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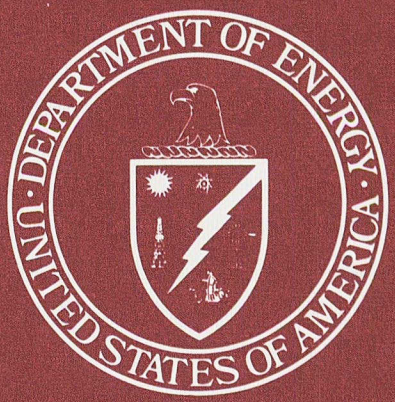
Monthly Energy Review

November 1980



U.S. Department of Energy
Energy Information Administration

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EIA WEEKLY PETROLEUM DATA: DATA COLLECTION AND METHODS OF ESTIMATION[1]

Nancy Kirkendall and Wendy Kolmar*

Overview

In mid-February 1979, following the curtailment of Iranian oil exports, the Energy Information Administration (EIA) initiated a program for the collection of weekly petroleum data. The Administrator of EIA established a task force with a twofold purpose: first to begin, as quickly as possible, to publish available petroleum data on a weekly basis; and to design a system for the collection and processing of weekly petroleum data. Publication of the *Weekly Petroleum Status Report* (WPSR) began in April of 1979.

The WPSR contains tables and graphs that present weekly and monthly information relevant to the current petroleum situation in the United States. Initially, this report used weekly estimates from the American Petroleum Institute (API) "Weekly Statistical Bulletin," the only weekly estimates then available. The API estimates were used because the most current DOE information available was monthly data from the Joint Petroleum Reporting System (JPRS),[2] which is published 45 days after the end of the month. The API weekly estimates were also used to compute preliminary petroleum figures for the most recent months published in EIA's *Monthly Energy Review* (MER).

During 1979, the EIA designed and tested the weekly surveys and developed procedures for processing data and estimating totals. At the end of January 1980, EIA weekly estimates of petroleum stocks, refinery production, and refinery input replaced the API estimates in the WPSR and in the MER. Then, in June 1980, API estimates for imports were replaced in both publications by EIA estimates. Now all petroleum figures published in the WPSR are based on data collected by the Department of Energy (DOE).

In this system, selected petroleum companies now report weekly data to EIA on crude oil stocks, refined product stocks, refinery production, and imports. The weekly data are reported on five forms that are differentiated according to type of reporting facility or by product reported. Current weekly data and the most recent monthly data in the JPRS are used to estimate the published weekly totals. The EIA weekly reporting system was designed for the collection of data similar to those collected under the monthly JPRS system so that monthly data could be used as the basis for estimating weekly totals.

The Surveys

In general, the weekly forms are used for the collection of data on crude oil, unfinished oils, and major refined products (i.e., motor gasoline, naph-

*Nancy Kirkendall, Quality Assurance Staff and Wendy Kolmar, Office of Oil and Gas Statistics.

[1] The authors wish to acknowledge the contribution to the establishment of the weekly system of: Y. Ahmed, E. Burns, T. Barber, P. Chapman, P. Conlon, V. Culhane, F. Elsen, C. French, P. Nestor, B. Whittemore, and M. Zipser.

[2] These data are published in the following EIA publications: *Petroleum Statement, Monthly,* the *Monthly Petroleum Statistics Report,* in the *Monthly Energy Review,* and in the *Weekly Petroleum Status Report.*

Weekly and Monthly Data Collection Systems: Number of Companies Reporting

	Refiners (Refineries)	Bulk Terminals	Pipelines	Crude Stock Holders	Importers
Monthly Form	EIA-87	EIA-88	EIA-89	EIA-90	ERA-60
Weekly Form	EIA-161	EIA-162	EIA-163	EIA-164	EIA-165
Number of Monthly Reports	188 (318)	153	58	220	625
Number of Weekly Reports	94 (202)	71	58	95	56

tha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, and residual fuel oil) from a sample of companies. The monthly forms are used to gather similar data from all the companies in greater detail (See Table on preceding page).

On the weekly "Refinery Report," Form EIA–161, refiners report data on refinery receipts and input of crude oil and unfinished oils, refinery output of petroleum products, and refinery inventories of crude oil, unfinished oils, and petroleum products. These data are reported on a *custody* basis, regardless of the ownership of the oils. Refineries are identified on the Form EIA–161 by their location (city and state). As of March 31, 1980, 188 refiners reported data for 318 refineries on the monthly form. Of these, 94 refiners reported weekly data for 202 refineries.

