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Monthly Energy Review

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The *Monthly Energy Review* presents current data and trends 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 and production of electricity from nuclear powered facilities. This report is published to keep the public and other interested parties fully informed with respect to current energy production, consumption, stocks, and prices.

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. . ."

From time-to-time an article that addresses some facet of energy is included in this publication. Feature articles that have appeared in previous issues are as follows:

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An Overview of Natural Gas Markets

By
Frederic H. Murphy,[1] Richard P. O'Neill,[2] and Mark Rodekohr[3]

Energy Information Administration

Introduction

This is the first in a series of planned *Monthly Energy Review* articles intended to present background information on the natural gas markets. The Energy Information Administration (EIA), Federal Energy Regulatory Commission (FERC), and trade associations, such as the American Gas Association, collect and disseminate substantial amounts of data about the gas industry. The purpose of the articles in this series is to synthesize and interpret some of the most important data collected, present some new information, and guide the reader to the major data sources.

This article provides a general introduction to natural gas markets with an emphasis on the relative importance of natural gas to the major energy consuming sectors of the economy and trends in natural gas reserves and production. The article concludes with a discussion of trends in gas shortages.

The Physical Characteristics of Natural Gas

Natural gas, as it comes from wells, is a mixture of gaseous hydrocarbons, primarily methane, that often contains some other gases, such as carbon dioxide and hydrogen sulfide. Gas delivered to the customer is almost entirely the methane remaining after the other constituents have been removed. The nonmethane hydrocarbons, known as natural gas liquids, are removed from the gas stream at processing plants. The natural gas liquids are sold separately for chemical feedstocks, bottled gas, or blending components in petroleum products such as gasoline. Processing also removes most nonmethane gases and neutralizes dangerous hydrogen sulfide gas when present.

"Dry" natural gas delivered to users has approximately 1,020 British thermal units (Btu) of energy in each cubic foot. During 1980, approximately 20 trillion cubic feet (Tcf) of gas were consumed in the United States. That amounted to over 25 percent of the total energy consumed in the United States, or the equivalent (in heat content) of about 10 million barrels of oil per day for the year.

Crude oil and natural gas exist in the same geological formations. Much of the natural gas reserves (approximately 30 percent) are found with oil. The remainder occurs in deposits that do not contain the heavier liquid hydrocarbon components.

Natural gas was a nuisance rather than an asset in the early days of the industry because there was almost no way to market it. Gas was not marketable because it had to be delivered by pipelines, and there was no technology for building long-distance pipelines that could withstand high pressures without leaking. Growth of the gas industry was therefore directly related to the development of seamless welded pipes in the 1920's. During the 1930's, over 1,000 miles of pipeline were built; by 1950, there were over 100,000 miles of gas pipeline. Today, there are more than 260,000 miles of natural gas pipeline in the United States.

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Natural Gas Consumption

From 1950 to 1972, growth in gas consumption (Figure 1) paralleled the growth in the pipeline system. Total consumption rose from 5.8 Tcf in 1950 to a peak of 22.1 Tcf in 1972. Consumption then declined between 1972 and 1975 and has now stabilized at about 20 Tcf per year.

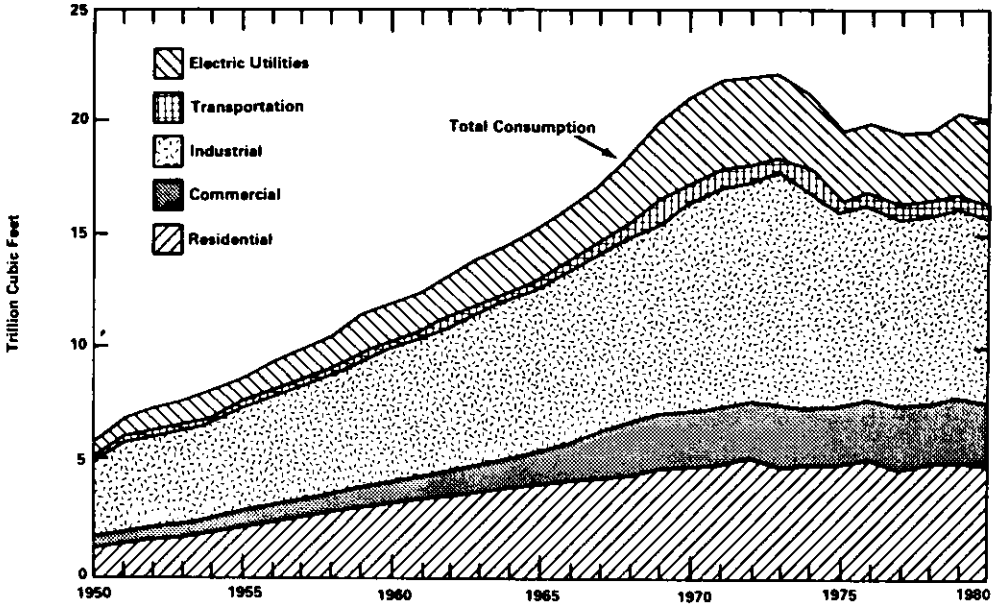
This decline and subsequent stabilization are the results of several events. Some users faced rapidly rising prices in the 1970's, while other users could not buy gas because of shortages. Industries that faced shortages had to close down or switch to different fuels. New homes, offices, and industries also were not allowed to hook up to gas distributors or pipelines because of moratoria on new or expanded hookups during the period. A substantial part of the drop in demand can be explained by economic conditions. In 1975, the country experienced its worst post-war recession; industrial output was low, so the need for gas in industry was correspondingly less. Since 1975, conservation has played an important role in reducing demand by individual consumers. Gas consumption has remained relatively stable since 1975 because, even though gas prices are increasing, gas is less expensive than oil, and homeowners, as well as electric utilities, are switching from oil to gas.

Residential Sector

Residential gas use grew steadily between 1950 and 1972, from 1.2 Tcf to 5.1 Tcf. Since then, residential consumption has fluctuated between 4.8 Tcf and 5.1 Tcf. Although gas use has remained relatively constant in the residential sector, gas use per customer has declined from a peak high in 1972 (Figure 2). The increase in gas use per customer prior to 1972 paralleled steady increases in consumers' incomes and the increase in average new home size. The initial stabilization in per customer consumption started in 1970 with a sharp decline after 1972 that coincided with the end of declining gas prices and the beginning of a new trend of rising prices. In the years since 1974, gas demand fluctuations paralleled the severity of the winters.

Currently, natural gas is the most widely used fuel for home heating purposes (Figure 3). In 1979, about 42 million households, or 55 percent of all households, used natural gas for space heating. An additional 7 million households used natural gas for

Figure 1. Consumption of Natural Gas by End-Use Sector, 1950–1980



Source: EIA, *1980 Annual Report to Congress*, Volume Two: Data, April 1981.

purposes other than space heating, such as water heating and cooking. The total number of households using natural gas for space heating increased by 550,000 between 1978 and 1979. This increase was due to the construction of new, gas-using homes and conversion of existing furnaces (oil in particular) to natural gas.

Residential natural gas use varies considerably across regions of the country. In 1979, the North Central Census Region had the highest total number of natural gas users (16 million) and the highest percentage (75 percent) of households that use natural gas for heating purposes (Figure 4). The Northeast and South Regions had the lowest percentage (40 percent) of households that use natural gas for space heating. These regional differences are due primarily to the historical growth in the transmission system and the degree of urbanization.

In 1979, the average household using natural gas for heating paid $400 per year for natural gas. However, regional average household expenditures varied because of governmental pricing controls, transportation costs from producing regions in the South and Southwest, and differences in requirements due to climate variations. The highest average expenditure was in the Northeast, $525 per household, while the lowest average expenditure was in the West, $251 per household.

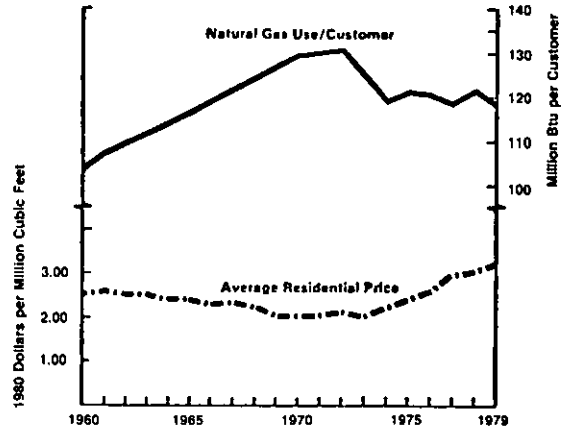
Industrial Sector

The industrial sector consumes more natural gas than any other sector, although its share of total consumption has been declining since 1950. Industrial demand grew from 3.4 Tcf in 1950 to a peak level of 10.2 Tcf in 1973 and has been steadily declining ever since, reaching 8.2 Tcf in 1980. In 1980, this sector consumed about 40 percent of the natural gas, a decrease from its market share of approximately 60 percent in 1950.

The initial declines in consumption following 1973 were due primarily to decreasing industrial output and shortages of gas. Since 1975, industrial activity has rebounded and shortages have decreased. However, conservation by industry has resulted in a continuing decline in industrial gas use.

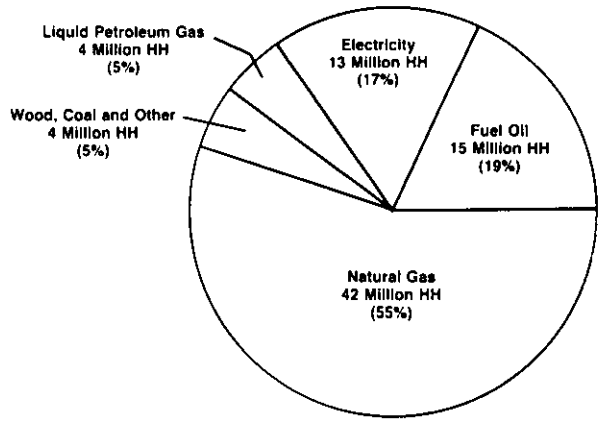
The relative importance of gas in the industrial sector follows the same pattern as consumption. In 1950, gas constituted less than 30 percent of industrial energy use. The share reached almost 50 percent by 1973 and has since declined to 40 percent in 1980 because of increases in oil and electricity consumption, while gas is being conserved.

Figure 2. Residential Natural Gas Use Per Customer and Average Residential Price, 1960–1979



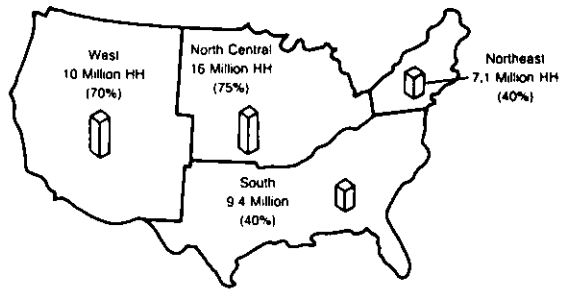
Source: American Gas Association, *Gas Facts*, 1979.

Figure 3. Home Heating Fuels, 1979 (Number of Households [HH] and Percent)



Source: EIA, *Residential Energy Consumption Survey; 1979–1980 Consumption and Expenditures, Part 1*, April 1981.

Figure 4. Natural Gas Users by Census Region, 1979 (Number of Households [HH] and Percent Within Region)



Source: EIA, *Residential Energy Consumption Survey: 1979–1980 Consumption and Expenditures, Part 1*, April 1981.

The components of industrial gas demand can be broken down by subsector (Figure 5). Manufacturing accounts for the predominant industrial use of gas. Mining is a large user because this subsector includes fuel used for oil and gas extraction and gas processing.

Natural gas use in manufacturing is diverse, but 64 percent is concentrated in three areas: chemicals, primary metals, and petroleum refining (Figure 5). The regional distribution of industrial natural gas consumption is heavily skewed toward the South Central States, particularly Texas and Louisiana. In 1978, the West-South-Central (WSC) Census Division, composed of four States (Texas, Louisiana, Oklahoma, and Arkansas), represented 50 percent of all industrial natural gas consumption. This concentration occurs because many natural gas-intensive industries are located near the major sources of natural gas supply to avoid most gas transportation costs.

Natural Gas Supply

Natural gas is a finite resource contained in reservoirs or groups of reservoirs known as fields. These reservoirs are not underground lakes. They are layers of porous rock filled with gas, covered by a layer of impermeable rock that stops the gas from rising and ventilating through the surface of the Earth. These reservoirs range in size from very small to very large.

Producing gas fields range in depth from a few hundred feet to more than 20,000 feet underground. It is believed that most gas originates from decomposed organic matter. However, some of the deep gas may be methane that was trapped in rock early in the Earth's history, when methane was a major component of the atmosphere.

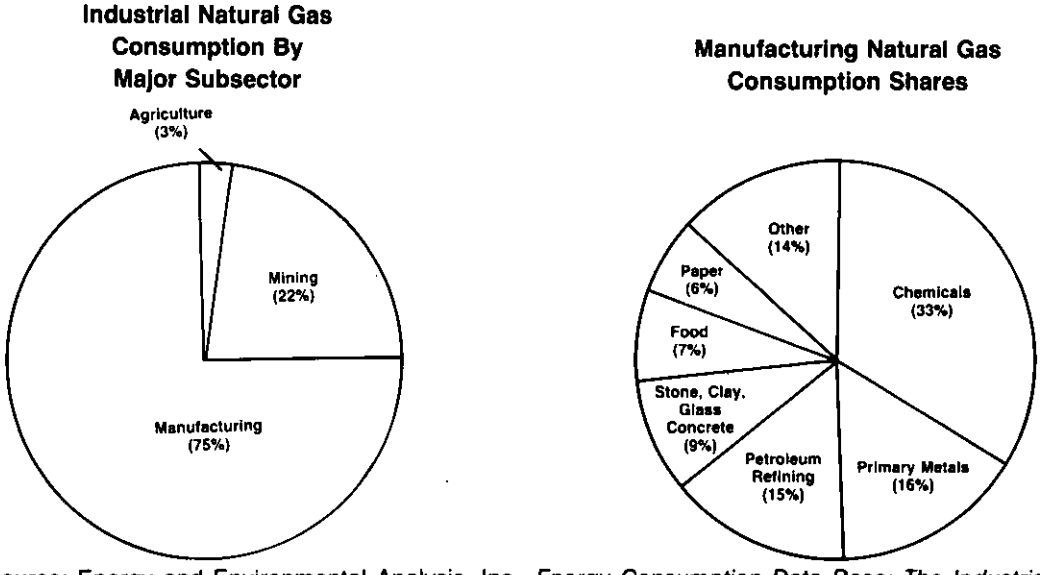
Resources

No one knows precisely how much gas remains to be found. The U.S. Geological Survey has estimated with varying degrees of certainty that there are 475 to 739 Tcf remaining to be found using current technology. Unconventional resources, requiring higher prices and/or new approaches to exploration and production, are even more uncertain than conventional resources. The best guess for unconventional resources is 1,200 Tcf. Undiscovered resource estimates have a wide range of uncertainty because there is no sure way to know whether gas is present at any location until a hole is drilled. In 1980, 7 out of every 10 exploratory wells drilled were dry or contained insufficient quantities of gas or oil to be economical.

Reserves

Reserves are estimates of the inventories of natural gas that have been found and have yet to be produced. They represent a reasonably sure source of

Figure 5. Industrial Natural Gas Consumption By Major Subsectors



Source: Energy and Environmental Analysis, Inc., *Energy Consumption Data Base: The Industrial Sector End Use*, Volume 1, December 1980 (Based on information supplied in 1976).

supply over the next several years. The 1980 year-end estimate of reserves of dry natural gas was 199 Tcf.

Gas is produced from wells that have penetrated reservoirs containing gas and/or crude oil. Development wells are drilled into the reservoirs, "stepping out" from an exploratory well. These development wells are used to add more precise information about how much gas is present as well as providing the capability to produce the gas. The more development wells that are drilled the faster the gas can be produced. However, the drilling of wells is costly, so a combination of the economics along with State and Federal conservation regulations determines the distance between wells.

Producing wells do not yield gas at a constant rate. Initially the gas flows out of the well at a high rate. But, as the gas is produced, the underground pressures are reduced, resulting in less force pushing the gas out and a lower flow rate. Because of this pressure change, the existing gas reserves will not be produced at a rate of 20 Tcf per year for 10 years and then just stop. Rather, production from existing reserves will gradually taper off. Maintaining current production levels requires increased exploratory drilling to find and develop new reserves and development drilling to accelerate the rate at which the reserves can be produced.

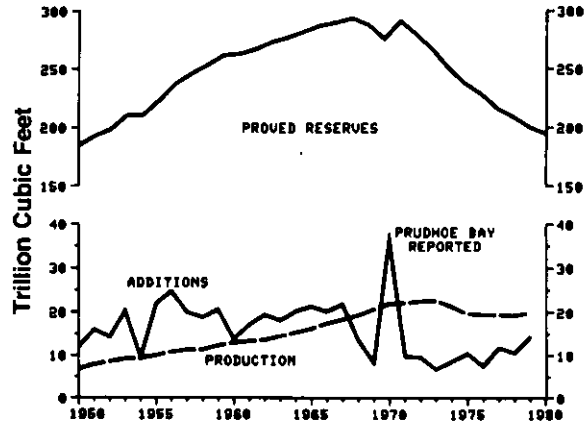
Trend in Gas Supply

The pattern of domestic natural gas production parallels the patterns of consumption previously described although production has not grown as rapidly. Marketed production of dry natural gas (gas with the liquids removed) grew from 6 Tcf in 1950 to a peak of 21.7 Tcf in 1973, and since then has declined, dropping to 19.3 Tcf in 1980. Domestic production has fallen below consumption, and the deficit has been satisfied by increased imports. There were no imports of natural gas in 1950. In 1979, natural gas imports peaked at 1.25 Tcf and then dropped to 1 Tcf in 1980 due to price increases.

Additions to reserves have been below production for almost every year since 1967 (Figure 6). The only year when additions exceeded production since 1967 was 1970 when the gas found at Prudhoe Bay, Alaska, was added to the reserves inventory.

Recently, however, there has been an upturn in reserve additions. This has been due to improved economics and a turnaround in drilling (Figure 6).

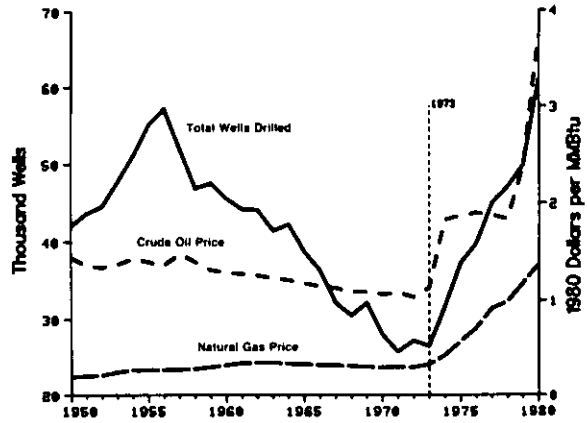
Figure 6. Natural Gas Reserves, Reserves Additions, and Production, 1950–1979



Sources: American Gas Association, *Gas Facts*, 1979, and EIA, *1980 Annual Report to Congress*, Volume two: Data, April 1981.

The drilling of a well is an economic decision. The higher the price of gas, the greater the revenues from a discovery. Drilling opportunities that were once uneconomical, either because it was necessary to drill deep or the find was too small, have become more economical. The increased drilling directly parallels the increased prices for gas and oil (Figure 7). A record 61,000 wells were drilled in 1980, of which 15,700 were completed as gas wells. Drilling has continued to increase through 1981, with the number of wells expected to reach 75,000. Before 1980, the previous peak was 57,000 wells in 1956.

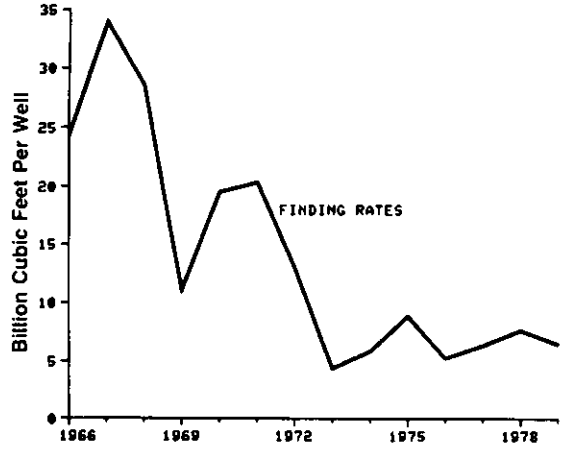
Figure 7. Average Wellhead Price of Crude Oil and Natural Gas and Total Wells Drilled, 1950–1980



Source: EIA, *1980 Annual Report to Congress*, Volume Two: Data, April 1981.

Although drilling is currently exceeding the pace of the peak years in the mid 1950's, reserve additions are being found at a lower rate (Figure 8). The reserves added per successful exploratory well have decreased. Through 1973, this statistic, known as the finding rate, declined dramatically. Since 1973, the finding rate has stabilized at a level far below what it was in the past.

Figure 8. Reserves Added Per Successful Exploratory Gas Well, 1966–1979



Source: American Gas Association, *Gas Facts*, 1979.

The decline in the finding rate is related to the basic economics of the industry and the physical properties of oil and gas fields. In a given area of the country and in a given geological formation, there is only so much gas. The early exploratory wells tend to find the biggest reservoirs in the area, mainly because bigger reservoirs are easier to hit. As exploration proceeds in an area, the remaining targets are smaller, on average, leading to a decline in the reserves added by each well. After the bigger reservoirs are found, drilling either tapers off, as occurred before 1973, or higher prices make even the smaller prospects economical and drilling accelerates as has happened since 1973. A larger number of smaller finds reduces the finding rate.

The only way the finding rate is likely to improve is for new, previously undrilled areas to be explored successfully. This is happening in the offshore areas such as the Gulf of Mexico, the area known as the Overthrust Belt associated with the Rocky Mountains, and the more fully developed areas, where the drilling is going far deeper than in the past.

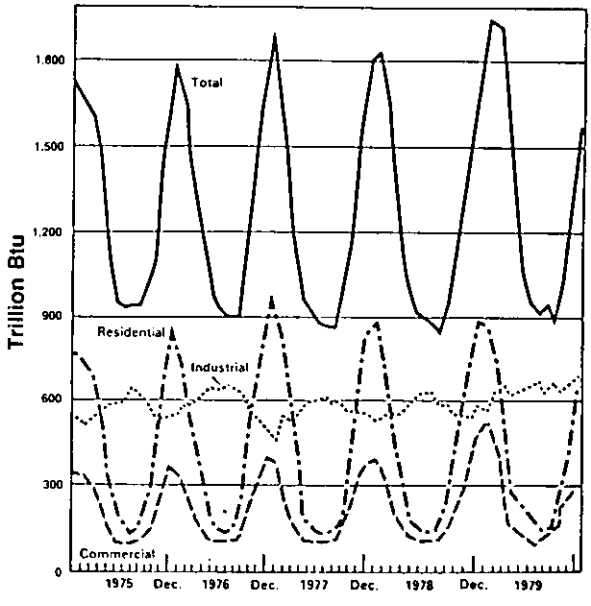
The Seasonal Nature of Gas Markets

Natural gas consumption follows a seasonal pattern (Figure 9). The winter peak consumption is approximately double the summer slack demand. Residential and commercial consumption increases several-fold during winter to meet space-heating needs.

In most years, at the time residential and commercial demand are at the winter peak, combined industrial and electric utility demand dips. This occurs even in years when there are no serious shortages. The countercyclical demand in the industrial sector is due to the nature and economics of the pipeline industry.

The only economical way to move large quantities of natural gas across the country is in pipelines. For example, the homeowner's furnace is physically connected by pipe to the producing well. To move more gas, more expensive, larger pipe must be used or more pumping stations must be added to operate the system at higher pressures. However, expanding capacity to meet the peak demands would mean investing in equipment that would stand idle for all but a few weeks of the year.

Figure 9. Utility Sales of Natural Gas To Consumers By Months, 1975–1979



Source: American Gas Association *Gas Facts*, 1979.
Note: Does not include direct sales by producers to consumers. Industrial includes sales to electric utilities.

The natural gas industry had tried to reduce the need for rarely used equipment by developing a group of large users that can consume gas when demand by other consumers is slack and switch to alternative fuels when demand is high. These customers, industrial users and electric utilities (that are not gas distributors), agree to interruptible contracts. Electric utilities that own gas distribution systems balance the needs of their gas customers with the use of gas as a fuel to generate power.

Another approach to balancing supply and demand taken by the industry is to produce gas during slack periods, transport it relatively near the consumer, and store it for the seasonal increase in demand. The top graph on page 51 in the Natural Gas section of this issue of the *Monthly Energy Review* illustrates the seasonal patterns of consumption and production. Production shows almost no variation from season to season, yet consumption has a distinct pattern. The bottom graph on page 51 shows how inventories of gas balance the mismatch between production and consumption.

Natural Gas Shortages

During the mid 1970's, there were some serious shortages of natural gas. There were school and factory closings leading to concerns about the future availability of gas.

A shortage of natural gas is an easy concept to understand, but it is impossible to measure with any precision. For data to be accurate, a concrete definition of what is to be measured is necessary. For example, gas consumption is determined by measuring the physical volumes delivered. A shortage is the difference between what a consumer wants and what is delivered. Although the deliveries can be readily measured, the desires cannot.

The difficulty of translating "desired" demand into concrete terms can be seen in the context of interruptible contracts. Including all interruptible unmet demand overstates the level of shortages because these customers clearly traded reliability of supply for lower prices. Not including any curtailments to interruptible customers probably understates shortages, however, since in a year of greater shortages the customer may receive far less gas than expected.

A seemingly obvious measure of shortages derives from the structure of natural gas delivery contracts. A large purchaser pays two charges for gas. The first is for the gas itself. The second is for the capacity to have gas delivered at a given rate. For example, the purchasers may contract for 1,000,000 cubic feet per week of capacity, yet buy only 500,000 cubic feet in some weeks and 1,200,000 cubic feet in others.

For any gas purchased beyond the contracted volume in a given period, the customer pays a substantially higher price. The rational purchaser, therefore, contracts for more than is needed while keeping gas costs at a minimum and ensuring the availability of supply. As a consequence, using contracted volumes to measure demand overstates desired demand and the level of shortages.

The Energy Information Administration (EIA) collects data to indicate trends in shortages. These data are referred to as "curtailments" instead of shortages because of the difficulty in defining a shortage. The data are collected from each pipeline company, which chooses a curtailments definition that best suits the characteristics of its customers. Some pipeline companies have included all or none of the interruptible customer curtailments. Some include changes in interruptible curtailments. Many use the contracted volume as demand estimates.

The one feature of the curtailments definition that is constant throughout reporting is that once a definition is chosen by a pipeline company it is used for all future reports. This consistency across time illustrates the year-to-year trends in shortages.

Table 1 contains curtailments data collected by EIA. The reported curtailments peaked in the winter of 1976-77 and have declined substantially since then. This indicates that shortages have not been the problem in recent years as they were in the mid 1970's.

Table 1. "Curtailments" as Reported on EIA Data Collection Form-50

Heating Season	Amounts "Curtailed" (Trillion cubic feet)
1975–76	1.45
1976–77	1.99
1977–78	1.36
1978–79	1.21
1979–80	.60

The major factor affecting the level of shortages was Federal regulations on wellhead prices of natural gas. The Federal policies and their consequences will be detailed by subsequent feature articles in this series.

Conclusions

The data presented here provide a mixed picture of natural gas markets. Gas supply and demand are no longer growing. At the same time, there are no steep drops as in 1974 and 1975. Gas prices are rising, but shortages are declining. More exploration for gas is going on, and, while finding rates are low, they are at least not falling as rapidly as in the past and may even be increasing.

Conservation seems to be lowering rates of consumption, holding demand for gas constant even though the population and the economy have grown since 1975. There is also some built-in conservation that would occur if gas production were to decline. About one-third of the industrial gas consumption is associated with oil and gas production or processing in the mining and petroleum refining subsectors. Consequently, any reduction in oil consumption or oil and gas production leads to a reduction in industrial gas use, that is, further conservation.

Current trends present a different picture from the early and mid 1970's. That was a period of increasing shortages, an accelerating decline in production and reserves, and a bottoming out of drilling.

A Bibliography of EIA Publications On Natural Gas

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Statistics of Interstate Natural Gas Pipeline Companies, DOE/EIA-0145
Financial Statistics of Electric Utilities and Interstate Pipeline Companies, DOE/EIA-0147

Part 1 Executive Summary

Overview

Production

Energy production during the first 9 months of 1981 totaled 47.7 quadrillion Btu, 1.1 percent* below the level during the same period of 1980. Decreases in production occurred for petroleum (0.2 percent) and coal (5.5 percent). Natural gas production increased by 1.3 percent, and other forms of energy production combined were up by 1.5 percent.

Consumption

During the first 9 months of 1981, energy consumption totaled 55.4 quadrillion Btu, a 1.6 percent decrease compared to consumption during the same period of 1980. Decreases in the consumption of petroleum (5.1 percent) and natural gas (1.1 percent) contributed to the overall decline in energy consumption during this period. Coal consumption increased by 4.1 percent and consumption of other energy sources combined increased 1.8 percent over the level during the first 9 months of 1980.

Imports

Net imports of energy during the first 9 months of 1981 totaled 7.3 quadrillion Btu, 21.4 percent below the level for the first 9 months of 1980. By energy source, the decreases in net imports were petroleum (15.4 percent) and natural gas (14.3 percent). Electricity and coal coke combined increased 12.5 percent. Net exports of coal during the first 9 months of 1981 were 19.0 percent higher than the level during the same period of 1980.

*All percentage increases/decreases are on a daily rate basis to remove impact of 1980 leap year.

ENERGY SUMMARY
(Quadrillion (10^{15}) Btu)

	September			Cumulative January through September				
	1981	1980	Percent Change	1981	1981 Daily Rate	1980	1980 Daily Rate	Percent Change*
Total Production	**5.539**	**5.240**	**+5.7**	**47.711**	**0.175**	**48.430**	**0.177**	**−1.1**
Petroleum[1]	1.686	1.679	+0.4	15.311	0.056	15.391	0.056	−0.2
Natural Gas	1.593	1.547	+3.0	14.891	0.055	14.761	0.054	+1.3
Coal	1.798	1.555	+15.6	13.115	0.048	13.934	0.051	−5.5
Other[2]	0.462	0.459	+0.8	4.393	0.016	4.345	0.016	+1.5
Total Consumption	**5.662**	**5.798**	**−2.3**	**55.391**	**0.203**	**56.510**	**0.206**	**−1.6**
Petroleum[3]	2.538	2.727	−7.0	24.043	0.088	25.439	0.093	−5.1
Natural Gas	1.338	1.326	+0.8	14.676	0.054	14.898	0.054	−1.1
Coal	1.309	1.272	+2.9	12.131	0.044	11.696	0.043	+4.1
Other[4]	0.478	0.472	+1.3	4.541	0.017	4.476	0.016	+1.8
Net Imports	**0.759**	**0.825**	**− 8.0**	**7.302**	**0.027**	**9.319**	**0.034**	**−21.4**
Petroleum[5]	0.997	0.980	+ 1.7	8.596	0.031	10.203	0.037	−15.4
Natural Gas	0.065	0.057	+14.5	0.610	0.002	0.714	0.003	−14.3
Coal	(0.319)	(0.226)	(+41.4)	(2.051)	(0.008)	(1.730)	(0.006)	(+19.0)
Other[6]	0.016	0.013	+18.7	0.148	0.001	0.132	0.000	+12.5

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

Executive Summary

Energy Summary

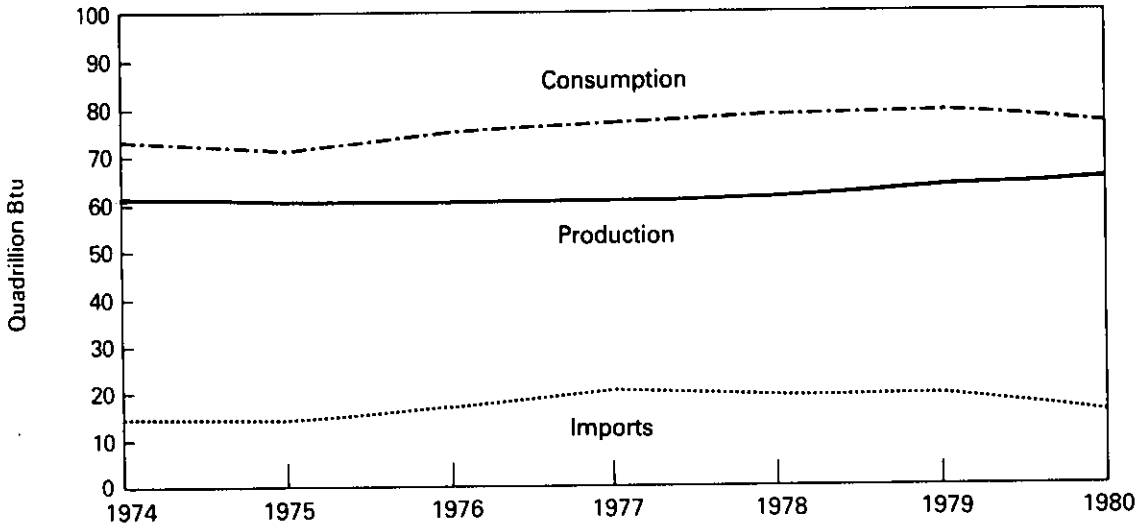
		Energy Production[1]	Energy Consumption[2]	Energy Imports[3]	Energy Exports[4]
		Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**62.433**	**74.609**	**14.732**	**2.073**
1974	**TOTAL**	**61.229**	**72.759**	**14.417**	**2.241**
1975	**TOTAL**	**60.059**	**70.707**	**14.113**	**2.389**
1976	**TOTAL**	**60.091**	**74.510**	**16.838**	**2.213**
1977	**TOTAL**	**60.293**	**76.332**	**20.092**	**2.097**
1978	**TOTAL**	**61.204**	**78.150**	**19.262**	**1.952**
1979	**TOTAL**	**63.907**	**78.968**	**19.622**	**2.900**
1980	January	5.598	7.423	1.652	0.227
	February	5.246	7.018	1.459	0.208
	March	5.634	6.906	1.489	0.266
	April	5.396	6.021	1.320	0.295
	May	5.521	5.831	1.277	0.346
	June	5.335	5.709	1.288	0.365
	July	5.185	5.957	1.174	0.328
	August	5.276	5.847	1.188	0.319
	September	5.240	5.798	1.160	0.335
	October	5.431	6.168	1.237	0.376
	November	5.275	6.288	1.227	0.347
	December	5.612	7.235	1.359	0.343
	TOTAL	**64.748**	**76.201**	**15.830**	**3.756**
1981	January	5.446	7.426	1.339	0.267
	February	5.195	6.346	1.205	0.282
	March	5.667	6.458	1.184	0.377
	April	R4.601	R5.737	R1.098	R0.331
	May	R4.723	R5.786	R1.115	R0.281
	June	5.242	5.841	1.005	0.249
	July	5.596	6.157	1.110	0.400
	August	5.702	5.976	1.101	0.429
	September	5.539	5.662	1.179	0.420
	TOTAL (Year-to-date)	**47.711**	**55.391**	**10.337**	**3.035**

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 1979.
[1]See Explanatory Note 1.
[2]See Explanatory Note 2.
[3]See Explanatory Note 3.
[4]See Explanatory Note 4.
R=Revised data.
Note: 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.
Source: •Energy Information Administration calculations based on data appearing elsewhere in this publication.

