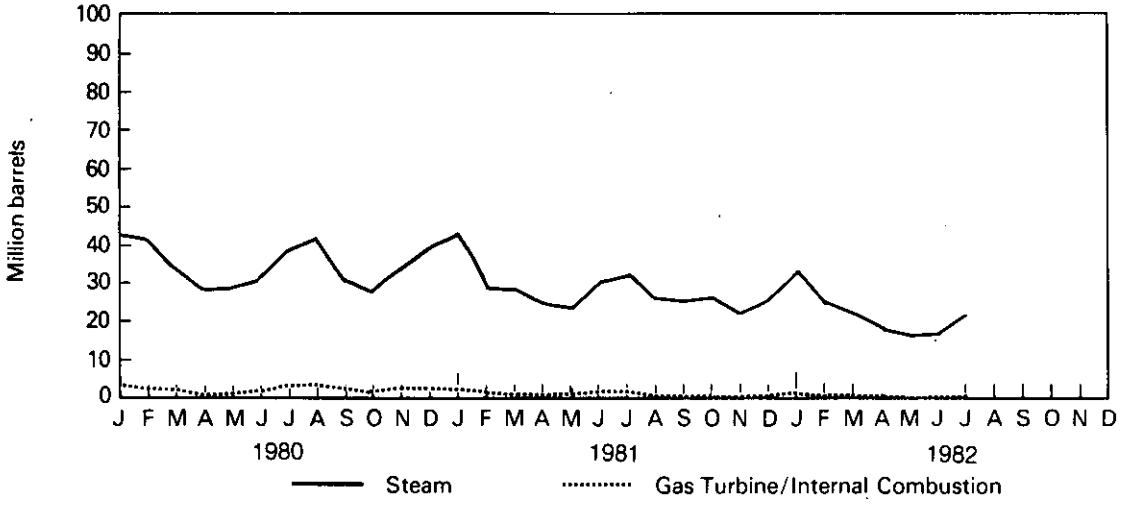
Electric Utilities

Primary Energy Consumed to Produce Electricity

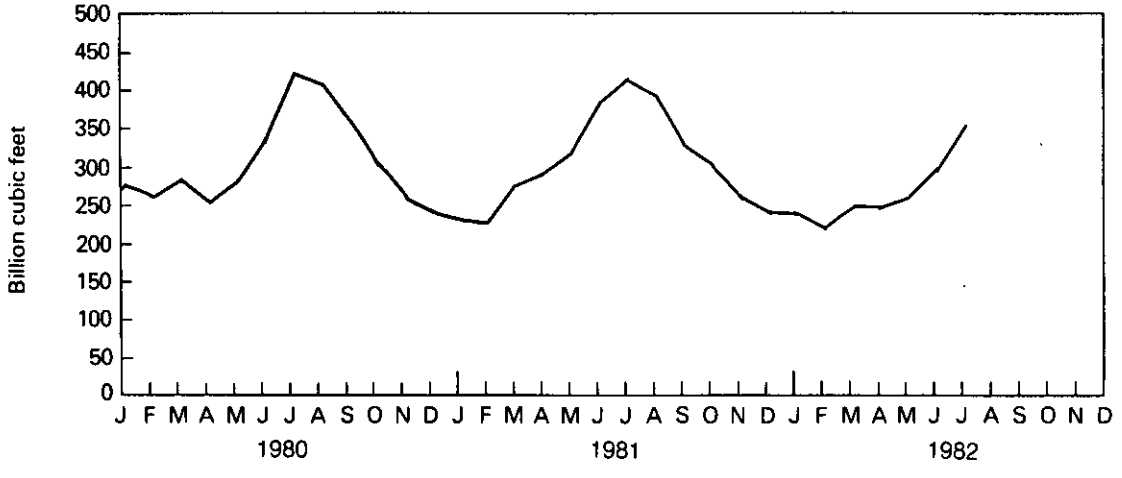
Coal Consumption



Petroleum Consumption



Natural Gas Consumption



Electric Utilities

End-of-Month Coal and Petroleum Stocks

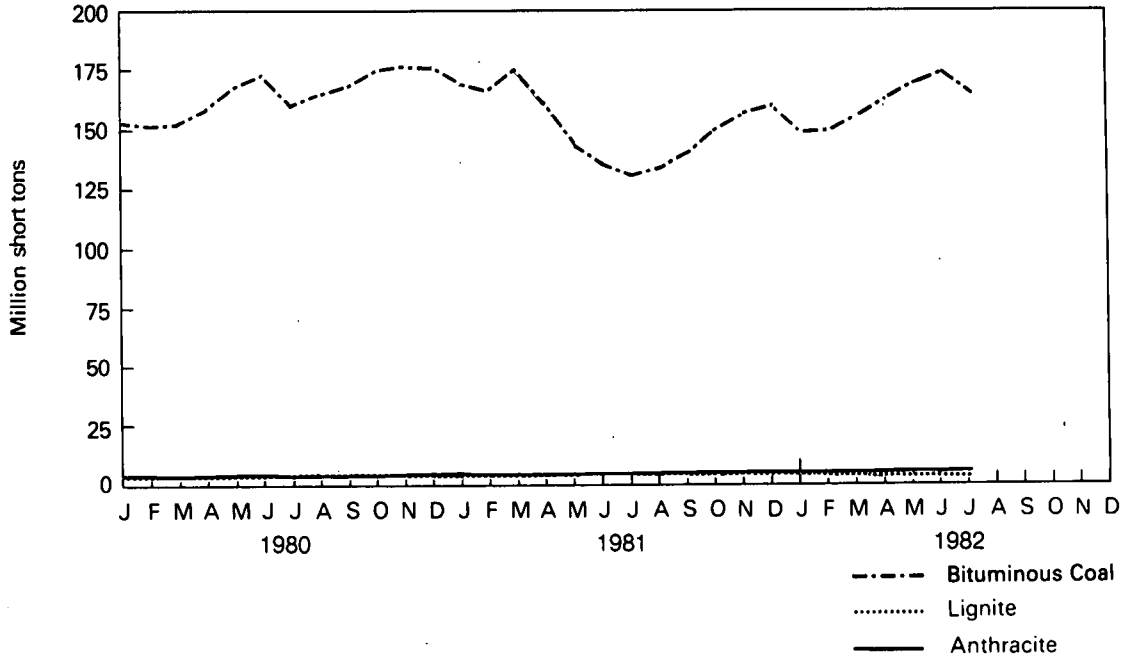
		Coal				Petroleum			
		Anthracite	Bituminous Coal	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Total Liquids	Petroleum Coke
		Thousand short tons				Thousand barrels			Thousand short tons
1973		**‡1,066**	**‡84,941**	**‡961**	**‡86,967**	**‡79,121**	**‡10,095**	**‡89,216**	**‡312**
1974		**‡930**	**‡81,712**	**‡867**	**‡83,509**	**‡97,718**	**‡15,199**	**‡112,917**	**‡35**
1975		**‡982**	**‡107,927**	**‡1,815**	**‡110,724**	**‡108,825**	**‡16,432**	**‡125,257**	**‡31**
1976		**‡1,000**	**‡114,130**	**‡2,306**	**‡117,436**	**‡106,993**	**‡14,703**	**‡121,696**	**‡32**
1977		**‡2,321**	**‡128,210**	**‡2,688**	**‡133,219**	**‡124,750**	**‡19,281**	**‡144,031**	**‡44**
1978		**‡2,178**	**‡123,020**	**‡3,027**	**‡128,225**	**‡102,402**	**‡16,386**	**‡118,788**	**‡198**
1979		**‡3,274**	**‡152,981**	**‡3,459**	**‡159,714**	**‡111,121**	**‡20,301**	**‡131,422**	**‡183**
1980	January	3,371	151,891	3,455	158,717	114,313	19,597	133,909	175
	February	3,451	150,151	3,522	157,124	111,353	19,055	130,409	168
	March	3,488	151,022	3,116	157,625	116,246	18,934	135,180	154
	April	3,533	158,441	3,843	165,817	118,824	19,201	138,025	103
	May	3,725	166,325	3,980	174,029	123,043	19,485	142,529	69
	June	3,838	171,042	4,079	178,959	124,177	19,273	143,450	65
	July	3,955	161,159	3,691	168,806	121,596	18,680	140,276	65
	August	4,098	163,756	4,036	171,891	118,514	18,150	136,664	63
	September	4,291	166,515	4,262	175,067	122,240	18,064	140,304	61
	October	4,481	173,411	4,153	182,045	124,046	18,398	142,445	60
	November	4,661	175,489	3,983	184,133	119,863	18,051	137,915	53
	December	4,741	174,154	4,115	183,010	117,227	18,147	135,374	52
1981	January	4,824	167,884	4,267	176,975	110,533	18,199	128,732	51
	February	4,859	166,552	4,304	175,715	112,879	17,315	130,195	52
	March	4,951	174,554	4,478	183,983	111,490	17,421	128,911	52
	April	5,035	159,645	4,541	169,221	109,455	17,197	126,652	52
	May	5,008	143,500	4,907	153,415	112,172	17,073	129,245	52
	June	5,081	134,321	5,119	144,520	109,988	17,957	127,945	49
	July	5,269	129,684	5,171	140,124	110,476	16,856	127,332	48
	August	5,337	132,072	4,909	142,318	114,016	16,801	130,817	47
	September	5,428	138,808	5,290	149,526	112,992	16,515	129,506	46
	October	5,512	148,952	5,213	159,676	110,900	16,164	127,063	44
	November	5,548	156,360	5,094	167,002	110,939	16,077	127,016	43
	December	5,537	158,258	5,098	168,893	112,380	15,756	128,136	42
1982	January	5,517	148,227	4,628	158,371	104,921	15,014	119,935	39
	February	5,401	148,118	4,617	158,136	103,055	14,775	117,830	40
	March	5,488	154,724	4,305	164,518	107,718	14,301	122,018	43
	April	5,542	161,720	4,128	171,390	105,604	14,274	119,877	42
	May	5,569	167,805	4,088	177,461	105,278	14,407	119,685	41
	June	5,603	172,819	4,092	182,513	107,947	13,913	121,861	43
	July	5,658	164,687	4,157	174,502	105,374	14,583	119,956	43

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
‡Total as of December 31.
Source: • Energy Information Administration Form 759, "Monthly Power Plant Report."

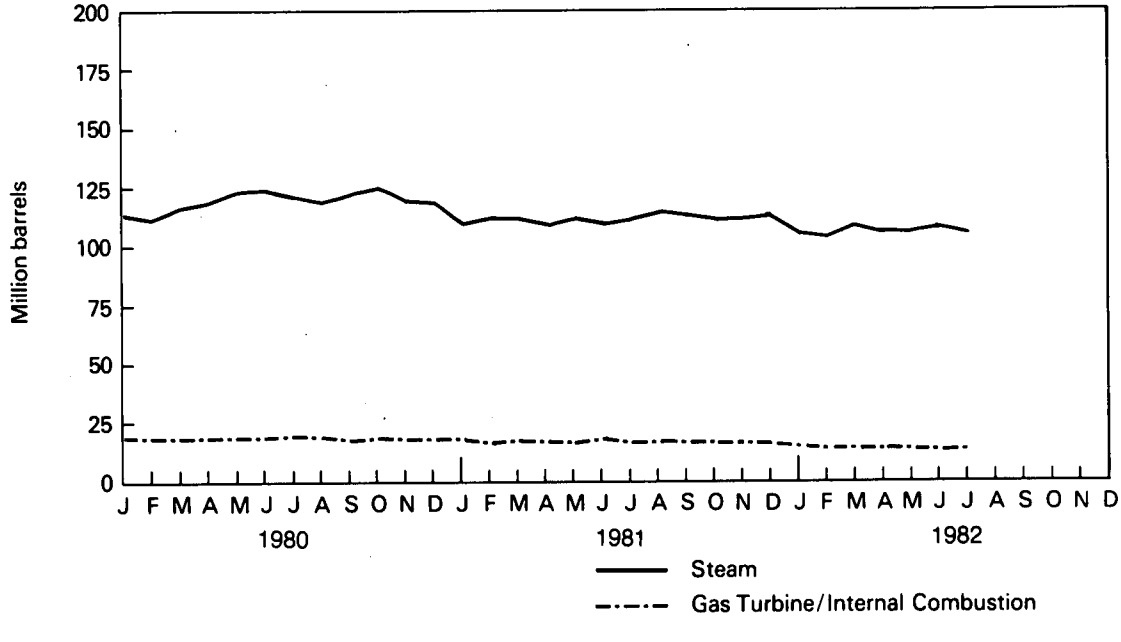
Electric Utilities

End-of-Month Coal and Petroleum Stocks

Coal Stocks (Bituminous Coal, Lignite, and Anthracite)



Petroleum Stocks



Nuclear

During July 1982, nuclear powerplants generated a total of 25.5 billion net kilowatt-hours of electricity, 6.0 percent above June 1982 generation and 10.3 percent above July 1981 output. Nuclear power accounted for 12.1 percent of the electricity generated by domestic utilities in July 1982.

On July 17, the Nuclear Regulatory Commission issued a low-power license for Pennsylvania Power & Light Co's Susquehanna-1 unit. This boiling water reactor has a net design electrical rating of 1,101 megawatts (MWe). Thus, as of July 31, 1982, there were 78 licensed U.S. power reactors with a combined net capacity (maximum dependable capacity or design electrical rating) of 59,690 MWe. Of these 78 units in July, 4 were in startup or low-power testing (Grand Gulf-1, LaSalle-1, San Onofre-2 and Susquehanna-1), 1 unit was in power ascension (Sequoyah-2), and 16 units generated no electricity or operated substantially below capacity (D. Arnold, Brunswick-2, Cook-1, Davis Besse, Hanford, Indian Point-3, La Crosse, Nine Mile Point-1, North Anna-1 and -2, Oconee-3, Rancho Seco, Robinson-2, San Onofre-1, Three Mile Island-1 and Trojan). Duquesne Light's Beaver Valley unit resumed operations in July, after being shutdown for almost 7 months for major design modifications and for refueling.

July 1982 marked the fifth consecutive month during which there were no reactors cancelled. In February 1982, however, Iowa Power and Light Co. cancelled its 1,270 MWe Vandallia unit. This cancellation is reflected in the nuclear reactor status table on page 76 and reduces the total number of units in all stages of planning, construction, or operation as of July 31 to 155, with an aggregate capacity of 147.0 million net kilowatts.

A video-camera inspection of the Three Mile Island-2 reactor core on July 21 indicated that, while significant damage to fuel assemblies had occurred, there were no indications of fuel melting. Further inspections of the reactor core should clarify the effects of the March 1979 accident and should also assist General Public Utilities in planning the eventual removal of the core.