These 94 refiners were selected in one of two ways: 62 refiners were selected because the total capacity of each company's refineries exceeded 30,000 barrels a day in 1978; the additional 32 companies were identified by sampling the remaining refineries.

On the weekly report, "Bulk Terminal Stocks of Finished Petroleum Products," Form EIA–162, bulk terminal[3] operators report data on end-of-week stock levels of finished petroleum products held in bulk terminals. All bulk terminals report on the monthly form, Form EIA–88. As of March 1980, there were 153 bulk terminal operators; 71 of these are included in the weekly system. The 71 companies that report on the Form EIA–162 are bulk terminals with a storage capacity greater than 200,000 barrels. These terminals were selected because they accounted for more than 90 percent of the terminal storage capacity in each refining district[4] during 1978.

On the weekly "Pipeline Stocks of Finished Products Report," Form EIA–163, pipeline companies report data on end-of-week stock levels of petroleum products transported by the pipeline. This report is also prepared on a pipeline *custody* basis, regardless of ownership of products. As of March 1980, there were 58 product pipeline operators. Reports from all 58 operators are received in both the monthly and the weekly systems.

On the weekly "Total Stocks of Crude Oil Report," Form EIA–164, holders of crude oil report their end-of-week stock levels. Crude oil stocks are held by refining companies, crude oil pipeline companies, crude oil producers, and terminal operators. Crude oil data are reported by location (Petroleum Administration for Defense [PAD] district[5]) and by origin (foreign or domestic). Companies with stocks of crude petroleum in their custody—regardless of ownership—in excess of 1,000 barrels are required to report on the monthly Form EIA–90. Two hundred twenty companies report data on the monthly form; of these, 95 report on the Form EIA–164. These 95 companies include the largest refiners which report on the Form EIA–161 and those trunk pipeline companies, crude oil producers, and terminal operators with crude oil inventories of more than 20,000 barrels. These 95 companies together accounted for more than 90 percent of the crude oil stocks in each PAD district during 1978.

On the "Weekly Imports Report," Form EIA–165, importers of record report data on imports of crude oil and refined petroleum products which include liquefied petroleum gases, petrochemical feedstocks, asphalt, plant condensate, and special naphthas as well as the products reported on the other weekly forms. Crude oil imports are identified by country of origin and PAD district of entry. Refined product imports are identified by region of origin and PAD district of entry. The imports data collected under the weekly system are, generally, consistent with the monthly imports data collected on the ERA–60[6] although some differences in product definitions do exist between the weekly and monthly system. All importers of record (625 in March 1980) report on the ERA–60. Of these, 56 report on the Form EIA–165. Forty-four of the 56 are the largest importers of either crude oil or petroleum products. The reports from these companies accounted for about 90 percent of U.S. imports of crude and total refined products during 1978. In addition, 12 smaller companies were included among the reporters on the Form EIA–165. These companies were selected from among the com-

[3] A bulk terminal is a storage facility that either has a total capacity of 50,000 barrels or more or receives petroleum products by tanker, barge, or pipeline.

[4] The 13 refining districts were defined by the Bureau of Mines, Department of the Interior in conjunction with the petroleum industry to correspond to natural boundaries of refining and marketing regions.

[5] The five PAD districts were established in the early 1940's as Petroleum Administration for War districts. States in each PAD district are listed on Page 12 of this publication.

[6] Form ERA–60 is used to collect imports data for the Economic Regulatory Administration (ERA).

panies remaining after the largest importers were chosen.

The Sample Design

The sampling procedure used for the weekly system was the cut-off method. In the cut-off method companies are ranked from largest to smallest on the basis of the quantities reported during some previous period. The quantity used for ranking should be the item to be measured by the sample. Companies are chosen for the sample by beginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time period.

To choose the weekly sample, the companies were first listed in order from largest to smallest based on the following criteria: total refining capacity in 1978 (Form EIA–161); total bulk terminal storage capacity (Form EIA–162); total crude oil storage (Form EIA–164); or total imports of either crude oil or all refined products in 1978 (Form EIA–165). From this list, the largest companies in each group were selected to report each week. In addition, a few smaller companies were selected to report on Form EIA–161 and Form EIA–165.