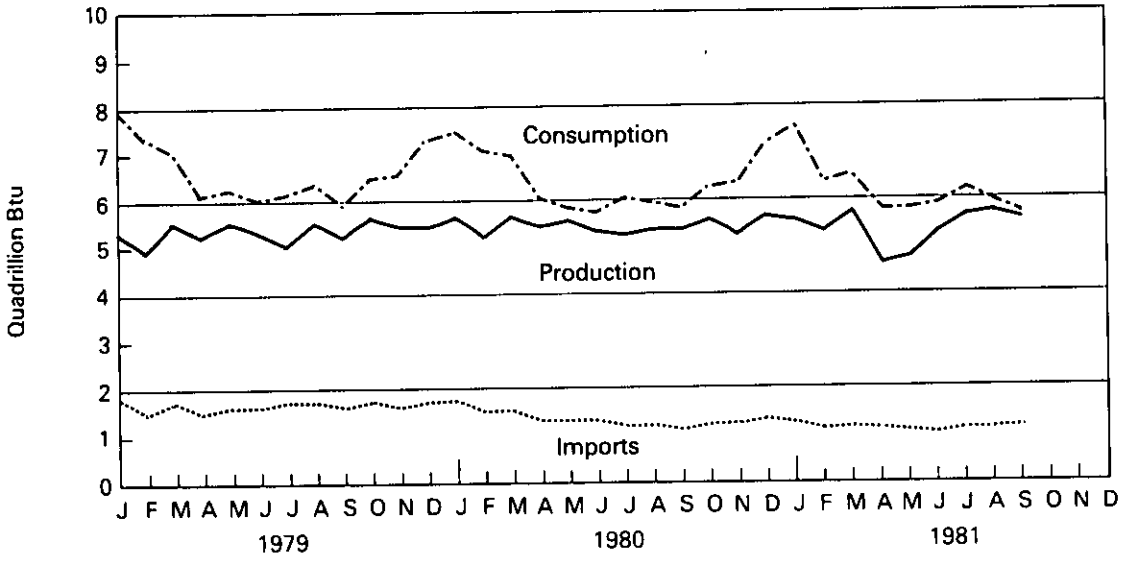
Executive Summary

Energy Summary

Yearly



Monthly



Executive Summary

Production of Energy by Type

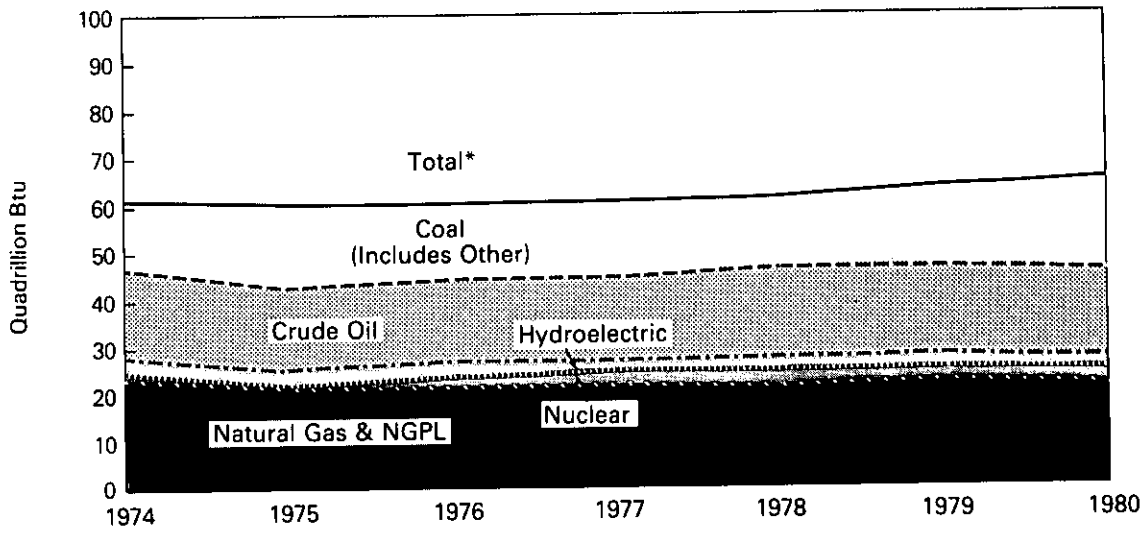
		Coal[1]	Crude Oil[2]	NGPL[3]	Natural Gas (Dry)	Hydro-electric Power[4]	Nuclear Electric Power	Other[5]	Total Energy Produced	Yearly Cumulative Energy Produced
		Quadrillion (10^{15}) Btu								
1973	**TOTAL**	**14.366**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.433**	
1974	**TOTAL**	**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**	**2.958**	**2.977**	**0.068**	**61.204**	
1979	**TOTAL**	**17.651**	**18.104**	**2.286**	**20.076**	**2.954**	**2.748**	**0.089**	**63.907**	
1980	January	1.573	1.555	0.202	1.782	0.267	0.213	0.008	5.598	5.598
	February	1.481	1.463	0.189	1.672	0.226	0.208	0.008	5.246	10.845
	March	1.603	1.566	0.192	1.791	0.257	0.216	0.008	5.634	16.478
	April	1.574	1.512	0.193	1.635	0.272	0.202	0.008	5.396	21.874
	May	1.605	1.553	0.191	1.659	0.305	0.198	0.010	5.521	27.395
	June	1.612	1.487	0.185	1.552	0.292	0.197	0.009	5.335	32.730
	July	1.385	1.538	0.186	1.582	0.258	0.226	0.010	5.185	37.915
	August	1.546	1.514	0.186	1.542	0.216	0.262	0.011	5.276	43.191
	September	1.555	1.500	0.179	1.547	0.195	0.254	0.010	5.240	48.430
	October	1.634	1.535	0.184	1.615	0.189	0.264	0.011	5.431	53.861
	November	1.551	1.479	0.186	1.619	0.203	0.226	0.011	5.275	59.137
	December	1.630	1.548	0.191	1.759	0.235	0.238	0.011	5.612	64.748
	TOTAL	**18.749**	**18.250**	**2.263**	**19.754**	**2.913**	**2.704**	**0.114**	**64.748**	
1981	January	1.482	1.534	0.196	1.735	0.236	0.252	0.011	5.446	5.446
	February	1.593	1.396	0.179	1.561	0.223	0.233	0.010	5.195	10.640
	March	1.750	1.546	0.194	1.711	0.218	0.237	0.011	5.667	16.308
	April	0.835	R1.486	R0.184	1.643	0.219	0.222	0.010	R4.601	R20.908
	May	0.841	R1.528	R0.190	1.687	0.255	0.212	0.010	R4.723	R25.631
	June	1.396	1.498	0.198	1.634	0.278	0.228	0.010	5.242	R30.874
	July	1.654	1.555	0.199	1.664	0.265	0.249	0.011	5.596	R36.470
	August	1.766	1.541	0.201	1.664	0.228	0.290	0.011	5.702	R42.172
	September	1.798	1.500	0.186	1.593	0.188	0.263	0.011	5.539	47.711
	TOTAL (Year-to-date)	**13.115**	**13.585**	**1.726**	**14.891**	**2.111**	**2.185**	**0.096**	**47.711**	

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 1979.
[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.

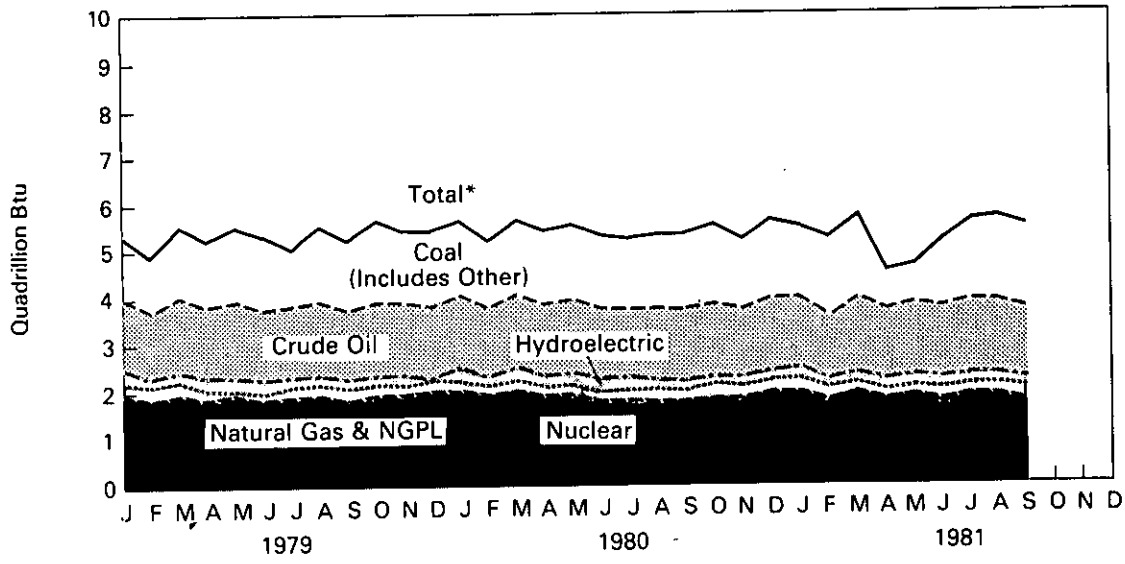
Executive Summary

Production of Energy by Type

Yearly



Monthly



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

Executive Summary

Consumption of Energy by Type

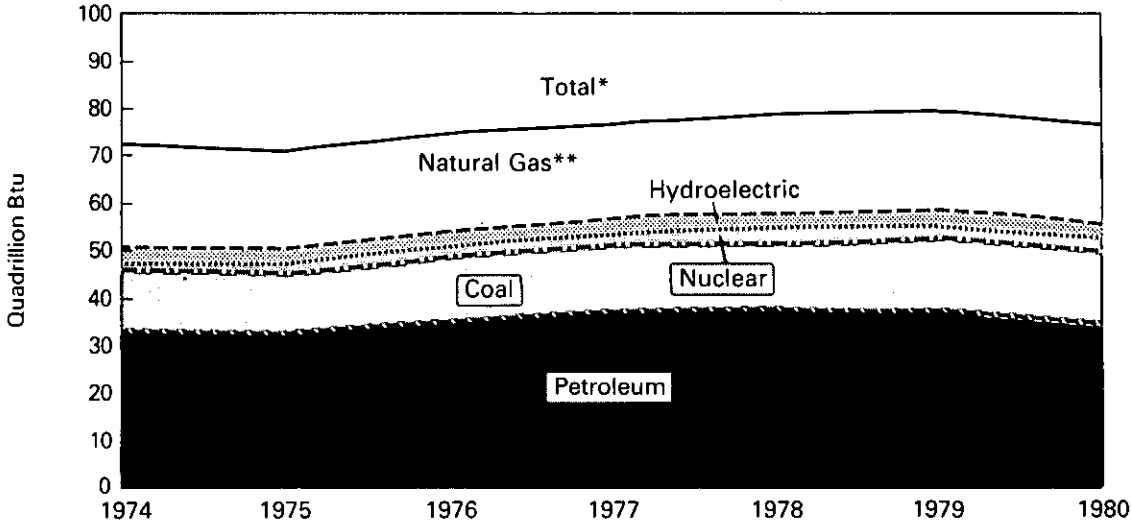
		Coal[1]	Natural Gas (Dry)	Petroleum	Hydroelectric Power[2]	Nuclear Electric Power	Net Imports of Coal Coke[3]	Other[4]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**13.300**	**22.512**	**34.840**	**3.010**	**0.910**	**(0.008)**	**0.046**	**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**	**13.965**	**19.931**	**37.122**	**2.515**	**2.702**	**0.015**	**0.082**	**76.332**	
1978	**TOTAL**	**13.846**	**20.000**	**37.965**	**3.164**	**2.977**	**0.131**	**0.068**	**78.150**	
1979	**TOTAL**	**15.109**	**20.666**	**37.123**	**3.166**	**2.748**	**0.066**	**0.089**	**78.968**	
1980	January	1.410	2.327	3.177	0.285	0.213	0.003	0.008	7.423	7.423
	February	1.325	2.238	2.998	0.242	0.208	(0.001)	0.008	7.018	14.441
	March	1.307	2.143	2.961	0.275	0.216	(0.003)	0.008	6.906	21.347
	April	1.169	1.601	2.756	0.289	0.202	(0.005)	0.008	6.021	27.368
	May	1.173	1.383	2.749	0.323	0.198	(0.006)	0.010	5.831	33.199
	June	1.245	1.279	2.672	0.309	0.197	(0.004)	0.009	5.709	38.908
	July	1.401	1.328	2.719	0.276	0.226	(0.004)	0.010	5.957	44.865
	August	1.393	1.272	2.679	0.234	0.262	(0.003)	0.011	5.847	50.712
	September	1.272	1.326	2.727	0.213	0.254	(0.004)	0.010	5.798	56.510
	October	1.238	1.574	2.880	0.207	0.264	(0.006)	0.011	6.168	62.678
	November	1.261	1.820	2.752	0.220	0.226	(0.002)	0.011	6.288	68.966
	December	1.407	2.201	3.126	0.253	0.238	(0.001)	0.011	7.235	76.201
	TOTAL	**15.603**	**20.495**	**34.196**	**3.125**	**2.704**	**(0.037)**	**0.114**	**76.201**	
1981	January	1.491	2.303	3.115	0.254	0.252	0.000	0.011	7.426	7.426
	February	1.322	1.939	2.604	0.239	0.233	(0.001)	0.010	6.346	13.772
	March	1.333	1.946	2.697	0.236	0.237	(0.003)	0.011	6.458	20.230
	April	1.207	1.544	R2.518	0.237	0.222	(0.001)	0.010	R5.737	R25.967
	May	1.213	1.490	R2.588	0.273	0.212	0.000	0.010	R5.786	R31.753
	June	1.317	1.364	2.631	0.296	0.228	(0.004)	0.010	5.841	R37.595
	July	1.501	1.395	2.718	0.283	0.249	0.000	0.011	6.157	R43.752
	August	1.437	1.358	2.633	0.246	0.290	0.000	0.011	5.976	R49.728
	September	1.309	1.338	2.538	0.206	0.263	(0.002)	0.011	5.662	55.391
	TOTAL (Year-to-date)	**12.131**	**14.676**	**24.043**	**2.270**	**2.185**	**(0.011)**	**0.096**	**55.391**	

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.

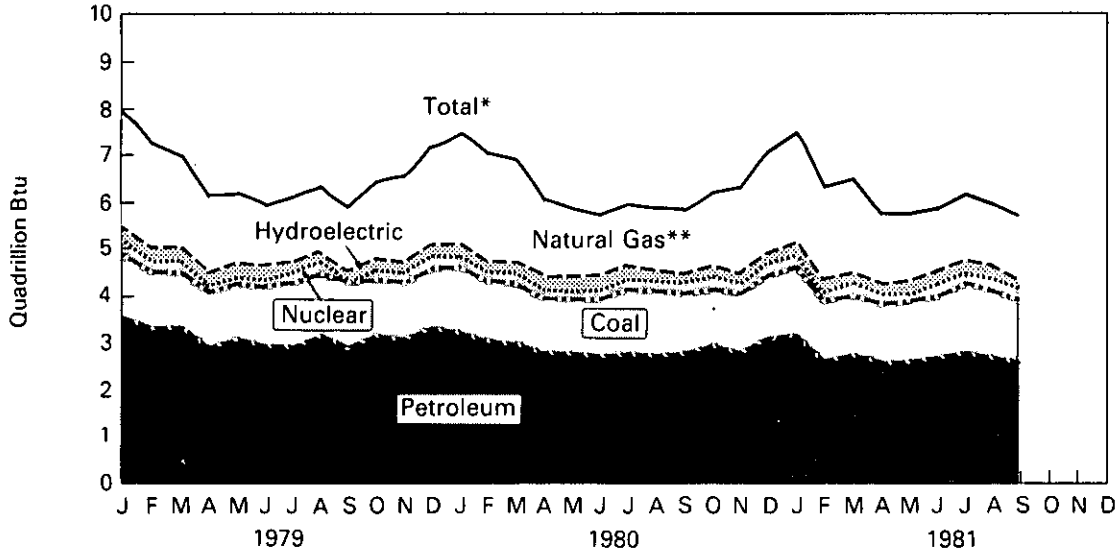
Executive Summary

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]

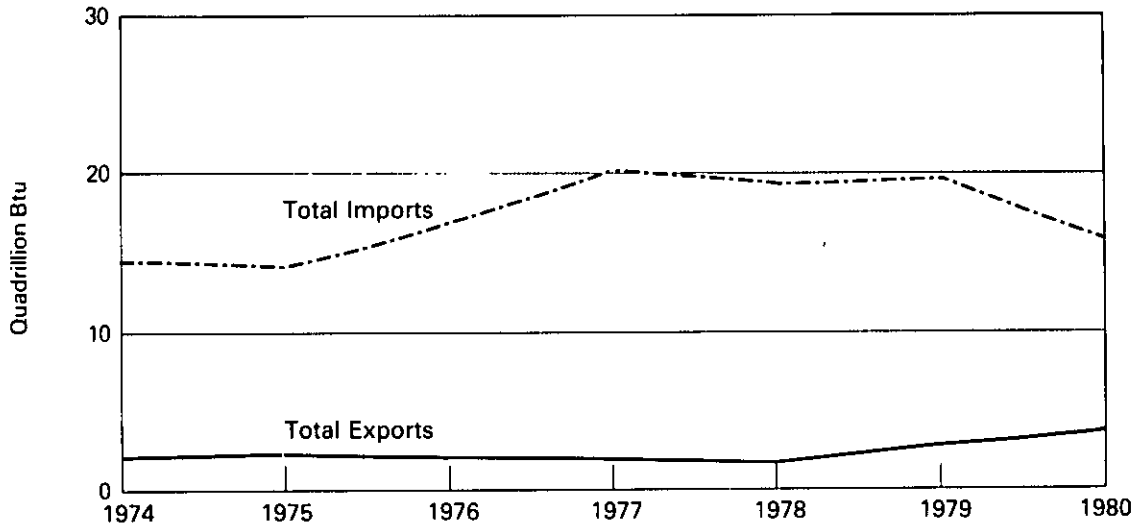
		Coal[2]	Crude Oil[3]	Refined Petroleum Products[4]	Natural Gas (Dry)	Electricity[5]	Coal Coke	Net Imports	Yearly Cumulative Net Imports of Energy
		Quadrillion (10^{15}) Btu							
1973	**TOTAL**	**(1.443)**	**6.883**	**6.097**	**0.981**	**0.148**	**(0.008)**	**12.659**	
1974	**TOTAL**	**(1.585)**	**7.389**	**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**	**0.206**	**0.131**	**17.310**	
1979	**TOTAL**	**(1.730)**	**13.328**	**3.603**	**1.243**	**0.212**	**0.066**	**16.722**	
1980	January	(0.117)	1.089	0.316	0.116	0.018	0.003	1.426	1.426
	February	(0.104)	0.948	0.284	0.107	0.017	(0.001)	1.251	2.676
	March	(0.150)	0.984	0.266	0.108	0.018	(0.003)	1.223	3.900
	April	(0.202)	0.931	0.207	0.077	0.017	(0.005)	1.024	4.924
	May	(0.227)	0.858	0.218	0.070	0.018	(0.006)	0.931	5.855
	June	(0.237)	0.892	0.196	0.060	0.017	(0.004)	0.923	6.778
	July	(0.221)	0.794	0.199	0.060	0.018	(0.004)	0.845	7.624
	August	(0.246)	0.837	0.205	0.059	0.018	(0.003)	0.870	8.494
	September	(0.226)	0.765	0.216	0.057	0.017	(0.004)	0.825	9.319
	October	(0.251)	0.791	0.236	0.073	0.018	(0.006)	0.860	10.179
	November	(0.242)	0.763	0.256	0.088	0.017	(0.002)	0.879	11.058
	December	(0.220)	0.847	0.276	0.097	0.018	(0.001)	1.016	12.074
	TOTAL	**(2.444)**	**10.498**	**2.873**	**0.972**	**0.212**	**(0.037)**	**12.074**	
1981	January	(0.155)	0.826	0.301	0.084	0.018	0.000	1.073	1.073
	February	(0.180)	0.761	0.249	0.079	0.016	(0.001)	0.923	1.996
	March	(0.260)	0.776	0.203	0.072	0.018	(0.003)	0.806	2.803
	April	(0.221)	R0.742	R0.163	0.067	0.017	(0.001)	R0.768	R3.570
	May	(0.162)	R0.712	R0.207	0.058	0.018	0.000	R0.834	R4.404
	June	(0.162)	0.673	0.172	0.060	0.017	(0.004)	0.756	R5.161
	July	(0.290)	0.716	0.202	0.063	0.018	0.000	0.710	R5.871
	August	(0.301)	0.714	0.181	0.060	0.018	0.000	0.672	R6.543
	September	(0.319)	0.788	0.209	0.065	0.017	(0.002)	0.759	7.302
	TOTAL (Year-to-date)	**(2.051)**	**6.709**	**1.887**	**0.610**	**0.159**	**(0.011)**	**7.302**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Net imports = 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.
[5]Only yearly totals are available for electricity imports and exports of data. Figures shown are estimates derived by dividing the yearly net import total by the number of days in the year and multiplying by the number of days in the month. Annual data for 1979 are used in estimating 1980 and 1981 data until actual annual data become available for those years.
R = Revised data.
Source: •Energy Information Administration calculations based on data reported elsewhere in this publication.

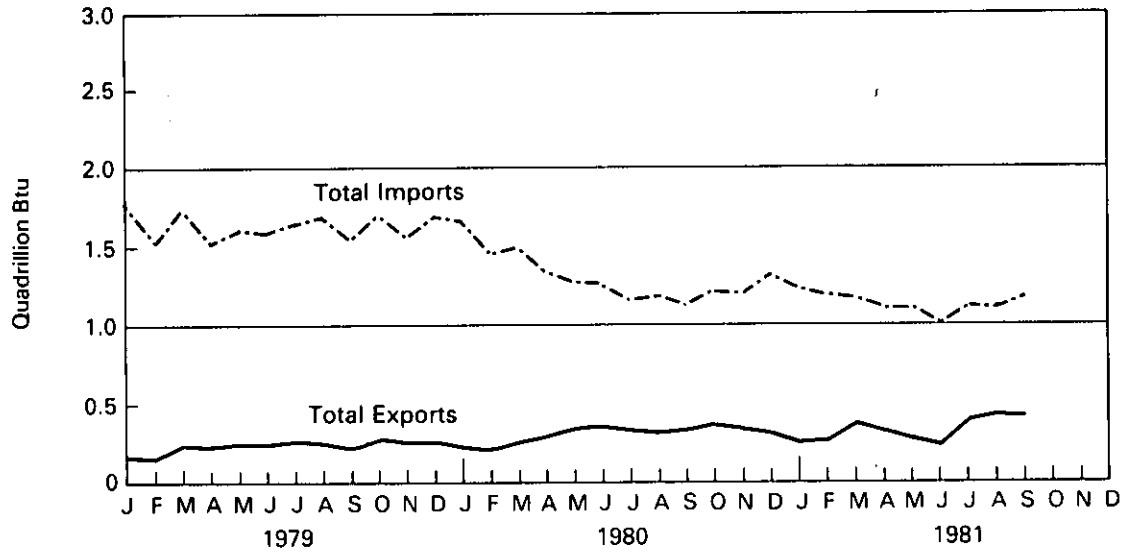
Executive Summary

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	806	18,019	18,825	8,014	15,180	23,194	-7,208	+2,838	-4,370
	February	977	18,787	19,764	7,943	13,978	21,922	-6,966	+4,808	-2,158
	March	951	20,484	21,434	6,476	14,473	20,949	-5,525	+6,010	+485
	April	691	19,127	19,818	7,836	14,454	22,289	-7,145	+4,674	-2,471
	May	566	18,304	18,869	6,078	15,232	21,310	-5,512	+3,071	-2,441
	June	575	19,295	19,870	7,256	14,719	21,975	-6,681	+4,576	-2,105
	July	869	18,395	19,264	5,692	14,115	19,807	-4,823	+4,281	-542
	August	894	18,156	19,050	6,881	16,648	23,528	-5,987	+1,509	-4,478
	September	947	18,708	19,655	6,558	14,671	21,229	-5,611	+4,037	-1,574
	October	989	18,055	19,044	6,644	16,590	23,234	-5,655	+1,464	-4,191
	TOTAL (Year-to-date)	**8,265**	**187,328**	**195,593**	**69,378**	**150,059**	**219,437**	**-61,113**	**+37,268**	**-23,846**

Notes: The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory which includes the 50 States, the District of Columbia, and Puerto Rico. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions; and 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 free alongside ship(f.a.s.) basis except for 1973 imports which are on a customs value basis (i.e., generally at prices in principal foreign markets). Monthly data are adjusted for seasonal and working-day variation; annual data are unadjusted. Statistics include nonmonetary gold. Statistics exclude Department of Defense (DOD) 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: positive indicates surplus trade value and negative 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.

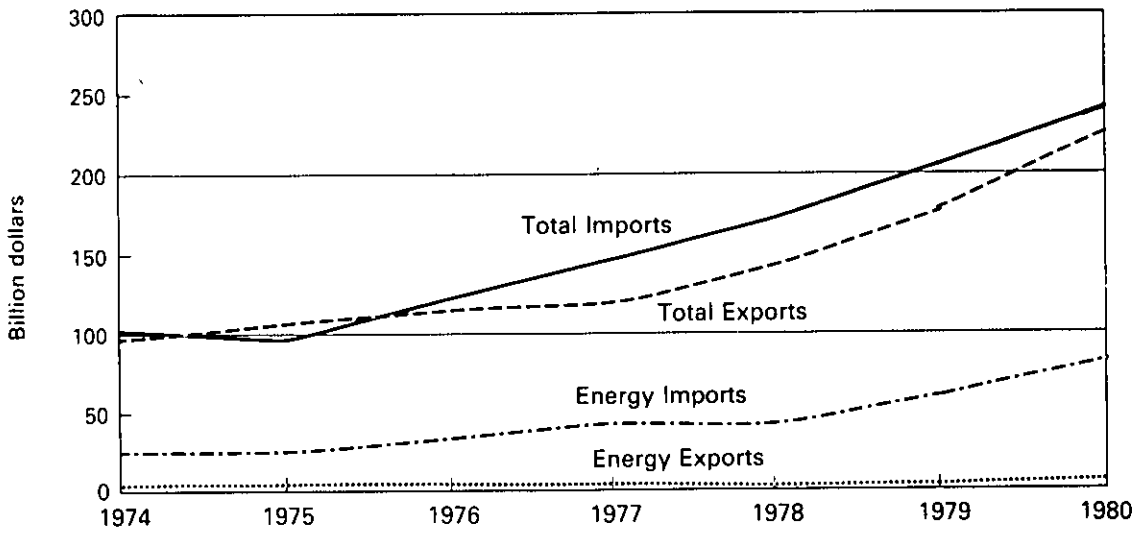
Sources: • 1973 through 1978–U.S. Department of Commerce, International Trade Administration, *Overseas Business Reports*, "United States Foreign Trade Annual 1973-1979;"

• 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 1981.

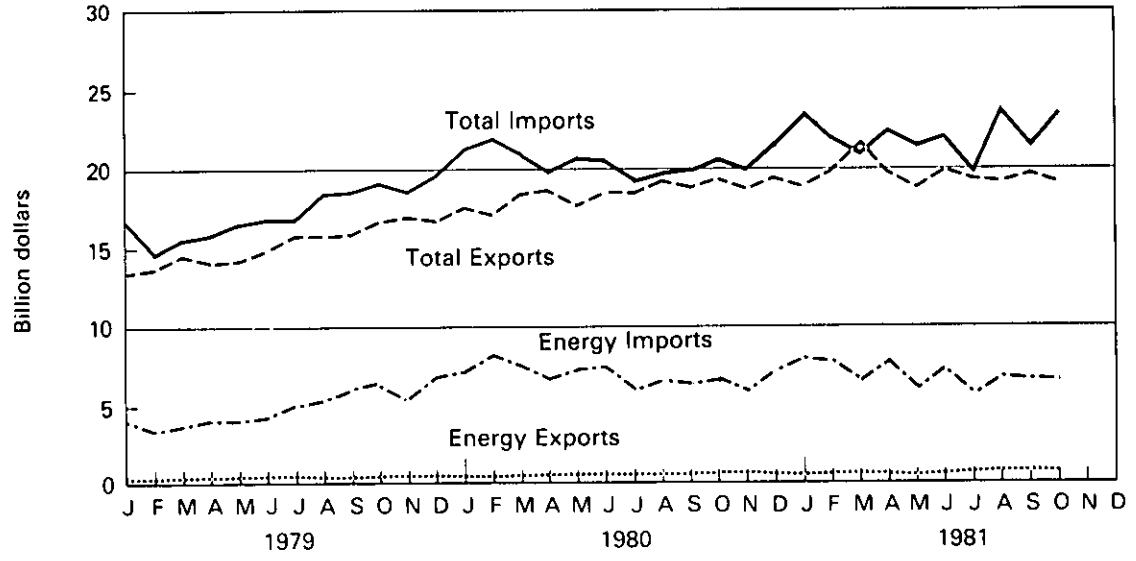
Executive Summary

Merchandise Trade Value

Yearly



Monthly



Executive Summary

Heating Degree-Days[1]

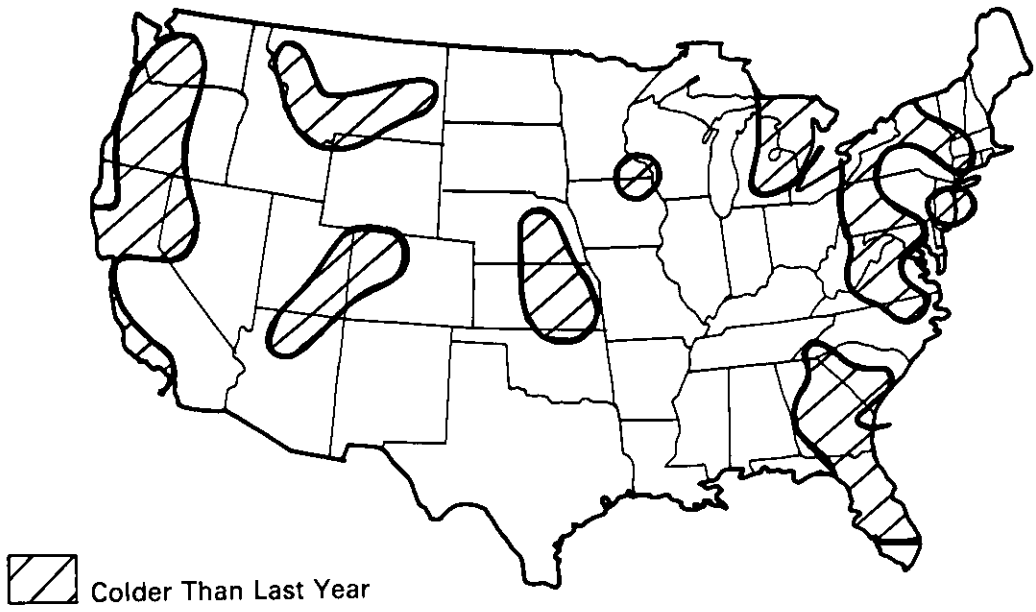
Petroleum Administration For Defense (PAD) Districts	October 26 through November 29					Cumulative July 1 through November 29				
	1981	1980[2]		Normal (1941–70)[2]		1981	1980[2]		Normal (1941–70)[2]	
PAD District I	555	664	(−16.5)	563	(−1.5)	902	915	(−1.4)	795	(13.5)
New England	736	860	(−14.4)	726	(1.4)	1,256	1,292	(−2.8)	1,116	(12.6)
Conn., Maine, Mass., N.H., R.I., Vt.										
Middle Atlantic	654	793	(−17.4)	661	(−1.0)	1,082	1,086	(−0.4)	940	(15.0)
Del., Md., N.J., N.Y., Pa.										
Lower Atlantic	325	386	(−15.7)	345	(−5.7)	477	492	(−3.1)	435	(9.5)
Fla., Ga., N.C., S.C., Va., W. Va.										
PAD District II	694	847	(−18.1)	793	(−12.6)	1,176	1,253	(−6.1)	1,145	(2.7)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.										
Pad District III	233	389	(−40.1)	307	(−24.0)	313	456	(−31.4)	359	(−12.8)
Ala., Ark., La., Miss., N. Mex., Tex.										
PAD District IV	706	861	(−18.0)	896	(−21.3)	1,162	1,287	(−9.8)	1,377	(−15.6)
Colo., Idaho, Mont., Utah, Wyo.										
PAD District V	260	278	(−6.5)	342	(−23.9)	481	481	(0.0)	588	(−18.2)
Ariz., Calif., Nev., Oreg., Wash.										
U.S. AVERAGE[3]	**524**	**642**	**(−18.3)**	**585**	**(−10.4)**	**869**	**919**	**(−5.5)**	**843**	**(3.1)**

[1]See Explanatory Note 6 for explanation of degree-days.
[2]Percentage change in parentheses.
[3]Excludes Alaska and Hawaii.