Nuclear

Nuclear Powerplant Operations

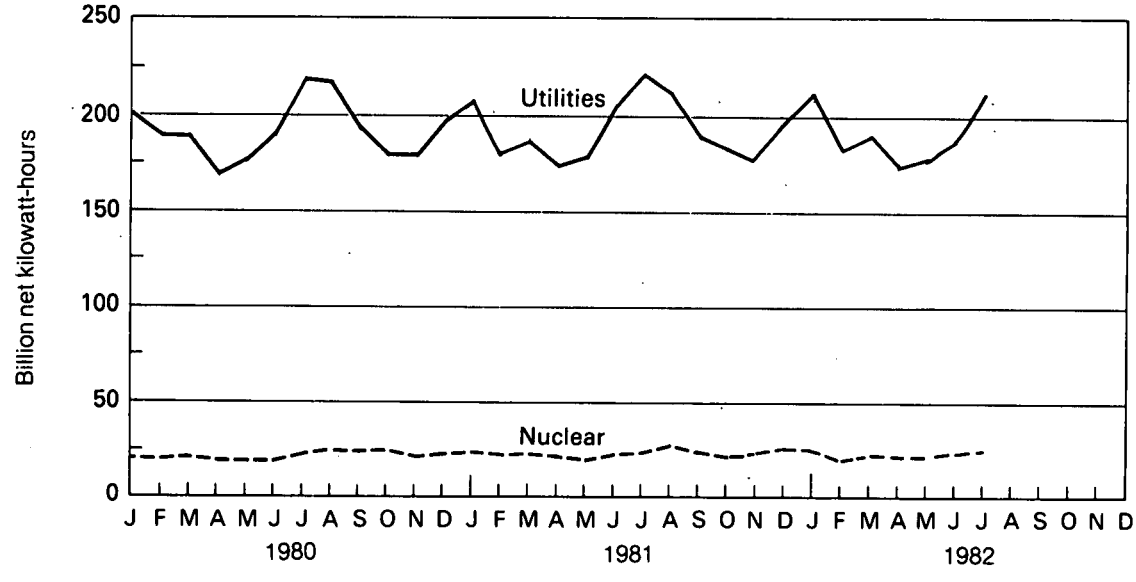
		Reactors Licensed For Commercial Operations[1]	Nuclear-Based Electricity Generation[2]	Nuclear Portion of Domestic Electricity Generation	Maximum Dependable Capacity[1]	Capacity Factor[3]
			Million net kilowatt-hours	Percent	Million net kilowatts	Percent
1973	**AVERAGE**	**40**	**83,479**	**4.5**	**13.850**	**63.2**
1974	**AVERAGE**	**53**	**113,976**	**6.1**	**29.921**	**43.5**
1975	**AVERAGE**	**56**	**172,505**	**9.0**	**35.671**	**55.2**
1976	**AVERAGE**	**62**	**191,104**	**9.4**	**40.642**	**53.5**
1977	**AVERAGE**	**67**	**250,883**	**11.8**	**45.554**	**62.9**
1978	**AVERAGE**	**71**	**276,403**	**12.5**	**49.385**	**63.9**
1979	**AVERAGE**	**71**	**255,155**	**11.4**	**50.604**	**57.6**
1980	January	68	19,746	9.9	48.669	54.5
	February	69	19,277	10.2	50.617	56.0
	March	69	20,039	10.7	50.606	53.2
	April	71	18,794	11.1	52.572	49.7
	May	71	18,385	10.5	52.574	47.0
	June	71	18,322	9.7	52.425	48.5
	July	71	21,024	9.7	52.525	53.8
	August	71	24,333	11.3	52.311	62.5
	September	71	23,572	12.3	52.188	62.7
	October	72	24,510	13.7	53.180	61.9
	November	72	20,984	11.8	53.031	55.0
	December	72	22,130	11.3	52.597	56.6
	AVERAGE	**71**	**251,116**	**11.0**	**51.941**	**55.1**
1981	January	73	23,779	11.5	54.374	58.8
	February	73	21,595	12.0	54.372	59.1
	March	73	22,004	11.9	54.429	54.3
	April	73	20,646	12.0	54.095	53.1
	May	73	19,723	11.1	54.074	49.0
	June	74	21,166	10.4	55.214	53.2
	July	74	23,080	10.5	54.998	56.4
	August	74	26,946	12.8	54.820	66.1
	September	75	24,398	13.1	56.974	60.5
	October	75	20,556	11.3	56.412	48.9
	November	74	22,783	13.0	55.328	57.2
	December	74	25,997	13.3	55.524	62.9
	AVERAGE	**74**	**272,674**	**11.9**	**55.051**	**56.6**
1982	January	74	25,678	12.2	55.471	62.2
	February	75	20,188	11.2	56.608	53.1
	March	75	22,756	12.1	56.609	54.0
	April	76	21,785	12.6	R57.415	R52.8
	May	76	21,639	12.2	57.428	50.6
	June	77	24,026	12.9	58.559	57.0
	July	78	25,467	12.1	59.690	57.3

Geographic coverage: the 50 United States and District of Columbia.
[1]See Notes on the last page of this section.
[2]Electricity generation entries represent yearly or monthly totals rather than averages.
[3]Average percentage of the net maximum dependable capacity utilized yearly or monthly.
R=Revised data.
Sources: • See the last page of this section.

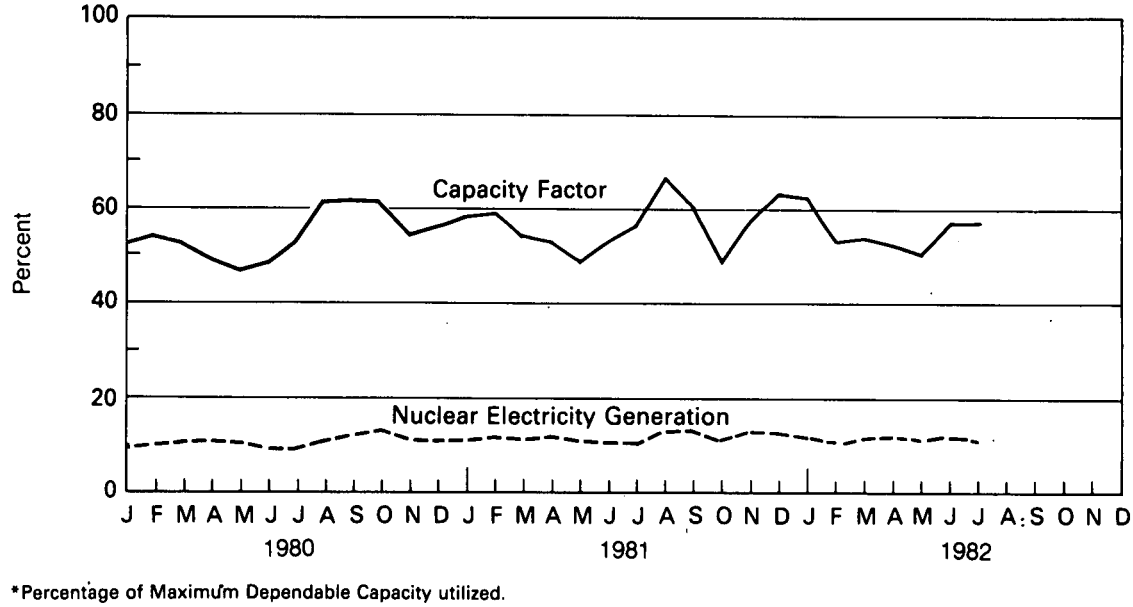
Nuclear

Nuclear Powerplant Operations

Electricity Generated by Utilities and by Nuclear Powerplants



Nuclear Portion of Electricity Generation and Capacity Factor*



*Percentage of Maximum Dependable Capacity utilized.

Nuclear

Status of Nuclear Reactor Units[1]

		Reactors Licensed For Commercial Operations[2]	Construction Permits Granted	Construction Permits Pending	Reactor Units on Order	Reactor Units Announced	Total Reactor Units	Total Design Capacity[3] (Million Net Kilowatts)
1973		**40**	**51**	**58**	**48**	**20**	**217**	**212**
1974		**53**	**58**	**80**	**28**	**16**	**235**	**234**
1975		**56**	**69**	**73**	**19**	**19**	**236**	**236**
1976		**62**	**72**	**66**	**16**	**19**	**235**	**236**
1977		**67**	**80**	**52**	**13**	**9**	**221**	**220**
1978		**71**	**90**	**32**	**9**	**4**	**206**	**204**
1979		**71**	**91**	**21**	**3**	**0**	**186**	**180**
1980	January	68	90	17	3	0	178	173
	February	69	89	16	3	0	177	172
	March	69	87	14	3	0	173	168
	April	71	85	14	3	0	173	168
	May	71	85	14	3	0	173	168
	June	71	85	14	3	0	173	168
	July	71	85	14	3	0	173	168
	August	71	85	14	3	0	173	168
	September	71	85	14	3	0	173	168
	October	72	84	14	3	0	173	168
	November	72	82	14	3	0	171	166
	December	72	82	12	3	0	169	163
1981	January	73	81	12	3	0	169	163
	February	73	81	12	3	0	169	163
	March	73	81	12	3	0	169	163
	April	73	81	12	3	0	169	163
	May	73	81	12	3	0	169	163
	June	74	80	12	3	0	169	163
	July	74	80	12	3	0	169	163
	August	74	79	12	3	0	168	162
	September	75	78	11	3	0	167	161
	October	75	77	11	3	0	166	160
	November	74	78	11	3	0	166	160
	December	74	75	11	3	0	163	157
1982	January	74	73	11	3	0	161	154
	February	75	72	6	R2	0	R155	R147
	March	75	72	6	R2	0	R155	R147
	April	76	71	6	R2	0	R155	R147
	May	76	71	6	R2	0	R155	R147
	June	77	70	6	R2	0	R155	R147
	July	78	69	6	2	0	155	147

Geographic coverage: the 50 United States and District of Columbia.
[1]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.
[2]See Notes on the last page of this section.
[3]Entries in this column are based on design electrical ratings. See definition in Note 1 on the last page of this section.
R = Revised data.
Sources: • See the last page of this section.

Notes and Sources for the Nuclear Section

Notes

1. Units & Definitions: The units used to describe power generation at nuclear plants are based on the watt, a unit of power. (Power is energy produced per unit of time.) Nuclear powerplants may have more than one type of power rating, including:
(a) Design Capacity or Design Electrical Rating (DER), Net—The nominal net electrical output of the unit, as specified by the utility for the purpose of plant design.
(b) Maximum Dependable Capacity (MDC), Gross-The gross electrical output as measured at the output terminals of the turbine generator during the most restrictive seasonal conditions (usually summer).
(c) Maximum Dependable Capacity (MDC), Net-The gross maximum dependable capacity less the nominal station service load. The nominal station service load for a nuclear plant is about 5 percent of its gross generation.
(d) Thermal Capacity—The rate of heat production by the reactor core. The Nuclear Regulatory Commission authorizes a maximum thermal power rating for U.S. reactors.
2. Nuclear Powerplant Operations: For most reactors the net maximum dependable capacity (MDC) is used. Where the net MDC is not available, the net design electrical rating (DER) is used. Starting with January 1980 entries, the restricted capacity of "derated" units (i.e., units for which the Nuclear Regulatory Commission or the operating utility has imposed a "power limit") is used in place of either the net MDC or net DER to provide a more realistic estimate of true available capacity.
3. Status of Nuclear Reactor Units: These figures include reactors in fuel-loading, power-testing, and power- ascension stages. They also include two Department of Energy, dual-purpose reactors—Shippingpot (capacity=60 MWe) and Hanford (capacity=850 MWe) which, while they are not licensed by the Nuclear Regulatory Commission, do generate electricity on a commercial basis. Not included in the above table is the Experimental Breeder Reactor-2 which generates electricity but does not distribute it commercially. Beginning with January 1980 data, three units (each of which had been inoperative for at least nine months prior to that time) are deleted from this table due to their uncertain futures: Humboldt Bay (capacity=65 MWe), which requires major seismic modifications; Dresden-1 (capacity=200 MWe), also in need of major modifications, and Three Mile Island-2 (capacity=906 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979.

Sources

Nuclear Powerplant Operations: • Capacity data for units in commercial operation or start-up testing—Nuclear Regulatory Commission Report NUREG—0020, "Licensed Operating Reactors."
• Generation Data—Energy Information Administration Form 759, "Monthly Power Plant Report."
Status of Nuclear Reactor Units: • Compiled from various sources, primarily the Department of Energy, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones," and from the Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.

Price

Crude Oil

The average price of domestic crude oil purchased at the wellhead was $28.37 per barrel in July 1982. This was 0.9 percent above the previous month's level but 8.9 percent below the level in June 1981.

During July 1982, the composite refiner acquisition cost of crude oil was $31.82 per barrel, $0.08 per barrel (0.3 percent) above the previous month's price of $31.74. The price of imported crude oil decreased $0.19 per barrel from the June 1982 level to $33.60 per barrel in July. This price was 8.1 percent below the July 1981 level. The price of domestic crude oil in July 1982 was $30.85, an increase of $0.06 per barrel from the June 1982 average.

Residual Fuel Oil

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in July 1982 was $29.33 per barrel, $0.26 per barrel (0.9 percent) below the previous month's price but 4.1 percent below the July 1981 average. The average price, excluding taxes, of No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts in July 1982 was $25.97 per barrel, $0.65 (2.4 percent) below the June 1982 average and 2.1 percent below the July 1981 average.

Heating Oil

The national average price of heating oil sold to residential customers in July 1982 was 116.4 cents per gallon. This was 0.2 percent above the selling price in June 1982 but 3.8 percent below the July 1981 price. The average distributor margin on residential heating oil in July was 16.8 cents per gallon, 1.8 percent below the margin during July 1981. The refiners' national average selling price to resellers and retailers was 94.1 cents per gallon in July 1982, 4.5 percent below the July 1981 average.

Aviation Fuel

The average price, excluding taxes, of kerosene-type jet fuel sold to commercial airlines, Department of Defense, and other ultimate consumers in July 1982 was 95.3 cents per gallon, unchanged from the previous month's average but an 8.2-percent decrease from the July 1981 average.

Motor Gasoline

The national average retail price for all grades and all types of motor gasoline was 131.0 cents per gallon in August 1982. Leaded regular gasoline at all types of stations sold for an average of 125.4 cents per gallon in August, 0.9 cents lower (0.7 percent) than the price in July. The price of unleaded regular gasoline at all types of stations was 132.3 cents per gallon in August, 0.8 cents lower (0.6 percent) than the price in July.

Liquefied Petroleum Gases

The average wholesale price for propane during July 1982, excluding taxes, was 39.9 cents per gallon, 8.1 percent above the previous month's level but 13.3 percent below the July 1981 level.

In July 1982, the average wholesale price for butane, excluding taxes, was 70.0 cents per gallon, 3.1 percent above the previous month's price and 23.9 percent above the July 1981 average.

Price

Price

Petroleum Price Summary

		Actual Domestic Average Wellhead Price[1]	Refiner Acquisition Cost of Crude Oil[2]			No. 6 Residual Oil Price Average[3]	
			Domestic	Imported	Composite	Wholesale[4]	Retail[4]
		Dollars per barrel					
1976	**AVERAGE**	**8.19**	**8.84**	**13.48**	**10.89**	**10.72**	**11.49**
1977	**AVERAGE**	**8.57**	**9.55**	**14.53**	**11.96**	**11.96**	**13.23**
1978	**AVERAGE**	**9.00**	**10.61**	**14.57**	**12.46**	**11.51**	**12.75**
1979	**AVERAGE**	**12.64**	**14.27**	**21.67**	**17.72**	**17.66**	**18.67**
1980	January	17.86	19.78	30.75	24.81	24.41	26.21
	February	18.81	21.22	32.40	26.11	23.34	26.48
	March	19.34	22.07	33.42	26.88	21.11	25.33
	April	20.29	22.89	33.54	27.09	19.09	22.87
	May	21.01	23.63	34.33	27.85	20.22	23.75
	June	21.53	24.48	34.48	28.80	20.44	24.09
	July	22.26	25.05	34.51	28.73	21.28	23.86
	August	22.63	24.98	34.44	28.70	22.25	25.00
	September	22.59	25.37	34.46	28.96	22.47	25.31
	October	23.23	26.21	34.63	29.56	24.06	26.68
	November	23.92	26.51	35.09	29.79	28.12	30.10
	December	25.80	26.55	35.63	31.39	29.76	32.33
	AVERAGE	**21.59**	**24.23**	**33.89**	**28.07**	**23.14**	**26.09**
1981	January	28.85	32.71	38.85	34.86	31.14	33.65
	February	34.14	36.27	39.00	37.28	31.81	36.04
	March	34.70	36.97	38.31	37.48	31.78	36.11
	April	34.05	35.58	38.41	36.58	30.56	34.70
	May	32.71	35.21	37.84	36.11	30.41	34.11
	June	31.71	34.20	37.03	35.03	25.95	31.03
	July	31.13	33.76	36.58	34.70	26.52	30.57
	August	31.13	33.79	35.82	34.46	27.01	30.52
	September	31.13	33.47	35.44	34.11	26.20	30.33
	October	31.00	33.48	35.43	34.07	26.78	30.32
	November	30.98	33.49	36.21	34.33	27.99	30.16
	December	30.72	33.51	35.95	34.33	27.26	30.90
	AVERAGE	**31.77**	**34.33**	**37.05**	**35.24**	**28.86**	**32.50**
1982	January	30.87	33.39	35.54	33.95	27.07	29.83
	February	29.76	32.71	35.48	33.40	26.29	30.02
	March	28.31	31.08	34.07	31.81	25.73	29.50
	April	27.65	30.27	32.82	30.83	25.46	28.21
	May	27.67	30.37	32.78	31.02	26.52	28.93
	June	R28.11	R30.79	R33.79	R31.74	R26.62	R29.59
	July†	28.37	30.85	33.60	31.82	25.97	29.33
	August	NA	NA	NA	NA	NA	NA

Geographic coverage: the 50 United States and District of Columbia, except for the refiner acquisition cost of crude oil, which is the 50 United States, District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
[1]See Note 1 on the last two pages of this section.
[2]See Note 2 on the last two pages of this section.
[3]Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial, and residential accounts.
[4]Excludes tax.
See additional footnotes on the following page.