Initially, these samples were intended to be used to estimate weekly petroleum information at the PAD district and refining district level, and for all individual products as well as for crude oil and total refined products. Because the data available weekly were not drawn from a probability sample, the procedures available for estimating weekly totals would give large errors if the total reported in the sample did not account for a high percentage of the universe. (90 percent is frequently cited as the desired level of coverage.) For example, to estimate total weekly production for naphtha-jet fuel in a refining district, the total of the reports for naphtha-jet fuel in the weekly sample should be about 90 percent of the actual weekly production of naphtha-jet fuel in that refining district.

In late 1979, after weekly company reports had been received for several months, it became apparent that the sample coverage was not equally good for all products in all districts. For stocks, production, and imports of some products, the companies included in the weekly sample in some refining and PAD districts covered a fairly small percentage of the corresponding monthly totals for those districts. For this reason, EIA does not at the present time estimate weekly totals at these lower levels of detail.

Data Processing and Validation

The company information reported to EIA is processed and checked for errors and then entered in a data base. The weekly reporting period extends from 7 a.m. Friday to 7 a.m. the following Friday. Companies are required to report data by 5 p.m. on the Monday following the close of the reporting week. Data entry and error-checking are completed by Tuesday evening. On Wednesday, graphs, tables, and a balance sheet are prepared for publication in the WPSR and are reviewed Thursday. The WPSR is published early Friday.

Reported data are checked in several ways. As the weekly data are entered, automated checking procedures, described in greater detail below, compare the current reports for each company with its previous reports and identify variations. Two different error-checking algorithms have been developed, one for the Form EIA–165 data and one for the data reported on other forms. Imports are checked differently because they are more variable than other series and because many more reports of zero are received for imports than for other series. When the checking procedure identifies a company whose report for the current week differs significantly from its previous weekly report(s), the out-of-range data are checked against the original submission; if necessary the company is called and asked to verify its report or to explain the unusual values.

For all weekly forms, except Form EIA–165 (imports), the automated data checking is based on the ratio of the current week's report to the previous week's report. A message is printed which indicates that the ratio falls outside a certain range. The limits of this range depend on the magnitudes of the companies' reports, x, and on two constants: a proportion, P, and an order of magnitude, M, which are fixed by product and by type of data. For companies whose current week's report is in the top 10 percent by volume (i.e., x is greater than the top 10 percent cut-off value, x_c), the test range is between 1 minus P and 1 plus P. For the smaller companies whose current week's report is in the lower 90 percent by volume (i.e. x is less than x_c) the test range is more complicated. The upper limit of the test range varies from 1 + P, when $x = x_c$, to M, when $x = 0$. The lower limit of the test range varies from 1 − P, when $x = x_c$, to 1/M when $x = 0$. This range

recognizes that smaller companies are likely to show more variability in their weekly reports, when expressed as a ratio, than larger companies. Thus, a message is printed when the ratio of this week's to last week's imports, R, satisfies any of the following equations:

$$R > 1 + P \qquad \text{for } x \geq x_c$$

$$R > M - \frac{(M - (1 + P))}{x_c} x \qquad \text{for } x < x_c$$

$$R < 1 - P \qquad \text{for } x \geq x_c$$

$$R < 1/M - \frac{(1/M - (1-P))}{x_c} x \text{ for } x < x_c$$

The outlier detection procedure for imports recognizes that weekly imports reports by any particular company are likely to be zero frequently. Therefore, the checking procedure for imports compares a company's current weekly report to other weekly reports received from the same importer during the test period. At present the test period is all weeks in 1980. Eventually, the test period will be the most recent 52 weeks of data. A message is printed if:

1. All weekly reports during the test period for the product were zero and the current week's report is not zero.

2. The current week's report is zero, and more than 90 percent of that company's reports during the test period were not zero.

3. The current week's report is not zero and is outside a specific range. This range is based on the upper quartile, Q_u, a point such that 25 percent of that company's weekly reports during the test period lie above it, and the lower quartile, Q_l, a point such that 25 percent of that company's weekly reports fall below it. The current week's report, x, is outside the test range if:

$$x > Q_u + 3(Q_u - Q_l)$$

or,

$$x < Q_u - 3(Q_u - Q_l)$$

Estimation Methodology

After the company reports have been checked and entered into the weekly data base, the reported data are used to estimate weekly totals. The ratio method is the usual method for estimating a total given a sample covering a large percentage of the total (the weekly surveys) and a complete survey from some previous time period (the JPRS). Use of a ratio estimate is appropriate when the sample represents the same fraction of the total during every time period. Thus, a ratio estimate for a current total is given by multiplying the current total for the sampled units by the ratio of the past total to the sum of the past reports for the sampled units. This method usually gives good results with a cut-off sample, when the sampled companies account for about 90 percent of the total, as is the case for the weekly sample for all categories for which estimates are produced. The ratio method will be an accurate estimation procedure as long as the relationship between the large, sampled companies and the smaller, nonsampled companies remains the same. If this relationship changes, which might happen during a supply disruption, the ratio method might result in large errors. The ratio method is applied at the refining district level in order to obtain weekly estimates for stocks of motor gasoline, distillate fuel oil, and residual fuel oil. The ratio method is applied at the national level to obtain estimates for all other categories of data except imports: production, inputs to refineries, and stocks of minor products.

To produce ratio estimates from total weekly reports for a region (refining district, PAD district, or the Nation) the following procedure is followed. First, the current week's data for a given product reported by companies in that region are summed. Call this weekly sum, W_*. Next, the most recent month's data for that product reported by those same companies are summed. Call this monthly sum, M_*. Finally, let M_t be the sum of the most recent month's data for that product as reported by *all* companies in that region. Then, the current week's ratio estimate for that product for all companies in that region is given by:

$$W_t = \frac{M_t}{M_*} W_*$$

Because weekly imports data are highly variable on a company by company basis or a week-by-week basis, the ratio method did not seem optimal as an estimation procedure. With imports, it is likely that small-volume companies may import a large quantity of petroleum occasionally or that one vessel may carry a significant part of a week's imports of a product. Under such conditions, the ratio method is known to result in large errors. Hence, a number of other procedures for estimating weekly imports were considered. The procedure selected the av-

erage ratio method, was chosen on the basis of agreement between the estimates it produced and the monthly data.

Imports Estimation Procedure

Average ratio estimates for imports are calculated from estimates obtained with the ratio method, but with each company in turn omitted from the sample. These estimates are then averaged to obtain the average ratio estimate. In particular, let n represent the number of companies in the weekly sample that are importers of a given product[7], and label these sample companies with integers from 1 to n. Then, if i is some integer from 1 to n, call company i's current week's imports W_i and its most recent month's imports M_i. Let M_t represent the total imports of the product for the most recent month for the universe of companies. Then, obtain n ratio estimates for total weekly imports, $\hat{W}_j$, by omitting one company at a time from the sample and calculating the ratio estimate from the resultant sample. (j represents the omitted company.)

Thus:

$$\hat{W}_j = \frac{M_t}{\sum_{i \neq j} M_i} \sum_{i \neq j} W_i \qquad j = 1, \ldots, n.$$

The average ratio estimate, W_*, is given by the average of the $\hat{W}_j$, i.e.,

$$W_* = \frac{1}{n} \sum_{j=1}^{n} \hat{W}_j.$$

Accuracy of the Data

The data supplied by companies on a weekly basis are preliminary and subject to revision. From week to week, most companies can only report estimates of their current stocks, production levels, and inputs. Even the monthly data first supplied to the JPRS are subject to revision and cannot be considered final until annual reports are prepared almost 8 months after the close of the reporting year. However, monthly and annual information is more accurate than weekly information because it is based on final, verified company records. For stocks of crude oil and refined products and for inputs to refineries the weekly estimates, calculated as described above, are published in the WPSR. Because of the variability of weekly data, the estimates for the most recent 4 weeks are averaged for the other data items (production and imports), and the 4-week averages are published in the WPSR. These weekly data are also used to calculate the figures for products supplied published in the WPSR.

The weekly system was designed so that the data reported would match data collected on the monthly JPRS system. This correlation between weekly and monthly data is necessary for the estimation procedure to operate effectively. Periodically, weekly and monthly data are compared to ensure that companies are reporting data consistently in the two systems. Since stock levels are measurements made at the end of the reporting period, stock levels reported in the weekly and JPRS systems can be compared graphically for a given company by plotting monthly and weekly reported values on the same scale. For production and imports, the comparison is done differently, because data reported represent a volume which has passed through a facility during a given reporting period. In this case, cumulative reported monthly volumes are compared graphically to cumulative reported weekly volumes beginning with a time period when the weekly and monthly reporting periods coincide.