Executive Summary

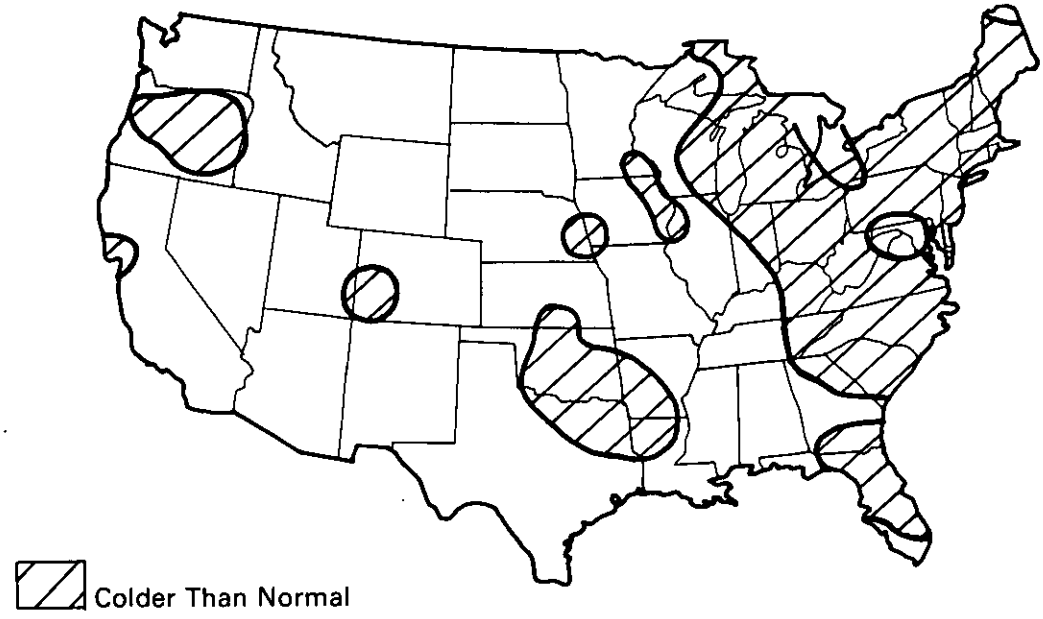
Heating Degree-Days Accumulated from July 1 through November 29

Departure from Last Year



Colder Than Last Year

Departure from Normal



Colder Than Normal

Source: ● Department of Commerce — NOAA.

Executive Summary

Energy Indicators—

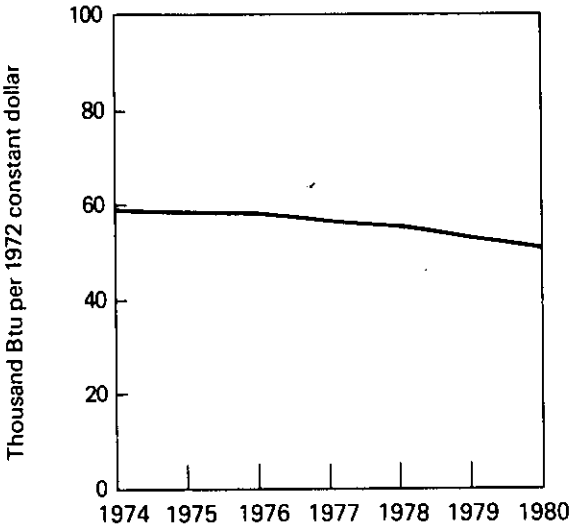
		Energy Consumption per GNP Dollar				U.S. Dependence on Petroleum Imports[3]			
				Gross National Product (Annual rate)		Direct Imports			
		Energy Consumption per GNP Dollar[1]	Yearly Rate of Energy Consumption	Current Dollars	1972 Dollars[2]	From Arab/OPEC Countries	From OPEC Countries	Total All Countries	Domestic Petroleum Products Supplied
ANNUAL RATE			Quadrillion Btu	Trillion Dollars		Million barrels per day			
1973	AVERAGE	59.4	74.609	1.326	1.255	0.92	2.99	6.26	17.31
1974	AVERAGE	58.3	72.759	1.434	1.248	0.75	3.28	6.11	16.65
1975	AVERAGE	57.3	70.707	1.549	1.234	1.38	3.60	6.06	16.32
1976	AVERAGE	57.3	74.510	1.718	1.300	2.42	5.07	7.31	17.46
1977	AVERAGE	55.6	76.332	1.918	1.372	3.19	6.19	8.81	18.43
1978	AVERAGE	54.4	78.150	2.156	1.437	2.96	5.75	8.36	18.85
1979	AVERAGE	53.2	78.968	2.414	1.483	3.06	5.64	8.46	18.51
1980	1st Qtr	57.2	85.857	2.572	1.502	3.00	4.97	7.90	18.27
	2nd Qtr	48.3	70.630	2.565	1.463	2.59	4.28	6.81	16.36
	3rd Qtr	47.6	70.025	2.637	1.472	2.26	3.74	6.11	16.07
	4th Qtr	52.7	78.336	2.731	1.486	2.33	4.03	6.52	17.33
	AVERAGE	51.5	76.201	2.626	1.481	2.54	4.25	6.83	17.01
1981	1st Qtr	R54.1	R82.044	2.853	1.516	R2.06	R3.81	R6.53	R17.02
	2nd Qtr	R46.1	R69.651	R2.886	R1.510	R1.81	R3.12	R5.58	15.48
	3rd Qtr	46.7	70.604	2.957	1.513	1.84	3.14	5.84	15.61

Geographic coverage: the 50 United States and District of Columbia.
[1]Thousand Btu per 1972 constant dollar.
[2]Current dollars are converted to 1972 constant dollars by the formula:
Constant 1972 dollars = 100(Current dollars in year N/GNP implicit price deflator in year N)
The Gross National Product deflators (1972=100) were determined by the Department of Commerce, Bureau of Economic Analysis.
GNP rates are from the Business Conditions Digest published by the Bureau of Economic Analysis.
[3]Beginning in October 1977 Strategic Petroleum Reserve imports are included.
R = Revised.
Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.

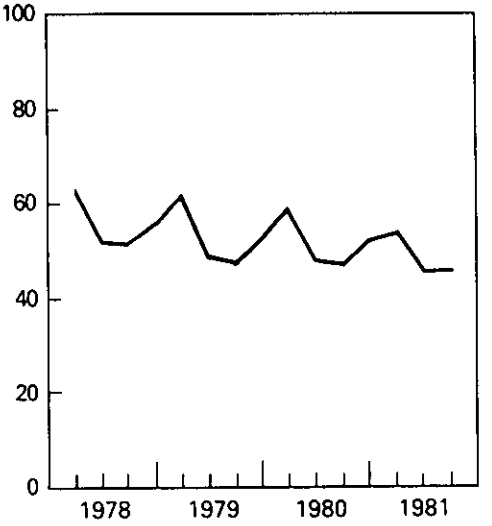
Executive Summary

Energy Consumption per GNP Dollar

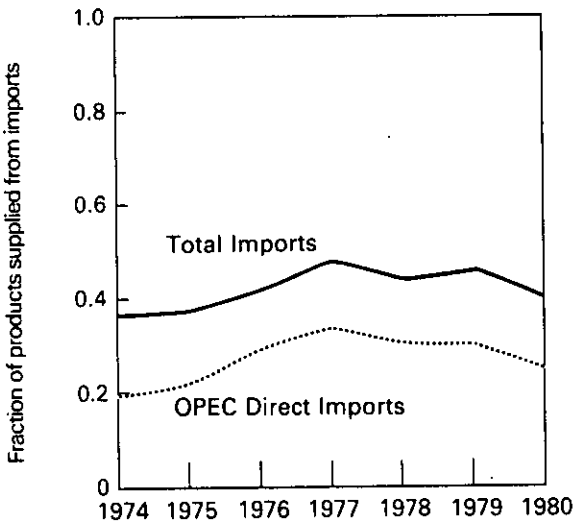
Yearly



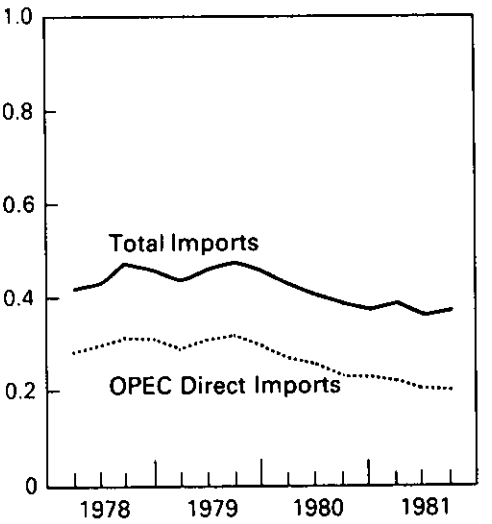
Quarterly



Yearly



Quarterly

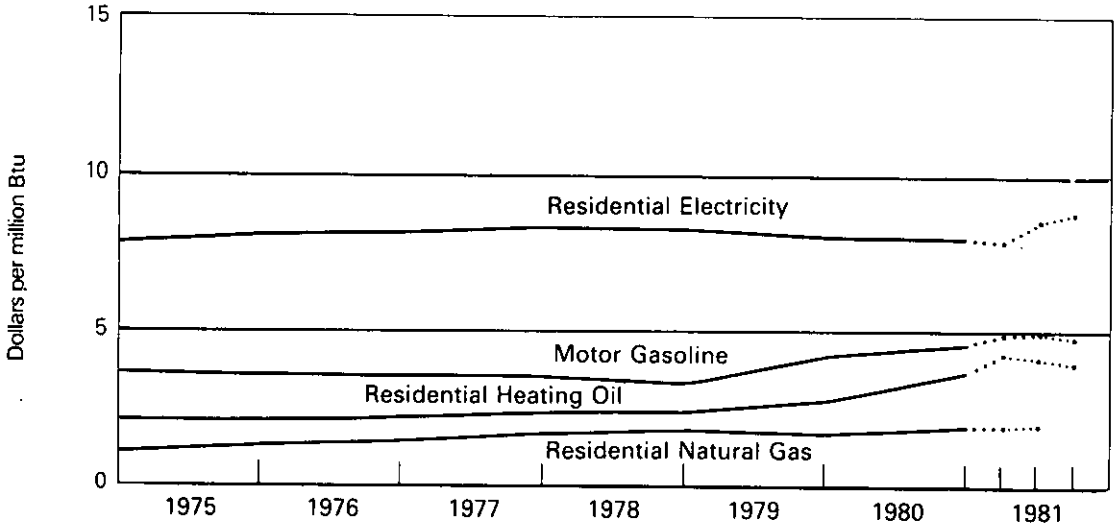


Executive Summary

Energy Indicator—Cost of Fuels to End Users (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	1st Qtr	60.9	4.87	49.8	3.59	190.9	1.88	2.53	7.42
	2nd Qtr	62.1	4.97	49.8	3.59	197.2	1.94	2.75	8.06
	3rd Qtr	60.6	4.85	49.2	3.55	207.6	2.04	2.86	8.38
	4th Qtr	58.2	4.65	50.7	3.66	198.9	1.95	2.73	8.00
	AVERAGE	**60.5**	**4.84**	**49.7**	**3.58**	**198.8**	**1.95**	**2.72**	**7.97**
1981	1st Qtr	62.1	4.97	57.0	4.11	196.0	1.93	2.65	7.77
	2nd Qtr	62.1	4.97	57.2	4.12	207.5	2.04	2.91	8.53
	3rd Qtr	59.3	4.74	54.4	3.92	NA	NA	2.99	8.76

Average Cost of Fuels to End Users (1972 constant dollars)



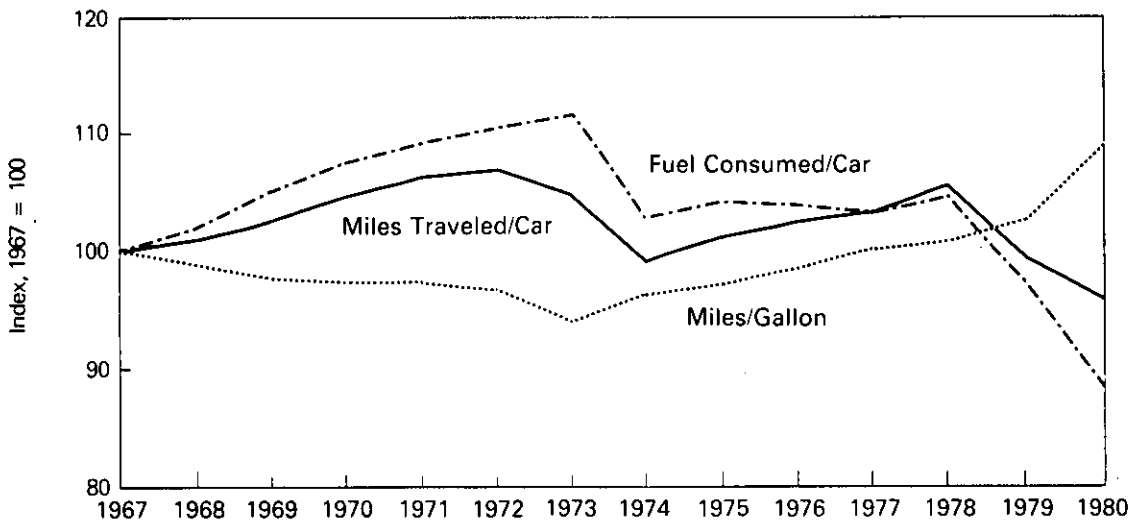
Geographic coverage: the 50 United States and District of Columbia.
NA = Not available.
Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.
Sources: • Motor Gasoline—Bureau of Labor Statistics.
• Heating Oil—1974 and 1975: Form CLC-92, "No. 2 Heating Oil Monthly Price Adjustment Report," and 1976 forward, FEA Form P112-M-1, and EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."
• Natural Gas—1973 through 1979 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 1980 annual numbers, Bureau of Labor Statistics.
• Electricity—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.

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

U.S. Passenger Car Efficiency Index



Geographic coverage: the 50 United States and District of Columbia.
Source: • 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 September 1981 dropped to 5.7 quadrillion Btu, 2.3 percent below the September 1980 level.

The Residential and Commercial Sector consumption was 1.8 quadrillion Btu in September 1981, 10.0 percent lower than in August 1981 and 4.6 percent lower than the amount consumed during September 1980. The Residential and Commercial Sector consumed 32.6 percent of the total consumption for September 1981, down from the sector's 33.4 percent share in September 1980.

The Industrial Sector consumption was 2.3 quadrillion Btu in September 1981, down 2.8 percent from the August 1981 level and down 1.7 percent from the consumption level in September 1980. The Industrial Sector consumed 40.6 percent of the September 1981 total, as compared to the 40.3 percent share in September 1980.

The Transportation Sector consumption was 1.5 quadrillion Btu in September 1981, down 2.4 percent from August 1981 and down 0.1 percent from the consumption level in September 1980. This sector consumed 26.7 percent of the September 1981 total, as compared to the 26.1 percent share in September 1980.

The Electric Utilities consumption was an estimated 2.0 quadrillion Btu of energy in September 1981, 11.4 percent lower than in the previous month, and 3.2 percent lower than the energy consumed in September 1980. Coal contributed 51.0 percent of the energy consumed by Electric Utilities in September 1981, while natural gas contributed 16.5 percent, nuclear power 13.0 percent, hydroelectric power 10.1 percent, petroleum 8.9 percent, and geothermal, wood and waste 0.5 percent.

Consumption

Energy Consumption Summary for September 1981
Quadrillion (10^{15}) Btu

Primary Energy Source	Sector: Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL
Coal	0.010	0.262	0.000	1.033	1.309
Natural Gas (dry)	0.253	0.710	0.040	0.335	1.338
Petroleum	0.344	0.543	1.470	0.181	2.538
Hydroelectric	0.000	0.002	0.000	0.204	0.206
Nuclear	0.000	0.000	0.000	0.263	0.263
Net Coke Imports	0.000	(0.002)	0.000	0.000	(0.002)
Other	0.000	0.000	0.000	0.011	0.011
TOTAL PRIMARY ENERGY	**0.607**	**1.516**	**1.510**	**2.025**	**5.662**
Electricity Sales	0.383	0.242	0.001	(0.627)	
Net Energy Consumption	0.990	1.758	1.511		4.263
Electrical Energy Losses	0.856	0.541	0.002	(1.399)	1.399
TOTAL ENERGY CONSUMED	**1.846**	**2.298**	**1.513**		**5.662**

Totals may not equal sum of components due to independent rounding.
Notes and sources for this table and all other tables in this section are provided at the end of this section.

Consumption

Consumption of Energy by End-Use Sector[1]

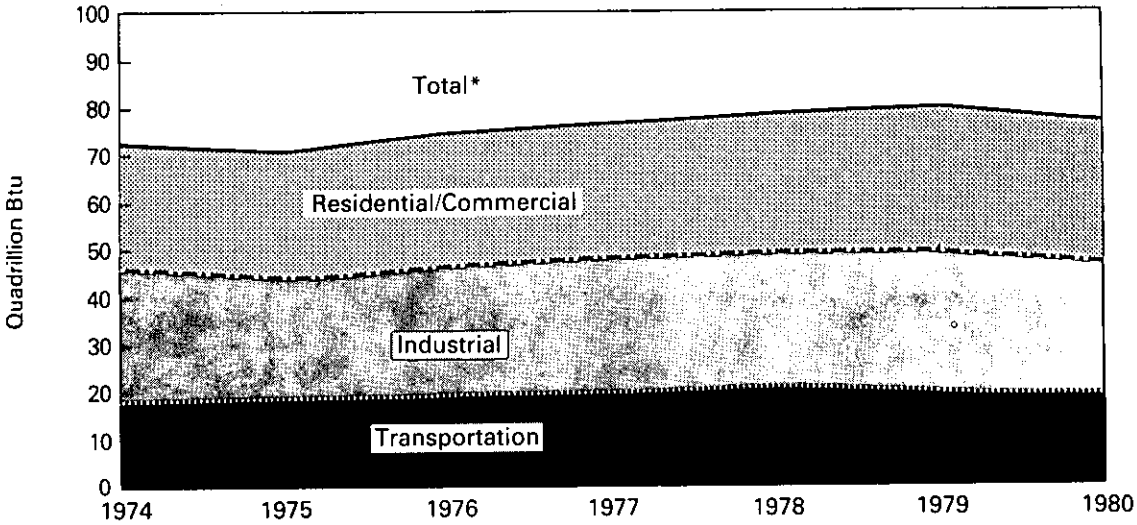
		Residential and Commercial	Industrial	Transportation	Total Energy Consumed
		Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**26.615**	**29.472**	**18.519**	**74.609**
1974	**TOTAL**	**25.981**	**28.748**	**18.026**	**72.759**
1975	**TOTAL**	**26.015**	**26.510**	**18.177**	**70.707**
1976	**TOTAL**	**27.217**	**28.226**	**19.063**	**74.510**
1977	**TOTAL**	**27.568**	**29.026**	**19.735**	**76.332**
1978	**TOTAL**	**28.217**	**29.317**	**20.613**	**78.150**
1979	**TOTAL**	**27.144**	**31.396**	**20.425**	**78.968**
1980	January	2.859	2.892	1.676	7.423
	February	2.818	2.592	1.611	7.018
	March	2.637	2.636	1.635	6.906
	April	2.101	2.347	1.581	6.021
	May	1.856	2.407	1.573	5.831
	June	1.883	2.306	1.517	5.709
	July	2.099	2.268	1.577	5.957
	August	2.076	2.216	1.543	5.847
	September	1.936	2.338	1.515	5.798
	October	1.925	2.629	1.613	6.168
	November	2.104	2.679	1.505	6.288
	December	2.713	2.818	1.702	7.235
	TOTAL	**27.008**	**30.128**	**19.047**	**76.201**
1981	January	3.127	2.598	1.700	7.426
	February	2.684	2.206	1.456	6.346
	March	2.439	2.458	1.561	6.458
	April	R1.976	R2.265	R1.496	R5.737
	May	R1.841	R2.419	R1.522	R5.786
	June	1.947	2.318	1.565	5.841
	July	R2.105	R2.460	1.585	6.157
	August	2.052	R2.364	R1.550	5.976
	September	1.846	2.298	1.513	5.662
	TOTAL (Year-to-date)	**20.017**	**21.387**	**13.948**	**55.391**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the Notes and Sources at the end of this section.
R = Revised data.
Source: •See Notes and Sources at the end of this section.

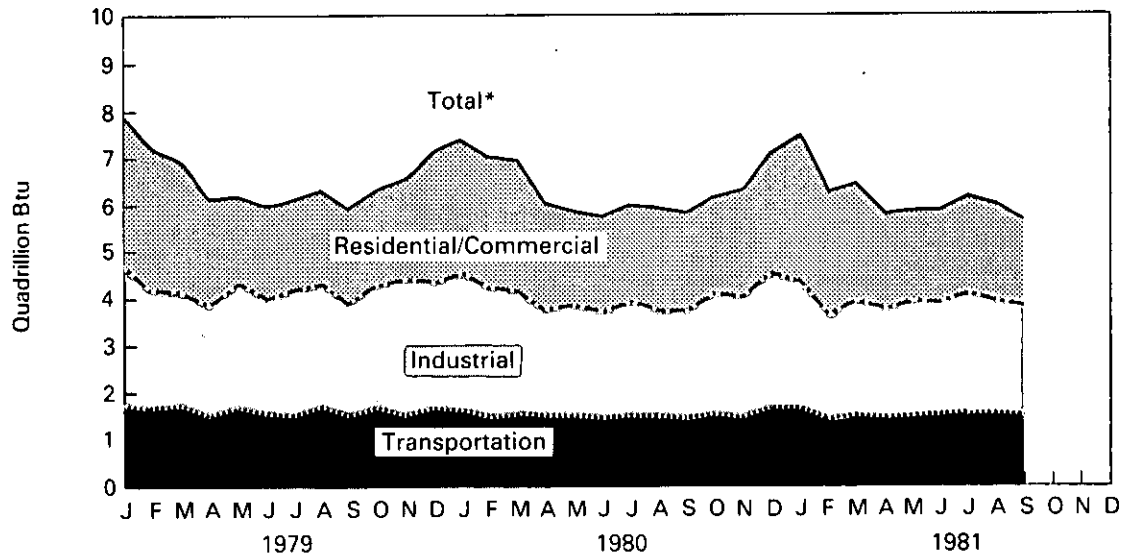
Consumption

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[1]

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses[2]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**0.291**	**7.626**	**6.741**	**3.495**	**8.462**	**26.615**	
1974	**TOTAL**	**0.292**	**7.518**	**6.141**	**3.475**	**8.556**	**25.981**	
1975	**TOTAL**	**0.238**	**7.581**	**5.792**	**3.588**	**8.816**	**26.015**	
1976	**TOTAL**	**0.227**	**7.866**	**6.302**	**3.729**	**9.093**	**27.217**	
1977	**TOTAL**	**0.225**	**7.461**	**6.245**	**3.936**	**9.701**	**27.568**	
1978	**TOTAL**	**0.239**	**7.624**	**6.268**	**4.100**	**9.986**	**28.217**	
1979	**TOTAL**	**0.210**	**7.891**	**4.725**	**4.184**	**10.133**	**27.144**	
1980	January	0.022	1.114	0.382	0.381	0.958	2.859	2.859
	February	0.019	1.192	0.357	0.375	0.874	2.818	5.676
	March	0.014	1.054	0.335	0.358	0.876	2.637	8.314
	April	0.015	0.717	0.291	0.319	0.758	2.101	10.415
	May	0.009	0.450	0.312	0.298	0.787	1.856	12.271
	June	0.007	0.329	0.325	0.334	0.888	1.883	14.154
	July	0.009	0.259	0.337	0.410	1.085	2.099	16.254
	August	0.008	0.240	0.332	0.439	1.056	2.076	18.330
	September	0.011	0.252	0.351	0.410	0.912	1.936	20.266
	October	0.015	0.370	0.374	0.343	0.824	1.925	22.191
	November	0.016	0.640	0.326	0.322	0.800	2.104	24.295
	December	0.020	1.026	0.379	0.364	0.923	2.713	27.008
	TOTAL	**0.166**	**7.645**	**4.102**	**4.355**	**10.742**	**27.008**	
1981	January	0.022	1.291	0.398	0.413	1.003	3.127	3.127
	February	0.014	1.139	0.310	0.379	0.842	2.684	5.811
	March	0.012	0.928	0.306	0.344	0.848	2.439	8.250
	April	0.014	0.605	R0.282	0.315	0.761	R1.976	R10.226
	May	0.009	0.429	R0.287	0.313	R0.802	R1.841	R12.067
	June	0.008	0.302	0.342	0.355	0.940	1.947	R14.014
	July	0.010	0.251	R0.356	0.420	1.068	R2.105	R16.119
	August	0.009	0.243	0.359	0.421	R1.020	2.052	R18.171
	September	0.010	0.253	0.344	0.383	0.856	1.846	20.017
	TOTAL (Year-to-date)	**0.109**	**5.441**	**2.985**	**3.342**	**8.140**	**20.017**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.
[2]Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.
R=Revised data.
Source: • See Notes and Sources at the end of this section.

Consumption

Consumption of Energy by the Industrial Sector[1]

		Coal	Natural Gas (Dry)	Petro-leum	Hydro-electric	Net Coke Imports[2]	Electricity Sales	Electrical Energy Losses[3]	Total Energy Con-sumed	Yearly Cumulative Energy Consumed
						Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**4.349**	**10.395**	**6.683**	**0.035**	**(0.008)**	**2.341**	**5.678**	**29.472**	
1974	**TOTAL**	**4.048**	**10.010**	**6.506**	**0.033**	**0.059**	**2.337**	**5.755**	**28.748**	
1975	**TOTAL**	**3.797**	**8.533**	**6.160**	**0.032**	**0.014**	**2.304**	**5.669**	**26.510**	
1976	**TOTAL**	**3.786**	**8.769**	**6.951**	**0.033**	**0.000**	**2.525**	**6.163**	**28.226**	
1977	**TOTAL**	**3.498**	**8.643**	**7.692**	**0.033**	**0.015**	**2.635**	**6.510**	**29.026**	
1978	**TOTAL**	**3.372**	**8.540**	**7.840**	**0.032**	**0.131**	**2.732**	**6.671**	**29.317**	
1979	**TOTAL**	**3.636**	**8.554**	**9.263**	**0.034**	**0.066**	**2.873**	**6.970**	**31.396**	
1980	January	0.319	0.858	0.899	0.003	0.003	0.230	0.579	2.892	2.892
	February	0.296	0.708	0.807	0.003	(0.001)	0.234	0.545	2.592	5.484
	March	0.302	0.733	0.791	0.003	(0.003)	0.236	0.576	2.636	8.121
	April	0.295	0.572	0.699	0.003	(0.005)	0.232	0.551	2.347	10.468
	May	0.286	0.602	0.685	0.003	(0.006)	0.229	0.606	2.407	12.874
	June	0.260	0.565	0.649	0.003	(0.004)	0.228	0.605	2.306	15.180
	July	0.237	0.597	0.620	0.003	(0.004)	0.224	0.592	2.268	17.448
	August	0.239	0.577	0.618	0.002	(0.003)	0.230	0.553	2.216	19.664
	September	0.233	0.667	0.676	0.002	(0.004)	0.237	0.527	2.338	22.002
	October	0.262	0.847	0.717	0.002	(0.006)	0.237	0.570	2.629	24.630
	November	0.272	0.863	0.739	0.002	(0.002)	0.231	0.574	2.679	27.310
	December	0.296	0.861	0.834	0.002	(0.001)	0.234	0.592	2.818	30.128
	TOTAL	**3.297**	**8.451**	**8.734**	**0.033**	**(0.037)**	**2.781**	**6.869**	**30.128**	
1981	January	0.310	0.706	0.794	0.003	0.000	0.229	0.557	2.598	2.598
	February	0.287	0.512	0.665	0.003	(0.001)	0.230	0.511	2.206	4.804
	March	0.290	0.679	0.678	0.003	(0.003)	0.234	0.576	2.458	7.262
	April	0.263	0.597	R0.609	0.003	(0.001)	0.232	0.562	R2.265	R9.527
	May	0.241	0.692	R0.646	0.003	0.000	0.235	0.602	R2.419	R11.946
	June	0.234	0.623	0.571	0.003	(0.004)	0.244	0.647	2.318	R14.264
	July	0.288	0.681	R0.621	0.003	0.000	0.245	0.623	R2.460	R16.724
	August	0.262	0.672	0.586	0.002	0.000	0.246	0.596	R2.364	R19.088
	September	0.262	0.710	0.543	0.002	(0.002)	0.242	0.541	2.298	21.387
	TOTAL (Year-to-date)	**2.436**	**5.872**	**5.713**	**0.026**	**(0.011)**	**2.137**	**5.214**	**21.387**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.
[2]Net Imports = imports minus exports. Parentheses indicate exports are greater than imports.
[3]Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.
R = Revised data.
Source: •See Notes and Sources at the end of this section.