Price

Petroleum Price Summary (continued)

		No. 2 Diesel Price Average[5]		No. 2 Heating Oil Price Average		Gasoline Price Average All Types[6]	Propane Price Average[7]	Butane Price Average[7]
		Wholesale[4]	Retail[4]	Wholesale	Retail	Retail	Wholesale[4]	Wholesale[4]
		Cents per gallon						
1976	**AVERAGE**	**31.9**	**34.7**	**32.6**	**40.6**	**NA**	**20.6**	**21.9**
1977	**AVERAGE**	**36.1**	**39.3**	**36.9**	**46.0**	**NA**	**25.0**	**25.4**
1978	**AVERAGE**	**37.1**	**40.2**	**38.7**	**49.4**	**65.2**	**24.0**	**23.0**
1979	**AVERAGE**	**58.2**	**62.4**	**53.0**	**65.6**	**88.2**	**29.5**	**45.8**
1980	January	76.0	82.2	75.2	90.8	111.0	41.8	73.3
	February	78.3	85.0	79.0	95.3	118.6	42.7	70.1
	March	79.8	87.8	80.4	97.1	123.0	41.0	66.8
	April	80.4	88.0	81.0	97.4	124.2	41.2	63.1
	May	80.5	87.8	81.4	97.2	124.4	41.7	63.7
	June	81.7	88.6	82.5	97.9	124.6	41.2	58.2
	July	81.9	87.6	83.0	97.9	124.7	40.8	53.8
	August	81.6	86.9	82.9	97.9	124.3	40.6	53.1
	September	80.3	86.6	83.0	98.1	123.1	41.4	51.2
	October	81.5	85.9	83.7	98.7	122.3	43.2	54.3
	November	83.6	88.9	86.1	101.1	122.2	45.1	65.5
	December	87.5	92.4	91.3	106.5	123.1	46.5	72.7
	AVERAGE	**81.2**	**87.3**	**82.2**	**97.8**	**122.1**	**42.4**	**62.9**
1981	January	92.5	100.9	98.6	114.4	126.9	46.5	66.1
	February	99.5	106.1	106.0	123.4	135.3	48.2	63.0
	March	101.7	108.8	106.3	125.5	138.8	48.3	62.1
	April	101.3	107.7	105.2	123.9	138.1	49.3	60.1
	May	100.8	106.8	104.0	122.7	137.0	48.6	56.8
	June	99.5	106.6	103.0	120.9	136.2	46.0	52.7
	July	98.8	103.8	102.7	121.0	135.3	46.0	56.5
	August	97.8	105.9	102.2	119.4	134.8	47.2	60.6
	September	97.6	104.8	101.6	119.7	135.8	47.7	64.6
	October	97.4	105.3	101.1	118.8	135.3	47.3	64.7
	November	98.3	105.2	102.3	120.8	135.1	47.5	61.6
	December	98.3	105.1	102.6	122.0	134.8	45.5	55.4
	AVERAGE	**98.5**	**106.2**	**102.6**	**120.5**	**135.3**	**47.2**	**60.4**
1982	January	98.0	105.3	101.5	122.0	134.1	43.1	51.8
	February	94.8	103.2	98.3	120.7	131.8	38.3	48.9
	March	90.2	98.0	91.3	115.3	126.8	35.7	49.6
	April	86.6	96.1	90.0	113.2	121.0	34.9	56.1
	May	89.1	97.6	95.1	114.3	122.4	35.4	65.6
	June	R93.5	102.2	98.5	R116.2	129.6	R36.9	67.9
	July	†93.4	†101.6	†98.6	†116.4	131.8	†39.9	†70.0
	August	NA	NA	NA	NA	131.0	NA	NA

Footnotes continued.
[5]Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded and unbranded jobbers and commercial accounts. Retail refers to the price at which company-owned and operated retail dealers sell to customers.
[6]Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily. See Note 5 on the last two pages of this section for additional information on motor gasoline prices.
[7]Wholesale refers to the price at which refiners, resellers, retailers, and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last two pages of this section.

Price

FOB Cost of Crude Oil Imports from Selected Countries[1]

		Algeria	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
		Dollars per barrel									
1976	**AVERAGE**	**13.05**	**12.76**	**11.61**	**12.55**	**NA**	**13.08**	**11.69**	**11.94**	**NA**	**11.32**
1977	**AVERAGE**	**14.36**	**13.57**	**12.67**	**13.90**	**13.42**	**14.44**	**12.37**	**12.83**	**NA**	**12.68**
1978	**AVERAGE**	**14.10**	**13.64**	**12.65**	**13.75**	**13.24**	**14.04**	**12.70**	**13.24**	**13.82**	**12.45**
1979	**AVERAGE**	**20.65**	**19.35**	**23.71**	**22.43**	**20.29**	**21.80**	**17.63**	**19.58**	**21.20**	**17.37**
1980	January	33.67	29.67	29.28	35.72	29.43	31.57	26.25	29.85	30.77	25.34
	February	34.03	31.11	NA	35.71	31.77	33.39	26.62	30.95	32.66	24.82
	March	36.74	31.54	(2)	35.88	30.56	35.59	26.85	29.34	34.34	24.03
	April	36.93	32.22	(2)	35.30	30.24	36.11	27.78	30.38	34.15	23.85
	May	37.10	32.40	(2)	36.13	30.68	36.50	28.50	32.67	34.10	24.82
	June	37.61	32.90	(2)	36.83	30.76	36.99	28.95	33.34	36.28	25.56
	July	38.40	33.19	(2)	37.26	31.84	37.17	28.47	NA	36.26	24.34
	August	37.53	33.01	(2)	37.01	31.87	36.69	29.74	NA	34.83	25.30
	September	37.21	33.13	(2)	36.94	31.21	36.38	30.34	NA	35.18	24.21
	October	37.60	32.31	(2)	37.15	31.27	36.82	30.19	NA	35.66	22.71
	November	37.05	32.94	(2)	36.90	31.59	36.87	31.43	NA	35.47	26.83
	December	37.37	33.21	(2)	37.58	32.33	36.79	32.01	NA	35.00	26.66
	AVERAGE	**36.57**	**32.37**	**(2)**	**36.41**	**31.11**	**35.82**	**28.53**	**NA**	**34.58**	**24.78**
1981	January	39.37	36.54	(2)	40.52	35.88	40.11	32.39	NA	38.34	32.87
	February	40.13	36.13	(2)	40.73	36.57	40.03	32.60	NA	39.41	30.36
	March	40.30	36.40	(2)	40.25	35.60	39.85	32.73	NA	39.50	31.24
	April	39.70	36.38	(2)	40.04	33.81	39.92	32.41	NA	38.85	29.93
	May	39.57	36.09	(2)	38.91	34.45	39.11	32.13	NA	37.16	28.39
	June	39.20	36.95	(2)	39.85	30.30	38.44	32.42	NA	35.84	30.50
	July	38.06	35.47	(2)	38.70	32.72	39.25	32.07	NA	34.89	29.25
	August	39.34	35.61	(2)	39.45	31.23	39.55	31.95	NA	34.38	27.08
	September	39.60	35.82	(2)	36.74	30.37	36.04	32.09	NA	34.44	28.14
	October	36.90	35.08	(2)	36.36	30.83	35.45	33.56	NA	34.87	27.27
	November	36.55	35.53	(2)	37.15	31.80	36.41	33.49	NA	35.97	28.39
	December	37.35	36.08	(2)	36.78	31.29	36.49	33.70	NA	36.46	28.02
	AVERAGE	**39.09**	**35.93**	**(2)**	**39.44**	**33.13**	**38.53**	**32.48**	**NA**	**36.08**	**28.86**
1982	January	36.96	35.53	(2)	35.69	29.67	36.23	33.40	NA	36.20	29.07
	February	35.56	35.59	(2)	34.64	30.92	35.92	33.50	NA	34.00	28.94
	March	31.50	35.74	(2)	34.21	27.86	34.94	33.77	NA	30.78	22.89
	April	30.54	35.69	(2)	(2)	26.96	33.80	33.49	NA	32.49	21.89
	May	33.32	34.82	31.11	(2)	28.53	35.22	32.97	NA	32.43	R22.31
	June	34.72	35.95	NA	(2)	28.18	35.18	R33.80	NA	33.67	22.25
	July†	34.50	34.98	31.44	(2)	28.30	35.22	32.80	NA	33.44	23.50

[1]The Free on Board (FOB) cost excludes all costs related to insurance and transportation. See Note 3 on the last two pages of this section.
[2]No crude oil was imported.
Note: Prices shown through December 1980 are for the month of reporting; prices since then are for the month of loading.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last two pages of this section.

Price

Landed Cost of Crude Oil Imports from Selected Countries[1]

		Algeria	Canada	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
		Dollars per barrel										
1975	**AVERAGE**	**12.72**	**12.72**	**13.79**	**12.21**	**12.35**	**NA**	**12.62**	**12.30**	**12.87**	**NA**	**11.65**
1976	**AVERAGE**	**13.81**	**13.57**	**13.82**	**12.82**	**13.58**	**NA**	**13.80**	**13.04**	**13.30**	**NA**	**11.80**
1977	**AVERAGE**	**15.20**	**14.21**	**14.63**	**13.80**	**14.87**	**13.75**	**15.25**	**13.61**	**14.04**	**NA**	**13.13**
1978	**AVERAGE**	**14.91**	**14.50**	**14.64**	**13.88**	**14.72**	**13.54**	**14.86**	**13.92**	**14.39**	**NA**	**12.83**
1979	**AVERAGE**	**21.90**	**20.43**	**20.69**	**25.02**	**23.68**	**20.86**	**22.96**	**19.15**	**21.90**	**22.16**	**18.18**
1980	January	35.32	27.73	31.03	30.37	37.10	30.18	33.03	27.85	32.35	32.14	26.25
	February	35.28	28.60	32.95	NA	36.98	32.38	35.25	28.15	32:71	34.07	25.91
	March	38.54	30.75	33.04	[2]	37.18	31.17	36.93	28.26	30.96	35.73	24.97
	April	38.52	30.31	33.81	[2]	36.57	30.77	37.41	29.14	32.29	35.34	25.10
	May	38.54	31.16	33.73	[2]	37.36	31.22	37.53	30.30	34.06	35.82	25.93
	June	38.71	31.26	34.51	[2]	38.09	31.43	38.15	30.16	34.96	37.41	26.42
	July	39.60	31.31	34.81	[2]	38.39	32.60	38.23	30.04	NA	37.25	25.47
	August	38.60	31.44	34.81	[2]	38.38	32.62	37.77	31.24	NA	36.20	26.37
	September	38.28	30.97	34.64	[2]	38.30	31.93	37.60	31.86	NA	36.35	25.47
	October	38.77	29.22	33.65	[2]	38.53	31.96	37.75	31.73	NA	36.82	23.92
	November	38.41	28.81	34.55	[2]	38.22	32.42	37.97	32.86	NA	36.62	27.75
	December	38.63	32.72	34.64	[2]	39.04	33.76	38.11	33.40	NA	36.31	27.66
	AVERAGE	**37.90**	**30.47**	**33.92**	**[2]**	**37.72**	**31.80**	**37.05**	**30.02**	**NA**	**35.88**	**25.86**
1981	January	41.25	34.26	38.08	[2]	41.81	36.81	41.55	34.06	NA	39.90	33.80
	February	41.90	33.73	37.86	[2]	42.19	37.23	41.46	34.38	NA	40.69	31.20
	March	41.62	33.88	38.11	[2]	41.60	36.42	40.98	34.42	NA	40.72	32.09
	April	40.96	33.74	37.95	[2]	41.58	34.42	41.04	34.16	NA	40.02	30.97
	May	40.81	32.70	37.72	[2]	40.46	34.83	40.10	33.73	NA	38.31	29.39
	June	40.31	32.67	38.73	[2]	41.44	31.03	39.60	34.29	NA	37.04	31.46
	July	39.59	31.19	37.20	[2]	40.27	33.18	40.05	33.72	NA	35.87	29.22
	August	40.65	30.44	37.07	[2]	40.30	31.77	40.85	33.23	NA	35.40	28.11
	September	41.62	30.83	37.52	[2]	37.73	30.84	37.20	33.66	NA	35.26	29.12
	October	37.52	31.17	36.39	[2]	38.15	31.34	36.64	34.88	NA	36.00	28.27
	November	37.43	31.04	36.84	[2]	38.50	32.42	37.59	34.91	NA	36.87	29.27
	December	38.14	31.37	37.31	[2]	38.89	31.85	37.52	35.37	NA	37.44	29.00
	AVERAGE	**40.49**	**32.16**	**37.57**	**[2]**	**40.92**	**33.78**	**39.70**	**34.19**	**NA**	**37.24**	**29.87**
1982	January	38.19	31.05	36.88	[2]	36.91	30.21	37.37	34.44	NA	36.78	29.82
	February	37.09	28.80	36.81	[2]	35.28	31.47	37.06	34.51	NA	35.04	30.09
	March	32.25	26.71	37.17	[2]	34.80	28.69	35.81	34.92	NA	31.35	23.92
	April	31.66	24.86	36.87	[2]	[2]	27.58	34.82	34.80	NA	33.19	23.09
	May	34.24	24.90	36.50	32.01	[2]	29.18	36.06	34.28	NA	33.22	23.44
	June	35.41	24.63	37.35	NA	[2]	28.76	36.15	R35.20	NA	34.41	23.43
	July†	35.27	26.44	36.78	32.08	[2]	28.98	36.28	35.07	NA	34.40	24.61

[1]See Note 4 on the last two pages of this section.
[2]No crude oil was imported.
Note: Prices shown through December 1980 are for the month of reporting; prices since then are for the month of loading.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last two pages of this section.

Price

U.S. City Average Retail Prices for Motor Gasoline[1]

		Leaded Regular	Unleaded Regular	Leaded Premium	Average for All Types
		Cents per gallon, including tax			
1974	**AVERAGE**	**53.2**	**NA**	**56.9**	**NA**
1975	**AVERAGE**	**56.7**	**NA**	**60.9**	**NA**
1976	**AVERAGE**	**59.0**	**61.4**	**63.6**	**NA**
1977	**AVERAGE**	**62.2**	**65.6**	**67.4**	**NA**
1978	**AVERAGE**	**62.6**	**67.0**	**69.4**	**65.2**
1979	**AVERAGE**	**85.7**	**90.3**	**92.2**	**88.2**
1980	January	108.6	113.1	114.9	111.0
	February	115.9	120.7	123.3	118.6
	March	120.2	125.2	127.7	123.0
	April	121.2	126.4	129.2	124.2
	May	121.5	126.6	129.5	124.4
	June	121.7	126.9	130.0	124.6
	July	121.6	127.1	130.7	124.7
	August	121.0	126.7	131.0	124.3
	September	119.7	125.7	130.4	123.1
	October	118.8	125.0	130.1	122.3
	November	118.8	125.0	129.9	122.2
	December	119.7	125.8	131.0	123.1
	AVERAGE	**119.1**	**124.5**	**128.1**	**122.1**
1981	January	123.8	129.8	133.8	126.9
	February	132.1	138.2	141.0	135.3
	March	135.2	141.7	144.9	138.8
	April	134.4	141.2	145.1	138.1
	May	133.3	140.0	144.7	137.0
	June	132.4	139.1	144.6	136.2
	July	131.5	138.2	144.6	135.3
	August	131.0	137.6	144.4	134.8
	September[2]	130.5	137.6	145.6	135.8
	October	129.9	137.1	145.7	135.3
	November	129.7	136.9	146.2	135.1
	December	129.3	136.5	146.0	134.8
	AVERAGE	**131.1**	**137.8**	**143.9**	**135.3**
1982	January	128.5	135.8	145.6	134.1
	February	126.0	133.4	143.8	131.8
	March	120.6	128.4	140.7	126.8
	April	114.8	122.5	136.8	121.0
	May	116.6	123.7	137.9	122.4
	June	124.2	130.9	140.8	129.6
	July	126.3	133.1	145.0	131.8
	August	125.4	132.3	145.8	131.0

Geographic coverage: 1974 through 1977—56 urban areas; 1978 forward—85 urban areas.
[1]See Note 5 on the last two pages of this section.
[2]Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily.
NA = Not available.
Sources: • See the last two pages of this section.