The comparison of weekly and monthly data has shown that, for most surveys, the data collected in the weekly and monthly systems do match. However, there are still some definitional differences between the weekly and monthly data for imports. Some product definitions vary slightly between the two systems. For example, blending agents for motor gasoline are reported differently on the weekly and monthly forms. The two systems also differ in their treatment of withdrawals from bonded storage which are reported weekly but not monthly. A further problem is created by the companies' difficulty in determining, on a weekly basis, whether or not they are the importer of record (i.e., the owner) for all oil shipments in their custody. Some companies can only report weekly data on a custody basis.

In an attempt to resolve these discrepancies, companies are being contacted and, in some cases, the problems have already been resolved. If immediate resolution is not possible, as with the definitional discrepancies which affect a few companies, adjustments are made in the estimation procedure so that these differences do not affect the weekly estimates. This adjustment generally consists of

[7] For purposes of estimation, a company is said to be an importer of a given product if it had a non-zero monthly report during the base month or it has a non-zero report for the current week.

omitting the affected companies' weekly reports of the problem product from the estimates.

Future Plans

For the immediate future, EIA will continue to monitor weekly data for accuracy. This process will include improvement of automatic error-checking procedures and identification of data anomalies due to definitional and reporting differences between the weekly and monthly systems. Differences between the two systems will be resolved as quickly as possible.

Work will also continue to develop estimation procedures which are more sensitive to the data variability observed in the weekly surveys.

A redesign of the weekly sample is EIA's major long-range project. This project should be completed within 8 to 12 months. The purpose of such a redesign would be to obtain sample coverage which would support estimation at the refining district or PAD district level for all categories of data. Smaller companies will be sampled on a probability basis, so that the data will support other methods of estimation. The inclusion of small-company data will also allow careful monitoring of changes in the behavior of these small companies and in their relationship to larger companies.

As part of the sample redesign, procedures will be established for updating the sampling frame and for identifying new companies added to the monthly system which should be included in the weekly surveys.

Overview

Production

Energy production during the first 8 months of 1980 totaled 43.3 quadrillion Btu, a 3.0 percent increase compared to production during the same period of 1979. This increase amounted to 2.5 percent when measured as a daily rate (a measure which removes the influence of leap year). Increases in production occurred for petroleum and coal. Petroleum production was up 1.6 percent and coal 9.1 percent (all measured as daily rates). Natural gas production decreased by 0.7 percent. All other forms of energy production combined were down by 3 percent, primarily due to a decline in electricity production by nuclear plants.

Consumption

During the first 8 months of 1980, energy consumption totaled 50.9 quadrillion Btu, a 4.0 percent decrease compared to consumption during the same period of 1979, or 4.4 percent lower when average daily rates are compared. Decreases in the daily consumption rates of petroleum (9.3 percent) and natural gas (1.1 percent) contributed to the overall decline in energy consumption during this period. The average daily rate of coal consumption was up 3.6 percent over the level during the first 8 months of 1979.

Imports

Net imports of energy during the first 8 months of 1980 totaled 8.5 quadrillion Btu, 24.3 percent below the first 8 months of 1979. This decrease amounted to 24.7 percent when measured as a daily rate. By energy source, the decreases in net imports were petroleum, 18.7 percent; natural gas 18.2 percent; and electricity and coal coke combined, 37.5 percent (daily rates). Net exports of coal during the first 8 months of 1980 were 40.9 percent higher than the level during the same period of 1979.

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

	August			Cumulative January through August				
	1980	1979	Percent Change	1980	1980 Daily Rate	1979	1979 Daily Rate	Percent Change*
Total Production	**5.372**	**5.497**	**−2.3**	**43.333**	**0.1776**	**42.091**	**0.1732**	**+2.5**
Petroleum[1]	1.722	1.756	−1.9	13.769	0.0564	13.494	0.0555	+1.6
Natural Gas	1.539	1.641	−6.2	13.150	0.0539	13.201	0.0543	−0.7
Coal	1.622	1.607	+0.9	12.529	0.0513	11.415	0.0470	+9.1
Other[2]	0.490	0.494	−0.8	3.886	0.0159	3.981	0.0164	−3.0
Total Consumption	**5.904**	**6.343**	**−6.9**	**50.870**	**0.2085**	**52.963**	**0.2180**	**−4.4**
Petroleum[3]	2.709	3.116	−13.1	22.783	0.0934	25.024	0.1030	−9.3
Natural Gas	1.274	1.362	−6.5	13.636	0.0559	13.731	0.0565	−1.1
Coal	1.417	1.345	+5.4	10.450	0.0428	10.038	0.0413	+3.6
Other[4]	0.504	0.520	−3.1	4.000	0.0164	4.169	0.0172	−4.7
Net Imports	**0.867**	**1.434**	**−39.5**	**8.503**	**0.0348**	**11.237**	**0.0462**	**−24.7**
Petroleum[5]	1.041	1.471	−29.2	9.229	0.0378	11.307	0.0465	−18.7
Natural Gas	0.057	0.096	−40.6	0.664	0.0027	0.807	0.0033	−18.2
Coal	(0.246)	(0.160)	(+53.8)	(1.505)	(0.0062)	(1.069)	(0.0044)	(+40.9)
Other[6]	0.014	0.026	−46.2	0.115	0.0005	0.187	0.0008	−37.5