Consumption

Consumption of Energy by the Transportation Sector[1]

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses[2]	Total Energy Consumed	Yearly Cumulative Energy Consumed
				Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**0.003**	**0.743**	**17.745**	**0.009**	**0.020**	**18.519**	
1974	**TOTAL**	**0.002**	**0.685**	**17.309**	**0.009**	**0.021**	**18.026**	
1975	**TOTAL**	**0.001**	**0.595**	**17.547**	**0.010**	**0.024**	**18.177**	
1976	**TOTAL**	**(3)**	**0.559**	**18.469**	**0.010**	**0.025**	**19.063**	
1977	**TOTAL**	**(3)**	**0.543**	**19.157**	**0.010**	**0.024**	**19.735**	
1978	**TOTAL**	**(3)**	**0.539**	**20.044**	**0.009**	**0.021**	**20.613**	
1979	**TOTAL**	**(3)**	**0.612**	**19.778**	**0.010**	**0.024**	**20.425**	
1980	January	(3)	0.069	1.604	0.001	0.002	1.676	1.676
	February	(3)	0.066	1.542	0.001	0.002	1.611	3.286
	March	(3)	0.063	1.569	0.001	0.002	1.635	4.922
	April	(3)	0.047	1.531	0.001	0.002	1.581	6.502
	May	(3)	0.041	1.529	0.001	0.002	1.573	8.075
	June	(3)	0.038	1.476	0.001	0.002	1.517	9.592
	July	(3)	0.039	1.534	0.001	0.002	1.577	11.168
	August	(3)	0.038	1.503	0.001	0.002	1.543	12.712
	September	(3)	0.039	1.473	0.001	0.002	1.515	14.227
	October	(3)	0.047	1.563	0.001	0.002	1.613	15.840
	November	(3)	0.054	1.448	0.001	0.002	1.505	17.345
	December	(3)	0.065	1.634	0.001	0.002	1.702	19.047
	TOTAL	**(3)**	**0.607**	**18.404**	**0.011**	**0.025**	**19.047**	
1981	January	(3)	0.068	1.628	0.001	0.002	1.700	1.700
	February	(3)	0.057	1.395	0.001	0.002	1.456	3.156
	March	(3)	0.058	1.500	0.001	0.002	1.561	4.716
	April	(3)	0.046	R1.448	0.001	0.002	R1.496	R6.213
	May	(3)	0.044	R1.475	0.001	0.002	R1.522	R7.735
	June	(3)	0.040	1.522	0.001	0.002	1.565	R9.300
	July	(3)	0.041	1.540	0.001	0.002	1.585	R10.885
	August	(3)	0.040	R1.507	0.001	0.002	R1.550	R12.435
	September	(3)	0.040	1.470	0.001	0.002	1.513	13.948
	TOTAL (Year-to-date)	**(3)**	**0.435**	**13.486**	**0.008**	**0.020**	**13.948**	

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.
[2]Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.
[3]Since 1976 the amount of coal consumed by the Transportation Sector has been negligible.
R=Revised data.
Source: •See Notes and Sources at the end of this section.

Consumption

Consumption of Energy by the Electric Utilities

		Coal[1]	Natural Gas (Dry)	Petro-leum[2]	Hydro-electric power[3]	Nuclear Electric Power	Other[4]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					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**	**3.132**	**2.977**	**0.068**	**23.523**	
1979	**TOTAL**	**11.264**	**3.609**	**3.357**	**3.132**	**2.748**	**0.089**	**24.199**	
1980	January	1.073	0.285	0.292	0.282	0.213	0.008	2.152	2.152
	February	1.012	0.272	0.292	0.240	0.208	0.008	2.031	4.184
	March	0.995	0.292	0.266	0.272	0.216	0.008	2.049	6.233
	April	0.867	0.264	0.235	0.286	0.202	0.008	1.863	8.096
	May	0.883	0.290	0.223	0.319	0.198	0.010	1.924	10.019
	June	0.976	0.347	0.223	0.306	0.197	0.009	2.059	12.078
	July	1.143	0.433	0.228	0.273	0.226	0.010	2.313	14.391
	August	1.134	0.418	0.226	0.231	0.262	0.011	2.282	16.673
	September	1.021	0.368	0.228	0.210	0.254	0.010	2.091	18.764
	October	0.961	0.310	0.226	0.204	0.264	0.011	1.976	20.740
	November	0.974	0.263	0.239	0.218	0.226	0.011	1.930	22.670
	December	1.090	0.249	0.279	0.251	0.238	0.011	2.117	24.787
	TOTAL	**12.127**	**3.792**	**2.956**	**3.092**	**2.704**	**0.114**	**24.787**	
1981	January	1.158	0.239	0.294	0.251	0.252	0.011	2.205	2.205
	February	1.021	0.231	0.234	0.237	0.233	0.010	1.965	4.170
	March	1.031	0.281	0.213	0.233	0.237	0.011	2.006	6.176
	April	0.930	0.296	0.180	0.234	0.222	0.010	1.873	8.049
	May	0.959	0.324	R0.180	0.269	0.212	0.010	1.955	10.004
	June	1.065	0.399	0.196	0.293	0.228	0.010	2.190	R12.193
	July	1.196	0.422	0.201	0.280	0.249	0.011	2.359	14.552
	August	1.157	0.402	R0.181	0.244	0.290	0.011	R2.286	R16.838
	September	1.033	0.335	0.181	0.204	0.263	0.011	2.025	18.863
	TOTAL (Year-to-date)	**9.550**	**2.928**	**1.860**	**2.244**	**2.185**	**0.096**	**18.863**	

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]Based on deliveries to utilities.
[3]Includes net imports of electricity.
[4]Includes geothermal power and electricity produced from wood and waste.
R = Revised data.
Source: •See Notes and Sources at the end of this section.

Notes and Sources for the Consumption Section

1. See Explanatory Note 5 in the Explanatory Notes Section located at the end of this publication for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.
2. **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 sources: same as Note 6 below.
3. **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 Sectors consumption to the months in proportion to the American Gas Association (AGA) monthly sales to te Residential and Commercial Sectors. For incomplete years, the AGA monthly sales data are used temporarily. Monthly Transportation Sector 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. The Electric Utility consumption of natural gas is available monthly from 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 forward: DOE, *Energy Data Reports,* "Natural Gas Production and Consumption."
   • Electric Utilities consumption: 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report." 1977 forward: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."
   • American Gas Association, "Monthly Gas Utility Statistical Report."
4. **Petroleum**: Petroleum consumption by end-use is the sum of all individual petroleum products consumed in each end-use. 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 1979: DOE, EIA, *Energy Data Reports,* "Petroleum Statement, Annual."
   • 1980 forward: DOE, EIA, *Energy Data Reports,* "Petroleum Statement, Monthly,"
   DOE, EIA, "Monthly Petroleum Statistics Report," and
   DOE, EIA, estimates for current months where above sources are not yet available.

   Each product's total is allocated to end-use sectors as follows:
   • Aviation gasoline—All to the Transportation Sector.
   • Asphalt and road oil—All to the Commercial Sector for use by government in road maintenance.
   • Distillate fuel—Allocated to the major end-use sectors in proportion to the sales of distillate fuel sold to each sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys,* "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports,* "Fuel Oil Sales, Annual." In summary, the sectors' proportions are created from sales groupings as follows:
     —Residential and Commercial is sales for heating;
     —Industrial is sales for industrial use, oil company use, and for miscellaneous use except for that part of the miscellaneous use which is diesel used on the highway and is part of the Transportation Sector;
     —Transportation is sales for vessel bunkering, military, railroads, and diesel used on the highway (from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics,* since 1979); and
     —Electric Utility is the sales to the electric utilities (except since 1979 when it is deliveries to the electric utilities from the FPC Form 423).
     The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.
   • Jet fuel—small amounts in 1975 through 1977 are used in industrial and small amounts in all months are consumed by the electric utilities. All remaining jet fuel is allocated to the Transportation Sector.
   • Kerosene—Allocated to the major end-use sectors in proportion to the sales of kerosene sold to the Residential and Commercial Sector and the Industrial Sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys,* "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports,* "Fuel Oil Sales, Annual":
     —Residential and Commercial is sales for heating in the "Fuel Oil Sales, Annual."
     —Industrial is sales for "All Other Uses" in the "Fuel Oil Sales, Annual."
     The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.
   • Liquefied petroleum gases (LPG)—Allocated to the major end-use sectors in proportion to the sales of LPG sold to each sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys,* "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports,* "Fuel Oil Sales, Annual." In summary, the sectors' proportions are created from sales groupings as follows:
     —Residential and Commercial is sales for residential and commercial use;
     —Industrial is sales for industrial use, for miscellaneous uses, to utility gas companies, to chemical plants, and 84 percent of LPG sold for use as internal combustion engine fuel use; and
     —Transportation is the remaining 16 percent of LPG sold for use as internal combustion fuel use.
     The 1979 shares are used as estimates for the succeeding periods until sales after 1979 are developed.
   • Lubricants—Allocated to the Industrial Sector and Transportation Sector for all months according to proportions of sales to those 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 from 1977 forward.
   • Motor gasoline—the DOE motor gasoline consumption data are allocated to end-use according to shares derived from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics,* Tables MF-21, MF-24 and MF-25. In summary, the sectors' proportions are created from sales groupings as follows:
     —Residential and Commercial is sales for construction use, for miscellaneous use, for public non-highway use, and for unclassified use;

Notes and Sources for the Consumption Section (continued)

—Industrial is sales for agriculture and industrial and commercial use as classified in the *Highway Statistics;* and
—Transportation is sales for highway use (minus the sales of special fuels which is primarily diesel fuel and is accounted for in the Transportation Sector of distillate fuel) and sales for marine use.

- Petroleum coke consumed by the Electric Utilities—FPC, Form 4, "Monthly Power Plant Report." All other petroleum coke is allocated to the Industrial Sector.
- Residual fuel—Allocated to the major end-use sectors in proportion to the sales of residual fuel sold to each sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys,* "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports,* "Fuel Oil Sales, Annual." In summary, the sectors' proportions are created from sales groupings as follows:
  —No allocation for Residential Sector;
  —Sales for heating is assigned to the Commercial Sector;
  —Industrial Sector sales is the sum of sales for industrial use, oil company use, and miscellaneous uses;
  —Transportation Sector sales is the sum of sales for vessel bunkering, military, and railroads; and
  —Electric Utility is the sales to the electric utilities (except since 1979 when it is deliveries to the electric utilities from the FPC Form 423).

  The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.
- All other products are allocated to the Industrial Sector.

5. **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 Utility Sector.

Sources for Electric Utility Sector:
- 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."
- 1977 forward: DOE, EIA, FPC, Form 4, "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. 1979 estimates are used for succeeding periods until later estimates are developed.

6. **Nuclear**: *Sources:* • 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."
• 1977 forward: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."

7. **Net Coke Imports**: Net coke imports is coke made from coal.
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."

8. **Other Energy**: "Other" is electricity produced from geothermal power and from wood and waste. *Sources:* same as Note 6 above, for Nuclear.

9. **Electricity Sales:** The total energy consumed by electric utilities to generate and transmit electricity to the end-users, including all losses, is allocated to the major end-users in proportion to the sales of electricity to the end-use sectors. "Other" sales, largely for use in government buildings, is allocated to the Residential and Commercial Sector, and about 4.2 percent of "Other" is for railroad usage and is counted in the Transportation Sector.
Source 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."

10. **Electrical Energy Losses**: In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., utilities energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage, i.e., sales.

Crude Oil and Refined Petroleum Products*

Domestic crude oil production during October 1981 averaged 8.5 million barrels per day. This production rate was 0.4 percent below the rate in October 1980 and 1.3 percent lower than in September 1981.

Total petroleum imports averaged 5.1 million barrels per day in October 1981, 17.8 percent less than the October 1980 rate and 12.6 percent lower than in September 1981.

In October 1981, 15.5 million barrels per day of petroleum products were supplied for domestic use. Motor gasoline accounted for 42.2 percent of the total, distillate fuel oil 18.6 percent, and residual fuel oil 10.4 percent.

Motor gasoline supplied during October 1981 averaged 6.5 million barrels per day, 2.3 percent lower than in September 1981.

In October 1981, 2.9 million barrels of distillate fuel oil were supplied per day, 14.0 percent higher than the September 1981 rate. Distillate fuel oil stocks were 197.3 million barrels at the end of October 1981, 4.4 percent lower than at the end of the previous month.

Residual fuel oil supplied in October 1981 averaged 1.6 million barrels per day, 12.3 percent lower than in September 1981. Residual fuel oil stocks measured 80.4 million barrels at the end of October 1981, 0.6 percent higher than during the previous month.

*Estimates for the most recent 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 provisional data for June 1981. The total petroleum import data exclude imports into the Strategic Petroleum Reserve.

Petroleum

Crude Oil

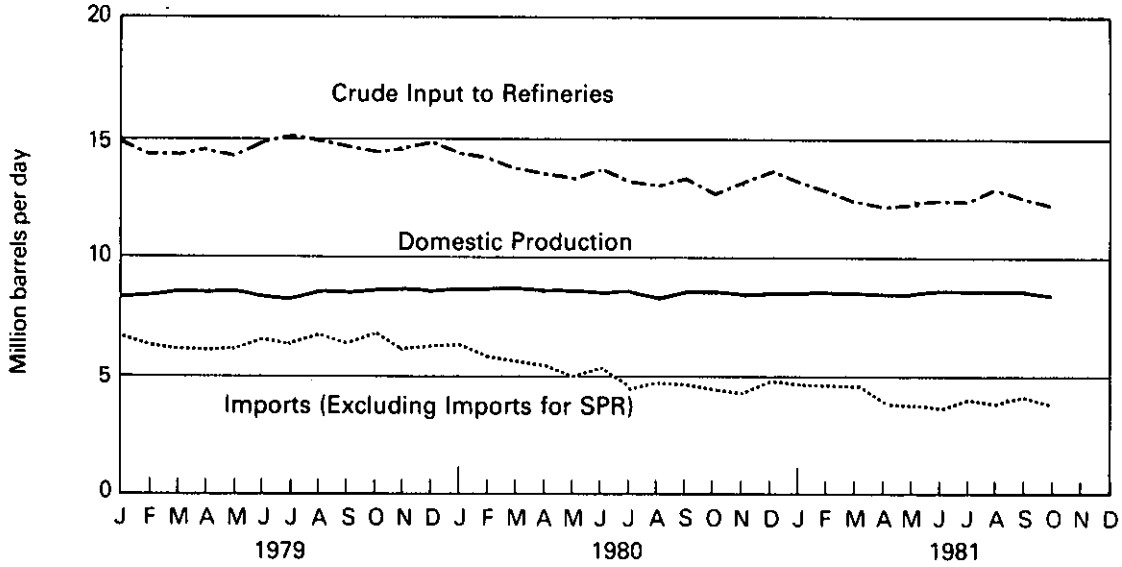
		Crude Input to Refineries	Total Domestic Production[1,2]	Alaskan Production	Crude Oil Imports[3]	Strategic Petroleum Reserve (SPR) Imports	Crude Oil Exports	Primary Crude Oil Stocks[1,3]	Strategic Petroleum Reserve (SPR) Stocks
		Thousand barrels per day						Thousand barrels	
1973	**AVERAGE**	**12,431**	**9,208**	**198**	**3,244**		**2**	**‡242,478**	
1974	**AVERAGE**	**12,133**	**8,774**	**193**	**3,477**		**3**	**‡265,020**	
1975	**AVERAGE**	**12,442**	**8,375**	**191**	**4,105**		**6**	**‡271,354**	
1976	**AVERAGE**	**13,416**	**8,132**	**173**	**5,287**		**8**	**‡285,471**	
1977	**AVERAGE**	**14,602**	**8,245**	**464**	**6,594**	**20**	**50**	**‡339,857**	**‡7,540**
1978	**AVERAGE**	**14,739**	**8,707**	**1,229**	**6,195**	**162**	**158**	**‡309,421**	**‡66,860**
1979	**AVERAGE**	**14,648**	**8,552**	**1,401**	**6,452**	**67**	**235**	**‡339,074**	**‡91,191**
1980	January	14,298	8,648	1,634	6,359	0	311	353,611	91,191
	February	14,189	8,696	1,630	5,936	0	310	361,648	91,191
	March	13,709	8,712	1,647	5,785	0	323	361,742	91,191
	April	13,484	8,688	1,649	5,555	0	216	379,352	91,191
	May	13,326	8,640	1,628	5,071	0	308	383,902	91,191
	June	13,705	8,547	1,626	5,480	0	365	382,035	91,191
	July	13,251	8,555	1,612	4,645	0	238	379,280	91,191
	August	13,011	8,422	1,612	4,723	0	78	387,605	91,191
	September	13,312	8,619	1,610	4,653	54	322	375,989	92,824
	October	12,777	8,536	1,588	4,570	131	309	378,488	96,645
	November	13,119	8,499	1,561	4,524	142	289	372,811	102,320
	December	13,648	8,609	1,602	4,848	198	343	357,702	107,800
	AVERAGE	**13,483**	**8,597**	**1,617**	**5,177**	**44**	**284**		
1981	January	13,248	8,533	1,606	4,817	106	339	376,456	112,490
	February	12,903	8,598	1,619	4,793	80	198	386,793	116,057
	March	12,383	8,601	1,618	4,382	140	210	397,191	120,860
	April	R12,090	R8,543	R1,608	R4,185	272	198	R407,182	134,170
	May	R12,309	R8,496	R1,580	R3,881	386	312	R402,273	150,068
	June†	12,463	*8,610*	*1,634*	3,668	318	123	385,663	163,081
	July†	12,413	*8,646*	*1,609*	4,059	175	257	389,209	173,128
	August†	12,899	*8,572*	*1,609*	3,908	257	204	366,913	184,674
	September†	R12,517	*8,620*	*1,618*	R4,279	R435	194	R361,748	R199,247
	October†	*12,202*	*8,506*	*1,603*	*3,940*	*445*	NA	*373,048*	*213,804*
	AVERAGE	**12,541**	**8,572**	**1,610**	**4,187**	**262**	**NA**		

Geographic coverage: the 50 United States and District of Columbia.
[1]Includes lease condensate.
[2]Includes Alaskan production.
[3]Excludes. Strategic Petroleum Reserve storage that began in October 1977.
‡Total as of December 31. †Preliminary data. R = Revised data. NA = Not available.
Note: Estimated data are in italics and are likely to be revised.
Sources: •See Sources at the end of this section.

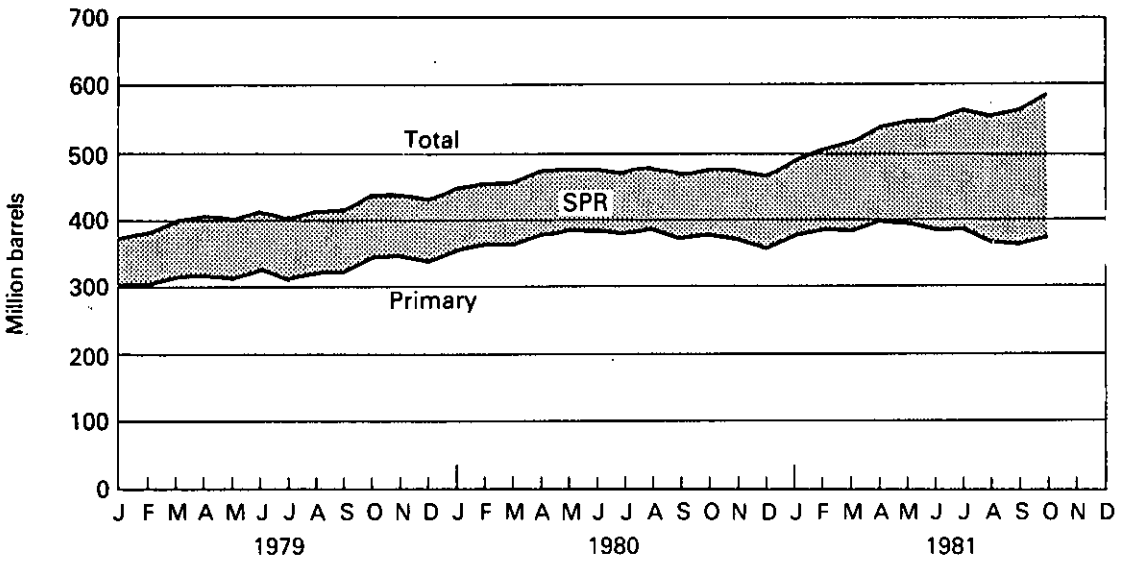
Petroleum

Crude Oil

Production, Refinery Input and Imports



Stocks



Petroleum

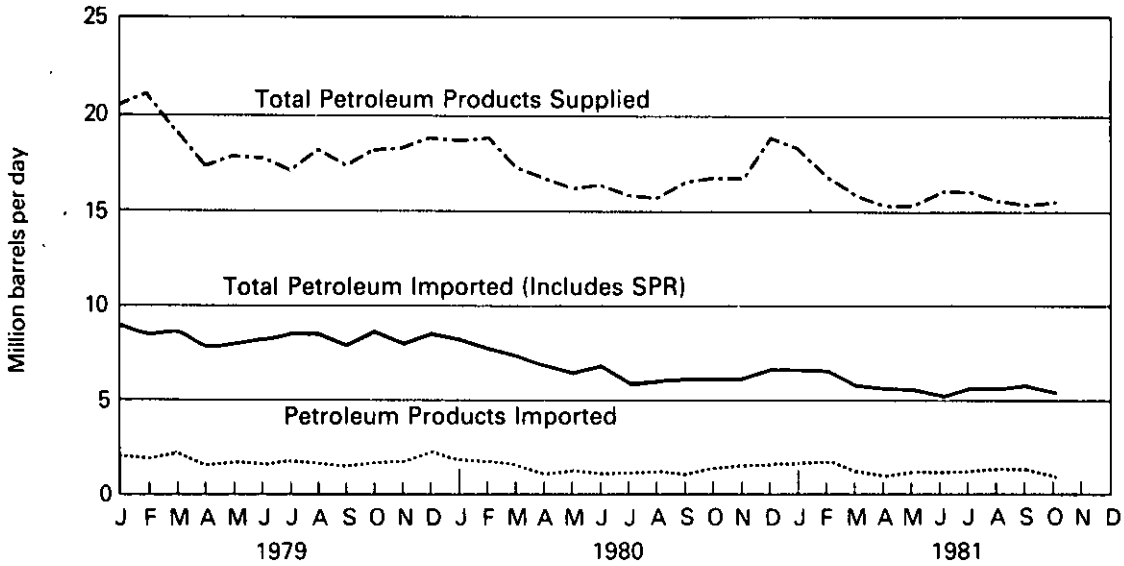
		Total Petroleum Products[1]			Total Crude Oil and Petroleum Products Trade				
		Products Supplied[1]	Product Imports[2]	Product Exports	Total Imports (Excluding SPR)	SPR Imports[3]	Total Imports (Including SPR)[3]	Total Exports	Net Imports
		Thousand barrels per day			Thousand barrels per day				
1973	**AVERAGE**	**17,308**	**3,012**	**229**	**6,256**			**231**	**6,025**
1974	**AVERAGE**	**16,653**	**2,635**	**218**	**6,112**			**221**	**5,892**
1975	**AVERAGE**	**16,322**	**1,951**	**204**	**6,056**			**209**	**5,846**
1976	**AVERAGE**	**17,461**	**2,026**	**215**	**7,313**			**223**	**7,090**
1977	**AVERAGE**	**18,431**	**2,193**	**193**	**8,787**	**20**	**8,807**	**243**	**8,565**
1978	**AVERAGE**	**18,847**	**2,008**	**204**	**8,202**	**162**	**8,363**	**362**	**8,002**
1979	**AVERAGE**	**18,513**	**1,937**	**236**	**8,389**	**67**	**8,456**	**471**	**7,985**
1980	January	18,656	1,983	228	8,342	0	8,342	539	7,803
	February	18,815	1,911	227	7,847	0	7,847	536	7,311
	March	17,385	1,724	243	7,509	0	7,509	566	6,943
	April	16,724	1,430	241	6,985	0	6,985	457	6,528
	May	16,143	1,478	266	6,549	0	6,549	573	5,975
	June	16,214	1,413	288	6,893	0	6,893	654	6,239
	July	15,962	1,401	292	6,046	0	6,046	530	5,516
	August	15,727	1,379	241	6,102	0	6,102	319	5,784
	September	16,548	1,475	235	6,129	54	6,183	557	5,626
	October	16,911	1,603	288	6,173	131	6,303	598	5,706
	November	16,694	1,729	260	6,252	142	6,395	549	5,846
	December	18,354	1,812	279	6,660	198	6,858	622	6,236
	AVERAGE	**17,006**	**1,611**	**258**	**6,787**	**44**	**6,831**	**542**	**6,290**
1981	January	18,288	1,892	219	6,709	106	6,814	558	6,257
	February	16,930	1,904	371	6,697	80	6,777	569	6,208
	March	15,838	1,505	376	5,886	140	6,026	586	5,440
	April	R15,280	R1,310	R372	R5,495	272	R5,767	R570	R5,198
	May	R15,196	R1,436	R283	R5,317	386	R5,702	R595	R5,107
	June†	15,962	1,270	282	4,939	318	5,257	405	4,852
	July†	15,960	1,439	314	5,497	175	5,672	571	5,101
	August†	15,462	1,450	440	5,359	257	5,616	644	4,972
	September†	R15,397	R1,528	325	R5,808	R435	R6,243	519	5,724
	October†	*15,483*	*1,137*	NA	*5,077*	*445*	*5,522*	NA	NA
	AVERAGE	**15,974**	**1,484**	**NA**	**5,671**	**262**	**5,933**	**NA**	**NA**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]See Definitions.
[2]Includes plant condensate, natural gasoline and unfinished oils.
[3]Strategic Petroleum Reserve storage began in October 1977.
Estimated data in italics. These are likely to be revised.
†Preliminary data. R=Revised data. NA=Not available.
Sources: •See Sources on the last page of this section.

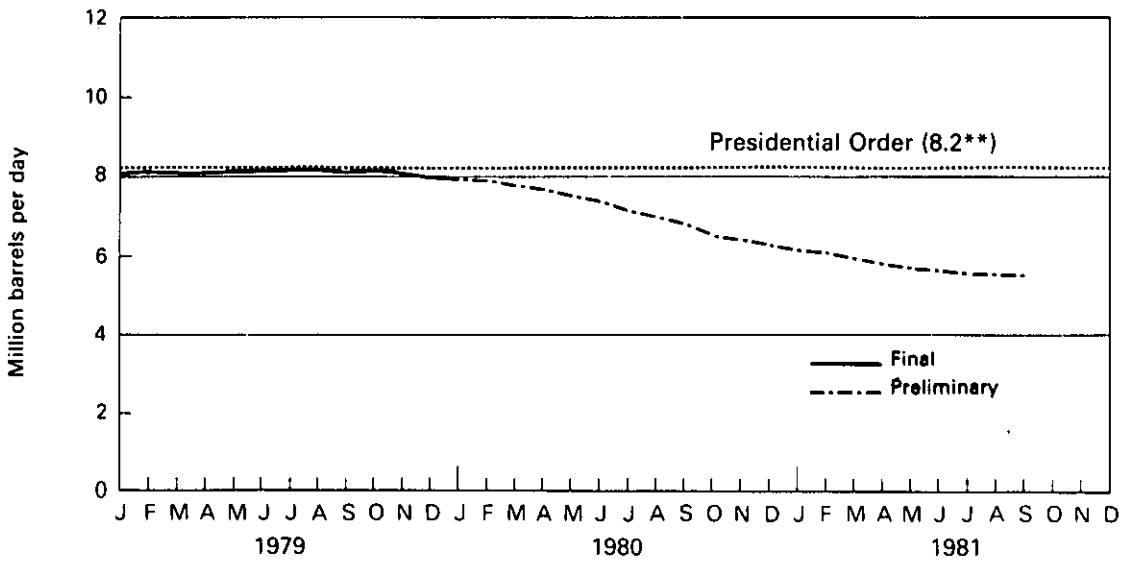
Petroleum

Products Supplied and Imports

Products Supplied and Imports



Net Imports* of Crude Oil and Refined Products
(Average for the Latest 12 Months)



* Includes SPR.
** In his January 1980 State of the Union address, President Carter announced his revised net import ceiling of 8.2 million barrels per day for 1980. The figure was previously 8.5 million barrels per day.

Petroleum

Petroleum Imports from OPEC Sources

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC[1]	Total OPEC	Arab Members of OPEC[2]
	Thousand barrels per day										
1973 AVERAGE	**136**	**213**	**223**	**164**	**459**	**486**	**71**	**1,135**	**106**	**2,993**	**915**
1974 AVERAGE	**190**	**300**	**469**	**4**	**713**	**461**	**74**	**979**	**88**	**3,280**	**752**
1975 AVERAGE	**282**	**390**	**280**	**232**	**762**	**715**	**117**	**702**	**122**	**3,601**	**1,383**
1976 AVERAGE	**432**	**539**	**298**	**453**	**1,025**	**1,230**	**254**	**700**	**134**	**5,066**	**2,424**
1977 AVERAGE	**559**	**541**	**535**	**723**	**1,143**	**1,380**	**335**	**690**	**287**	**6,193**	**3,185**
1978 AVERAGE	**649**	**573**	**555**	**654**	**919**	**1,144**	**385**	**645**	**226**	**5,751**	**2,963**
1979 AVERAGE	**636**	**420**	**304**	**658**	**1,080**	**1,356**	**281**	**690**	**212**	**5,637**	**3,056**
1980											
January	484	433	80	617	1,054	1,562	202	583	179	5,195	3,001
February	639	317	9	603	1,013	1,399	304	543	140	4,967	3,016
March	472	405	0	654	924	1,390	370	352	175	4,742	2,979
April	556	374	0	683	722	1,294	150	339	228	4,346	2,866
May	441	360	0	468	955	1,149	172	405	132	4,083	2,314
June	497	331	0	561	998	1,327	178	409	105	4,408	2,598
July	537	308	0	492	721	1,179	158	411	55	3,861	2,378
August	432	289	0	431	770	1,136	142	397	98	3,695	2,205
September	375	299	0	505	735	1,112	107	425	111	3,670	2,185
October	463	348	0	476	716	1,043	182	482	52	3,762	2,178
November	493	348	0	500	599	1,201	105	595	78	3,920	2,339
December	417	280	0	641	958	1,300	83	610	101	4,391	2,460
AVERAGE	**483**	**341**	**8**	**552**	**847**	**1,257**	**179**	**463**	**121**	**4,251**	**2,541**
1981											
January	324	424	0	500	908	1,297	93	556	27	4,129	2,214
February	381	407	0	468	866	1,122	93	466	92	3,895	2,064
March	352	328	0	485	771	1,027	47	360	54	3,425	1,911
April	263	314	0	R496	826	R1,056	85	R237	42	R3,317	R1,916
May	R393	277	0	443	664	929	17	R317	124	R3,164	R1,792
June†	366	324	0	380	534	865	60	232	118	2,878	1,712
July†	295	329	0	267	615	1,073	80	468	38	3,165	1,735
August†	341	361	0	274	317	1,056	61	510	84	3,004	1,732
September†	341	371	0	154	323	1,457	96	359	149	3,249	2,047
AVERAGE	**339**	**348**	**0**	**385**	**646**	**1,097**	**70**	**390**	**81**	**3,355**	**1,901**

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

Petroleum

Petroleum Imports from Non-OPEC Sources

	Bahamas	Canada	Mexico	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Other[1]	Total
					Thousand barrels per day				
1973									
AVERAGE	**174**	**1,325**	**16**	**585**	**99**	**255**	**329**	**480**	**3,263**
1974									
AVERAGE	**164**	**1,070**	**8**	**511**	**90**	**251**	**391**	**347**	**2,832**
1975									
AVERAGE	**152**	**846**	**71**	**332**	**90**	**242**	**406**	**314**	**2,454**
1976									
AVERAGE	**118**	**599**	**87**	**275**	**88**	**274**	**422**	**382**	**2,247**
1977									
AVERAGE	**171**	**517**	**179**	**211**	**105**	**289**	**466**	**676**	**2,614**
1978									
AVERAGE	**160**	**467**	**318**	**229**	**94**	**253**	**429**	**663**	**2,613**
1979									
AVERAGE	**147**	**538**	**439**	**231**	**92**	**190**	**431**	**751**	**2,819**
1980									
January	175	569	545	289	56	239	467	806	3,147
February	111	540	463	205	95	192	522	752	2,880
March	124	460	460	184	81	189	443	827	2,767
April	56	411	546	231	63	143	418	771	2,639
May	77	419	576	184	88	221	303	597	2,466
June	77	408	627	196	91	160	315	611	2,485
July	43	378	434	242	90	180	365	454	2,185
August	62	319	646	255	85	159	254	627	2,407
September	58	403	549	213	52	205	343	690	2,513
October	70	473	604	238	107	114	359	577	2,542
November	22	470	458	267	108	157	391	602	2,475
December	54	502	445	212	109	149	423	573	2,467
AVERAGE	**78**	**446**	**530**	**226**	**85**	**176**	**383**	**656**	**2,580**
1981									
January	39	543	401	197	89	150	494	771	2,686
February	84	546	437	227	46	163	481	897	2,881
March	74	471	488	227	45	93	370	832	2,601
April	R68	R410	R440	R198	40	139	365	R806	R2,467
May	R122	R366	R522	213	58	R105	344	R807	R2,538
June†	44	323	496	196	67	124	262	865	2,379
July†	77	369	370	212	50	178	206	1,045	2,507
August†	65	334	471	255	68	123	184	1,112	2,612
September†	100	380	675	159	72	169	265	1,174	2,994
AVERAGE	**75**	**415**	**476**	**209**	**60**	**138**	**329**	**923**	**2,627**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
Beginning in October 1977 Strategic Petroleum Reserve imports are included.
[1]Includes Non-OPEC Arab, Western Europe, Angola, U.S.S.R., Rumania, other Western Hemisphere and other Eastern Hemisphere.
†Preliminary data. R = Revised data.
Sources: •See Sources on the last page of this section.