Price

Aviation Fuel

		Aviation Gasoline		Naphtha-Type[1]	Kerosene-Type	
		Wholesale[2]	Retail[2]	Retail[2]	Wholesale[2]	Retail[2]
		Cents per gallon, excluding tax				
1976	**AVERAGE**	**42.4**	**43.1**	**31.5**	**32.5**	**31.2**
1977	**AVERAGE**	**46.7**	**47.7**	**35.0**	**36.7**	**35.8**
1978	**AVERAGE**	**51.0**	**52.1**	**37.5**	**38.9**	**38.9**
1979	**AVERAGE**	**68.5**	**69.5**	**52.3**	**66.5**	**55.1**
1980	January	90.6	90.0	76.0	83.4	77.0
	February	98.5	97.8	80.1	86.2	83.0
	March	102.9	107.0	84.1	86.4	86.3
	April	104.8	109.6	83.2	88.4	87.4
	May	106.2	109.7	89.1	89.0	87.6
	June	107.7	111.4	90.0	86.1	88.6
	July	109.3	113.4	91.4	88.3	89.7
	August	110.2	112.9	90.6	86.2	90.7
	September	110.8	113.4	92.9	86.4	88.8
	October	110.9	113.0	91.2	87.6	88.7
	November	112.4	113.0	92.5	89.9	91.0
	December	115.1	117.2	96.0	91.4	91.6
	AVERAGE	**107.2**	**109.4**	**88.2**	**87.5**	**87.4**
1981	January	118.9	121.6	99.2	97.1	95.7
	February	121.3	128.1	102.7	103.6	101.6
	March	127.2	131.1	106.9	104.8	106.3
	April	117.5	131.3	109.0	103.8	106.4
	May	120.7	133.5	109.1	104.4	106.2
	June	116.5	132.1	107.6	102.3	104.8
	July	120.1	133.4	106.3	100.5	103.8
	August	120.0	132.5	105.7	101.4	103.3
	September	121.0	133.5	105.6	103.0	103.3
	October	117.2	134.5	104.8	99.9	101.1
	November	114.4	133.2	104.5	101.9	102.6
	December	116.8	131.9	103.8	101.9	102.2
	AVERAGE	**118.8**	**131.5**	**105.7**	**102.0**	**103.1**
1982	January	122.4	133.2	101.7	101.3	101.6
	February	122.0	134.0	101.3	100.0	101.0
	March	117.0	134.8	98.4	97.6	99.6
	April	113.4	132.7	96.0	93.0	96.8
	May	109.6	132.7	94.1	91.7	95.5
	June	114.7	132.5	98.4	94.1	95.3
	July†	120.4	134.4	98.7	94.3	95.3

Geographic coverage: the 50 United States and District of Columbia.
[1]Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.
[2]Wholesale refers to the price of aviation fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.
†Preliminary data.
Sources: • See the last two pages of this section.

Price

National Average Heating Oil Prices[1]

		Refiners' Average Selling Price to Resellers and Retailers	Average Purchase Price Paid by Distributors for Heating Oil[2]	Average Distributor Margin on Residential Heating Oil[2]	Average Selling Price to Residential Customers[2]
		Cents per gallon			
1976	**AVERAGE**	**31.4**	**32.6**	**NA**	**40.6**
1977	**AVERAGE**	**35.7**	**36.9**	**NA**	**46.0**
1978	**AVERAGE**	**37.2**	**38.7**	**11.0**	**49.4**
1979	**AVERAGE**	**55.9**	**53.0**	**12.8**	**65.6**
1980	January	75.0	75.2	16.2	90.8
	February	77.8	79.0	16.7	95.3
	March	78.8	80.4	17.1	97.1
	April	78.8	81.0	17.0	97.4
	May	79.3	81.4	16.3	97.2
	June	80.2	82.5	15.8	97.9
	July	79.2	83.0	15.3	97.9
	August	79.3	82.9	15.2	97.9
	September	79.3	83.0	15.4	98.1
	October	80.7	83.7	15.3	98.7
	November	84.0	86.1	13.8	101.1
	December	88.6	91.3	14.1	106.5
	AVERAGE	**80.0**	**82.2**	**15.8**	**97.8**
1981	January	94.9	98.6	15.1	114.4
	February	102.5	106.0	16.1	123.4
	March	102.8	106.3	17.6	125.5
	April	100.9	105.2	17.7	123.9
	May	100.7	104.0	17.6	122.7
	June	99.3	103.0	16.9	120.9
	July	98.5	102.7	17.1	121.0
	August	98.2	102.2	16.2	119.4
	September	97.8	101.6	17.2	119.7
	October	98.0	101.1	16.6	118.8
	November	100.0	102.3	17.6	120.8
	December	100.6	102.6	18.3	122.0
	AVERAGE	**99.3**	**102.6**	**16.8**	**120.5**
1982	January	99.1	101.5	19.3	122.0
	February	94.7	98.3	21.3	120.7
	March	87.4	91.3	22.6	115.3
	April	86.0	90.0	22.0	113.2
	May	91.2	95.1	18.4	114.3
	June	95.4	98.5	16.9	R116.2
	July†	94.1	98.6	16.8	116.4

Geographic coverage: the 50 United States and District of Columbia.
[1]See Note 6 on the last two pages of this section.
[2]Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last two pages of this section.

Price

Residential Heating Oil Prices by Region

		Standard Federal Region[1]									
		Cents per gallon									
		1	2	3	4	5	6	7	8	9	10
1979	January	55.1	54.5	53.3	51.6	51.5	(2)	49.6	50.4	47.6	50.8
	February	57.7	57.3	55.5	53.2	53.7	(2)	51.3	51.4	49.4	52.9
	March	60.6	59.8	57.5	54.3	56.3	(2)	54.7	55.3	50.8	55.3
	April	62.8	61.9	60.0	57.3	58.8	(2)	58.2	58.4	53.8	57.8
	May	65.9	64.8	63.4	61.2	62.8	(2)	62.0	62.7	56.2	60.8
	June	70.5	69.7	68.4	66.2	68.5	(2)	68.9	67.8	62.2	66.4
	July	75.9	73.9	72.9	70.9	73.2	(2)	72.0	72.5	68.4	72.3
	August	80.1	78.6	77.7	74.8	78.5	(2)	76.4	77.1	71.7	77.2
	September	83.3	81.4	80.0	79.4	81.5	(2)	79.5	80.1	76.8	81.4
	October	84.1	82.5	81.7	79.1	82.6	(2)	80.2	81.3	81.2	82.6
	November	85.1	83.7	82.4	80.5	83.9	(2)	82.2	84.0	80.4	82.3
	December	87.2	85.7	85.1	82.9	86.1	(2)	85.3	86.3	82.6	84.6
1980	January	91.8	91.0	90.2	88.6	90.4	(2)	90.0	90.2	89.6	91.0
	February	96.7	95.3	94.7	93.0	93.5	(2)	93.6	93.5	95.8	95.7
	March	98.7	97.2	96.5	94.8	94.3	(2)	95.1	95.9	93.9	97.6
	April	99.2	97.3	96.6	94.1	94.5	(2)	95.3	99.5	94.7	99.0
	May	98.7	97.3	96.4	94.2	95.8	(2)	95.2	97.7	95.5	98.6
	June	99.8	97.9	96.8	95.1	95.8	(2)	95.3	98.4	96.0	99.8
	July	100.3	98.1	96.6	94.2	96.2	(2)	93.1	97.0	96.7	100.2
	August	100.2	97.9	96.8	94.8	95.7	(2)	95.4	92.1	99.7	100.4
	September	100.5	98.2	97.0	94.7	95.7	(2)	93.7	93.0	97.2	100.6
	October	101.1	98.8	97.4	95.6	95.9	(2)	94.7	94.1	98.6	100.4
	November	102.5	103.0	99.9	101.5	98.8	(2)	95.2	98.5	101.0	103.1
	December	108.2	108.5	105.3	106.6	103.4	(2)	99.6	101.8	(2)	105.6
1981	January	116.2	117.1	113.2	114.0	110.4	(2)	106.3	108.6	(2)	107.5
	February	125.8	126.6	123.0	124.4	117.8	(2)	114.2	113.1	(2)	113.7
	March	127.6	128.4	125.0	125.3	119.3	(2)	115.4	119.3	111.5	116.5
	April	126.8	126.6	122.7	124.8	118.3	(2)	114.7	118.4	(2)	117.5
	May	125.5	125.6	122.1	118.8	117.3	(2)	114.5	115.1	114.1	115.6
	June	124.1	123.6	121.1	115.9	116.5	(2)	112.5	116.0	(2)	117.1
	July	123.3	122.9	120.6	120.2	116.0	(2)	115.9	116.2	(2)	118.3
	August	122.7	122.2	117.9	117.4	115.1	(2)	112.1	116.9	(2)	117.7
	September	122.7	121.4	118.5	120.5	116.2	(2)	111.6	116.8	(2)	117.8
	October	122.5	122.0	115.3	117.6	116.3	(2)	112.0	115.8	(2)	118.2
	November	123.3	123.2	119.5	118.2	116.7	(2)	114.1	115.8	(2)	118.8
	December	124.8	124.7	120.7	119.0	117.4	(2)	112.4	117.1	(2)	120.0
1982	January	125.3	124.7	120.6	118.7	117.1	(2)	112.7	116.1	(2)	119.7
	February	123.2	123.7	119.3	115.3	116.0	(2)	110.9	114.9	(2)	119.5
	March	117.4	119.0	112.3	112.9	111.0	(2)	106.4	109.7	(2)	118.1
	April	113.9	116.6	112.2	109.4	108.7	(2)	100.8	106.3	(2)	116.0
	May	115.9	117.1	113.2	111.7	110.8	(2)	108.7	108.4	(2)	116.6
	June	117.5	R118.5	115.2	R113.5	R114.4	(2)	R111.8	112.3	(2)	R116.0
	July†	118.0	118.4	115.5	115.2	114.0	(2)	111.7	(2)	(2)	115.5

[1]Standard Federal Regions are defined in Note 7 on the last two pages of this section.
[2]Not available for publication.
†Preliminary data. R=Revised data.
Sources: • See the last two pages of this section.

Price

Average No. 6 Residual Fuel Oil Prices

		0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Average	
		Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
		Dollars per barrel, excluding taxes							
1976	**AVERAGE**	**12.20**	**12.54**	**10.83**	**11.79**	**9.98**	**10.43**	**10.72**	**11.49**
1977	**AVERAGE**	**13.45**	**14.36**	**12.09**	**13.45**	**11.31**	**12.27**	**11.96**	**13.23**
1978	**AVERAGE**	**12.77**	**14.47**	**11.95**	**12.78**	**10.73**	**11.70**	**11.51**	**12.75**
1979	**AVERAGE**	**19.87**	**21.21**	**18.33**	**19.33**	**15.89**	**16.44**	**17.66**	**18.67**
1980	January	29.11	30.35	26.15	28.12	21.56	21.98	24.41	26.21
	February	27.07	30.32	25.82	28.15	20.21	22.22	23.34	26.48
	March	26.88	30.20	23.73	27.29	17.81	20.34	21.11	25.33
	April	25.16	28.69	20.38	24.78	16.41	18.36	19.09	22.87
	May	25.48	31.73	22.72	25.77	17.72	18.04	20.22	23.75
	June	23.14	31.37	22.35	25.44	17.72	19.27	20.44	24.09
	July	24.89	28.51	23.44	25.55	19.20	20.58	21.28	23.86
	August	23.20	30.93	24.98	26.11	20.42	21.45	22.25	25.00
	September	24.27	33.12	23.46	26.31	20.62	21.71	22.47	25.31
	October	25.72	31.88	25.86	27.99	22.30	23.29	24.06	26.68
	November	29.52	33.70	29.40	30.89	27.08	27.50	28.12	30.10
	December	31.69	35.76	31.29	32.61	28.39	30.03	29.76	32.33
	AVERAGE	**26.41**	**31.13**	**24.91**	**27.59**	**20.77**	**22.11**	**23.14**	**26.09**
1981	January	34.27	37.23	32.12	33.96	29.12	31.35	31.14	33.65
	February	38.04	41.60	34.96	37.32	28.96	32.02	31.81	36.04
	March	37.78	41.19	34.47	38.01	29.55	31.95	31.78	36.11
	April	35.66	41.71	33.10	35.94	28.35	30.56	30.56	34.70
	May	33.61	41.09	32.53	35.94	28.77	30.64	30.41	34.11
	June	28.01	38.30	26.71	32.38	25.33	27.16	25.95	31.03
	July	29.56	39.02	27.38	31.93	25.62	25.96	26.52	30.57
	August	30.48	36.57	27.77	32.04	26.03	26.20	27.01	30.52
	September	29.91	39.17	27.46	32.08	24.80	26.26	26.20	30.33
	October	30.26	39.90	28.64	31.88	24.96	26.18	26.78	30.32
	November	31.71	39.48	29.63	31.02	26.09	26.45	27.99	30.16
	December	31.40	37.65	28.29	32.19	25.39	26.53	27.26	30.90
	AVERAGE	**32.97**	**39.31**	**30.56**	**33.69**	**27.07**	**28.57**	**28.86**	**32.50**
1982	January	33.03	37.56	28.90	31.13	24.60	25.94	27.07	29.83
	February	31.67	38.41	29.30	30.95	23.60	24.70	26.29	30.02
	March	30.95	38.96	27.60	30.57	23.45	24.21	25.73	29.50
	April	30.11	36.77	27.08	30.00	23.57	24.40	25.46	28.21
	May	30.38	37.97	27.89	30.05	25.15	25.94	26.52	28.93
	June	27.98	38.93	R28.26	R30.89	R25.35	R26.56	R26.62	R29.59
	July†	30.05	37.46	27.42	29.84	24.15	26.49	25.97	29.33

Geographic coverage: the 50 United States and District of Columbia.
Note: Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial, and residential accounts.
†Preliminary data. R = Revised data.
Sources: • See the last two pages of this section.

Price

Natural Gas

		Average Wellhead Value	Delivered to Electric Plant[1]	Average Residental Heating
		Cents per thousand cubic feet		
1973	**AVERAGE**	**21.6**	**35.0**	**108.2**
1974	**AVERAGE**	**30.4**	**49.0**	**125.3**
1975	**AVERAGE**	**44.5**	**76.9**	**154.2**
1976	**AVERAGE**	**58.0**	**105.9**	**184.6**
1977	**AVERAGE**	**79.0**	**133.4**	**226.4**
1978	**AVERAGE**	**90.5**	**147.9**	**262.6**
1979	**AVERAGE**	**117.8**	**180.3**	**323.1**
1980	January	138.2	201.1	357.7
	February	143.5	210.5	360.7
	March	148.8	214.7	371.0
	April	155.3	210.4	370.7
	May	157.3	218.1	397.0
	June	157.8	216.4	397.9
	July	165.5	237.3	413.8
	August	165.5	245.6	416.3
	September	170.5	245.6	420.2
	October	172.3	253.4	423.9
	November	177.0	238.4	399.2
	December	175.0	232.7	406.5
	AVERAGE	**160.3**	**212.8**	**394.6**
1981	January	178.5	258.8	410.1
	February	183.4	268.9	412.5
	March	186.5	273.0	420.7
	April	191.7	282.5	425.0
	May	195.2	293.2	460.7
	June	199.5	296.7	461.2
	July	203.6	298.2	464.0
	August	201.2	299.9	470.2
	September	211.5	297.4	490.1
	October	214.0	308.6	491.2
	November	217.8	309.3	487.8
	December	213.1	299.3	474.8
	AVERAGE	**199.5**	**291.6**	**455.7**
1982	January	216.4	309.8	486.0
	February	223.4	320.8	R486.6
	March	223.6	327.7	R505.9
	April	227.1	334.4	R517.7
	May	229.5	341.8	R562.0
	June	228.7	343.5	561.2

Geographic coverage: the 50 United States and District of Columbia.
[1]Includes all electric utility generating plants with a combined capacity for 25 megawatts or greater. Small quantities of coke oven gas, refinery gas, and blast furnace gas are included.
R=Revised data.
Sources: • See the last two pages of this section.