Petroleum

Motor Gasoline

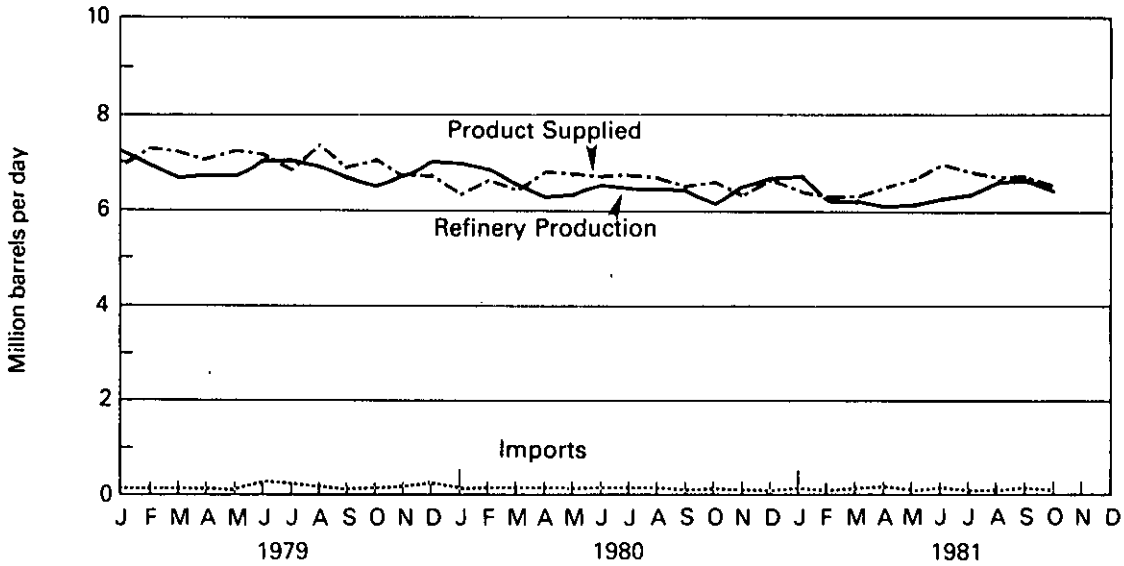
	Product Supplied[1]				Imports[1,2]			Stocks[1,2,3]	
	Total	Unleaded	Unleaded Percent of Total	Refinery Production[1,3]	Total Motor Gasoline	Finished Motor Gasoline	Exports	Total Motor Gasoline	Finished Motor Gasoline
	Thousand barrels per day							Thousand barrels	
1973									
AVERAGE	**6,674**	**NA**	**NA**	**6,527**	**134**		**4**	**‡209,395**	
1974									
AVERAGE	**6,537**	**NA**	**NA**	**6,358**	**204**		**2**	**‡218,346**	
1975									
AVERAGE	**6,675**	**NA**	**NA**	**6,518**	**184**		**2**	**‡234,925**	
1976									
AVERAGE	**6,978**	**NA**	**NA**	**6,838**	**131**		**3**	**‡231,387**	
1977									
AVERAGE	**7,177**	**1,976**	**27.5**	**7,031**	**217**		**2**	**‡257,578**	
1978									
AVERAGE	**7,412**	**2,521**	**34.0**	**7,167**	**190**		**1**	**‡237,956**	
1979									
AVERAGE	**7,034**	**2,798**	**39.8**	**6,837**	**181**		**(s)**	**‡237,082**	
1980									
January	6,335	2,718	42.9	6,977	141		1	262,134	
February	6,594	2,969	45.0	6,851	153		(s)	274,422	
March	6,411	3,032	47.3	6,512	154		(s)	282,688	
April	6,799	3,021	44.4	6,268	152		1	271,729	
May	6,726	2,980	44.3	6,294	132		1	262,938	
June	6,661	3,099	46.5	6,552	148		1	264,583	
July	6,735	3,131	46.5	6,446	149		3	260,711	
August	6,646	3,135	47.2	6,437	141		1	259,013	
September	6,511	3,054	46.9	6,369	106		7	258,135	
October	6,662	3,110	46.7	6,124	152		1	246,422	
November	6,237	3,123	50.1	6,456	126		(s)	257,059	
December	6,628	3,421	51.6	6,632	121		1	261,327	
AVERAGE	**6,579**	**3,067**	**46.6**	**6,492**	**140**		**1**		
1981									
January	6,389	3,113	48.7	6,677	152	138	(s)	276,511	226,686
February	6,293	3,100	49.3	6,269	121	111	1	283,983	229,465
March	6,303	3,095	49.1	6,202	200	170	(s)	284,859	231,977
April	R6,585	R3,278	R49.8	R6,110	195	174	(s)	R271,782	R223,240
May	R6,608	R3,117	R47.2	R6,119	159	146	1	R258,187	R212,729
June†	6,975	3,412	48.9	6,230	195	161	1	242,167	195,576
July†	6,765	3,389	50.1	6,356	116	115	(s)	229,794	186,550
August†	6,680	3,361	50.3	6,617	159	118	3	232,457	188,256
September†	R6,686	3,325	49.7	R6,591	R193	169	2	R236,831	190,465
October†	*6,530*	NA	NA	*6,411*	*124*	NA	NA	*238,965*	NA
AVERAGE	**6,583**	**NA**	**NA**	**6,360**	**161**	**NA**	**NA**		

Geographic coverage: the 50 United States and District of Columbia.
[1]Beginning in January 1981, EIA modified its monthly petroleum surveys. Non-refinery blenders were added to the reporting universe and gasohol was included as a motor gasoline component. On the new basis motor gasoline production and product supplied during the last half of 1980 would have averaged 289,000 barrels per day higher than shown.
[2]Total motor gasoline includes finished motor gasoline and blending components.
[3]See Definitions.
Estimated data in italics. These are likely to be revised.
‡Total as of December 31.
†Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.
Sources: •See Sources on the last page of this section.

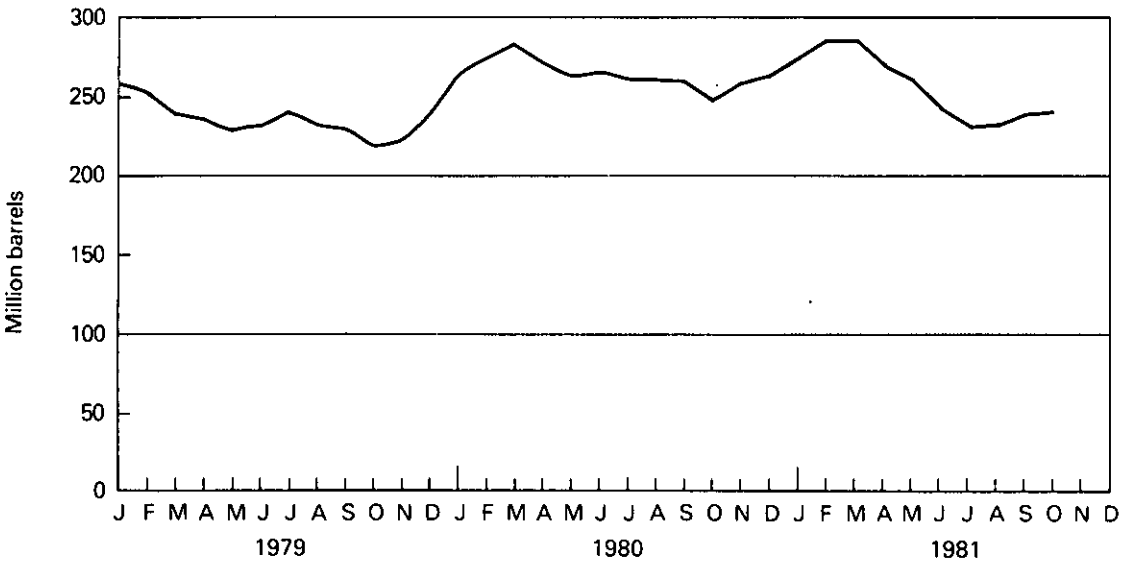
Petroleum

Motor Gasoline

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Jet Fuel

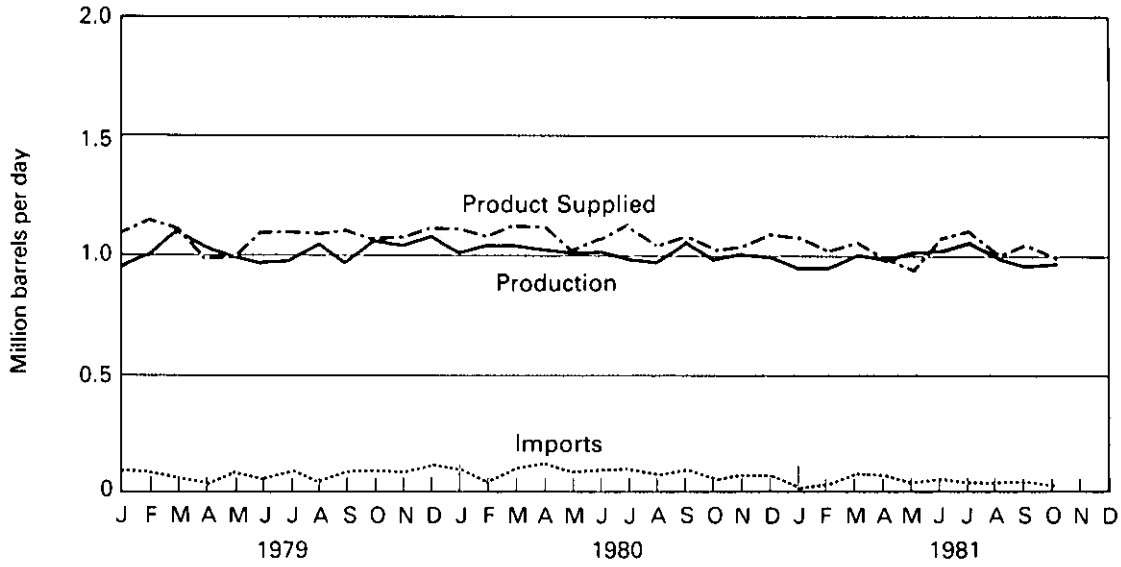
		Product Supplied	Refinery Production	Imports	Exports	Stocks
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**1,059**	**859**	**212**	**4**	**‡28,544**
1974	**AVERAGE**	**993**	**836**	**163**	**3**	**‡29,435**
1975	**AVERAGE**	**1,001**	**871**	**133**	**2**	**‡30,380**
1976	**AVERAGE**	**987**	**918**	**76**	**2**	**‡32,085**
1977	**AVERAGE**	**1,039**	**973**	**75**	**2**	**‡34,548**
1978	**AVERAGE**	**1,057**	**970**	**86**	**1**	**‡33,665**
1979	**AVERAGE**	**1,076**	**1,012**	**78**	**1**	**‡38,520**
1980	January	1,101	1,004	95	1	38,412
	February	1,072	1,026	43	2	38,258
	March	1,116	1,031	99	2	38,661
	April	1,105	1,023	107	3	39,339
	May	1,015	1,001	79	2	41,310
	June	1,057	1,004	86	1	42,283
	July	1,110	974	93	2	40,902
	August	1,043	959	67	1	40,331
	September	1,056	1,041	77	1	42,159
	October	1,037	977	93	1	43,177
	November	1,029	988	66	1	43,921
	December	1,083	962	60	1	42,031
	AVERAGE	**1,069**	**999**	**81**	**1**	
1981	January	1,060	956	12	1	39,478
	February	1,016	949	41	1	38,726
	March	1,055	995	76	(s)	39,206
	April	R965	R960	R55	1	R40,690
	May	R924	R1,006	R47	1	R44,668
	June†	1,056	999	64	(s)	44,862
	July†	1,078	1,045	35	1	44,884
	August†	998	980	33	1	45,332
	September†	R1,027	R937	R30	1	R43,498
	October†	*971*	*948*	*11*	NA	*42,923*
	AVERAGE	**1,015**	**978**	**40**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
Estimated data in italics. These are likely to be revised.
‡Total as of December 31.
†Preliminary data. R = Revised data. NA = Not available.
(s) = Less than 500 barrels per day.
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.
Sources: •See Sources on the last page of this section.

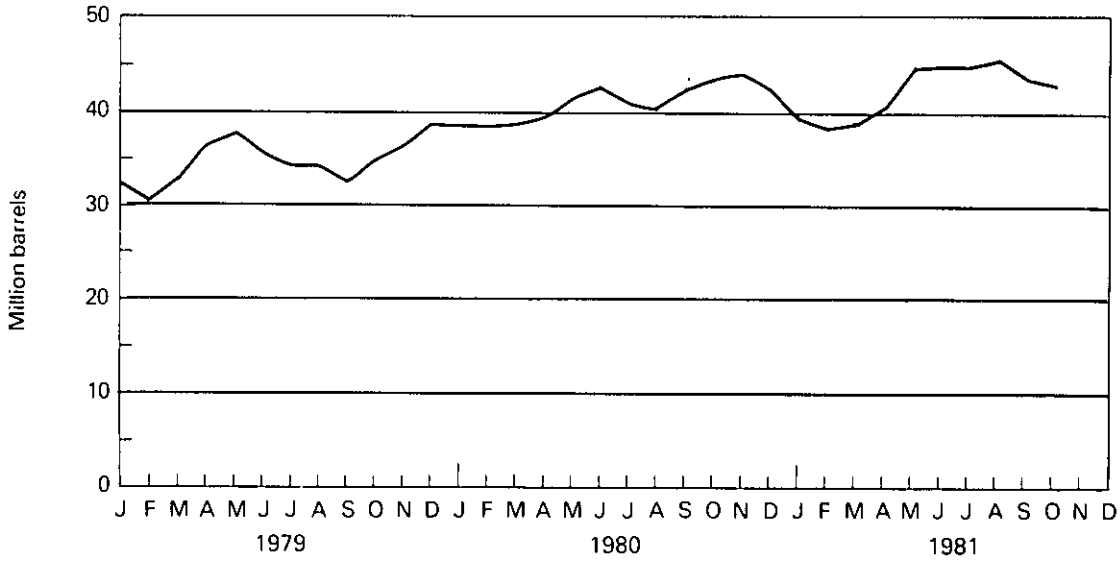
Petroleum

Jet Fuel

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Distillate Fuel Oil

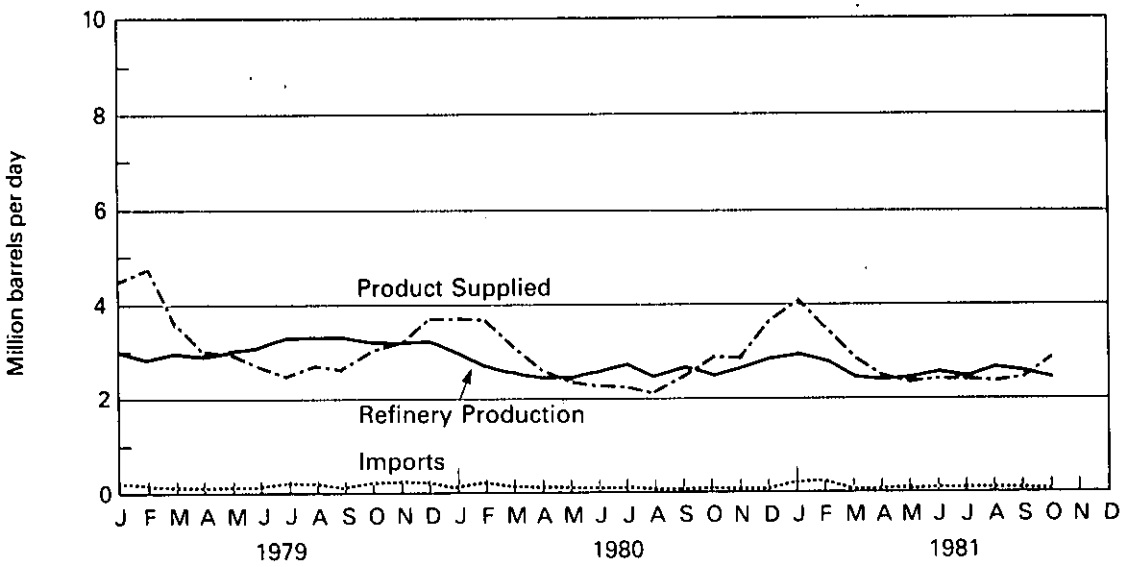
		Product Supplied[1]	Refinery Production[1,2]	Imports	Exports	Stocks[2]
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**3,092**	**2,820**	**392**	**9**	**‡196,421**
1974	**AVERAGE**	**2,948**	**2,668**	**289**	**2**	**‡200,029**
1975	**AVERAGE**	**2,851**	**2,653**	**155**	**1**	**‡208,787**
1976	**AVERAGE**	**3,133**	**2,924**	**146**	**1**	**‡185,948**
1977	**AVERAGE**	**3,352**	**3,277**	**250**	**1**	**‡250,260**
1978	**AVERAGE**	**3,432**	**3,167**	**173**	**3**	**‡216,439**
1979	**AVERAGE**	**3,311**	**3,152**	**193**	**3**	**‡228,712**
1980	January	3,732	3,023	179	7	212,126
	February	3,706	2,778	221	8	191,464
	March	3,171	2,564	179	19	177,659
	April	2,630	2,462	147	2	177,006
	May	2,402	2,471	126	1	183,072
	June	2,331	2,645	108	(s)	195,790
	July	2,225	2,688	117	3	213,756
	August	2,136	2,462	77	(s)	226,305
	September	2,590	2,687	101	(s)	232,310
	October	2,918	2,589	115	(s)	225,711
	November	2,916	2,699	133	(s)	223,261
	December	3,646	2,892	166	(s)	205,113
	AVERAGE	**2,865**	**2,663**	**139**	**3**	
1981	January	4,090	2,987	273	(s)	180,004
	February	3,395	2,809	325	17	172,528
	March	2,891	2,484	144	(s)	164,638
	April	R2,541	R2,418	R116	3	R164,634
	May	R2,395	R2,454	R165	(s)	R171,918
	June†	2,416	2,524	195	(s)	181,594
	July†	2,439	2,450	176	2	187,662
	August†	2,409	2,642	151	(s)	199,831
	September†	R2,523	R2,606	R129	1	R206,438
	October†	*2,876*	*2,516*	*134*	NA	*197,294*
	AVERAGE	**2,795**	**2,588**	**180**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
[1]Beginning in January 1981, EIA modified its monthly petroleum surveys. On the new basis distillate fuel oil production and product supplied in 1980 would have been an average of 105,000 barrels per day higher than shown.
[2]See Definitions.
Estimated data in italics. These are likely to be revised.
‡Total as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
(s)=Less than 500 barrels per day.
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.
Sources: •See Sources on the last page of this section.

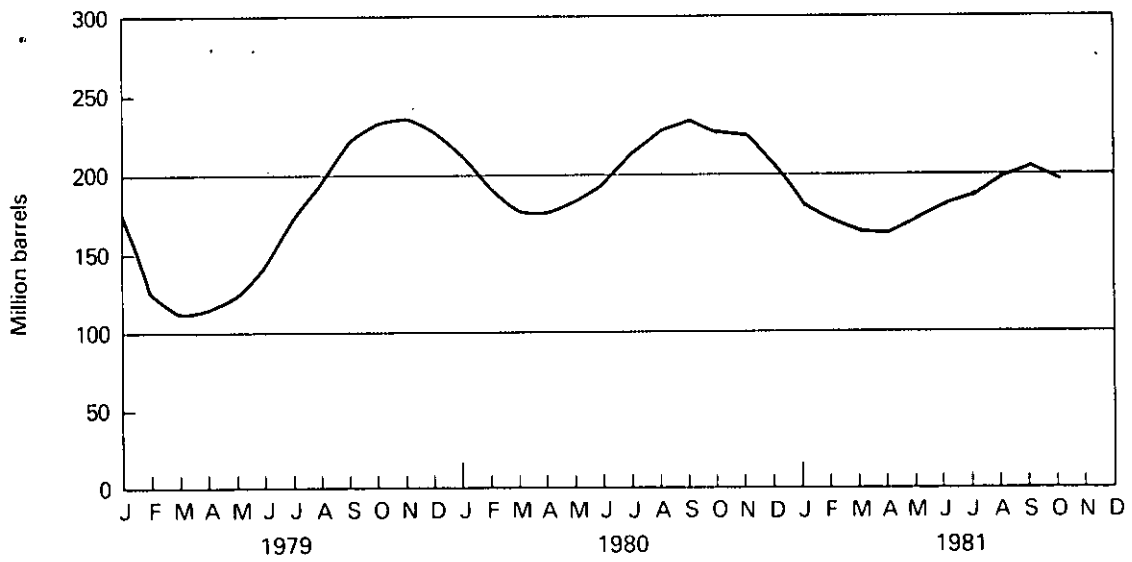
Petroleum

Distillate Fuel Oil

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Residual Fuel Oil

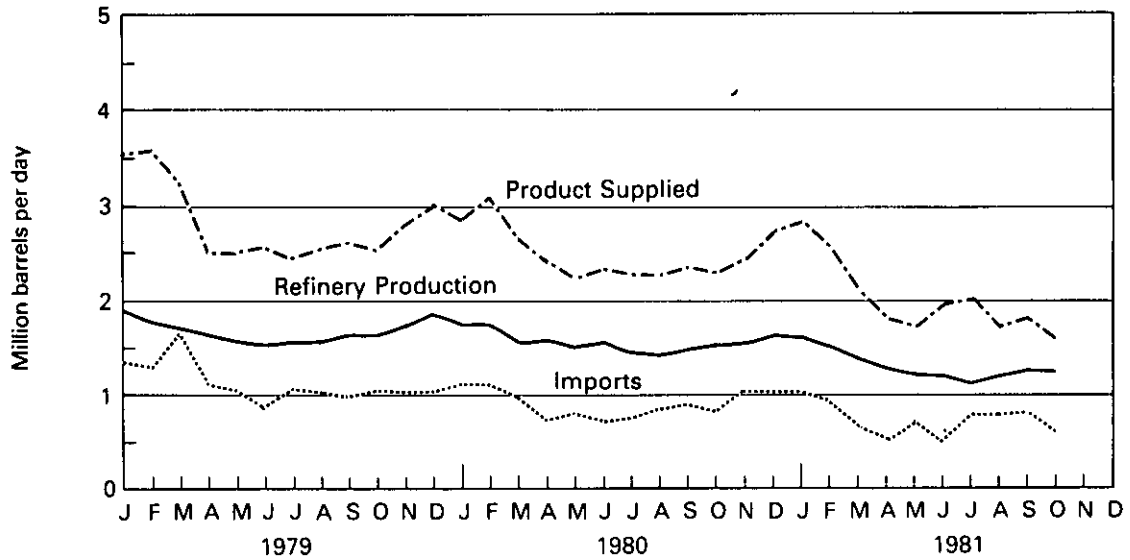
		Product Supplied[1]	Refinery Production[1]	Imports	Exports	Stocks
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**2,822**	**971**	**1,853**	**23**	**‡53,480**
1974	**AVERAGE**	**2,639**	**1,070**	**1,587**	**14**	**‡59,694**
1975	**AVERAGE**	**2,462**	**1,235**	**1,223**	**15**	**‡74,126**
1976	**AVERAGE**	**2,801**	**1,377**	**1,413**	**12**	**‡72,344**
1977	**AVERAGE**	**3,071**	**1,754**	**1,359**	**6**	**‡89,993**
1978	**AVERAGE**	**3,023**	**1,667**	**1,355**	**13**	**‡90,194**
1979	**AVERAGE**	**2,826**	**1,687**	**1,151**	**9**	**‡95,598**
1980	January	2,865	1,766	1,132	5	97,153
	February	3,099	1,770	1,119	17	90,959
	March	2,650	1,581	971	2	88,269
	April	2,434	1,591	769	[2]40	85,219
	May	2,234	1,507	812	20	87,639
	June	2,324	1,575	749	14	87,657
	July	2,287	1,480	787	60	85,605
	August	2,287	1,444	875	2	86,949
	September	2,360	1,497	906	21	87,876
	October	2,224	1,513	871	70	90,989
	November	2,430	1,577	1,024	88	93,814
	December	2,747	1,661	1,025	62	90,344
	AVERAGE	**2,493**	**1,577**	**920**	**33**	
1981	January	2,870	1,611	1,015	65	82,267
	February	2,549	1,565	956	125	78,230
	March	2,098	1,423	699	145	74,920
	April	R1,829	R1,320	R584	151	R73,045
	May	R1,769	1,222	R735	25	R78,542
	June†	2,007	1,247	540	76	70,112
	July†	1,976	1,162	822	82	68,248
	August†	1,782	1,228	819	69	74,735
	September†	R1,833	R1,276	R841	126	R79,916
	October†	*1,607*	*1,290*	*674*	NA	*80,386*
	AVERAGE	**2,028**	**1,333**	**768**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
[1]Beginning in January 1981, EIA modified its monthly petroleum surveys. On the new basis residual fuel oil production and product supplied in 1980 would have been an average of 54,000 barrels per day higher than shown.
[2]Beginning in April 1980, residual fuel oil exports increased due to shipments of high sulfur fuel to the Carribean to be desulfurized and returned to the United States. In July 1980, additional exports of high sulfur fuel oil began to be shipped to Asia.
Estimated data in italics. These are likely to be revised.
‡Total as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.
Sources: •See Sources on the last page of this section.

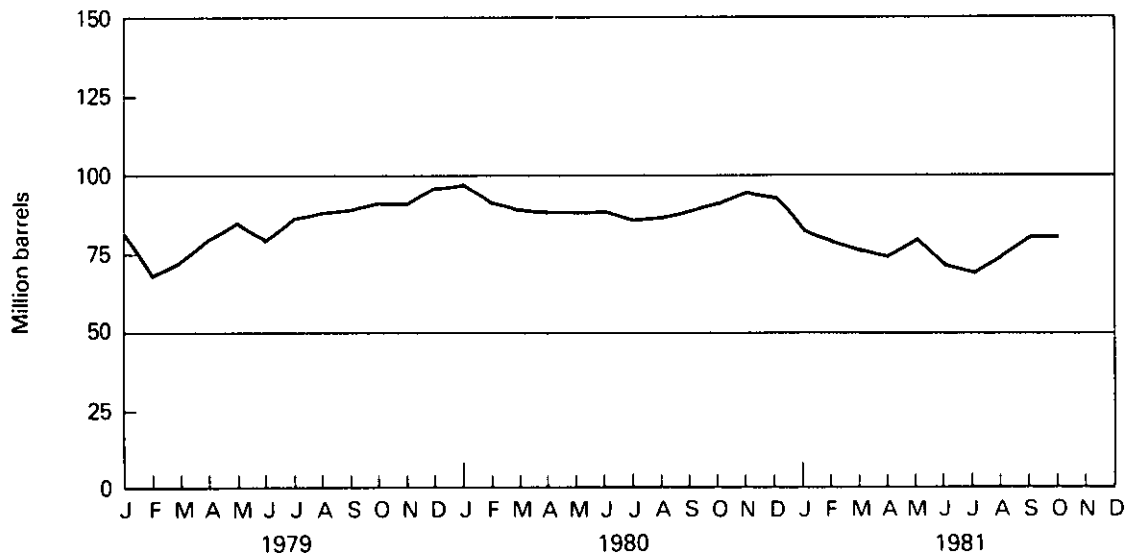
Petroleum

Residual Fuel Oil

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

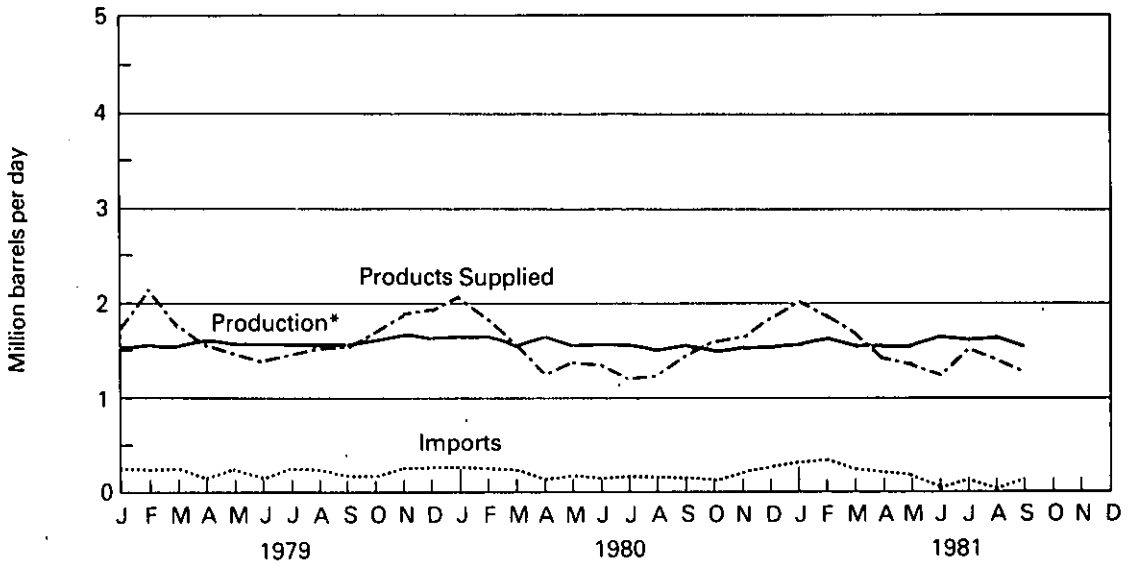
Natural Gas Plant Liquids, Including Liquefied Refinery Gases

		Products Supplied[1]	Production[1]		Used at Refineries[1]	Imports	Stocks[1]
			At processing plants	At refineries			
		Thousand barrels per day					Thousand barrels
1973	**AVERAGE**	**1,454**	**1,738**	**375**	**815**	**239**	**‡106,659**
1974	**AVERAGE**	**1,422**	**1,688**	**338**	**746**	**212**	**‡120,175**
1975	**AVERAGE**	**1,352**	**1,633**	**311**	**710**	**185**	**‡132,653**
1976	**AVERAGE**	**1,407**	**1,603**	**340**	**725**	**196**	**‡124,518**
1977	**AVERAGE**	**1,427**	**1,618**	**352**	**673**	**203**	**‡144,902**
1978	**AVERAGE**	**1,416**	**1,567**	**355**	**639**	**139**	**[2]‡140,052**
1979	**AVERAGE**	**1,695**	**1,584**	**340**	**504**	**230**	**‡125,289**
1980	January	2,021	1,647	338	698	282	110,378
	February	1,843	1,651	354	572	265	105,389
	March	1,573	1,569	342	518	224	106,070
	April	1,212	1,626	328	507	149	117,006
	May	1,376	1,555	325	428	187	124,615
	June	1,385	1,559	335	386	193	133,516
	July	1,218	1,513	325	455	178	143,618
	August	1,244	1,514	323	417	166	153,716
	September	1,463	1,510	314	463	168	155,181
	October	1,612	1,498	300	501	262	152,763
	November	1,697	1,568	324	528	240	149,277
	December	1,863	1,558	346	545	299	[3]142,251
	AVERAGE	**1,542**	**1,564**	**329**	**502**	**218**	
1981	January	2,010	1,595	324	611	319	134,010
	February	1,893	1,615	332	560	338	128,722
	March	1,696	1,581	313	484	260	127,279
	April	R1,405	R1,551	R322	R462	R222	R133,375
	May	R1,384	R1,554	R325	R443	R197	R140,492
	June†	1,228	1,666	328	473	71	147,729
	July†	1,512	1,624	311	468	158	150,684
	August†	1,355	1,636	340	466	51	152,433
	September†	1,289	1,566	325	536	150	158,294
	AVERAGE	**1,529**	**1,598**	**324**	**500**	**195**	

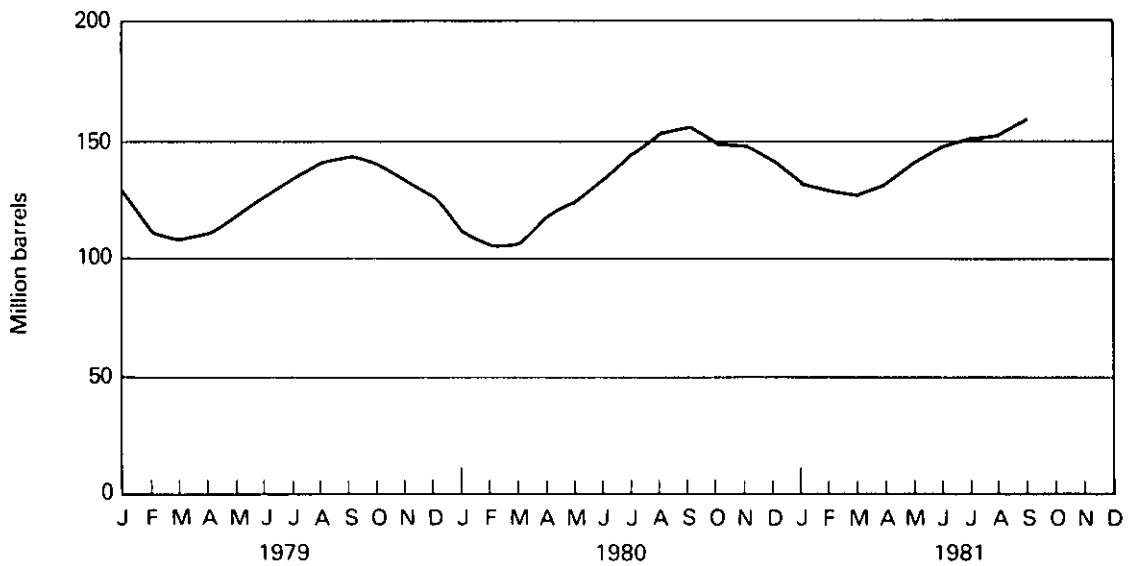
Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 7 and Definitions.
[2]EIA natural gas plant coverage was expanded in January 1979 to include approximately 80 more plants. Calculated on the new basis, December 1978 closing stocks totaled 147,548 thousand barrels.
[3]EIA natural gas liquids operations coverage was expanded in January 1981 to include additional storage terminals. Calculated on the new basis, December 1980 closing stocks totaled 146,544 thousand barrels.
‡Total as of December 31.
†Preliminary data. R=Revised data.
Sources: • 1973 through May 1981 are shown on last page of this section.
• June 1981 through September 1981: EIA "Monthly Petroleum Statistics Report."
• Sources for the *Energy Data Reports* are shown on the last page of this section.