Price

Electricity

		Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants				Average Retail Electricity Prices for Privately Owned Utilities[1]				
		Coal	Residual Oil[2]	Natural Gas[3]	All Fossil Fuels[2]	Residential	Commercial	Industrial	Other	Total[4]
		Cents per million Btu				Cents per kilowatt-hour				
1973	**AVERAGE**	**40.5**	**78.8**	**33.8**	**47.5**	**2.54**	**2.41**	**1.25**	**2.10**	**1.96**
1974	**AVERAGE**	**71.0**	**191.0**	**48.1**	**90.9**	**3.10**	**3.04**	**1.69**	**2.75**	**2.49**
1975	**AVERAGE**	**81.4**	**201.4**	**75.4**	**103.0**	**3.51**	**3.45**	**2.07**	**3.08**	**2.92**
1976	**AVERAGE**	**84.8**	**195.9**	**103.4**	**110.4**	**3.73**	**3.69**	**2.21**	**3.27**	**3.09**
1977	**AVERAGE**	**94.7**	**220.4**	**130.0**	**127.7**	**4.05**	**4.09**	**2.50**	**3.51**	**3.42**
1978	**AVERAGE**	**111.6**	**212.3**	**143.8**	**139.3**	**4.31**	**4.36**	**2.79**	**3.62**	**3.69**
1979	**AVERAGE**	**122.4**	**299.7**	**175.4**	**162.1**	**4.64**	**4.68**	**3.05**	**3.96**	**3.99**
1980	January	128.7	423.5	194.8	187.3	4.69	4.90	3.32	4.19	4.21
	February	129.9	429.7	205.1	190.0	4.74	4.97	3.32	4.63	4.25
	March	130.1	409.8	207.9	184.2	4.92	5.17	3.45	4.69	4.40
	April	133.8	398.5	204.0	177.2	5.14	5.28	3.49	4.71	4.48
	May	133.4	403.5	212.0	180.4	5.41	5.44	3.59	4.97	4.63
	June	135.1	392.7	209.3	178.8	5.60	5.61	3.79	4.58	4.85
	July	137.4	394.5	228.2	199.0	5.66	5.65	3.93	4.93	5.03
	August	137.9	404.9	237.2	195.2	5.72	5.64	3.94	4.81	5.07
	September	138.9	411.3	238.7	193.1	5.69	5.73	3.89	4.95	5.03
	October	138.1	452.2	245.7	192.7	5.68	5.84	3.84	4.88	4.95
	November	139.3	496.0	231.3	200.0	5.60	5.70	3.85	5.06	4.89
	December	137.8	521.9	226.3	206.6	5.49	5.69	3.88	4.82	4.90
	AVERAGE	**135.1**	**427.9**	**221.4**	**190.4**	**5.36**	**5.48**	**3.69**	**4.76**	**4.73**
1981	January	142.7	540.2	245.9	219.2	5.43	5.72	3.94	4.92	4.96
	February	146.3	572.9	260.5	218.2	5.52	5.83	3.95	5.01	4.99
	March	148.3	583.9	264.0	215.0	5.76	6.01	4.04	5.33	5.12
	April	146.9	568.3	273.5	241.9	5.99	6.14	4.07	5.20	5.20
	May	146.7	552.8	282.7	250.6	6.26	6.29	4.16	5.47	5.36
	June	152.7	506.1	286.3	234.6	R6.49	6.48	4.36	R5.37	5.59
	July	156.5	496.3	288.6	227.5	6.58	6.47	4.48	R5.61	5.76
	August	157.0	494.4	291.1	220.2	6.62	6.49	4.49	5.52	5.78
	September	157.2	501.0	286.5	212.3	6.63	6.48	4.49	5.65	5.74
	October	160.2	511.9	300.7	217.7	6.57	6.52	4.40	5.31	5.64
	November	159.1	521.0	300.0	215.1	6.42	6.48	4.46	5.43	5.61
	December	156.7	505.0	291.4	215.5	6.32	6.46	4.56	[5]4.60	5.65
	AVERAGE	**153.2**	**529.4**	**282.5**	**222.5**	**6.20**	**6.29**	**4.29**	**5.28**	**5.46**
1982	January	160.8	484.6	301.0	226.5	6.22	6.49	4.66	5.44	5.74
	February	164.1	487.6	310.4	222.2	6.35	6.68	4.70	5.84	5.84
	March	165.6	470.9	315.8	219.8	6.58	6.79	4.83	6.39	5.97
	April	164.6	478.0	323.5	214.3	6.72	6.82	4.84	5.77	5.99
	May	165.0	486.0	331.6	215.7	6.94	6.86	4.95	5.91	6.09
	June	167.0	479.6	345.8	224.7	7.08	6.94	4.92	R6.01	6.18
	July†	NA	NA	NA	NA	7.18	6.98	5.12	6.13	6.38

Geographic coverage: Fossil Fuels—the lower 48 States and District of Columbia. Electricity—the 50 United States and District of Columbia.
[1]The 1973 through 1979 data are for Classes A and B privately owned electric utilities only. The 1980 and forward data are for selected Class A utilities whose electric operating revenues were $100 million or more during the previous year.
[2]See Note 8 on the last two pages of this section.
[3]Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.
[4]Average price for total sales to ultimate consumers.
[5]Includes a major adjustment by one utility.
† Preliminary data. R=Revised data. NA=Not available.
Sources: • See the last two pages of this section.

Notes and Sources for the Price Section

Notes

1. The actual domestic average price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.
2. 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 costs previously published for January 1981, viz., $30.87 per barrel for domestic crude, $37.59 per barrel for imported, and $33.40 per barrel for the composite, were from data collected on ERA Form 49. The revised costs are from data collected on EIA Form 14. The January prices are being replaced because the EIA Form 49 data were based on only the 27 days of controlled activity, and because there was considerable recertification of oil, which occurred in January.

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.

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.
3. 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.
4. 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.
5. The motor gasoline prices are calculated monthly by the Bureau of Labor Statistics in conjunction with the construction of the Consumer Price Index (CPI). 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).
6. The survey and method used to derive data for March 1976 forward differ from those used for prior months. Data for January 1974 through February 1976 are derived from a survey of distributors, and prices and margins are computed as unweighted averages. The average distributor purchase price and average dealer margin for March 1976 forward are for distributors only, whereas the average selling price includes both refiners and distributors. Data for March 1976 forward are computed as sales weighted averages.
7. Standard Federal Regions are defined as follows:
Region 1 —Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island;
Region 2 —New York, New Jersey, Puerto Rico, Virgin Islands;
Region 3 —Pennsylvania, Maryland, West Virginia, Virginia, District of Columbia, Delaware;
Region 4 —Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, Canal Zone;
Region 5 —Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio;
Region 6 —Texas, New Mexico, Oklahoma, Arkansas, Louisiana;
Region 7 —Kansas, Missouri, Iowa, Nebraska;
Region 8 —Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado;
Region 9 —California, Nevada, Arizona, Hawaii, Trust Territory of the Pacific Islands, American Samoa, Guam;
Region 10 —Washington, Oregon, Idaho, Alaska.
8. Residual 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.

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 forward: ERA Form 182, "Domestic Crude Oil First Purchase Report."
• Refiner acquisition costs—Energy Information Administration (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."
• No. 6 residual oil prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
• No. 2 diesel prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

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

Notes and Sources for the Price Section (continued)

Petroleum and Petroleum Products (continued):
• No. 2 heating oil (residential heating oil) prices-EIA, 1976 through October 1980: 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"; November 1980 forward: EIA Form 9A, "No. 2 Distillate Price Monitoring Report."
• Motor gasoline prices—Bureau of Labor Statistics.
• Propane and butane prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
• Crude oil imports costs—Environmental Protection, Safety and Emergency Preparedness, 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report"; February 1979 forward: ERA Form 51, "Transfer Pricing Report."
• Aviation fuel prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
Natural Gas: • Annual data for wellhead values are from the appropriate agencies of the individual producing States and the U.S. Geological Survey; monthly data are estimated primarily on the basis of values reported by State agencies in New Mexico, Oklahoma, and Texas, which together provide data for almost 50 percent of total U.S. marketed production excluding nonhydrocarbon gases removed. Monthly data for 1980 have been adjusted to conform with final reported 1980 annual data.
• Electric plant data—Energy Information Administration (EIA), FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
• Average residential heating prices—Bureau of Labor Statistics.
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 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

International

Crude Oil Production

World crude oil production during June 1982 was 52.5 million barrels per day, up 2.0 million barrels per day (4.0 percent) from the May 1982 level.

Organization of Petroleum Exporting Countries (OPEC) output during June 1982 averaged 18.8 million barrels per day, up 1.8 million barrels per day from the revised previous month average. Production by Arab members of OPEC averaged 11.5 million barrels per day, 1.3 million barrels per day higher than the May 1982 level.

Among Arab OPEC members, Saudi Arabia increased its production in June 1982 by 0.8 million barrels per day compared to its May 1982 average, and Libya increased its production by 0.2 million barrels per day. Of the non-Arab OPEC members, the most significant increase occurred in Nigeria, where production in June was 0.3 million barrels per day above the previous month's average.

Among non-OPEC nations, the combined crude oil production in Canada, Mexico, the United Kingdom, and the United States during June 1982 increased by 0.3 million barrels per day from the previous month's production.

Petroleum Consumption

Preliminary petroleum consumption data for June 1982 were available for France, Italy, Japan, the United Kingdom, and the United States. Compared to June 1981 levels, Italy and the United Kingdom increased consumption while the other countries experienced decreases. The June 1982 U.S. consumption was 1.2 million barrels per day lower than in June 1981.

Petroleum Stocks

Preliminary data on petroleum stocks for May 1982 were available for Canada, France, Italy, and the United States. Stocks of petroleum in each country were lower than in May 1981. Petroleum stocks for Organization for Economic Cooperation and Development members stood at 3,537 million barrels at the end of December 1981 (latest data available), a decrease of 29 million barrels (0.8 percent) from stocks held at the end of December 1980. The United States held 1,484 million barrels (42.0 percent) of the December 1981 stocks.

Nuclear Electricity Production

In July 1982, the 19 non-Communist nations with significant nuclear power capacity generated 64.4 billion gross kilowatt-hours of nuclear-based electricity, 5.7 percent above June 1982 output and 5.6 percent greater than the output in July 1981.

In July 1982, two new units were added to the list of operational reactors: Electricite de France's Blayais-2 unit (a 957-megawatt pressurized water reactor), and Pennsylvania Power & Light's Susquehanna-1 (a 1,101-megawatt boiling water reactor). As of July 31, there were 228 operational non-Communist power reactors with a collective gross capacity of 153.2 million kilowatts (GWe). Of this capacity, 64.4 GWe (42.0 percent) were associated with the 78 U.S. units.

International

Crude Oil Production for Major Petroleum Producing Countries

		Algeria	Iraq	Kuwait[1]	Libya	Qatar	Saudi Arabia[1]	United Arab Emirates	Arab Members of OPEC[2]	Indonesia	Iran
						Thousand barrels per day					
1973	**AVERAGE**	**1,097**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**18,009**	**1,339**	**5,861**
1974	**AVERAGE**	**1,009**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,724**	**1,375**	**6,022**
1975	**AVERAGE**	**983**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,986**	**1,307**	**5,350**
1976	**AVERAGE**	**1,075**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,578**	**1,504**	**5,883**
1977	**AVERAGE**	**1,152**	**2,348**	**1,969**	**2,063**	**445**	**9,245**	**1,999**	**19,221**	**1,686**	**5,663**
1978	**AVERAGE**	**1,161**	**2,563**	**2,131**	**1,983**	**487**	**8,301**	**1,831**	**18,457**	**1,635**	**5,242**
1979	**AVERAGE**	**1,154**	**3,477**	**2,500**	**2,092**	**508**	**9,532**	**1,831**	**21,094**	**1,591**	**3,168**
1980	January	1,150	3,400	2,140	2,100	495	9,785	1,740	20,810	1,565	2,295
	February	1,150	3,400	2,335	2,100	460	9,780	1,740	20,965	1,550	2,500
	March	1,150	3,400	2,090	2,000	500	9,790	1,695	20,625	1,575	2,350
	April	1,000	3,300	1,570	1,750	500	9,765	1,705	19,590	1,580	2,200
	May	1,000	3,300	1,525	1,750	480	9,775	1,765	19,595	1,550	1,700
	June	1,000	3,300	1,575	1,700	440	9,775	1,750	19,540	1,545	1,500
	July	1,000	3,100	1,365	1,680	460	9,765	1,710	19,080	1,565	1,700
	August	1,000	3,100	1,465	1,690	465	9,765	1,665	19,150	1,565	1,600
	September	1,000	3,000	1,290	1,680	460	9,740	1,670	18,840	1,565	1,400
	October	1,000	150	1,385	1,665	440	10,255	1,675	16,540	1,585	600
	November	1,000	350	1,505	1,680	475	10,265	1,695	16,930	1,630	800
	December	1,000	450	1,779	1,680	483	10,260	1,706	17,360	1,617	1,360
	AVERAGE	**1,012**	**2,514**	**1,656**	**1,787**	**472**	**9,900**	**1,709**	**19,050**	**1,577**	**1,662**
1981	January	950	600	1,765	1,600	505	10,265	1,620	17,305	1,630	1,600
	February	950	700	1,565	1,650	480	10,265	1,605	17,215	1,620	1,700
	March	950	1,000	1,560	1,600	505	10,110	1,610	17,335	1,635	1,700
	April	900	1,000	995	1,600	515	10,195	1,570	16,775	1,630	1,600
	May	900	1,000	990	1,400	435	10,140	1,550	16,415	1,600	1,500
	June	800	1,000	1,080	1,200	340	10,180	1,435	16,035	1,600	1,600
	July	725	1,100	1,200	750	380	10,170	1,415	15,740	1,600	1,400
	August	600	1,100	830	700	295	10,330	1,480	15,335	1,600	1,100
	September	550	1,100	855	700	365	9,155	1,465	14,190	1,600	1,100
	October	700	1,100	985	700	360	9,685	1,480	15,010	1,600	920
	November	750	1,100	890	900	340	8,640	1,365	13,985	1,600	930
	December	800	1,100	895	1,000	340	8,645	1,430	14,210	1,580	1,200
	AVERAGE	**805**	**1,000**	**1,125**	**1,140**	**405**	**9,815**	**1,500**	**15,790**	**1,605**	**1,380**
1982	January	800	1,500	805	1,000	405	8,655	1,450	14,615	1,490	1,100
	February	700	R1,500	840	600	375	8,440	1,375	R13,830	1,450	1,200
	March	600	R1,500	745	600	300	7,145	1,365	R12,255	1,400	1,800
	April	600	900	680	700	230	6,630	1,215	R10,955	1,245	1,800
	May	620	750	720	800	320	5,870	R1,125	R10,205	1,240	2,500
	June	650	750	840	1,000	410	6,670	1,210	11,530	1,305	2,500

U.S. geographic coverage: the 50 United States and District of Columbia.
Monthly data may not average to annual data due to independent rounding. Data for 1981 are preliminary.
[1]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In June 1982 total production in this region amounted to approximately 385,000 barrels per day.
[2]Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
Additional footnotes on following page.