Natural Gas Plant Liquids

Products Supplied, Production and Imports



Stocks



*At processing plants.

Petroleum

Petroleum Primary Supply Balance

	1980				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
	Thousand barrels per day				
Primary Supply					
Crude oil and lease condensate production	8,685	8,625	8,531	8,548	8,597
Natural gas plant liquids production	1,622	1,580	1,513	1,541	1,564
Other hydrocarbon supply	56	49	44	42	48
Crude oil imported[1]	6,029	5,366	4,692	4,806	5,220
Petroleum products imported[2]	1,872	1,440	1,418	1,714	1,611
Total new primary supply	18,263	17,059	16,197	16,652	17,040
Processing gain	629	567	593	591	595
Stock change—all oils[3]	-1	+753	+393	-557	+146
Total net primary supply	18,893	16,873	16,398	17,800	17,489
Unaccounted for crude oil[4]	-57	+61	+158	+131	+73
Disposition					
Crude oil and petroleum products exported	547	562	468	590	542
Crude oil losses	15	14	14	14	14
Total products supplied[5]	18,274	16,358	16,074	17,327	17,006
Total disposition	18,836	16,934	16,556	17,931	17,562

	1981		
	1st Qtr.	2nd Qtr.†	3rd Qtr.†
Primary Supply			
Crude oil and lease condensate production	R8,577	R8,549	8,613
Natural gas plant liquids production	R1,596	R1,590	1,609
Other hydrocarbon supply	R37	57	53
Crude oil imported[1]	R4,769	R4,237	4,368
Petroleum products imported[2]	R1,762	R1,340	1,472
Total new primary supply	R16,741	R15,773	16,113
Processing gain	R528	R488	481
Stock change—all oils[3]	R-219	R+320	+413
Total net primary supply	R17,489	R15,941	16,182
Unaccounted for crude oil[4]	R+109	R+66	+19
Disposition			
Crude oil and petroleum products exported	R571	R524	579
Crude oil losses	R5	R7	14
Total products supplied[5]	R17,021	R15,476	15,608
Total disposition	R17,598	R16,007	16,201

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes crude oil imported for the Strategic Petroleum Reserve.
[2]Includes plant condensate, natural gasoline and unfinished oils.
[3]Includes petroleum stored in the Strategic Petroleum Reserve.
[4]Balancing item resulting from statistical inconsistencies.
[5]Includes international bunkers.
†Preliminary data. R = Revised data.
Sources: • January 1980 through May 1981: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly."
• June 1981 through September 1981: EIA, "Monthly Petroleum Statistics Report".
• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are shown on the last page of this section.

Sources for the Petroleum Section

- 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 1979: EIA *Energy Data Reports,* "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual".
- January 1980 through May 1981: EIA *Energy Data Reports,* "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly."
- June 1981 through September 1981: EIA "Monthly Petroleum Statistics Report".
- 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* 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).

Part 4 Natural Gas

Natural Gas

Consumption of natural gas in the United States during October 1981 was an estimated 1.6 trillion cubic feet (Tcf). This was 19.1 percent higher than in September 1981 and 1.2 percent greater than in October 1980. Estimated consumption during the first 10 months of 1981 totaled 15.9 Tcf, 1.2 percent less than during the January through October 1980 period.

Production of dry natural gas in October 1981 was an estimated 1.6 Tcf, 3.2 percent more than in September 1981 and 1.8 percent higher than in October 1980. Output during the January through October 1981 period totaled 16.2 Tcf, 1.0 percent more than during the comparable 1980 period.

Imports of natural gas in October 1981 were an estimated 80 billion cubic feet (Bcf), 6.7 percent higher than in the previous October. During the first 10 months of 1981, imports of natural gas totaled an estimated 703 Bcf, 12.0 percent lower than during the comparable 1980 period. Receipts of foreign gas during October 1981 included Algerian liquefied natural gas (LNG) equivalent to approximately 3 Bcf.

Domestic producer sales to major interstate pipelines in July 1981 (latest data available) totaled 889 Bcf, 7.8 percent above sales for the previous July. Total sales during the first 7 months of 1981 were 6.4 Tcf, approximately 2.4 percent above sales during the comparable 1980 period.

Stocks of working gas* in underground natural gas storage reservoirs at the end of October 1981 totaled 3.2 Tcf, according to preliminary data. This was 1.8 percent above stocks available a year earlier and a record high for the beginning of the winter heating season (November through March). Net injections into storage during October 1981 were 99 Bcf, 12.5 percent higher than during the previous October.

*Gas available for withdrawal.

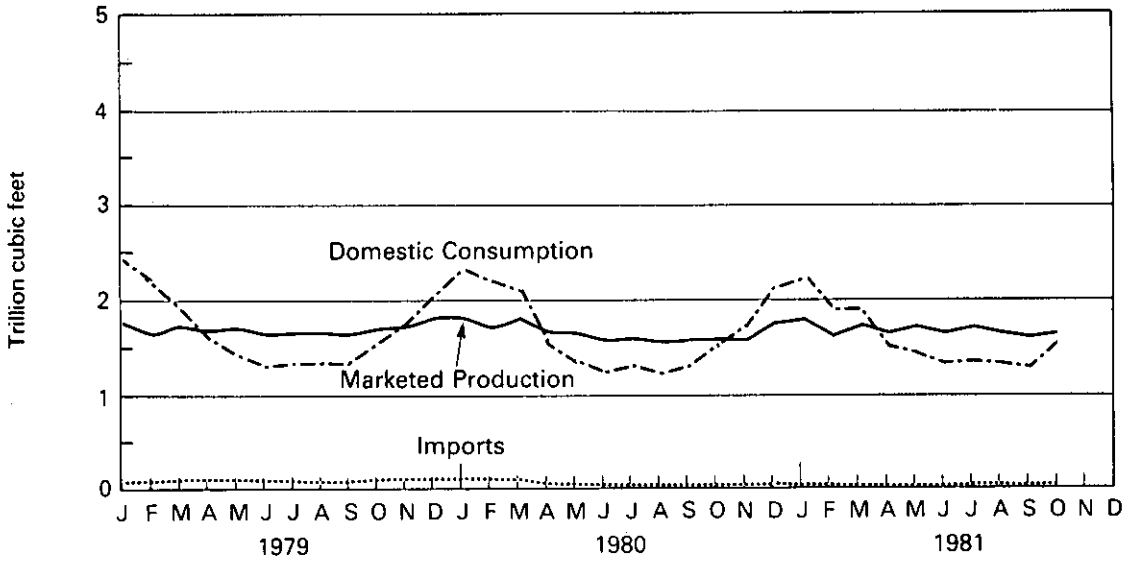
Natural Gas

		Domestic Consumption	Production		Domestic Producer Sales to Major Interstate Pipelines	Imports	Exports
			Marketed	Dry			
		Billion cubic feet					
1973	**TOTAL**	**22,049**	**22,648**	**21,731**	**12,067**	**1,033**	**77**
1974	**TOTAL**	**21,223**	**21,601**	**20,714**	**11,462**	**959**	**77**
1975	**TOTAL**	**19,538**	**20,109**	**19,237**	**10,652**	**953**	**73**
1976	**TOTAL**	**19,946**	**19,952**	**19,098**	**10,140**	**964**	**65**
1977	**TOTAL**	**19,521**	**20,025**	**19,163**	**9,883**	**1,011**	**56**
1978	**TOTAL**	**19,627**	**19,974**	**19,122**	**9,911**	**966**	**53**
1979	**TOTAL**	**20,241**	**20,471**	**19,663**	**10,496**	**1,253**	**56**
1980	January	2,279	1,817	1,745	981	118	6
	February	2,192	1,705	1,638	898	108	5
	March	2,099	1,827	1,754	960	109	5
	April	1,568	1,667	1,601	897	77	3
	May	1,355	1,692	1,625	859	70	3
	June	1,253	1,583	1,520	794	61	3
	July	1,301	1,613	1,549	825	61	3
	August	1,246	1,572	1,510	828	60	3
	September	1,299	1,577	1,515	800	60	5
	October	1,542	1,647	1,582	894	75	5
	November	1,783	1,651	1,586	906	88	3
	December	2,156	1,794	1,723	963	98	5
	TOTAL	**20,073**	**20,145**	**19,348**	**10,605**	**985**	**49**
1981	January	2,256	1,769	1,699	965	86	5
	February	1,899	1,592	1,529	873	79	3
	March	1,906	1,745	1,676	945	73	4
	April	1,512	1,675	1,609	905	68	3
	May	1,459	1,720	1,652	909	61	5
	June	1,336	1,666	1,600	877	63	5
	July	1,366	1,697	1,630	889	64	3
	August	1,330	*1,690*	*1,630*	NA	62	4
	September	1,310	*1,620*	*1,560*	NA	R67	4
	October	1,560	*1,680*	*1,610*	NA	80	5
	TOTAL (Year-to-date)	**15,934**	**16,854**	**16,195**	**NA**	**703**	**41**

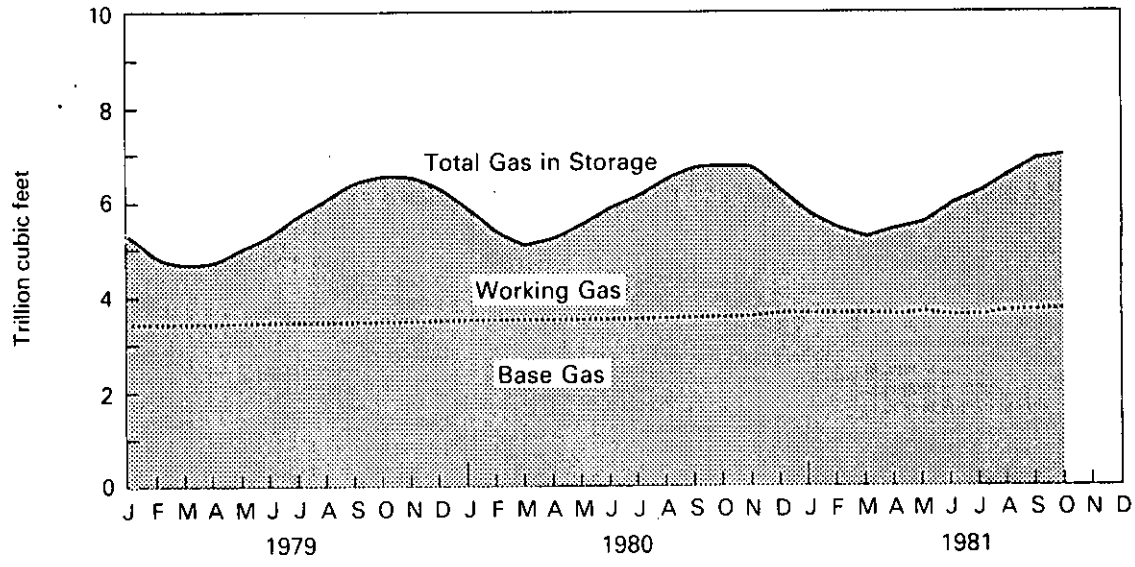
Geographic coverage: the 50 United States and District of Columbia.
Estimated data in italics. These are likely to be revised.
R = Revised data. NA = Not available.
Sources: • Domestic Consumption—1973 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* "Natural Gas" chapter; 1976 through 1979: Energy Information Administration (EIA) *Energy Data Report,* "Natural Gas Production and Consumption"; January 1980 forward: EIA estimates based on a supply/disposition balance calculation.
• Production —State reports to the Interstate Oil Compact Commission, data from the United States Geological Survey and EIA estimates for states that do not report monthly data on a regular or timely basis.
• Domestic Producer Sales—Federal Power Commission (FPC) Form 11, "Natural Gas Pipeline Company Monthly Statement."
• Imports —1973 through 1980: 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: FPC Form 14; January 1981 forward: EIA estimates based primarily on historical data reported on FPC Form 14.

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			
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	5,763	3,629	2,134	28	537	(509)
	February	5,440	3,628	1,812	62	385	(323)
	March	5,248	3,630	1,618	50	243	(193)
	April	5,380	3,631	1,749	191	59	132
	May	5,598	3,634	1,964	243	25	218
	June	5,895	3,634	2,261	323	31	292
	July	6,200	3,649	2,551	324	29	295
	August	6,589	3,709	2,880	356	18	338
	September	6,868	3,719	3,149	285	6	279
	October†	6,966	3,724	3,242	152	53	99

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 9.
[2]Net Storage Injections = storage injections minus storage withdrawals. Parentheses indicate withdrawals greater than injections.
‡Total as of December 31.
NA = Not available.† = Preliminary data.
Source: • Energy Information Administration Form 191 and Federal Power Commission Form 8, "Underground Gas Storage Report."

Part 5 Oil and Gas Resource Development

Oil and Gas Resource Development

The October 1981 rotary rig count of 4,352 was the highest in U.S. drilling history, 2.6 percent above the previous record of 4,242 rigs attained the month before and 38.2 percent higher than the October 1980 count of 3,148 rotary rigs.

Well completions reported in October 1981 totaled 7,741. This is a 45.9 percent increase from the number reported during October 1980.

Oil well completions reported in October 1981 (3,775 reported) were up 56.2 percent from October 1980 (2,417 reported). In October 1981, 1,875 gas well completions were reported, 57.6 percent above the October 1980 level. Total reported footage drilled during October 1981 increased 44.3 percent from the October 1980 level (35.5 million feet as compared to 24.6 million feet).

There were 52 crews engaged in seismic exploratory work offshore in October 1981. This was a 26.8 percent increase from the October 1980 level. October 1981 onshore seismic activity decreased slightly from the previous month's level to 689 crews, but was 30.0 percent higher than activity during October 1980.

Oil and Gas Resource Development

		Rotary Rigs In Operation		Exploratory and Development Wells Completed[1,2]				Total Footage of Wells Completed[1]
		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**	**1,475**	**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**	**1,656**	**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		R2,417	R1,190	R1,697	R5,304	R24,600
	November	3,220		2,239	1,498	1,598	5,335	25,273
	December	3,286		3,675	1,903	2,237	7,815	33,806
	AVERAGE	**2,909**	**TOTAL**	**R27,026**	**R15,730**	**R18,089**	**R60,845**	**R284,461**
1981	January	3,386		1,789	971	1,360	4,120	20,195
	February	3,502		2,462	1,045	1,609	5,116	22,763
	March	3,595		3,102	1,424	1,878	6,404	30,144
	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		3,137	1,266	1,867	6,270	28,886
	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
	AVERAGE	**3,869**	**TOTAL**	**29,471**	**13,721**	**17,833**	**61,025**	**280,562**

Geographic coverage: the 50 United States and District of Columbia.
[1]These data are for well completions reported to the American Petroleum Institute during the reporting period. Excludes service wells and stratigraphic and core tests.
[2]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: American Petroleum Institute (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			
	AVERAGE	**44**	**631**	**674**			

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

Coal

Coal production in October 1981 was 83.3 million short tons, 15.2 percent more than the 72.3 million short tons produced in October 1980. Coal production during the first 10 months of 1981 totaled 663.7 million short tons, down 3.7 percent from the 688.9 million short tons produced in the first 10 months of 1980.

Electric utility coal consumption in September 1981 totaled 48.5 million short tons, 1.2 percent more than consumption in September 1980.

Electric utility coal stocks of 149.5 million short tons at the end of September 1981 were 25.5 million short tons (14.6 percent) below the level 1 year earlier.

Imports of coal in September 1981 totaled 69 thousand short tons. Exports of coal in September 1981 totaled 11.9 million short tons, 3.5 million short tons (42.3 percent) more than the amount exported during September 1980. Coal exports were principally to Japan (22.6 percent) and Canada (18.8 percent).

Coal

Bituminous Coal, Lignite, and Anthracite

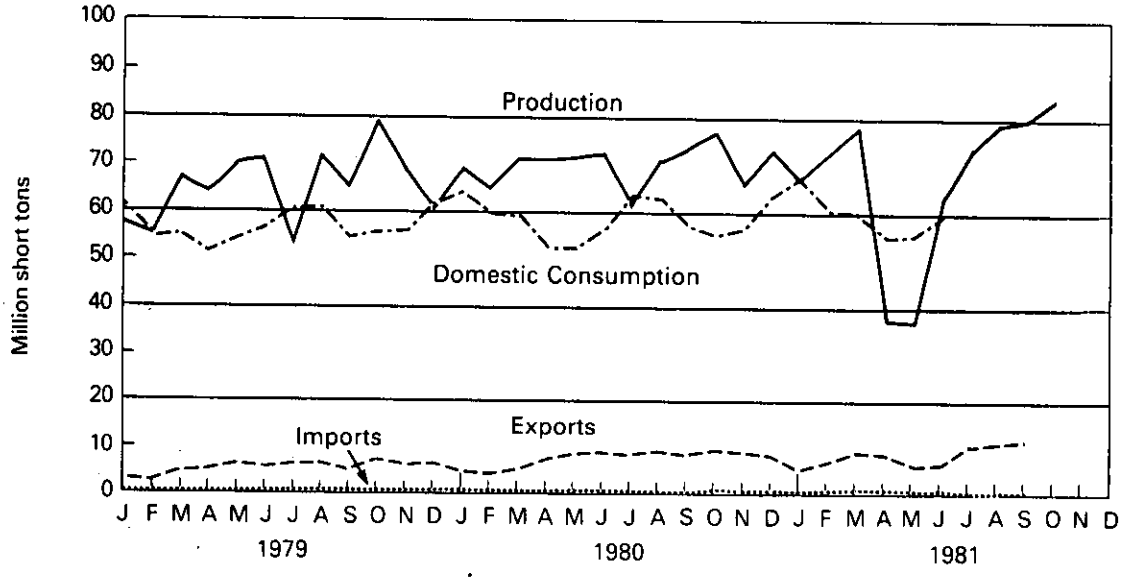
		Production	Domestic Consumption	Imports[1]	Exports[2,3]	Stocks[4]
			Thousand short tons			
1973	**TOTAL**	**598,568**	**562,584**	**127**	**53,587**	**104,335**
1974	**TOTAL**	**610,023**	**558,402**	**2,080**	**60,661**	**96,323**
1975	**TOTAL**	**654,641**	**562,641**	**940**	**66,309**	**128,050**
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	63,521	121	4,460	179,450
	February	65,546	59,678	193	4,041	176,808
	March	70,953	58,851	93	5,633	176,685
	April	69,658	52,635	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	194,467
	October	72,290	55,774	139	9,454	201,975
	November	68,655	56,800	3	8,987	204,436
	December	72,117	63,362	70	8,228	204,028
	TOTAL	**829,700**	**702,733**	**1,194**	**91,742**	
1981	January†	65,588	67,146	35	5,795	198,603
	February†	70,478	59,530	104	6,771	197,962
	March†	77,453	60,054	77	9,710	206,850
	April†	36,961	54,354	63	8,271	186,816
	May†	37,208	54,644	96	6,086	166,814
	June†	61,792	59,319	138	6,158	157,773
	July†	73,183	NA	13	10,762	NA
	August†	78,173	NA	150	11,315	NA
	September†	79,573	NA	69	11,900	NA
	October†	83,309	NA	NA	NA	NA
	TOTAL (Year-to-date)	**663,718**	**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 Explanatory Note 10 for methodology used to calculate domestic consumption from 1978 forward.
[1]Bituminous coal is the only type of coal imported during the years shown above.
[2]Includes exports of lignite beginning in 1978. Lignite prior to 1978 was combined with lignite briquets. Exports of lignite totaled 22,821 short tons in 1978; 26,389 short tons in 1979; and 65,064 short tons in 1980.
[3]Excludes shipments of anthracite to U.S. Armed Forces overseas (340,000 short tons in 1980).
[4]Stocks held by electric utilities, coke plants, and the other Industrial Sector at the end of period. Excludes stocks at retail dealers (which are consumed by the Residential and Commercial Sector).
†Preliminary data. NA = Not available.
Sources: • See Sources on the last page of this section.

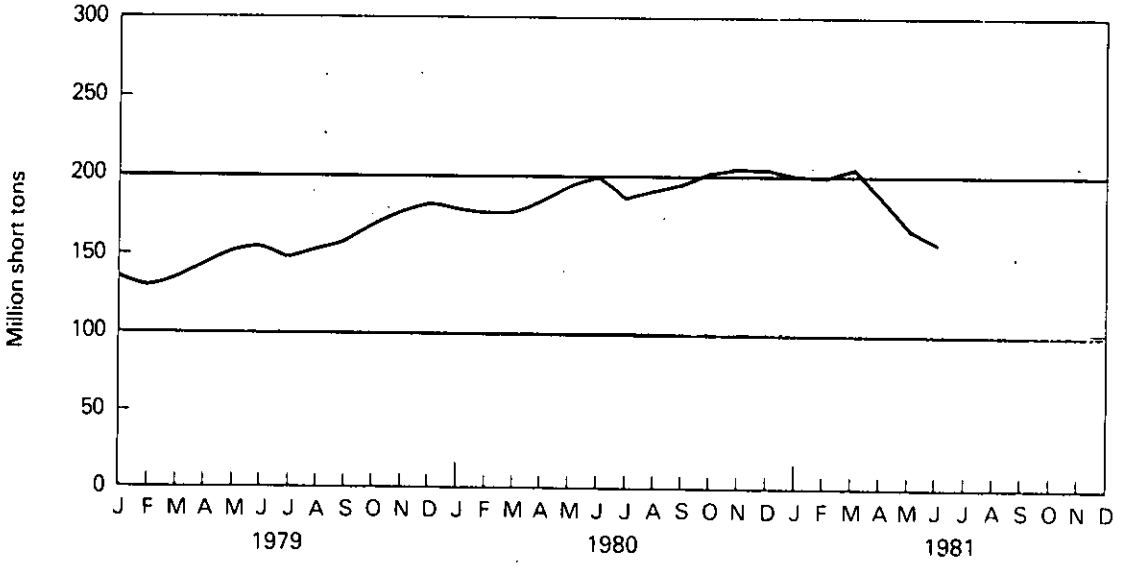
Coal

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**	**98,191**	**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	6,342	5,944	864	63,521
	February	47,512	6,010	5,400	756	59,678
	March	46,685	6,428	5,199	539	58,851
	April	40,692	6,247	5,118	578	52,635
	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	55,774
	November	45,698	5,152	5,331	619	56,800
	December	51,157	5,346	6,067	792	63,362
	TOTAL	**569,274**	**66,660**	**60,347**	**6,452**	**702,733**
1981	January†	54,357	5,465	6,469	855	67,146
	February†	47,914	5,177	5,874	565	59,530
	March†	48,398	5,532	5,654	470	60,054
	April†	43,677	4,862	5,254	561	54,354
	May†	44,999	4,259	5,016	370	54,644
	June†	49,988	4,460	4,571	300	59,319
	July†	56,144	NA	NA	NA	NA
	August†	54,328	NA	NA	NA	NA
	September†	48,483	NA	NA	NA	NA
	TOTAL (Year-to-date)	**448,288**	**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 Explanatory Note 10.
†Preliminary data. NA = Not available.
Sources: • See Sources on 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	9,743	176,685
	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	11,187	194,467
	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	12,079	206,850
	April†	168,894	6,952	10,970	186,816
	May†	152,103	4,850	9,861	166,814
	June†	144,520	4,500	8,753	157,773
	July†	140,656	NA	NA	NA
	August†	142,315	NA	NA	NA
	September†	149,526	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 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 (which are consumed by the Residential and Commercial Sectors).
†Preliminary data. NA = Not available.
Sources: • See Sources on the last page of this section.

Sources for the Coal Section

•**Production:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Energy Information Administration (EIA) "Weekly Coal Report," "Coal Distribution Report," (Form EIA-6), and selected State agencies.
•**Consumption and Stocks:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;*
—Electric Utilities—October 1977 forward: EIA "Monthly Power Plant Report" (FPC Form 4).
—Other Industrial—October 1977 through December 1979: EIA "Monthly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3); January 1980 forward: EIA "Quarterly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3) and EIA "Coal Distribution Report" (Form EIA-6).
—Coke Plants—October 1977 through December 1980: "Coke and Coal Chemicals - Monthly/Annual" (Form EIA-5/5A); January 1981 forward: "Coke and Coal Chemicals - Quarterly/Annual" (Form EIA-5/5A).
—Residential and Commercial—October 1977 through December 1979: "Monthly Coal Report, Retail Dealers and Upper Lake Docks" (Form EIA-2); January 1980 forward: "Coal Distribution Report" (Form EIA-6).
•**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

September 1981 production of electricity by utilities was 186.9 billion kilowatt-hours, 2.4 percent below the September 1980 production level. Coal-fired production totaled 97.7 billion kilowatt-hours, 0.1 percent above the September 1980 level. Natural gas-fired production decreased to 30.9 billion kilowatt-hours, 8.1 percent below the level 1 year earlier. Nuclear production totaled 24.4 billion kilowatt-hours, 3.5 percent above the September 1980 level. Hydroelectric production was 17.8 billion kilowatt-hours in September 1981, 3.5 percent below the September 1980 level. Petroleum-fired production totaled 15.6 billion kilowatt-hours, 12.6 percent below the level 1 year earlier.

Sales of electricity to all ultimate consumers in the United States in September 1981 totaled 183.6 billion kilowatt-hours, a decrease of 6.1 percent from sales of the month before and 3.4 percent below September 1980 sales. Sales to residential consumers during September 1981 were 60.2 billion kilowatt-hours, 11.5 percent below sales for the corresponding month in 1980. Commercial sales were 45.9 billion kilowatt-hours, 0.3 percent less than the amount for September 1980. Sales to industrial consumers totaled 71.0 billion kilowatt-hours in September 1981, 2.0 percent more than the September 1980 figure. In September 1981 other sales totaled 6.6 billion kilowatt-hours, 0.2 percent above the September 1980 level.

Electric utility petroleum consumption (excluding petroleum coke) during September 1981 was 26.3 million barrels, a 14.3 percent decrease below the September 1980 level. Coal consumption for September 1981 was 48.5 million tons, 1.2 percent above the September 1980 rate. During September 1981, consumption of natural gas by electric utilities was 324.8 billion cubic feet, 9.1 percent below the September 1980 consumption level.

On September 30, 1981, utility stocks of anthracite, bituminous coal, and lignite totaled 149.5 million tons. Stockpiles were 14.6 percent below the levels of September 1980.

Petroleum stocks (excluding petroleum coke) on September 30, 1981, totaled 129.4 million barrels, 7.8 percent below the levels for the same month of 1980.

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	111,148	25,724	22,081	23,368	22,355	540	205,217
	February	97,653	17,444	21,339	21,595	21,134	483	179,648
	March	99,482	16,962	25,900	22,004	20,572	541	185,461
	April	88,109	15,106	27,309	20,646	20,723	500	172,393
	May	88,941	14,508	29,920	19,723	24,081	483	177,656
	June	99,828	18,972	35,885	21,166	26,370	473	202,694
	July	112,854	19,973	38,602	23,080	25,133	523	220,164
	August	108,225	16,031	36,888	26,946	21,635	520	210,245
	September	97,664	15,566	30,850	24,398	17,842	538	186,858
	TOTAL (Year-to-date)	**903,904**	**160,286**	**268,774**	**202,927**	**199,845**	**4,601**	**1,740,337**

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, wood and waste.
Source: •Federal Power Commission Form 4, "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**	**584,712**	**401,674**	**675,271**	**68,153**	**1,729,810**
1976	**TOTAL**	**602,863**	**423,639**	**739,965**	**69,557**	**1,836,024**
1977	**TOTAL**	**641,134**	**444,931**	**772,291**	**70,487**	**1,928,845**
1978	**TOTAL**	**671,094**	**459,908**	**800,656**	**73,152**	**2,004,814**
1979	**TOTAL**	**682,819**	**473,307**	**841,903**	**73,070**	**2,071,101**
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	54,012	40,478	69,414	6,174	170,078
	November	50,539	37,954	67,613	6,068	162,174
	December	60,775	39,846	68,517	6,469	175,607
	TOTAL	**717,493**	**488,155**	**815,068**	**73,732**	**2,094,447**
1981	January	72,240	42,120	67,087	6,830	188,277
	February	64,588	40,244	67,394	6,387	178,613
	March	56,238	38,586	68,599	6,366	169,789
	April	49,624	36,975	68,136	5,953	160,688
	May	47,281	38,409	68,761	6,191	160,642
	June	54,997	43,130	71,615	6,237	175,979
	July	68,901	47,859	71,716	6,532	195,008
	August	69,224	47,842	72,021	6,553	195,640
	September	60,173	45,877	70,986	6,585	183,620
	TOTAL (Year-to-date)	**543,266**	**381,042**	**626,315**	**57,634**	**1,608,256**

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

Electric Utilities

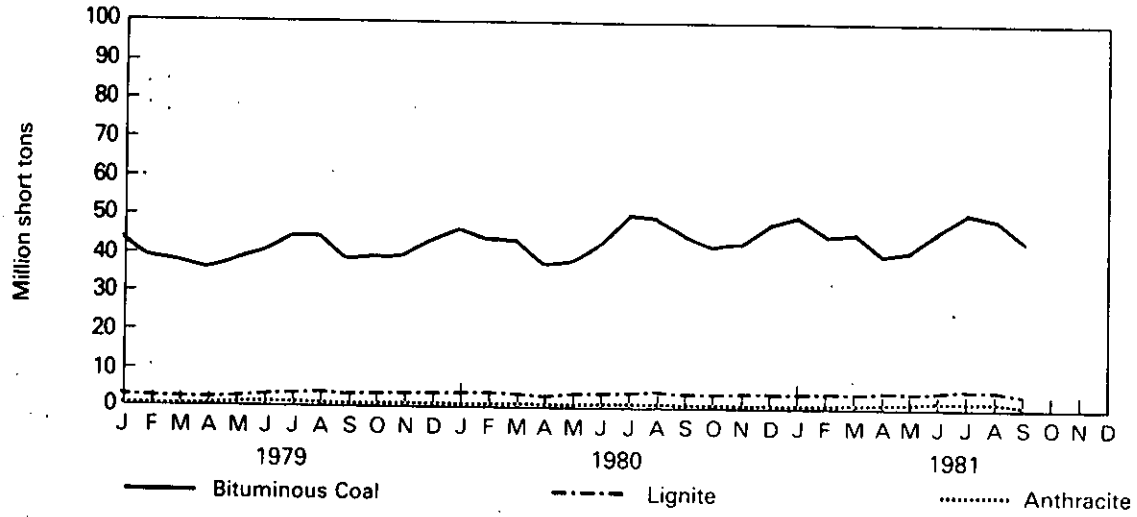
Primary Energy Consumed to Produce Electricity

		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**	**623,706**	**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	50,304	3,972	54,357	41,556	2,027	43,583	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	784	29,276	9	272,348
	April	73	40,535	3,069	43,677	25,028	557	25,585	7	287,679
	May	91	41,405	3,503	44,999	23,958	967	24,925	14	314,767
	June	105	46,500	3,383	49,988	30,673	1,741	32,413	13	386,972
	July	102	51,705	4,337	56,144	32,577	1,720	34,297	11	409,979
	August	133	50,010	4,184	54,328	26,630	586	27,216	13	390,587
	September	98	44,557	3,828	48,483	25,762	520	26,282	13	324,824
	TOTAL (Year-to-date)	**817**	**414,768**	**32,703**	**448,288**	**263,624**	**9,951**	**273,596**	**100**	**2,842,765**

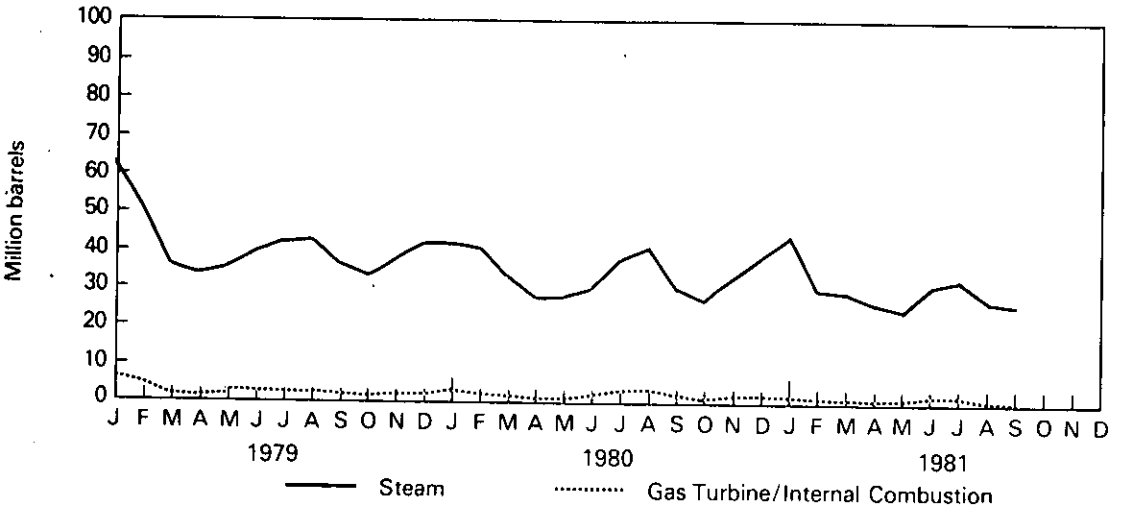
Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
Source: •Federal Power Commission, Form 4, "Monthly Power Plant Report."