International

Crude Oil Production for Major Petroleum Producing Countries (continued)

		Nigeria	Vene-zuela	Total OPEC[3]	Canada	Mexico	United Kingdom	United States	China	USSR	Other[4]	World
						Thousand barrels per day						
1973	**AVERAGE**	**2,054**	**3,366**	**30,989**	**1,800**	**465**	**2**	**9,208**	**1,090**	**8,465**	**3,729**	**55,748**
1974	**AVERAGE**	**2,255**	**2,976**	**30,729**	**1,684**	**571**	**2**	**8,774**	**1,315**	**9,000**	**3,835**	**55,910**
1975	**AVERAGE**	**1,783**	**2,346**	**27,155**	**1,439**	**705**	**12**	**8,375**	**1,490**	**9,625**	**4,151**	**52,952**
1976	**AVERAGE**	**2,067**	**2,294**	**30,738**	**1,295**	**831**	**245**	**8,132**	**1,670**	**10,143**	**4,351**	**57,405**
1977	**AVERAGE**	**2,085**	**2,238**	**31,278**	**1,320**	**981**	**768**	**8,245**	**1,874**	**10,682**	**4,647**	**59,795**
1978	**AVERAGE**	**1,897**	**2,166**	**29,805**	**1,313**	**1,209**	**1,082**	**8,707**	**2,082**	**11,185**	**4,782**	**60,165**
1979	**AVERAGE**	**2,302**	**2,356**	**30,928**	**1,496**	**1,461**	**1,568**	**8,552**	**2,122**	**11,460**	**5,111**	**62,698**
1980	January	2,155	2,280	29,535	1,515	1,720	1,600	8,675	2,111	11,615	5,060	61,831
	February	2,160	2,200	29,805	1,475	1,725	1,660	8,705	2,127	11,590	5,043	62,130
	March	2,155	1,995	29,100	1,475	1,830	1,670	8,698	2,119	11,615	5,020	61,527
	April	2,100	2,045	27,965	1,390	1,885	1,510	8,685	2,121	11,680	5,245	60,481
	May	2,200	2,150	27,645	1,470	1,910	1,600	8,635	2,133	11,750	4,903	60,046
	June	2,110	2,050	27,175	1,535	1,905	1,625	8,554	2,132	11,660	5,117	59,703
	July	2,095	2,170	27,030	1,520	2,015	1,585	8,547	2,124	11,825	4,865	59,511
	August	2,050	2,210	27,010	1,440	2,000	1,535	8,414	2,143	11,875	5,065	59,482
	September	1,600	2,190	25,955	1,420	2,125	1,540	8,619	2,110	11,950	4,963	58,682
	October	1,879	2,225	23,255	1,311	2,182	1,572	8,532	2,076	11,875	5,231	56,034
	November	2,062	2,230	24,065	1,467	1,901	1,731	8,495	2,088	11,930	5,101	56,778
	December	2,026	2,330	25,050	1,300	2,027	1,795	8,606	2,083	11,850	5,307	58,018
	AVERAGE	**2,055**	**2,167**	**26,890**	**1,424**	**1,937**	**1,622**	**8,597**	**2,114**	**11,770**	**5,098**	**59,452**
1981	January	1,900	2,220	25,025	1,390	2,220	1,765	8,540	2,024	11,800	5,211	57,975
	February	1,960	2,195	25,075	1,390	2,120	1,820	8,604	2,025	11,800	5,261	58,095
	March	1,875	2,240	25,190	1,280	2,365	1,885	8,613	2,025	11,800	5,252	58,410
	April	1,625	2,200	24,215	1,330	2,540	1,750	8,557	2,011	11,800	5,222	57,425
	May	1,295	2,200	23,380	1,250	2,545	1,770	8,501	2,025	11,800	5,364	56,635
	June	1,350	1,990	22,945	1,235	2,300	1,765	8,629	2,025	11,800	5,166	55,865
	July	770	1,760	21,620	1,270	2,095	1,750	8,500	2,010	11,800	5,315	54,360
	August	710	1,960	21,050	1,235	2,260	1,760	8,583	2,020	11,800	5,062	53,770
	September	1,065	2,080	20,385	1,265	2,480	1,830	8,604	1,990	11,800	5,266	53,620
	October	1,250	1,970	21,200	1,120	2,490	1,845	8,563	2,020	11,800	5,347	54,385
	November	1,590	2,230	20,575	1,280	2,090	1,840	8,586	2,020	11,800	5,209	53,400
	December	1,820	2,260	21,230	1,380	1,980	1,870	8,585	2,020	11,800	5,235	54,100
	AVERAGE	**R1,445**	**R2,110**	**R22,680**	**1,285**	**2,310**	**1,810**	**8,572**	**2,025**	**11,800**	**R5,228**	**55,710**
1982	January	1,765	1,985	21,285	1,218	2,315	1,905	8,669	2,020	11,800	5,288	54,500
	February	1,395	1,730	R19,950	1,275	2,550	1,955	8,690	2,020	11,800	R5,160	53,400
	March	945	1,870	R18,615	1,182	2,545	2,000	8,597	2,020	11,800	R5,041	51,800
	April	890	1,490	16,725	R928	2,780	2,110	8,652	2,025	11,800	R5,080	R50,100
	May	1,310	1,480	R17,075	R1,057	2,715	2,085	8,660	2,025	11,800	R5,083	R50,500
	June	1,645	1,500	18,845	1,200	2,790	2,140	8,681	2,025	11,800	5,019	52,500

Footnotes continued.
[3]OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.
[4]Other is a calculated total derived from the difference between world production and the nations represented above.
R = Revised data.
Sources: • See the last page of this section.

International

Petroleum Consumption for Major Non-Communist Industrialized Countries[1]

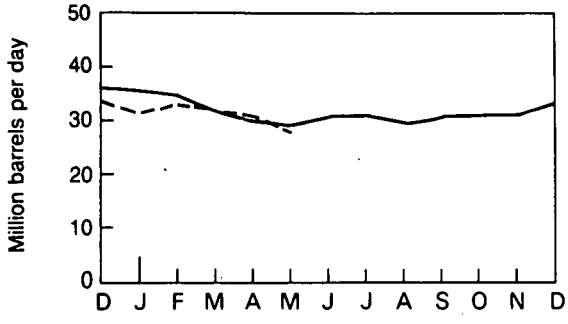
		Canada	France[2]	Italy	Japan	United Kingdom	United States	West Germany	Other IEA[3]	Total IEA[4]
						Thousand barrels per day				
1973	**AVERAGE**	**1,597**	**2,219**	**1,525**	**5,000**	**1,958**	**17,308**	**2,693**	**4,069**	**34,150**
1974	**AVERAGE**	**1,630**	**2,094**	**1,521**	**4,872**	**1,829**	**16,653**	**2,408**	**4,047**	**32,960**
1975	**AVERAGE**	**1,595**	**1,925**	**1,468**	**4,568**	**1,633**	**16,322**	**2,319**	**3,905**	**31,810**
1976	**AVERAGE**	**1,647**	**2,075**	**1,503**	**4,786**	**1,601**	**17,461**	**2,507**	**4,265**	**33,770**
1977	**AVERAGE**	**1,661**	**1,973**	**1,476**	**5,015**	**1,655**	**18,431**	**2,478**	**4,214**	**34,930**
1978	**AVERAGE**	**1,701**	**2,077**	**1,551**	**5,115**	**1,683**	**18,847**	**2,596**	**4,387**	**35,880**
1979	**AVERAGE**	**1,766**	**2,107**	**1,607**	**5,173**	**1,690**	**18,513**	**2,664**	**4,487**	**35,900**
1980	January	1,820	2,465	1,778	5,255	1,769	18,851	2,690	4,337	36,500
	February	1,930	2,444	1,864	5,722	1,621	18,817	2,410	4,736	37,100
	March	1,720	1,982	1,657	5,433	1,585	17,377	2,430	4,398	34,600
	April	1,600	2,110	1,541	4,626	1,472	16,784	2,680	4,197	32,900
	May	1,590	1,853	1,448	4,376	1,348	16,238	2,230	3,870	31,100
	June	1,660	1,848	1,511	4,224	1,286	16,187	2,220	4,012	31,100
	July	1,680	1,450	1,537	4,250	1,217	16,008	2,420	3,988	31,100
	August	1,650	1,220	1,310	3,910	1,120	15,753	2,150	3,807	29,700
	September	1,710	1,740	1,650	4,120	1,270	16,598	2,540	4,112	32,000
	October	1,770	2,050	1,670	4,250	1,430	16,995	2,230	3,855	32,200
	November	1,720	2,040	1,530	4,550	1,440	16,702	2,110	3,948	32,000
	December	1,940	2,410	1,740	5,350	1,480	18,410	2,190	4,390	35,500
	AVERAGE	**1,730**	**1,965**	**1,602**	**4,680**	**1,420**	**17,056**	**2,360**	**4,152**	**33,000**
1981	January	1,760	2,310	1,880	4,980	1,400	18,430	2,230	4,420	35,100
	February	1,770	2,170	2,195	5,350	1,460	16,989	2,510	4,126	34,400
	March	1,550	1,790	1,895	5,020	1,430	15,907	2,100	3,598	31,500
	April	1,600	1,500	1,785	4,140	1,290	15,350	1,810	3,925	29,900
	May	1,490	1,670	1,410	3,600	1,190	15,353	1,880	3,977	28,900
	June	1,635	1,600	1,510	3,915	1,210	16,095	2,155	3,880	30,400
	July	1,620	1,450	1,580	4,160	1,170	15,682	2,150	4,138	30,500
	August	1,630	1,160	1,360	4,100	1,125	15,263	2,111	3,711	29,300
	September	1,595	1,425	1,715	4,060	1,285	15,655	2,085	3,905	30,300
	October	1,585	1,655	1,600	4,085	1,390	15,822	2,305	4,013	30,800
	November	1,595	2,010	1,650	4,610	1,470	15,593	2,030	4,052	31,000
	December	1,635	2,215	1,930	5,425	1,380	16,596	2,100	3,934	33,000
	AVERAGE	**1,615**	**1,745**	**1,705**	**4,445**	**1,325**	**16,058**	**2,220**	**4,032**	**31,400**
1982	January	1,530	1,770	1,800	4,645	1,400	15,890	2,010	3,725	31,000
	February	1,715	1,815	1,795	5,275	1,465	15,941	2,315	4,094	32,600
	March	R1,510	1,940	1,805	R4,640	1,560	15,560	2,425	R4,100	31,600
	April	R1,350	1,730	1,560	R4,015	1,340	16,048	2,220	3,967	30,500
	May	1,325	1,580	1,510	3,515	R1,210	14,845	1,785	3,610	27,800
	June	NA	1,505	1,520	3,850	1,280	14,931	NA	NA	NA

U.S. geographic coverage: the 50 United States and District of Columbia.
[1]These data represent inland consumption, i.e., sales of petroleum products excluding refinery fuel, refinery losses, and ocean bunkers except for the United States, where it represents domestic products supplied.
[2]Not a member of the International Energy Agency (IEA).
[3]Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above.
[4]The 21 signatory nations of the IEA are listed in Note 1 on the last page of this section.
R = Revised data. NA = Not available.
Note: Data for 1980 through 1982 are preliminary.
Sources: • See the last page of this section.

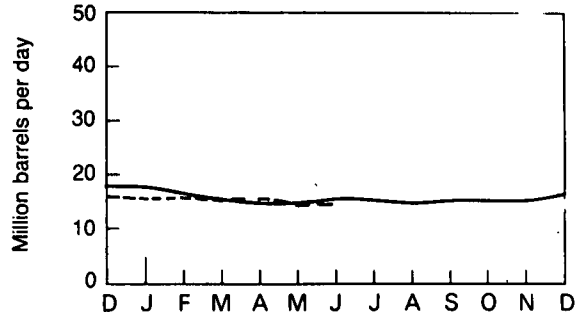
International

Petroleum Consumption

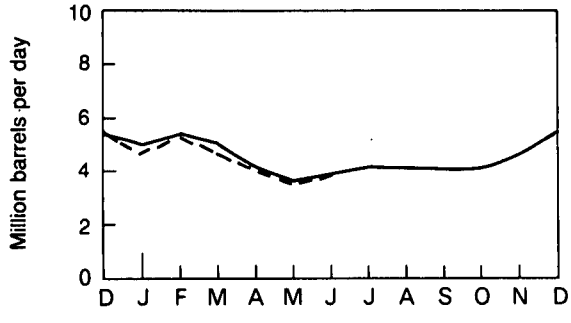
Total IEA



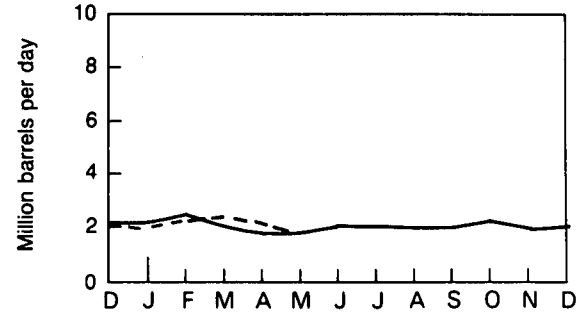
United States



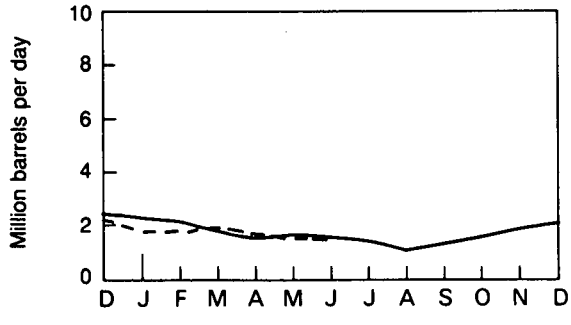
Japan*



West Germany



France**



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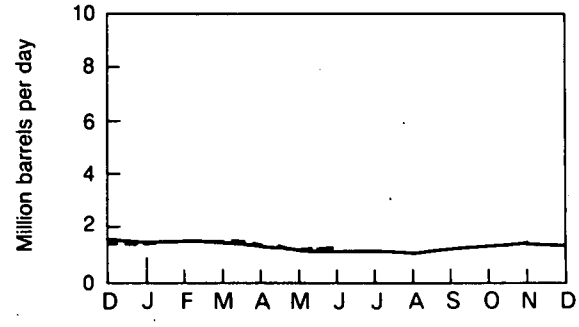

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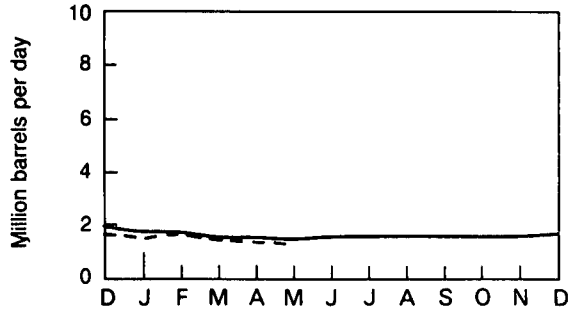
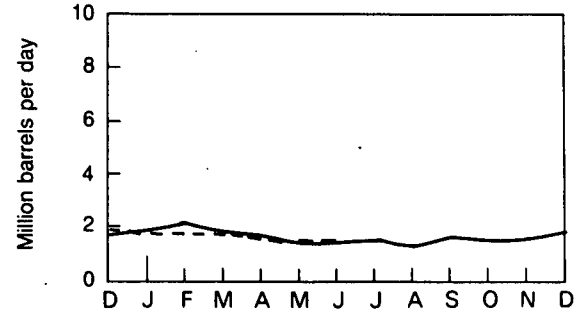


Italy***



*Excludes liquefied petroleum gases and condensates.

**Not a member of IEA.

***Principal products only.

——— 1981

- - - - - 1982

International

Petroleum Stocks for Major Non-Communist Industrialized Countries at End of Period[1]

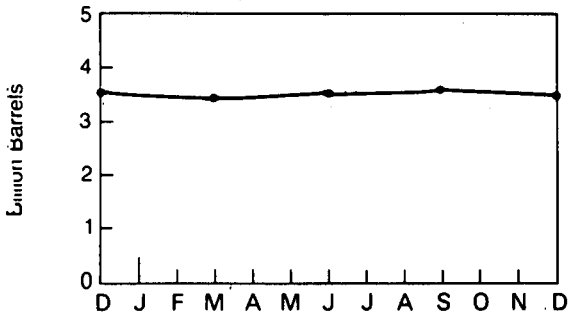
		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Other OECD[2]	Total OECD[3]
						Million barrels				
1973		**149**	**203**	**NA**	**303**	**156**	**1,008**	**NA**	**NA**	**NA**
1974		**164**	**240**	**169**	**370**	**191**	**1,074**	**215**	**NA**	**NA**
1975		**167**	**239**	**143**	**375**	**164**	**1,133**	**190**	**NA**	**NA**
1976		**156**	**231**	**142**	**394**	**165**	**1,112**	**214**	**NA**	**NA**
1977		**170**	**241**	**162**	**399**	**147**	**1,312**	**236**	**485**	**3,152**
1978		**148**	**214**	**153**	**422**	**147**	**1,278**	**239**	**487**	**3,089**
1979		**156**	**231**	**163**	**457**	**163**	**1,341**	**273**	**574**	**3,358**
1980	January	156	228	164	445	164	1,351	282	NA	NA
	February	153	225	153	419	162	1,343	305	NA	NA
	March	156	233	152	427	163	1,348	299	561	3,339
	April	161	220	155	442	160	1,367	287	NA	NA
	May	168	233	164	463	167	1,387	300	NA	NA
	June	171	239	165	471	174	1,411	313	584	3,527
	July	178	247	176	494	172	1,425	308	NA	NA
	August	184	266	186	508	176	1,449	315	NA	NA
	September	183	264	192	508	173	1,447	306	620	3,693
	October	178	271	186	497	169	1,430	307	NA	NA
	November	172	260	179	488	170	1,432	313	NA	NA
	December	171	254	173	481	169	1,392	323	600	3,566
1981	January	169	234	155	479	168	1,388	319	NA	NA
	February	162	235	184	457	170	1,389	312	NA	NA
	March	165	227	158	452	164	1,401	317	587	3,471
	April	174	235	169	484	165	1,415	322	NA	NA
	May	176	229	173	496	162	1,438	321	NA	NA
	June	179	225	171	484	158	1,430	312	607	3,566
	July	179	228	177	476	153	1,439	305	NA	NA
	August	184	233	189	483	151	1,457	308	NA	NA
	September	181	241	187	493	151	1,476	307	591	3,627
	October	172	238	188	500	149	1,485	NA	NA	NA
	November	163	230	178	483	147	1,501	300	NA	NA
	December	164	222	167	466	145	1,484	297	592	3,537
1982	January	163	222	165	464	NA	1,461	280	NA	NA
	February	156	215	162	460	NA	1,431	280	NA	NA
	March	154	207	156	483	NA	1,401	302	NA	NA
	April	148	201	154	NA	NA	1,350	312	NA	NA
	May	147	193	152	NA	NA	1,349	NA	NA	NA

U. S. geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all non-military 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.
[2]"Other OECD" includes Organization of Economic Cooperation and Development (OECD) members not shown.
[3]The members of OECD are listed in Note 2 on the last page of this section.
NA=Not available.
Sources: • See the last page of this section.

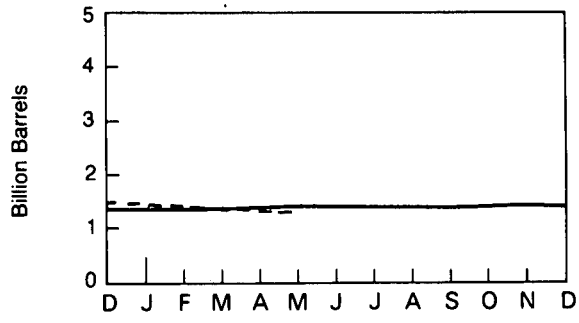
International

Petroleum Stocks

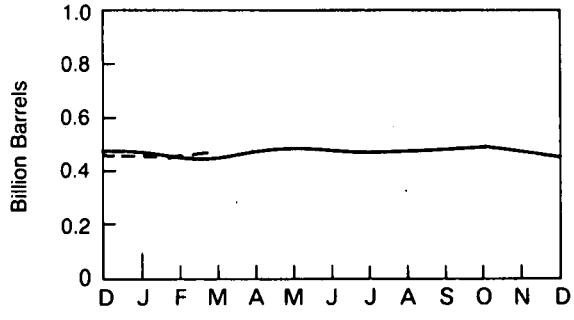
Total OECD



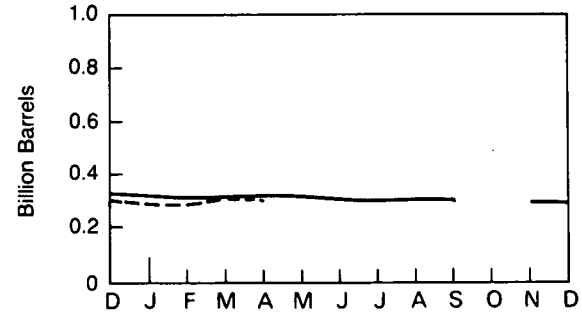
United States



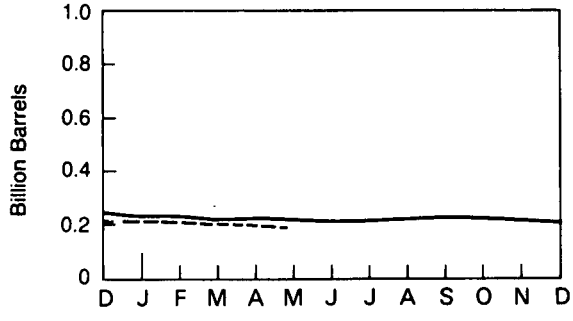
Japan



West Germany



France



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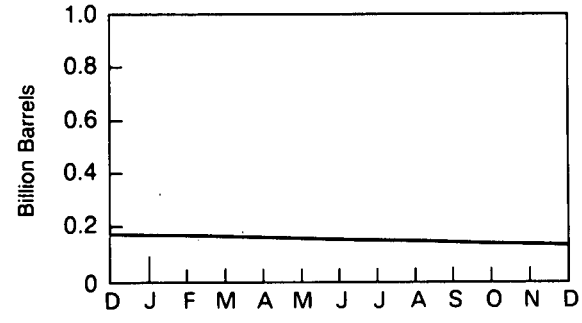

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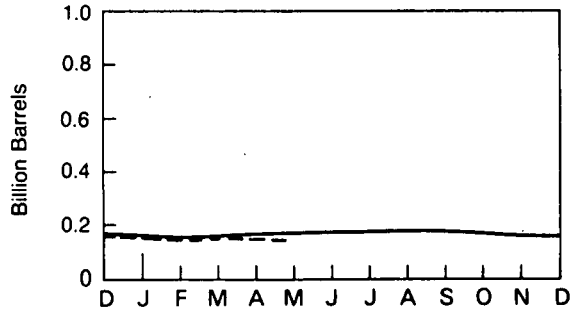
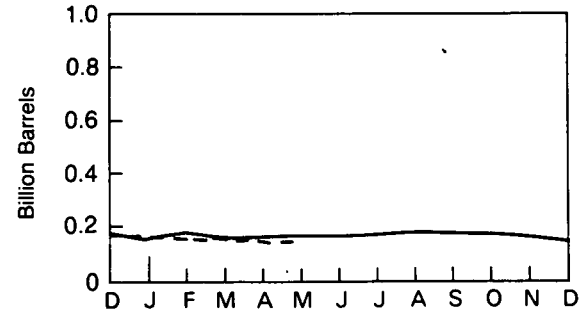
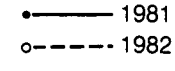


Italy





International

Nuclear Electricity Generation by Non-Communist Countries[1]

		Argentina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Netherlands	Pakistan
		Billion gross kilowatt-hours										
1973	**TOTAL**	**0**	**0**	**0**	**18.3**	**0**	**11.6**	**1.9**	**3.1**	**9.4**	**1.1**	**0.5**
1974	**TOTAL**	**1.0**	**0.1**	**0**	**15.4**	**0**	**14.7**	**2.5**	**3.4**	**18.1**	**3.3**	**0.6**
1975	**TOTAL**	**2.5**	**6.8**	**0**	**13.2**	**0**	**18.3**	**2.5**	**3.8**	**22.2**	**3.3**	**0.5**
1976	**TOTAL**	**2.6**	**10.0**	**0**	**18.0**	**0**	**15.8**	**3.2**	**3.8**	**36.8**	**3.9**	**0.5**
1977	**TOTAL**	**1.6**	**11.9**	**0**	**26.8**	**2.7**	**17.9**	**2.8**	**3.4**	**28.1**	**3.7**	**0.3**
1978	**TOTAL**	**2.9**	**12.5**	**0**	**32.9**	**3.3**	**30.5**	**2.3**	**4.4**	**53.2**	**4.1**	**0.2**
1979	**TOTAL**	**2.7**	**11.4**	**0**	**38.4**	**6.7**	**39.9**	**3.2**	**2.6**	**62.0**	**3.5**	**(s)**
1980	January	0.3	1.2	0	3.6	0.8	5.5	0.2	0.2	8.0	0.4	0
	February	0.1	1.0	0	3.5	0.8	5.3	0.1	0.4	7.4	0.4	0
	March	0	1.0	0	3.7	0.8	5.1	0.2	0.5	8.0	0.4	0
	April	0.1	0.5	0	3.2	0.8	5.0	0.3	0.4	5.6	0.3	0
	May	0.2	0.7	0	2.5	0.3	4.2	0.3	0.3	6.0	0.3	0
	June	0.2	1.1	0	3.1	0	4.1	0.2	0.1	6.7	0.3	0
	July	0.2	1.3	0	3.6	0.4	4.8	0.2	0.1	7.8	0.4	(s)
	August	0.3	1.3	0	3.9	0.4	3.2	0.3	0.1	8.6	0.4	(s)
	September	0.3	1.1	0	3.1	0.4	4.5	0.3	0.1	7.0	0.4	(s)
	October	0.3	0.9	0	3.3	0.5	5.1	0.2	0	6.0	0.3	0
	November	0.3	1.1	0	3.4	0.6	5.8	0.3	0	5.4	0.3	(s)
	December	0.3	1.2	0	3.5	1.2	8.5	0.2	0	6.3	0.3	(s)
	TOTAL	**2.3**	**12.5**	**0**	**40.4**	**7.0**	**61.2**	**2.9**	**2.2**	**82.8**	**4.2**	**0.1**
1981	January	0.3	1.2	0	3.2	1.3	9.3	0.2	0.2	8.2	0.1	(s)
	February	0.2	1.0	0	3.5	0.9	8.6	0.2	0.3	7.1	(s)	(s)
	March	0.3	0.6	0	3.9	1.4	8.8	0.3	0.1	7.8	0.3	0
	April	0.2	0.7	0	3.3	1.5	8.3	0.3	0.6	7.9	0.4	0
	May	0.2	1.2	0	3.4	1.0	8.9	0.4	0.3	8.0	0.4	(s)
	June	0.2	1.2	0	3.6	0.7	8.3	0.3	0.1	6.7	0.4	(s)
	July	0.3	1.3	0	4.0	0.8	8.4	0.3	0.3	8.3	0.4	(s)
	August	0.2	1.2	0	4.0	1.4	7.7	0.2	0.1	8.5	0.4	(s)
	September	0.3	0.9	0	3.3	1.5	8.5	0.2	0.1	6.4	0.4	(s)
	October	0.2	1.0	0	3.4	1.4	8.1	0.2	0.1	5.6	0.4	(s)
	November	0.2	1.3	0	3.5	1.3	9.3	0.2	0.1	5.3	0.4	(s)
	December	0.2	1.3	0	4.1	1.2	11.0	0.3	0.4	6.1	0.3	(s)
	TOTAL	**2.8**	**12.8**	**0**	**43.3**	**14.5**	**105.2**	**3.1**	**2.7**	**86.0**	**3.7**	**0.2**
1982	January	0.3	1.3	0	4.1	1.5	11.0	0.2	0.6	8.1	0.4	(s)
	February	0.2	0.8	0	3.2	1.5	10.0	0.2	0.7	7.7	0.1	(s)
	March	0.3	0.5	0	3.5	1.7	10.6	0.2	0.7	9.2	(s)	0
	April	0.3	1.0	(s)	3.7	1.6	10.1	0.2	0.5	9.7	0.3	0
	May	0.3	1.3	(s)	3.1	1.3	9.0	0.2	0.7	9.5	0.4	0
	June	0.3	1.2	(s)	3.3	0.9	7.7	0.1	0.6	9.5	0.4	0
	July	0.2	1.3	0	3.6	1.2	8.3	0.1	0.6	9.8	0.4	0

Totals may not equal sum of components due to independent rounding.
[1]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.
(s)=Less than 0.05 billion gross kilowatt-hours.
Sources: • See the last page of this section.

International

Nuclear Electricity Generation by Non-Communist Countries[1] (continued)

		South Korea	Spain	Sweden	Switzer-land	Taiwan	United Kingdom[2]	West Germany	Non-Communist World Excluding U.S.	United States	Total Non-Communist World
		Billion gross kilowatt-hours									
1973	**TOTAL**	**0**	**6.5**	**2.1**	**6.2**	**0**	**28.0**	**11.9**	**100.7**	**88.0**	**188.7**
1974	**TOTAL**	**0**	**7.2**	**1.6**	**7.0**	**0**	**34.0**	**12.0**	**121.1**	**104.5**	**225.6**
1975	**TOTAL**	**0**	**7.5**	**12.0**	**7.7**	**0**	**30.5**	**21.7**	**152.7**	**181.8**	**334.5**
1976	**TOTAL**	**0**	**7.6**	**16.0**	**7.9**	**0**	**36.8**	**24.5**	**187.3**	**201.7**	**389.1**
1977	**TOTAL**	**0.1**	**6.5**	**19.9**	**8.1**	**0.1**	**38.1**	**35.8**	**207.8**	**263.3**	**471.0**
1978	**TOTAL**	**2.3**	**7.6**	**23.8**	**8.3**	**2.7**	**36.7**	**35.9**	**263.6**	**292.7**	**556.3**
1979	**TOTAL**	**3.2**	**6.7**	**21.0**	**11.8**	**6.3**	**38.5**	**42.2**	**300.1**	**270.6**	**570.7**
1980	January	0.1	0.7	2.5	1.5	0.9	3.7	4.7	34.2	21.1	55.3
	February	(s)	0.3	2.4	1.2	0.7	3.4	4.2	31.3	21.0	52.2
	March	0.4	0.4	2.3	1.3	0.8	4.2	3.4	32.4	21.0	53.4
	April	0.4	0.4	1.9	1.4	0.7	2.7	3.6	27.3	19.8	47.1
	May	0.4	0.4	1.6	1.4	0.4	2.6	3.5	25.1	19.6	44.7
	June	0.1	0.3	1.6	0.6	0.5	2.8	2.9	24.7	19.4	44.1
	July	0.4	0.3	1.3	0.6	0.8	2.0	3.0	27.2	22.4	49.6
	August	0.3	0.4	1.3	0.7	0.8	2.6	2.7	27.2	25.7	52.9
	September	0.4	0.4	2.1	1.3	0.8	3.1	3.2	28.4	24.8	53.2
	October	0.4	0.4	2.7	1.4	0.8	2.7	3.1	28.2	25.7	53.9
	November	0.4	0.5	3.4	1.4	0.6	3.2	4.1	30.8	22.0	52.8
	December	0.3	0.7	3.6	1.5	0.5	4.2	5.3	37.5	23.1	60.7
	TOTAL	**3.5**	**5.2**	**26.7**	**14.3**	**8.2**	**37.2**	**43.7**	**354.4**	**265.5**	**619.9**
1981	January	0.3	0.8	3.5	1.5	0.8	3.8	5.0	39.7	25.7	65.4
	February	0	0.6	3.6	1.4	0.7	3.4	4.6	36.2	22.6	58.8
	March	0	0.7	3.7	1.5	0.8	4.2	4.9	39.1	23.1	62.2
	April	0	0.6	3.3	1.4	0.8	2.8	4.4	36.5	21.7	58.2
	May	0.2	0.8	2.8	1.4	0.8	2.5	4.3	36.6	20.9	57.4
	June	0.4	0.8	2.8	0.7	0.8	3.3	4.1	34.5	22.6	57.1
	July	0.4	1.1	1.4	0.6	0.8	2.5	5.2	36.1	24.8	61.0
	August	0.4	1.0	2.6	1.0	0.8	2.5	3.9	36.0	28.3	64.2
	September	0.3	0.6	3.0	1.3	0.8	3.1	3.3	33.9	25.7	59.6
	October	0.3	1.2	3.3	1.5	1.2	2.7	4.0	34.7	21.6	56.3
	November	0.3	0.6	3.6	1.4	1.0	3.1	4.3	36.0	R24.0	60.1
	December	0.4	0.7	4.1	1.5	1.1	4.9	5.4	43.1	27.5	70.6
	TOTAL	**2.9**	**9.4**	**37.7**	**15.2**	**10.7**	**38.9**	**53.4**	**442.4**	**R288.5**	**R730.9**
1982	January	0.4	1.0	4.0	1.5	0.8	3.4	5.9	44.5	27.1	71.6
	February	0.4	0.9	3.3	1.3	1.0	3.5	5.4	40.0	21.3	61.3
	March	0.4	0.5	3.8	1.5	1.0	4.1	5.3	43.2	24.0	67.1
	April	0.2	0.4	3.8	1.4	0.8	3.3	5.3	42.5	22.8	65.3
	May	0	0.5	2.5	1.2	0.8	2.6	5.6	39.0	22.8	61.8
	June	(s)	0.7	1.9	0.6	1.0	3.3	4.2	35.6	25.3	60.9
	July	0.3	0.6	1.2	0.9	1.2	3.3	4.5	37.6	26.8	64.4

United States geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]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.
[2]The United Kingdom assesses generation at 4-, 5- or 6-week intervals, rather than by calendar month.
R = Revised data. (s) = Less than 0.05 billion gross kilowatt-hours.
Sources: • See the last page of this section.