Electric Utilities

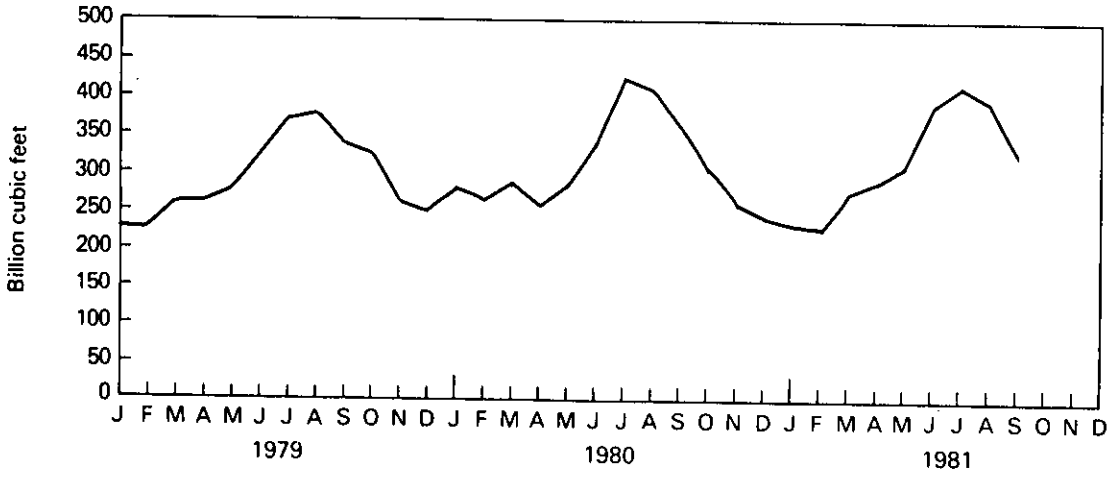
Coal Consumption



Petroleum Consumption



Natural Gas Consumption



Electric Utilities

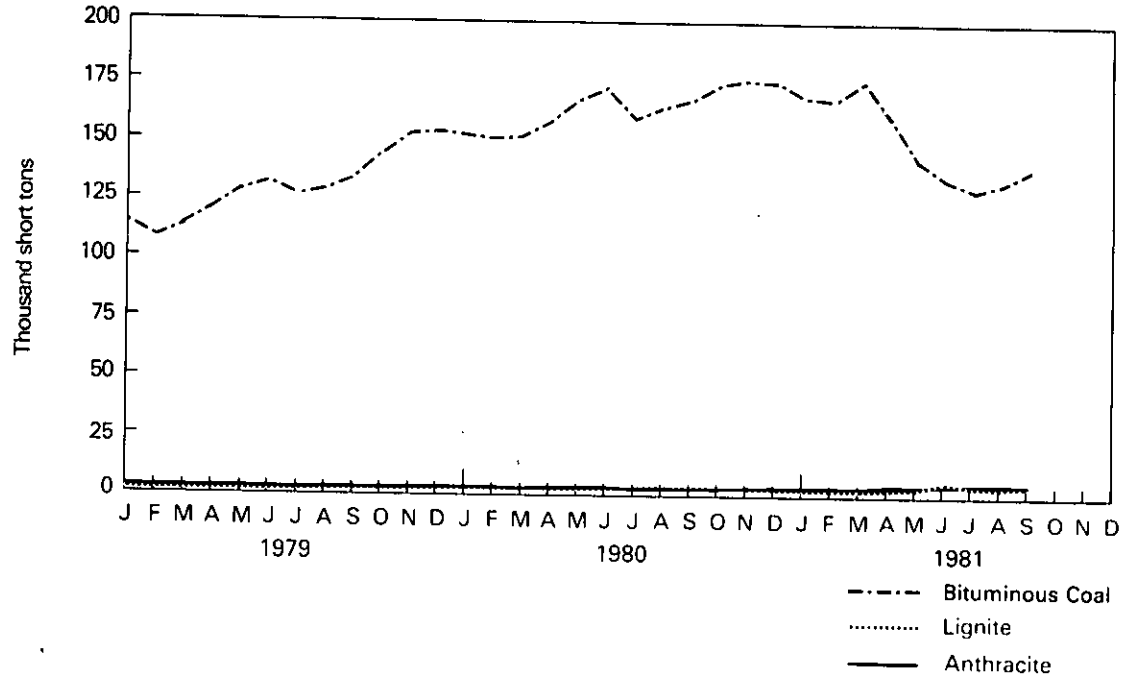
End-of-Month Coal and Petroleum Stocks

		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	109,915	18,280	128,195	51
	February	4,859	166,552	4,304	175,715	112,439	17,397	129,836	52
	March	4,951	174,554	4,478	183,983	111,105	17,502	128,607	52
	April	5,035	159,318	4,541	168,894	108,848	17,205	126,053	52
	May	5,008	142,188	4,907	152,103	111,758	17,068	128,826	52
	June	5,081	134,321	5,119	144,520	109,313	18,027	127,341	49
	July	5,802	129,684	5,171	140,656	110,294	16,883	127,177	48
	August	5,337	132,068	4,909	142,315	113,472	16,833	130,305	47
	September	5,428	138,808	5,290	149,526	112,771	16,588	129,359	46

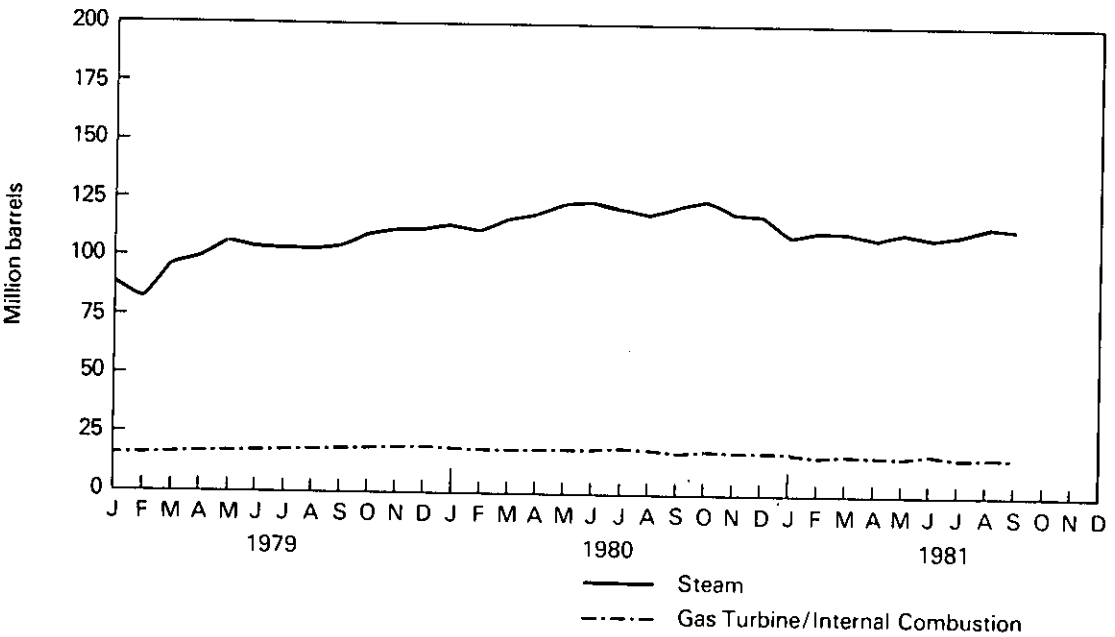
Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
‡Total as of December 31.
Source: •Federal Power Commission, Form 4, "Monthly Power Plant Report."

Electric Utilities

Coal Stocks (Bituminous Coal, Lignite, and Anthracite)



Petroleum Stocks



Nuclear

During September 1981, operating domestic nuclear power reactors generated a total of 24.4 billion net kilowatt-hours of electricity, 9.5 percent below August 1981 output but 3.5 percent above September 1980 generation. Nuclear power accounted for 13.1 percent of U.S. electricity generation in September 1981.

In September, Diablo Canyon-1, design electrical rating (DER) of 1,084 net megawatts (MWe), was granted a low-power operating license by the Nuclear Regulatory Commission. This action moved Diablo Canyon-1 from the "Construction Permits Granted" column to the "Reactors Licensed . . ." column of the Status of Nuclear Reactor Units table. Also in September, Boston Edison cancelled the Pilgrim-2 unit (DER of 1,150 MWe). This action reduced by one the number of units for which construction permits are pending and decreased total design capacity to 161 million net kilowatts.

As of September 30, 1981, the combined maximum dependable capacity of the 75 operational domestic power reactors was 56,924 MWe. Of these 75 units, 2 units (McGuire-1 and Salem-2) were in power ascension, 2 units (Diablo Canyon-1 and Sequoyah-2) were in start-up or low-power testing, and 14 units (Browns Ferry-1, Brunswick-1, Indian Point-3, Oconee-1 and -2, Oyster Creek, Palisades, Peach Bottom-3, Quad Cities-2, Rancho Seco, San Onofre-1, Three Mile Island-1, Turkey Point-3, and Zion-2) generated no electricity or operated substantially below capacity during September.

Nuclear

Nuclear Powerplant Operations

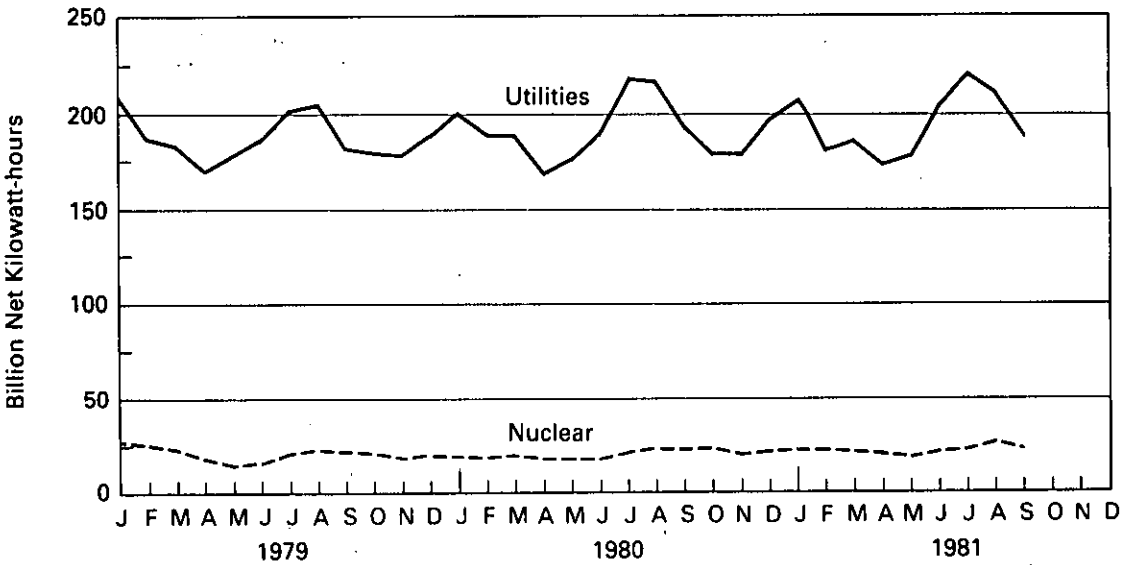
		Reactors Licensed For Commercial Operations[1,2]	Nuclear-Based Electricity Generation[3]	Nuclear Portion of Domestic Electricity Generation	Maximum Dependable Capacity[4]	Capacity Factor[5]
			Million net kilowatt-hours	Percent	Million net kilowatts	Percent
1973	**AVERAGE**	**40**	**83,479**	**4.5**	**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	71	19,746	9.9	49.945	53.1
	February	72	19,277	10.2	51.055	54.3
	March	72	20,039	10.7	51.031	52.8
	April	74	18,794	11.1	53.040	49.3
	May	74	18,385	10.5	53.040	46.6
	June	74	18,322	9.7	53.040	48.0
	July	74	21,024	9.7	54.064	52.3
	August	74	24,333	11.3	53.957	60.6
	September	74	23,572	12.3	53.855	60.8
	October	75	24,510	13.7	54.724	60.1
	November	75	20,984	11.8	54.737	53.2
	December	75	22,130	11.3	54.749	54.3
	AVERAGE	**74**	**251,116**	**11.0**	**53.103**	**53.8**
1981	January	75	23,368	11.4	55.853	56.2
	February	75	21,595	12.0	55.830	57.6
	March	75	22,004	11.9	55.818	53.0
	April	75	20,646	12.0	55.817	51.4
	May	75	19,723	11.1	55.841	47.5
	June	76	21,166	10.4	56.981	51.6
	July	74	23,080	10.5	55.840	55.6
	August	74	26,946	12.8	55.840	64.9
	September	75	24,398	13.1	56.924	59.5
	AVERAGE	**75**	**202,927**	**11.7**	**56.083**	**55.3**

Geographic coverage: the 50 United States and District of Columbia.
[1]See next table (Reactor Status Table) for explanation and sources.
[2]Dresden-1 (capacity = 200 MWe) and Three Mile Island-2 (capacity = 906 MWe) units are excluded from all tabulations as of July 1, 1981, reflecting the fact that these units have each been inoperative for several years and are likely to remain so for indefinite or extended periods.
[3]Electricity generation entries represent yearly or monthly totals rather than averages.
[4]See Explanatory Note 11.
[5]Average percentage of the net Maximum Dependable Capacity utilized yearly or monthly.
Sources: • Capacity data for units in commercial operation or start-up testing—Nuclear Regulatory Commission Report NUREG 0020, 'Operating Units Status Report.'
• Generation Data—Federal Power Commission Form 4, 'Monthly Power Plant Report.'

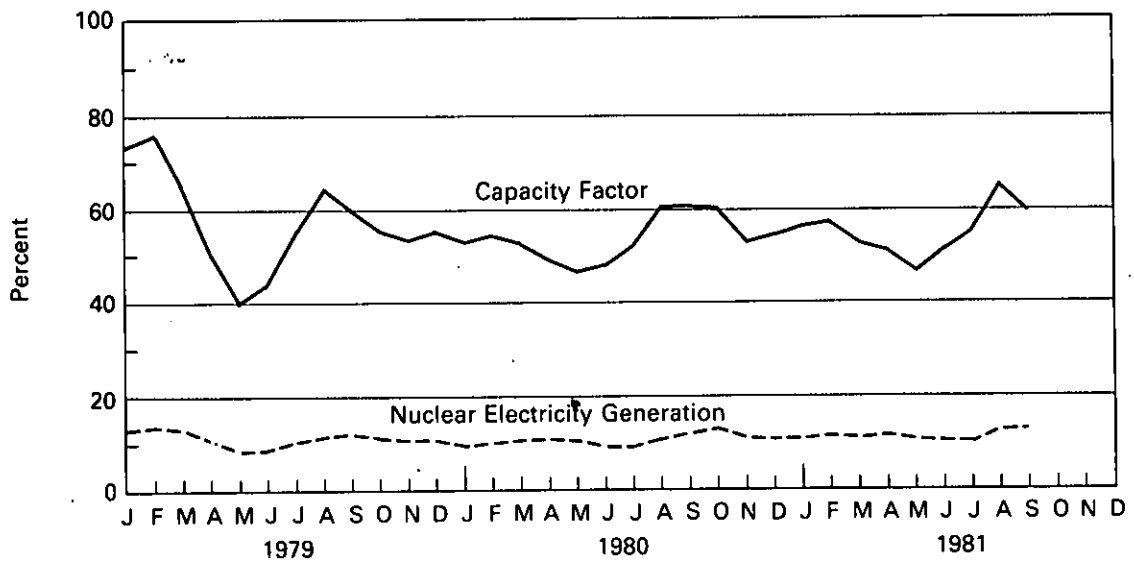
Nuclear

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[3]	Construction Permits Pending[3]	Reactor Units on Order	Reactor Units Announced	Total Reactor Units	Total Design Capacity[4] (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	71	90	17	3	0	181	174
	February	72	89	16	3	0	180	173
	March	72	87	14	3	0	176	169
	April	74	85	14	3	0	176	169
	May	74	85	14	3	0	176	169
	June	74	85	14	3	0	176	169
	July	74	85	14	3	0	176	169
	August	74	85	14	3	0	176	169
	September	74	85	14	3	0	176	169
	October	75	84	14	3	0	176	169
	November	75	82	14	3	0	174	167
	December	75	82	12	3	0	172	164
1981	January	75	81	12	3	0	171	164
	February	75	81	12	3	0	171	164
	March	75	81	12	3	0	171	164
	April	75	81	12	3	0	171	164
	May	75	81	12	3	0	171	164
	June	76	80	12	3	0	171	164
	July	74	80	12	3	0	169	163
	August	74	79	12	3	0	168	162
	September	75	78	11	3	0	167	161

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]These figures include reactors in fuel-loading, power-testing, and power-ascension stages. Also includes two Department of Energy dual-purpose reactors (Shippingport and Hanford) which, though not licensed by the NRC, generate electricity on a commercial basis. Not included in the above table is the Experimental Breeder Reactor-2 (EBR-2) which, while it generates electricity, does not distribute it to the grid. Three reactors whose operations have been suspended for indefinite periods (Dresden-1, which is undergoing major modifications, Three Mile Island-2 (TMI-2), shut down due to an accident in March 1979 and Humboldt Bay, where major seismic modifications are required) have been dropped from recent listings (July 1981, July 1981, and January 1981, respectively) due to their uncertain futures. Each of these three units has been inoperative for at least 2 years.
[3]Although New Haven-1, -2 and Jamesport-1, -2 still remain on the NRC docket as reactor units for which construction permits are either granted or pending, these 4 units were dropped from the above table (in November 1979 and March 1980, respectively) when applications for their construction were rejected by New York State.
[4]See Explanatory Note 11.
Sources: • Compiled by the Energy Information Administration from various sources, but primarily from the Office of Nuclear Reactor Programs, Department of Energy Report, NE-0030, 'U.S. Central Station Nuclear Electric Generating Units: Significant Milestones,' and from the Office of Coal, Nuclear and Alternate Fuels, Energy Information Administration."

Price

Crude Oil

The average price of domestic crude oil purchased at the wellhead was $31.13 per barrel in July 1981 (latest data available). This was 1.8 percent below the previous month's level, and 39.8 percent above the level in July 1980. Due to the January 1981 decontrol order, prices are no longer available by regulatory price categories.

During September 1981, the composite refiner acquisition cost of crude oil was $33.57 per barrel, $0.89 per barrel (2.6 percent) below the previous month's price of $34.46. The imported price decreased $1.39 per barrel from the August 1981 level to $34.43 per barrel in September. This price was 3.9 percent below the previous month's level and 0.1 percent below the September 1980 level. The domestic price in September 1981 was $33.10, a decrease of $0.69 per barrel (2.0 percent) from the August average.

Residual Fuel Oil

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in August 1981 was $30.52 per barrel, $0.05 per barrel (0.2 percent) below the previous month's price and 22.1 percent over the August 1980 average. The average price, excluding taxes, for No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts in August 1981 was $27.01 per barrel, $0.49 per barrel (1.8 percent) above the July 1981 average and a 21.4 percent increase over the August 1980 average.

Heating Oil

The national average price of heating oil sold to residential customers in September 1981 was 120.1 cents per gallon. This was a 0.6 percent increase above the selling price in August 1981 and a 22.4 percent increase over the September 1980 price. The average distributor margin on residential heating oil in September was 17.5 cents per gallon, 13.6 percent above the margin of September 1980. Refiners' national average selling price to resellers and retailers was 97.5 cents per gallon in September 1981, 23.0 percent above the September 1980 average.

Aviation Fuel

The average price, excluding taxes, for kerosene-type jet fuel sold to commercial airlines, Department of Defense, and other ultimate consumers in August 1981 was 103.3 cents per gallon, 0.5 percent below the previous month's average and a 13.9 percent increase over the August 1980 average.

Motor Gasoline

The national average retail price for all grades and all types of motor gasoline was 135.3 cents per gallon in October 1981. Leaded regular gasoline at all types of stations sold for an average of 129.9 cents per gallon in October, 0.6 cents lower (0.5 percent) than the price in September. The price for unleaded regular gasoline at all types of stations was 137.1 cents per gallon in October, 0.5 cents lower (0.4 percent) than the price in September.

Liquefied Petroleum Gases

The average wholesale price for propane during August 1981 (excluding taxes) was 47.2 cents per gallon, 2.6 percent above the previous month's level and 16.3 percent above the August 1980 level.

In August 1981, the average wholesale price for butane, excluding taxes, was 60.6 cents per gallon, 7.3 percent above the previous month's price and 14.1 percent above the August 1980 average.

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	28.55	35.63	31.39	29.76	32.33
	AVERAGE	**21.19**	**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	R33.76	R36.58	R34.70	R26.52	30.57
	August	NA	33.79	35.82	34.46	†27.01	†30.52
	September	NA	†33.10	†34.43	†33.57	NA	NA
	October	NA	NA	NA	NA	NA	NA
	AVERAGE	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Geographic coverage: Actual domestic average wellhead prices and No. 6 residual oil prices— the 50 United States and District of Columbia. Refiner acquisition cost of crude oil— the 50 United States, District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
[1]See Explanatory Note 12.
[2]See Explanatory Note 13.
[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.
†Preliminary data. R=Revised data. NA=Not available.
Sources: •Actual domestic average, January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report." February 1976 forward: ERA Form 182, "Domestic Crude Oil First Purchase Report."
•Refiner acquisition cost, January 1976: Form FEO 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: Form EIA-14, "Refiners' Monthly Cost Report."
•No.6 residual oil price, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

Price

Petroleum Price Summary (continued)

		No. 2 Diesel Price Average[1]		No. 2 Heating Oil Price Average		Gasoline Price Average All Types[2]	Propane Price Average[3]	Butane Price Average[3]
		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	R98.8	R103.8	102.7	121.0	135.3	46.0	56.5
	August	97.7	105.7	R102.2	R119.4	134.8	†47.2	†60.6
	September	NA	NA	†101.8	†120.1	135.8	NA	NA
	October	NA	NA	NA	NA	135.3	NA	NA
	AVERAGE	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Geographic coverage: the 50 United States and District of Columbia.
[1]Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and operated retail dealers sell to customers.
[2]The average year-to-date gasoline price for the current year is not yet available from the Bureau of Labor Statistics. 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 Explantory Note 16.
[3]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.
[4]Excludes tax.
†Preliminary data. R = Revised data. NA = Not available.
Sources: •No. 2 diesel price, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
•No. 2 heating oil price, FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" for 1976 through October 1980. EIA-9A "No. 2 Distillate Price Monitoring Report" for November 1980 forward.
•Gasoline price, Bureau of Labor Statistics.
•Propane and Butane prices, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

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	NA	NA	[2]	NA	NA	NA	NA	NA	NA	NA

Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 the prices are for the month of reporting.
[1]The FOB cost excludes all costs related to insurance and transportation. See Explanatory Note 14.
[2]No crude oil has been imported from Iran since February 1980.
†Preliminary data. NA = Not available.
Sources: 1976 through January 1979: FEA Form 701-M-0, "Transfer Pricing Report."
• February 1979 forward: Economic Regulatory Administration Form 51, "Transfer Pricing Report."

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	NA	NA	NA	[2]	NA	NA	NA	NA	NA	NA	NA

Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 prices are for the month of reporting.
[1]See Explanatory Note 15.
[2]No crude has been imported from Iran since February 1980.
†Preliminary data. NA = Not available.
Sources: • 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report." Data provided by the Economic Regulatory Administration.
• February 1979 forward: ERA 51, "Transfer Pricing Report."

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

Geographic coverage: 1974 through 1977—56 urban areas; 1978 forward—85 urban areas.
[1]See Explanatory Note 16.
[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.
Source: Bureau of Labor Statistics.

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	86.6	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	113.3	92.9	86.4	88.8
	October	110.8	113.0	91.1	87.6	88.7
	November	112.4	113.0	92.5	89.9	91.0
	December	115.1	117.2	94.1	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	R106.3	R100.5	103.8
	August†	120.0	132.5	105.7	101.4	103.3
	AVERAGE	**119.5**	**130.7**	**106.1**	**102.3**	**103.4**

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. R = Revised data.
Source: • FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

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	R98.2	R102.2	R16.2	R119.4
	September†	97.5	101.8	17.5	120.1

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 17.
[2]Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.
†Preliminary data. R=Revised data. NA=Not available.
Source: • FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" for 1976 through October 1980. EIA-9A, "No. 2 Distillate Price Monitoring Report, for 1976 through October 1980." EIA-9A, "No. 2 Distillate Price Monitoring Report" for November 1980 forward.

Price

Residential Heating Oil Prices by Region

		DOE 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	R122.7	122.2	R117.9	R117.4	R115.1	[2]	R112.1	R116.9	[2]	R117.7
	September†	122.9	121.4	118.8	121.6	116.1	[2]	112.8	116.4	[2]	117.9

[1]DOE Regions are defined in Explanatory Note 18.
[2]Not available for publication. Data for Region 6, and occasionally Region 9, are based on a sample of less than four reporting firms.
†Preliminary data. R = Revised data.
Source: • FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" for 1979 through October 1980. EIA-9A, "No. 2 Distillate Price Monitoring Report" for November 1980 forward.

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	28.00	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	R29.56	R39.02	R27.38	31.93	R25.62	25.96	R26.52	30.57
	August†	30.44	36.44	27.80	32.07	26.03	26.20	27.01	30.52
	AVERAGE	**34.36**	**39.45**	**31.46**	**34.49**	**27.89**	**29.61**	**29.73**	**33.38**

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.
Source: • FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

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	134.4	201.1	354.9
	February	139.5	210.5	357.9
	March	141.3	214.7	368.1
	April	143.4	210.4	367.8
	May	145.2	218.1	393.9
	June	145.8	216.4	394.8
	July	152.8	237.3	410.6
	August	152.8	245.6	413.1
	September	157.4	245.6	417.0
	October	159.4	253.4	420.6
	November	163.3	238.4	396.1
	December	162.2	232.7	403.3
	AVERAGE	**149.6**	**212.8**	**391.5**
1981	January	167.6	258.8	406.9
	February	171.3	268.9	409.3
	March	172.1	273.0	417.4
	April	173.8	282.5	421.7
	May	177.4	293.2	457.1
	June	178.5	296.7	457.6
	July	181.4	298.2	460.4
	August	181.5	299.9	466.6

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.
Sources: • 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.
• Electric Plant data are from Federal Power Commission Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
• Average residential heating prices, Bureau of Labor Statistics.

Price

Electricity

		Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants				Average Retail Electricity Prices[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	203.9	189.8	4.74	4.97	3.32	4.63	4.25
	March	130.1	411.0	207.9	184.8	4.92	5.17	3.45	4.69	4.40
	April	133.8	394.9	204.0	178.2	5.14	5.28	3.49	4.71	4.48
	May	133.3	403.1	212.0	180.3	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	228.5	199.0	5.66	5.65	3.93	4.93	5.03
	August	139.5	404.9	237.2	196.2	5.72	5.64	3.94	4.81	5.07
	September	138.9	411.3	238.7	193.5	R5.69	5.73	R3.89	4.95	5.03
	October	138.1	452.2	245.7	192.2	5.68	5.84	3.84	4.88	4.95
	November	139.3	496.0	231.3	200.0	5.61	5.71	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	**135.2**	**427.9**	**212.9**	**189.3**	**5.36**	**5.48**	**3.69**	**4.76**	**4.73**
1981	January	142.3	540.2	254.1	221.3	5.44	5.73	3.94	4.92	4.96
	February	146.3	572.9	260.5	218.4	5.52	5.83	3.95	5.01	4.99
	March	148.4	583.9	263.8	215.2	5.76	6.01	4.04	5.33	5.12
	April	146.9	568.4	273.5	242.1	5.99	6.14	4.07	5.20	5.20
	May	146.7	552.8	282.7	250.8	6.27	6.30	4.17	5.49	5.37
	June	152.8	503.2	286.3	236.2	6.48	6.48	4.36	5.38	5.59
	July	156.5	502.4	288.6	227.5	6.58	6.47	4.48	5.60	5.76
	August	157.0	494.4	291.0	220.3	6.62	6.49	4.49	5.52	5.78
	September	NA	NA	NA	NA	6.63	6.48	4.49	5.65	5.74

Geographic coverage: Fossil Fuels — the lower 48 States and District of Columbia. Electricity — the 50 United States and District of Columbia.
[1]Prices are for selected Classes A and B privately-owned electric utilities.
[2]See Explanatory Note 19.
[3]Includes small quantities of coke oven gas, refinery gas and blast furnace gas.
[4]Average price for total sales to ultimate consumers.
R = Revised data. NA = Not available.
Sources: • Cost of Fossil Fuels, Federal Power Commission, Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." • Retail Price, January 1973 thru February 1980: Federal Power Commission, Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: Federal Energy Regulatory Commission, Form 5, "Electric Utility Company Monthly Statement."

International

Crude Oil Production

World crude oil production during August 1981 was 53.8 million barrels per day, down 0.7 million barrels per day (1.3 percent) from the July 1981 level.

Organization of Petroleum Exporting Countries (OPEC) output during August 1981 averaged 21.1 million barrels per day, a decrease of 0.6 million barrels per day from the previous month. Average production by Arab members of OPEC was 15.3 million barrels per day, down 0.4 million barrels per day from the July 1981 level. The decrease in OPEC production was principally attributed to declines in production in Kuwait, Iran, and Algeria equal to an average of 0.4, 0.3, and 0.1 million barrels per day, respectively. In August 1981, Venezuela increased production by 0.2 million barrels per day to an average of 2.0 million barrels per day.

Production by non-OPEC nations decreased an average of 0.2 million barrels per day in August 1981, despite an increase in Mexican production of an average of about 0.2 million barrels per day. The United States production decreased by 0.1 million barrels per day to an average of 8.6 million barrels per day. Production remained about the same in other major producing countries.

Petroleum Consumption

Preliminary petroleum consumption data for August 1981 were available for France, Italy, Japan, and the United States. The consumption levels for all of these countries decreased from consumption levels in August 1980.

Petroleum consumption by International Energy Agency (IEA) member nations was 32.0 million barrels per day during June 1981 (latest data available). This preliminary figure was an increase of an average of 0.9 million barrels per day from the average rate of 31.1 million barrels per day in June 1980. The decrease for the United States for the same period was 0.3 million barrels per day.

Petroleum Stocks

Preliminary data on petroleum stocks for July 1981 were available for Canada, France, and the United States. Petroleum stocks for the United States were up from the level at the end of July 1980 by 1.1 percent. In contrast, stocks for Canada and France were down 1.1 and 7.7 percent, respectively, during the same interval.

Petroleum stocks of all Organization for Economic Cooperation and Development (OECD) members stood at 3,557 million barrels at the end of June 1981 (latest data available), an increase of 57 million barrels (1.6 percent) from stocks held at the end of June 1980. The United States held 1,446 million barrels of these stocks (40.7 percent).

Nuclear Electricity Production

In September 1981, the non-Communist world generated 58.5 billion gross kilowatt-hours of nuclear-based electricity, a decrease of 7.7 percent from the August 1981 output but 10.0 percent above September 1980 generation. U.S. nuclear electricity production in September 1981 was 25.1 billion gross kilowatt-hours, about 42.9 percent of the non-Communist world's nuclear generation for that month.