Notes and Sources for the International Section

Notes

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

Sources

Crude Oil Production: • 1973-1980 annual data: Energy Information Administration, *1980 International Energy Annual.*
• United States data: Energy Information Administration, *Petroleum Supply Monthly.*
• 1980,1981 and 1982 monthly data (except U.S. and World total): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources.
• 1981 annual data for individual countries (except U.S.): Central Intelligence Agency, "International Energy Statistical Review,"and other industry sources.
• 1981 and 1982 monthly data for World(total): Sum of data for all countries using above sources.
Petroleum Consumption: • Central Intelligence Agency, "International Energy Statistical Review" (except the United States).
• United States data: Energy Information Administration, *Petroleum Supply Monthly.*
• IEA totals for latest months are Energy Information Administration estimates.
Petroleum Stocks: • Canada: Energy, Mines and Resources Canada, *Energy Information Handbook;* Statistics Canada, *Refined Petroleum Products.* • France: Comite Professionel du Petrole, *Petrole 80: Activite de L'Industrie Petroliere* and *Bulletin Mensuel.* • West Germany and Italy: OECD, *Quarterly Oil Statistics* and *Monthly Oil Statistics.* • Japan: Ministry of International Trade and Industry, *Yearbook of Coal, Petroleum, and Coke Statistics 1979; Energy Production: Supply and Demand Statistics Report.* • United Kingdom: United Kingdom Department of Energy, *Digest of United Kingdom Energy Statistics 1981* and *Energy Trends;* and OECD, *Monthly Oil Statistics.* • United States: 1973 through 1979: Energy Information Administration (EIA), *Energy Data Reports,* "Petroleum Statement, Annual"; January 1980 forward: EIA, *Petroleum Supply Monthly.* • Other OECD: OECD, *Quarterly Oil Statistics.* • Total OECD: Sum of data for all OECD member countries using above sources.
Nuclear Electricity Generation: • *Nucleonics Week.*

Definitions

Anthracite

A hard, black, lustrous coal containing a high percentage of fixed carbon and a low percentage of volatile matter. Often referred to as hard coal. Includes metaanthracite and semianthracite. Conforms to ASTM Specification D388 for anthracite.

Bituminous Coal

A coal that is high in carbonaceous matter having a volatility greater than anthracite and a calorific value greater than lignite. Often referred to in the United States as soft coal. Includes subbituminous coal and conforms to ASTM Specification D388 for bituminous and subbituminous coal.

Coke (Coal)

Bituminous coal from which constituents have been driven off by heat so that the fixed carbon and the ash are fused together. It is used primarily in blast furnaces for smelting ores, especially iron ore.

Crude Oil

A mixture of hydrocarbons that is in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Statistically, crude oil reported at refineries, in pipelines, at pipeline terminals, and on leases may include lease condensate, shale oil, and tar sands oil.

Crude Oil Refinery Input

Total crude oil (including lease condensate) input to crude oil distillation units and other units for processing.

Crude Oil Stocks

Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

Distillate Fuel Oil

A light fuel oil distilled off during the refining process. Included are products known as No. 1 and No. 2 heating oils, diesel fuels, and No. 4 fuel oil, which conform to either ASTM Specification D396 or D975. These products are used primarily for space heating, on- and off-highway diesel engine fuel (including railroad engine fuel), and electric power generation.

Electricity Production

Net electricity (gross electricity output measured at the generator terminals, minus powerplant use) generated at electric utilities. Excludes industrial electricity generation. International data are gross electricity output.

Ethane

A normally gaseous, colorless hydrocarbon (C_2H_6) product at natural gas processing plants and refineries. It is used primarily as petrochemical feedstock for eventual production of chemicals and plastic materials.

Exports

Shipments from the 50 States and the District of Columbia to foreign countries. Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.

Full-Serve Station

Station at which services such as pumping gas, washing windows, and checking under the hood are performed by attendants.

Imports

Receipts into the 50 States and the District of Columbia of foreign goods (including receipts of goods from U.S. territories and U.S. Foreign Trade Zones) that are classified by customs officials as "imports for consumption" or "withdrawals from bonded warehouse for consumption," including withdrawals from bonded warehouses for military offshore use and for bunkering of vessels or aircraft engaged in international commerce. Included are imports for the Strategic Petroleum Reserve. Excluded are receipts into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

Landed Cost of Imported Crude Oil

Includes the purchase price at the foreign port (or U.S. land border), transportation and insurance costs, wharfage and demurrage, brokerage fees, import fees and duties, license (ticket) fees, and transportation costs to the refinery. Averages are computed based on major importers, which account for an estimated 90 to 95 percent of total crude oil imports. Coverage includes United States and its territories.

Lease Condensate

A natural gas liquid recovered from gas-well gas in lease separators and field facilities. It 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 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

Propane, propylene, butane, butylene, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids. Formerly called "Liquefied Gases."

Line Miles of Seismic Exploration

The distance along the earth's surface that is covered by seismic surveying.

Maximum Dependable Capacity, Net

Represents the dependable main-unit net capacity of domestic nuclear powerplant reactors and generally varies

throughout the year because the unit efficiency varies with seasonal cooling water temperature variations. Usually maximum dependable capacity is the highest net dependable output of the turbine generator during the most restrictive seasonal conditions (usually summer).

Motor Gasoline

See Motor Gasoline, Finished and Motor Gasoline, Total.

Motor Gasoline, Average Retail Selling Price

The average price (including taxes) of sales of motor gasoline to retail customers at service stations.

Motor Gasoline, Finished

Beginning in January 1981, "Motor Gasoline" was redefined as "Finished Motor Gasoline" which is 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. Included are premium and regular grade, both leaded and unleaded, gasohol and all other refinery products listed in ASTM Specification D439. Excludes any blendstock until blending has been completed and the blendstock is incorporated in the finished gasoline and no longer separately identified. Also excludes any alcohol to be used in the blending of gasohol.

Motor Gasoline, Premium Grade

Finished motor gasoline that has an antiknock designation of 3 or more for unleaded motor gasoline and 4 or more for leaded motor gasoline.

Motor Gasoline, Regular Grade

Motor gasoline that has an antiknock designation of 2 or less for unleaded motor gasoline and 3 or less for leaded motor gasoline.

Motor Gasoline, Total

This includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

Natural Gas

A mixture of hydrocarbon compounds and small quantities of various nonhydrocarbons existing in gaseous phase or in solution with crude oil in natural underground reservoirs at reservoir conditions.

Natural Gas Plant Liquids

Those portions of natural gas that are liquefied at natural gas processing plants, including natural gasoline plants, cycling plants, and fractionators, and, in some instances, field facilities. Products obtained include ethane, liquefied petroleum gases (propane, butane, isobutane, propane-butane mixtures, ethane-propane mixtures), isopentane, natural gasoline, unfractionated streams, plant condensate, and minor quantities of finished products such as motor gasoline, aviation gasoline, special naphthas, jet fuel, kerosene, distillate fuel oil, and miscellaneous products.

Petroleum

A generic term applied to oil and oil products in all forms, such as crude oil, lease condensate, unfinished oils, refined petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.

Petroleum Coke

A solid residue; the final product of the condensation process in cracking. 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 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, natural gasoline and isopentane, plant condensate, unfractionated stream, ethane, liquefied petroleum gases, 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.

Propane

A colorless, highly volatile hydrocarbon (C_3H_8) that is gaseous at ordinary atmospheric conditions and readily recovered as a liquid at natural gas processing plants and refineries. Propane is used primarily for residential and commercial heating and cooling, and also as a fuel for transportation and industrial uses, including petrochemical feedstocks.

Refined Petroleum Product Supplied

Total refined petroleum product supplied is the sum of all refined petroleum products supplied. For each product the amount supplied is derived by summing production, imports, crude oil burned directly, and subtracting changes in primary stocks (net withdrawals is a plus quantity; net additions is a minus quantity) and exports.

Refiner Acquisition Cost

The cost to the refiner, including transportation and fees, of crude oil. The composite cost is the average of domestic and imported crude oil costs and represents the amount of crude oil cost that refiners may pass on to their customers.

Residual Fuel Oil

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as No. 5 and No. 6 fuel oil that conform to ASTM Specification D396, Navy Special Fuel Oil, Bunker C fuel oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of

electric power, space heating, vessel bunkering, and various industrial purposes.

Rotary Rig

A machine, used for drilling wells, that employs a rotating tube attached to a bit for boring holes through rock.

Self-Serve Station

Station at which services such as pumping gas, washing windows, and checking under the hood are not performed by attendants.

Startup Test Phase of Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but that is in the initial testing phase during which production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer, and places it in "commercial operation" status. A request is then submitted to the appropriate utility rate commission to include the powerplant in the rate base calculation.

Stocks (Refined Petroleum Product)

Stocks held at refineries, natural gas processing plants, bulk terminals, and pipelines (including pipeline fill) where the storage capacity exceeds 50,000 barrels or where refined petroleum products are received by tanker, barge, or pipeline. Stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers, are excluded.

Strategic Petroleum Reserve

Petroleum inventories (currently only crude oil) held in Government-owned underground storage for use during periods of major supply interruptions. Congress enacted legislation to establish a Strategic Petroleum Reserve in Title I, Part B, of the Energy Policy and Conservation Act of 1975, Public Law 94-163.

Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of hydrocarbons that may be easily substituted for or interchanged with pipeline-quality natural gas.

Unaccounted for Crude Oil

Represents the arithmetic difference between the indicated demand for crude oil and the total disposition of crude oil. Indicated demand is the sum of crude oil production and imports less changes in crude oil stocks. Total disposition of crude oil is the sum of refinery input, exports of crude oil, crude oil burned as fuel, and crude oil losses.

Wells, Exploratory and Development

Holes drilled for the purpose of finding or producing crude oil or natural gas. They include wells classified as oil wells, gas wells, or dry holes.

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Conversion Factors

Approximate Heat Content of Various Fuels

		1973	1974	1975	1976	1977	1978	1979	1980	1981-82†
Anthracite										
Production	Thousand Btu/short ton	23,170	22,560	23,390	22,770	23,180	23,520	23,590	23,350	23,350
Imports and exports	Thousand Btu/short ton	25,400	25,400	25,400	25,400	25,400	25,400	25,400	25,400	25,400
Consumption, average	Thousand Btu/short ton	22,710	21,950	21,740	22,150	22,690	22,970	22,700	22,160	22,160
Electric utility consumption	Thousand Btu/short ton	17,920	17,200	17,060	17,530	17,240	17,100	17,450	17,650	17,650
Non-utility consumption	Thousand Btu/short ton	24,340	23,750	23,650	23,840	24,990	25,170	25,200	23,740	23,740
Bituminous coal and lignite										
Production	Thousand Btu/short ton	24,010	23,730	23,200	23,150	22,700	22,430	22,590	23,150	23,150
Imports	Thousand Btu/short ton	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Exports	Thousand Btu/short ton	27,000	27,000	27,000	27,000	27,000	27,000	27,000	26,180	26,180
Consumption, average	Thousand Btu/short ton	23,650	23,070	22,800	22,750	22,330	22,140	22,200	22,000	22,000
Electric utility consumption	Thousand Btu/short ton	22,260	21,800	21,660	21,690	21,480	21,280	21,380	21,300	21,300
Non-utility consumption	Thousand Btu/short ton	26,840	26,120	25,810	25,870	25,130	25,070	25,060	25,060	25,060
Coal coke	Thousand Btu/short ton	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Crude petroleum [1]										
Production	Thousand Btu/barrel	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800
Imports	Thousand Btu/barrel	5,817	5,827	5,821	5,808	5,810	5,802	5,810	5,812	5,812
Exports	Thousand Btu/barrel	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800
Crude petroleum and products										
Imports, average	Thousand Btu/barrel	5,897	5,884	5,858	5,856	5,834	5,839	5,810	5,796	5,796
Exports, average	Thousand Btu/barrel	5,752	5,774	5,748	5,745	5,797	5,808	5,832	5,820	5,820
Petroleum products										
Consumption, average	Thousand Btu/barrel	5,515	5,504	5,494	5,504	5,518	5,519	5,494	5,479	5,479
Residential and Commercial	Thousand Btu/barrel	5,381	5,371	5,354	5,383	5,384	5,386	5,281	5,270	5,230
Industrial	Thousand Btu/barrel	5,559	5,531	5,522	5,534	5,546	5,553	5,485	5,443	5,512
Transportation	Thousand Btu/barrel	5,398	5,396	5,395	5,400	5,404	5,412	5,429	5,441	5,429
Electric Utility	Thousand Btu/barrel	6,223	6,215	6,229	6,235	6,231	6,227	6,243	6,249	6,244
Imports	Thousand Btu/barrel	5,983	5,959	5,935	5,980	5,908	5,955	5,811	5,748	5,748
Exports	Thousand Btu/barrel	5,752	5,773	5,747	5,743	5,796	5,814	5,864	5,841	5,841
LPG consumption average [2]	Thousand Btu/barrel	3,746	3,730	3,715	3,711	3,677	3,669	3,680	3,674	3,674
Natural gas plant liquid production	Thousand Btu/barrel	4,049	4,011	3,984	3,964	3,941	3,925	3,955	3,914	3,914
Natural gas, dry										
Production and consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026	1,026
Electric utility consumption	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,034	1,034	1,034
Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,024	1,024
Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030	1,037	1,022	1,022
Exports	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013	1,013	1,013
Natural gas, wet										
Production	Btu/cubic foot	1,093	1,097	1,095	1,093	1,093	1,088	1,092	1,099	1,099
Hydropower [3]	Btu/kWh	10,389	10,442	10,406	10,373	10,435	10,361	10,353	10,353	10,353
Nuclear power [3]	Btu/kWh	10,903	11,161	11,013	11,047	10,769	10,941	10,640	10,640	10,640
Geothermal power [3]	Btu/kWh	21,674	21,674	21,611	21,611	21,611	21,611	21,553	21,629	21,629
Electricity consumption	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

Approximate Heat Content of Refined Petroleum Products:

	Thousand Btu/barrel
Refined Petroleum Products:	
Asphalt	6,636
Aviation gasoline	5,048
Butane	4,326
Butane-propane mixture[4]	4,130
Distillate fuel oil	5,825
Ethane	3,082
Ethane-propane mixture[5]	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
Petrochemical feedstocks	
Naphtha 400°	5,248
Other oils over 400°	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

Units of Measure

Weight

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

Conversion Factors for Crude Oil (Average Gravity)

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

Conversion Factors for Uranium

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

[1] Includes lease condensate.

[2] LPG consumption average is the annual weighted average of the LPG product supplied components: ethane, ethylene, propane, propylene, butane, butylene, butane-propane mixture, ethane-propane mixture, and isobutane.

[3] There is no generally accepted practice for measuring hydropower thermal conversion rates. The hydropower factors on this page are the prevailing heat rate factors at fossil fuel steam electric powerplants. By using the heat rate factor, it is possible to evaluate fossil fuel requirements for replacing hydropower production during periods of drought. Furthermore, it allows for better comparisons with certain other countries such as Norway where hydropower is the principal means for producing electricity. Similarly, the nuclear power and geothermal power conversion factors represent the thermal conversion equivalent of the uranium and geothermal steam consumed at powerplants. The heat content of a kilowatt-hour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatt-hour. It is not possible to determine the hydroelectric powerplant efficiency by using these factors. The efficiency factor for hydroelectric powerplants is derived by multiplying generation efficiency by turbine efficiency. The average hydroelectric powerplant efficiency in the United States is 86 percent while average generation efficiency is 97 percent and average turbine efficiency is 89 percent.

[4] 60 percent butane and 40 percent propane.

[5] 70 percent ethane and 30 percent propane.

† Preliminary data.

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