The addition of the U.S. reactor Diablo Canyon-1, with a design electrical rating of 1,084 net megawatts (see text, Part 8), brought to 221 the number of operational, non-Communist, commercial power reactors as of September 30, 1981. The combined gross generating capacity for these 221 units was 144.2 million kilowatts (GWe), of which 60.8 GWe—42.2 percent—was associated with the 75 units operating in the United States.

International

Crude Oil Production for Major Petroleum Exporting 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	R1,200	750	380	R10,170	R1,415	R15,740	R1,600	1,400
	August	600	1,100	830	700	295	10,330	1,480	15,335	1,600	1,100

Note: Data for 1981 are preliminary.
[1]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In August 1981 total production in this region amounted to approximately 257,000 barrels per day.
[2]Arab members of 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 Exporting 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	8,648	2,111	11,615	5,087	61,831
	February	2,160	2,200	29,805	1,475	1,725	1,660	8,696	2,127	11,590	5,052	62,130
	March	2,155	1,995	29,100	1,475	1,830	1,670	8,712	2,119	11,615	5,006	61,527
	April	2,100	2,045	27,965	1,390	1,885	1,510	8,688	2,121	11,680	5,242	60,481
	May	2,200	2,150	27,645	1,470	1,910	1,600	8,640	2,133	11,750	4,898	60,046
	June	2,110	2,050	27,175	1,535	1,905	1,625	8,547	2,132	11,660	5,124	59,703
	July	2,095	2,170	27,030	1,520	2,015	1,585	8,555	2,124	11,825	4,857	59,511
	August	2,050	2,210	27,010	1,440	2,000	1,535	8,422	2,143	11,875	5,057	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	8,536	2,076	11,875	5,227	56,034
	November	2,062	2,230	24,065	1,467	1,901	1,731	8,499	2,088	11,930	5,097	56,778
	December	2,026	2,330	25,050	1,300	2,027	1,795	8,609	2,083	11,850	5,304	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	1,260	2,220	1,765	8,533	2,024	11,900	5,248	57,975
	February	1,960	2,195	25,075	1,300	2,120	1,820	8,598	2,025	11,900	R5,257	58,095
	March	1,875	2,240	25,190	1,200	2,365	1,885	8,601	2,025	11,900	R5,244	58,410
	April	1,625	2,200	24,215	1,190	2,540	1,750	R8,543	2,011	11,800	R5,376	57,325
	May	1,295	2,200	23,380	1,195	2,545	1,770	R8,496	2,025	11,800	R5,424	56,635
	June	1,350	1,990	22,945	1,130	2,300	1,765	8,610	2,025	11,800	5,290	55,865
	July	770	R1,760	R21,620	1,200	2,095	1,750	8,646	2,025	11,800	R5,414	R54,550
	August	710	1,960	21,050	1,275	2,260	1,760	8,572	2,025	11,800	5,083	53,825

United States geographic coverage: the 50 United States and District of Columbia.
[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.
Note: Monthly data may not average to annual data due to independent rounding. Data for 1981 are preliminary.
Sources:
- 1973-1980 annual data: Energy Information Administration, *1980 International Energy Annual.*
- 1973-1981 United States data: See sources on the last page of the Petroleum Section.
- 1980 and 1981 monthly data (except U.S. and World total): Central Intelligence Agency, *International Energy Statistical Review.*
- 1981 monthly data for World: Sum of data for all countries using above sources.

International

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

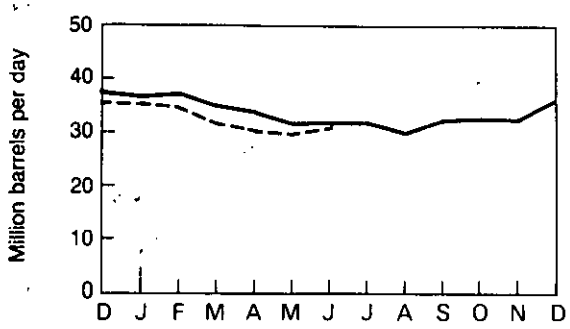
		Canada	France[2]	Italy	Japan	United Kingdom	United States	West Germany	Other IEA[3]	Total IEA[4]
						Thousand barrels per day				
1973	**AVERAGE**	**1,597**	**2,219**	**1,525**	**5,000**	**1,958**	**17,308**	**2,693**	**4,069**	**34,150**
1974	**AVERAGE**	**1,630**	**2,094**	**1,521**	**4,872**	**1,829**	**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	18,656	2,690	4,532	36,500
	February	1,930	2,444	1,864	5,722	1,621	18,815	2,410	4,738	37,100
	March	1,720	1,982	1,657	5,433	1,585	17,385	2,430	4,390	34,600
	April	1,600	2,110	1,541	4,626	1,472	16,724	2,680	4,257	32,900
	May	1,590	1,853	1,448	4,376	1,348	16,143	2,230	3,965	31,100
	June	1,660	1,848	1,511	4,224	1,286	16,214	2,220	3,985	31,100
	July	1,680	1,450	1,537	4,250	1,217	15,962	2,420	4,034	31,100
	August	1,650	1,220	1,310	3,910	1,120	15,727	2,150	3,833	29,700
	September	1,710	1,740	1,650	4,120	1,270	16,548	2,540	4,162	32,000
	October	1,770	2,050	1,670	4,250	1,430	16,911	2,230	3,939	32,200
	November	1,720	2,040	1,530	4,550	1,440	16,694	2,110	3,956	32,000
	December	1,940	2,410	1,740	5,350	1,480	18,354	2,190	4,446	35,500
	AVERAGE	**1,730**	**1,965**	**1,602**	**4,680**	**1,420**	**17,006**	**2,360**	**4,202**	**33,000**
1981	January	1,760	2,310	1,710	4,980	1,400	18,288	2,230	4,632	35,000
	February	1,770	2,170	2,010	5,350	1,460	16,930	2,510	R4,270	34,300
	March	1,550	1,790	1,700	5,020	1,430	15,838	2,100	R3,762	31,400
	April	1,600	1,500	1,620	4,140	1,290	R15,280	1,810	R4,060	R31,300
	May	1,490	1,670	1,290	R3,600	1,190	R15,196	1,880	4,084	30,400
	June	1,570	1,600	1,400	3,915	1,210	15,962	2,155	4,188	32,000
	July	NA	1,450	1,435	4,235	1,175	15,960	NA	NA	NA
	August	NA	1,160	1,210	3,840	NA	15,462	NA	NA	NA

United States 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 International Energy Agency (IEA) are: Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and 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.
NA = Not available. R = Revised data.
Note: Data for 1980 and 1981 are preliminary.
Sources: • Central Intelligence Agency, 'Economic & Energy Indicators,' 20 November 1981 (except United States).
• 1973-1981 United States data: See sources on last page of the Petroleum Section.
• IEA totals for latest months are EIA estimates.

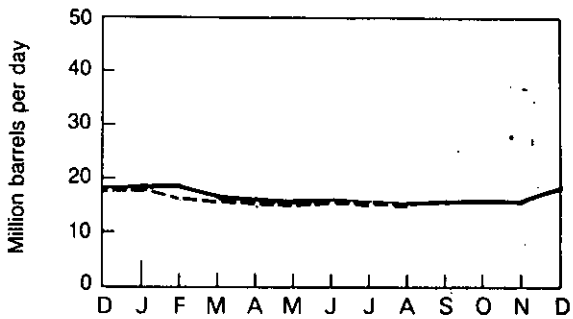
International

Petroleum Consumption

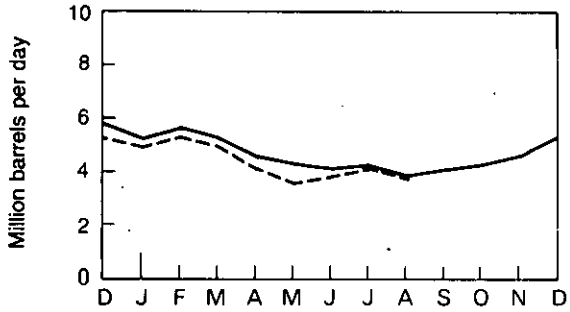
Total IEA



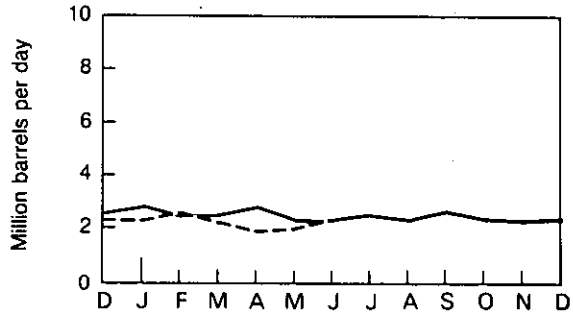
United States



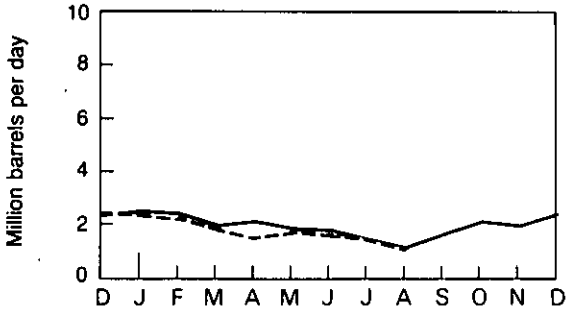
Japan*



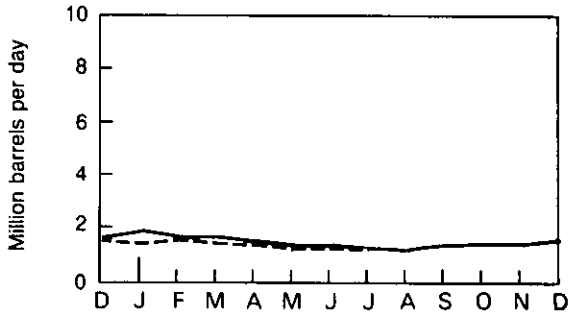
West Germany



France**



United Kingdom



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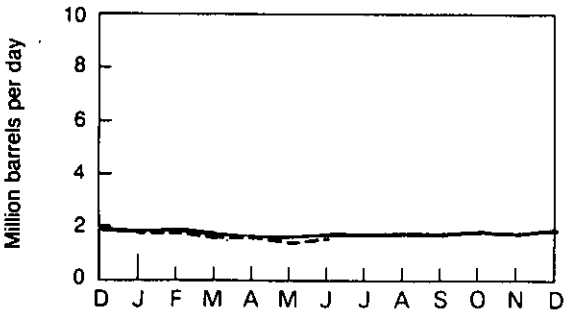
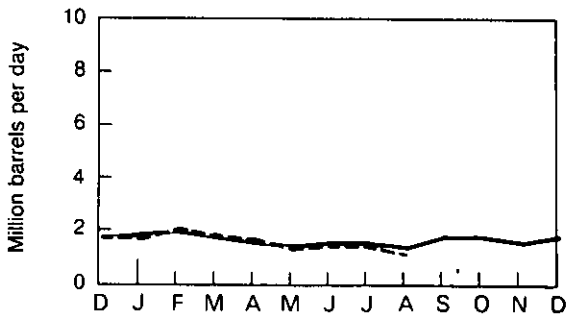


Italy***



*Excludes liquefied petroleum gases and condensates.

**Not a member of IEA.

***Principal products only.

——— 1980

– – – – 1981

International

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

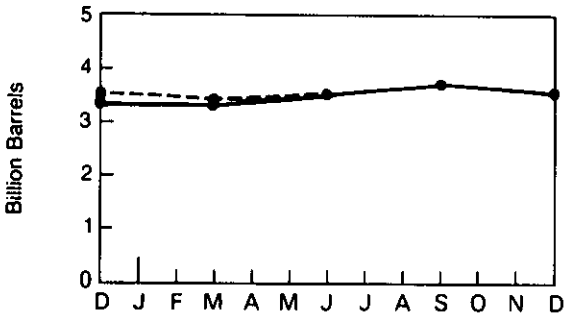
		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Other OECD[2]	Total OECD[3]
						Million barrels				
1973		**149**	**203**	**NA**	**303**	**156**	**1,008**	**NA**	**NA**	**NA**
1974		**164**	**240**	**169**	**370**	**191**	**1,074**	**215**	**NA**	**NA**
1975		**167**	**239**	**143**	**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	1,348	282	NA	NA
	February	153	225	153	419	162	1,339	305	NA	NA
	March	156	233	152	427	163	1,342	299	535	3,307
	April	161	220	155	442	160	1,366	287	NA	NA
	May	168	233	164	463	167	1,387	300	NA	NA
	June	171	239	165	471	174	1,410	313	557	3,500
	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	617	3,690
	October	178	271	186	497	169	1,430	307	NA	NA
	November	172	260	179	488	170	1,434	313	NA	NA
	December	171	254	173	481	169	1,395	323	587	3,553
1981	January	169	234	155	479	168	1,391	319	NA	NA
	February	162	235	184	457	170	1,400	312	NA	NA
	March	165	227	158	452	164	1,414	318	R525	R3,423
	April	174	235	169	484	165	1,421	322	NA	NA
	May	174	229	173	496	R162	1,448	321	NA	NA
	June	176	225	171	484	R158	1,446	312	585	3,557
	July	176	228	NA	NA	NA	1,441	NA	NA	NA

United States geographic coverage: the 50 United States and District of Columbia.
[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 particular country in the following facilities: bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. These data exclude oil held in pipelines (except for the United States), in rail and truck cars, in sea-going ships' bunkers, in service stations, retail stores, and in tankers at sea.
[2]"Other OECD" includes Organization of Economic Cooperation and Development (OECD) members not shown.
[3]The members of 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 United States Territories.
R=Revised data. NA=Not available.
Note: Totals may not equal sum of components due to independent rounding.
Sources: • 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 through March 1981: EIA, "Petroleum Statement, Monthly"; April 1981 through July 1981: EIA, "Monthly Petroleum Statistics Report". • Other OECD: OECD, *Quarterly Oil Statistics.* • Total OECD: Sum of data for all OECD member countries using above sources.

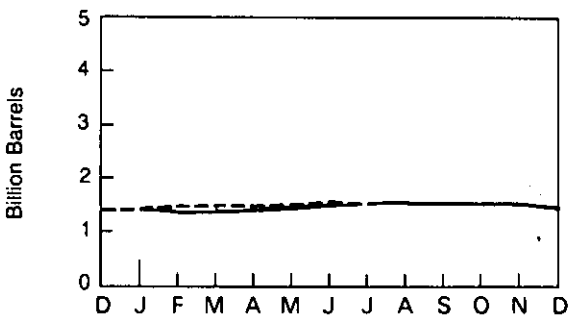
International

Petroleum Stocks

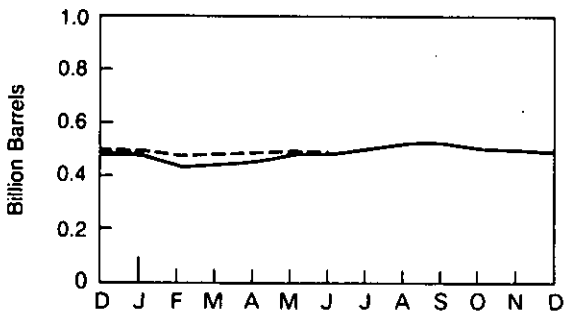
Total OECD



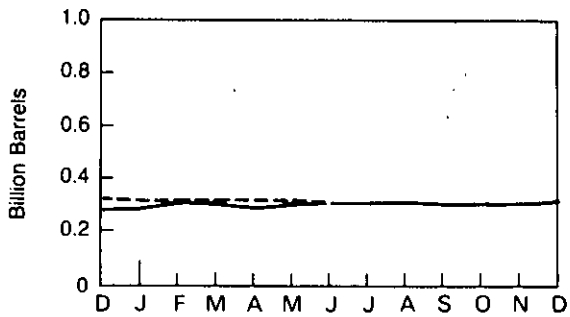
United States



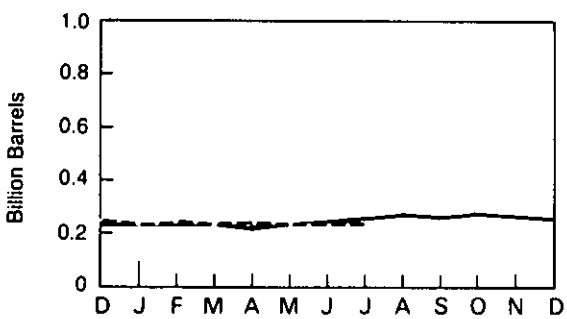
Japan



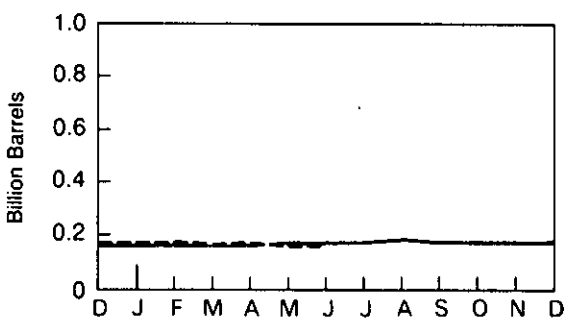
West Germany



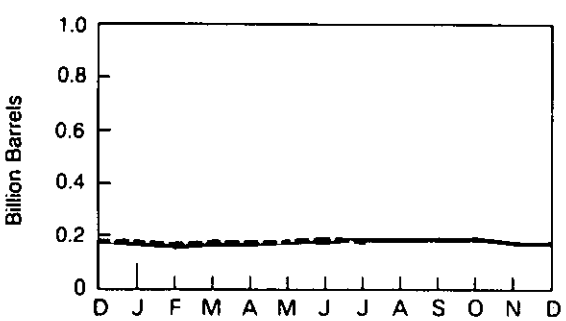
France



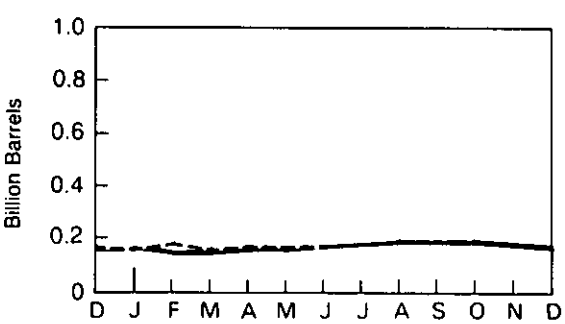
United Kingdom



Canada



Italy



1980
1981

International

Nuclear Electricity Generation by Non-Communist Countries[1]

		Argentina	Belgium	Canada	Finland	France	India	Italy	Japan	Nether-lands	Pakistan
		Billion gross kilowatt-hours									
1973	**TOTAL**	**0**	**0**	**18.3**	**0**	**11.6**	**1.9**	**3.1**	**9.4**	**1.1**	**0.5**
1974	**TOTAL**	**1.0**	**0.1**	**15.4**	**0**	**14.7**	**2.4**	**3.4**	**18.1**	**3.3**	**0.6**
1975	**TOTAL**	**2.5**	**6.8**	**13.2**	**0**	**18.3**	**2.5**	**3.8**	**22.2**	**3.3**	**0.5**
1976	**TOTAL**	**2.6**	**10.0**	**18.0**	**0**	**15.8**	**3.2**	**3.8**	**36.8**	**3.9**	**0.5**
1977	**TOTAL**	**1.6**	**11.9**	**26.8**	**2.7**	**17.9**	**2.8**	**3.4**	**28.1**	**3.7**	**0.3**
1978	**TOTAL**	**2.9**	**12.5**	**32.9**	**3.3**	**30.5**	**2.3**	**4.4**	**53.2**	**4.1**	**0.2**
1979	**TOTAL**	**2.7**	**11.4**	**38.4**	**6.7**	**39.9**	**3.2**	**2.6**	**62.0**	**3.5**	**(s)**
1980	January	0.3	1.2	3.6	0.8	5.5	0.2	0.2	8.0	0.4	0
	February	0.1	1.0	3.5	0.8	5.3	0.1	0.4	7.4	0.4	0
	March	0	1.0	3.7	0.8	5.1	0.2	0.5	8.0	0.4	0
	April	0.1	0.5	3.2	0.8	5.0	0.3	0.4	5.6	0.3	0
	May	0.2	0.7	2.5	0.3	4.2	0.3	0.3	6.0	0.3	0
	June	0.2	1.1	3.1	0	4.1	0.2	0.1	6.7	0.3	0
	July	0.2	1.3	3.6	0.4	4.8	0.2	0.1	7.8	0.4	(s)
	August	0.3	1.3	3.9	0.4	3.2	0.3	0.1	8.6	0.4	(s)
	September	0.3	1.1	3.1	0.4	4.5	0.3	0.1	7.0	0.4	(s)
	October	0.3	0.9	3.3	0.5	5.1	0.2	0	6.0	0.3	0
	November	0.3	1.1	3.4	0.6	5.8	0.3	0	5.4	0.3	(s)
	December	0.3	1.2	3.5	1.2	8.5	0.2	0	6.3	0.3	(s)
	TOTAL	**2.3**	**12.5**	**40.4**	**7.0**	**61.2**	**2.9**	**2.2**	**82.8**	**4.2**	**0.1**
1981	January	0.3	1.2	3.2	1.3	9.3	0.2	0.2	8.2	0.1	(s)
	February	0.2	1.0	3.5	0.9	8.6	0.2	0.3	7.1	(s)	(s)
	March	0.3	0.6	3.9	1.4	8.8	0.3	0.1	7.8	0.3	0
	April	0.2	0.7	3.3	1.5	8.3	0.3	0.6	7.9	0.4	0
	May	0.2	1.2	3.4	1.0	8.9	0.4	0.3	8.0	0.4	(s)
	June	0.2	1.2	3.6	0.7	8.3	0.3	0.1	6.7	0.4	(s)
	July	0.3	1.3	4.0	0.8	8.4	0.3	0.3	8.3	0.4	(s)
	August	0.2	1.2	4.0	1.4	7.7	0.2	0.1	8.1	0.4	(s)
	September	0.3	0.9	3.3	1.5	8.5	0.2	0.1	5.9	0.4	(s)
	TOTAL (Year-to-date)	**2.1**	**9.3**	**32.2**	**10.5**	**76.8**	**2.3**	**2.1**	**68.1**	**2.6**	**0.1**

Note: Totals may not equal sum of components due to independent rounding.
[1]Figures are for gross electrical generation as opposed to net electrical 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.
Source: • *Nucleonics Week.*

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**	**201.6**	**388.9**
1977	**TOTAL**	**0.1**	**6.5**	**19.9**	**8.1**	**0.1**	**38.1**	**35.8**	**207.8**	**263.2**	**470.9**
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**	**270.7**	**570.8**
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**	**265.4**	**619.8**
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	R22.5	57.0
	July	0.4	1.1	1.4	0.6	0.8	2.5	5.2	36.1	24.6	60.7
	August	0.4	1.0	2.6	1.0	0.8	2.5	3.9	35.6	27.8	63.4
	September	0.3	0.6	3.0	1.3	0.8	3.1	3.2	33.4	25.1	58.5
	TOTAL (Year-to-date)	**1.9**	**6.9**	**26.8**	**10.8**	**7.3**	**28.2**	**39.7**	**327.7**	**214.1**	**541.7**

United States geographic coverage: the 50 United States and District of Columbia.
Note: 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- or 5-week intervals, rather than by calendar month.
s = Less than 0.05 billion gross kilowatt-hours. R = Revised data.
Source: • *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.

Average Retail Selling Price, Motor Gasoline

The average price of sales of motor gasoline to retail customers at service stations.

Bituminous Coal

A coal which is high in carbonaceous matter, having a volatility greater than anthracite coal 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 primarily used 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.

Crude Oil Domestic Production

Domestic crude oil production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

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.

Distillate Fuel Oil Production

Total production of distillate fuel by refineries, measured at the refinery outlet. Relatively small quantities of distillate fuel are produced at natural gas processing plants, but these quantities are not included.

Electricity Production

Production at electric utilities only. Does not include industrial electricity generation.

Exploratory Well

A well drilled to 1.) find and produce oil or gas in an unproved area; 2.) find a new reservoir in a field previously found to be productive of oil or gas in another reservoir; or 3.) extend the limit of a known oil or gas reservoir.

Full Serve

Motor vehicle services are provided by an attendant, such as: pumping gas, washing windows, checking under the hood, checking tire pressure, etc.

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) which are classified by customs officials as "imports for consumption" or "withdrawals from bonded warehouse for consumption," including withdrawals from bonded warehouse 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 warehouse and into U.S. territories and U.S. Foreign Trade Zones.

Jet Fuel

Includes both naphtha-type and kerosene-type jet fuel meeting standards for use in aircraft turbine engines or meeting ASTM Specification D1655. Although most jet fuel is used in aircraft, some is used for other purposes, such as fuel for turbines to produce electricity.

Landed Cost

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 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 (including gas produced from crude oil reservoirs) in lease separators and, in some instances, field facilities. It consists primarily of pentanes and heavier hydrocarbons. Generally, it is blended with crude oil for refining.

Line Miles of Seismic Exploration

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

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.

Major Brand

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 10 or more states.

Maximum Dependable Capacity, Net

Represents the dependable main-unit net capacity of domestic 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

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 leaded and unleaded products and all refinery products listed in ASTM Specification D439.

Motor Gasoline Production

Total production of motor gasoline by refineries, measured at the refinery outlet. Relatively small quantities of motor gasoline are produced at natural gas processing plants, but these quantities are not included.

Motor Gasoline, Regular Grade

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

Motor Gasoline, Premium Grade

Volatile hydrocarbon mixture suitable for operation of an internal combustion engine and customarily marketed as "ethyl," "super," or equivalent classification.

Natural Gas

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

Natural Gas Liquids

Those portions of reservoir gas which are liquefied at the surface in lease separators, field facilities, or natural gas processing plants. Natural gas liquids include natural gas plant liquids and lease condensate.

Natural Gas Plant Liquids

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

Natural Gas Production (Dry)

Derived by subtracting extraction loss from marketed production. It represents the amount of domestic natural gas production that is available to be marketed and consumed as a gas.

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 productions.

Petroleum Products

Products obtained from the processing of crude oil, unfinished oils, natural gas liquids and other miscellaneous hydrocarbon compounds. Includes aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, ethane, liquefied petroleum gases, petrochemical feedstocks, special naphthas, lubricants, paraffin wax, petroleum coke, asphalt, road oil, still gas and other miscellaneous products.

Refined Petroleum Product Supplied

Total refined petroleum product supplied is the sum of each refined petroleum product supplied. For each product the amount supplied is derived by summing production, imports, and net withdrawals from primary stocks and subtracting 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 which 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, heavy diesel oil, 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

Motor vehicle services are not provided by attendants.

Strategic Petroleum Reserve

A plan developed to reduce the impact of interruption of imports of petroleum. 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.

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, bulk terminals, and pipelines (including pipeline fill) where the storage capacity exceeds 50,000 barrels. Stocks held at natural gas processing plants are not included as well as stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of hydrocarbons which 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.

Well

A hole drilled for the process of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic tests, or service wells.

Explanatory Notes

1. Domestic production of energy includes production of coal (anthracite, bituminous, 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 Thermal Conversion Factors.

2. 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 Thermal Conversion Factors.

3. 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 include bituminous coal and anthracite, crude oil, refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.

5. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately- and publicly-owned establishments which generate electricity primarily for resale.

6. 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.

7. Domestic products supplied figures for natural gas liquids (NGL) in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries (LRG). LRG produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

8. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated. Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted. Dry production of natural gas is the quantity remaining after the natural gas liquids have been extracted.

9. 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 which 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.

10. Preliminary estimates of monthly coal production are based on the number of cars loaded at mines reported weekly to the Association of American

Railroads by Class I railroads. The amount of coal produced and shipped by other modes of transportation is derived by employing the ratio of railroad shipments to total production for the most recent period for which this ratio is known. Final monthly and annual coal production data are derived from the Energy Information Administration (EIA) "Coal Distribution Report" (Form EIA-6) and selected State agencies.

Domestic consumption data in this series approximate actual consumption. This is in contrast to domestic products supplied reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

The data sources used to compute the monthly coal consumption estimates from 1978 forward for the "Other Industrial" (i.e. Industrial except coke plants) sector are:

(a) Form EIA-3, "Monthly Fuel Consumption Report—Manufacturing Plants."
(b) Form EIA-6, "Bituminous Coal and Lignite Distribution Report."

The basic assumption used in deriving a quarterly estimate for coal consumption 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

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

The Form EIA-6 provides complete coverage of the "Other Industrial" sector. The quarterly receipts are obtained from this form.

The Form EIA-3 does not provide total coverage of the "Other Industrial" sector, however it does contain stock change information. The impact of the stock change in the portion of the sector that is not covered by the Form EIA-3 is not substantial.

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

$$C_M = (C_{M3}/C_3) \bullet C \quad (3)$$

where

C_{M3} = the monthly consumption in the "Other Industrial" sector as reported on Form EIA-3.
C_3 = the quarterly consumption in the "Other Industrial" sector as reported on Form EIA-3.

Equation (3) insures that a) the monthly consumption estimates (C_M) sum to C over the quarter and b) the estimated seasonality for the C_M's is the same as that for the C_{M3}'s.

11. 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 power plants may have more than one type of power rating, including:

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

12. 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.

13. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on Form EIA-14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on Form ERA-49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. 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 Form ERA-49. The revised costs are from data collected on Form EIA-14. The January prices are being replaced because the Form ERA-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 Form ERA-51, the "Transfer Pricing Report," or any crude oil which is not domestic oil.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included 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 Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

14. 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.

15. 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 which 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.

16. The motor gasoline prices are calculated monthly by the BLS 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 are 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).

17. 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.

18. The U.S. Department of Energy 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.

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

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Conversion Factors

Approximate Heat Content of Various Fuels		1973	1974	1975	1976	1977	1978	1979	1980–81†
Anthracite									
Production	Thousand Btu/short ton	23,170	22,560	23,390	22,770	23,180	23,520	23,590	23,590
Imports and Exports	Thousand Btu/short ton	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	22,710	22,970	22,700	22,700
Electric utility consumption	Thousand Btu/short ton	17,920	17,200	17,060	17,530	17,240	17,100	17,450	17,380
Non-utility consumption	Thousand Btu/short ton	24,340	23,750	23,650	23,840	24,990	25,170	25,200	24,690
Bituminous coal and lignite									
Production	Thousand Btu/short ton	24,010	23,730	23,200	23,150	22,700	22,430	22,590	22,590
Imports	Thousand Btu/short ton	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	27,000
Consumption, average	Thousand Btu/short ton	23,650	23,070	22,800	22,750	22,330	22,140	22,200	22,200
Electric utility consumption	Thousand Btu/short ton	22,260	21,800	21,660	21,690	21,480	21,280	21,380	21,310
Non-utility consumption	Thousand Btu/short ton	26,840	26,120	25,810	25,870	25,130	25,070	25,060	25,970
Coal Coke	Thousand Btu/short ton	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
Imports	Thousand Btu/barrel	5,817	5,827	5,821	5,808	5,810	5,802	5,810	5,810
Exports	Thousand Btu/barrel	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	5,810
Exports, average	Thousand Btu/barrel	5,752	5,774	5,748	5,745	5,797	5,808	5,832	5,832
Petroleum products									
Consumption, average	Thousand Btu/barrel	5,515	5,504	5,494	5,504	5,518	5,519	5,494	5,494
Residential and Commercial	Thousand Btu/barrel	5,686	5,681	5,655	5,661	5,664	5,682	5,661	5,633
Industrial	Thousand Btu/barrel	5,325	5,304	5,304	5,336	5,368	5,369	5,338	5,380
Transportation	Thousand Btu/barrel	5,398	5,396	5,395	5,400	5,404	5,412	5,415	5,409
Electric Utility	Thousand Btu/barrel	6,223	6,215	6,229	6,235	6,231	6,227	6,245	6,246
Imports	Thousand Btu/barrel	5,983	5,959	5,935	5,980	5,908	5,955	5,811	5,811
Exports	Thousand Btu/barrel	5,752	5,773	5,747	5,743	5,796	5,814	5,864	5,864
LPG Consumption Average[2]	Thousand Btu/barrel	3,746	3,730	3,715	3,711	3,677	3,669	3,680	3,680
Natural gas plant liquid production	Thousand Btu/barrel	4,049	4,011	3,984	3,964	3,941	3,925	3,955	3,955
Natural gas, dry									
Production and consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,021
Electric utility consumption	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,034	1,030
Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,019
Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030	1,037	1,037
Exports	Btu/cubic foot	1,023	1,016	1,014	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	1,092
Hydropower[3]	Btu/kWh	10,389	10,442	10,406	10,373	10,435	10,435	10,435	10,435
Nuclear power[3]	Btu/kWh	10,903	11,161	11,013	11,047	10,769	10,769	10,769	10,769
Geothermal power[3]	Btu/kWh	21,674	21,674	21,611	21,611	21,611	21,611	21,611	21,611
Electricity consumption	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

Refined Petroleum Products:	Thousand Btu/barrel
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
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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