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

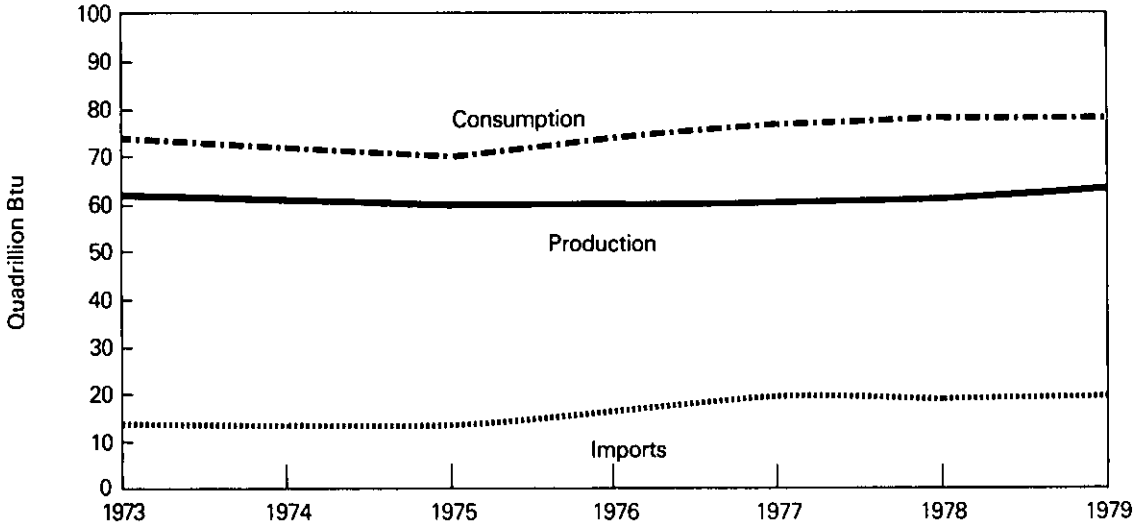
		Energy Production[1]	Energy Consumption[2]	Energy Imports[3]	Energy Exports[4]
			Quadrillion (10^{15}) Btu		
1973	**TOTAL**	**62.433**	**74.609**	**14.732**	**2.073**
1974	**TOTAL**	**61.229**	**72.759**	**14.417**	**2.243**
1975	**TOTAL**	**60.059**	**70.707**	**14.113**	**2.389**
1976	**TOTAL**	**60.090**	**74.509**	**16.838**	**2.213**
1977	**TOTAL**	**60.297**	**76.390**	**20.092**	**2.097**
1978	**TOTAL**	**61.208**	**78.154**	**19.262**	**1.951**
1979	January	5.291	7.933	1.777	0.175
	February	4.897	7.257	1.532	0.161
	March	5.479	6.987	1.727	0.242
	April	5.223	6.140	1.519	0.237
	May	5.438	6.203	1.606	0.257
	June	5.284	5.990	1.593	0.252
	July	4.981	6.109	1.646	0.272
	August	5.497	6.343	1.693	0.259
	September	5.136	5.901	1.537	0.222
	October	5.600	6.388	1.703	0.288
	November	5.362	6.537	1.562	0.264
	December	5.338	7.164	1.693	0.261
	TOTAL	**63.528**	**78.953**	**19.587**	**2.891**
1980	January	5.547	7.407	1.659	0.225
	February	5.206	7.011	1.467	R0.206
	March	5.599	6.976	1.492	0.265
	April	5.465	R6.011	1.337	0.297
	May	5.547	R5.838	1.281	0.348
	June	5.382	R5.759	1.271	0.366
	July	R5.218	R5.964	1.166	0.330
	August	5.372	5.904	1.187	0.320
	TOTAL (Year-to-date)	**43.333**	**50.870**	**10.860**	**2.357**

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 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.

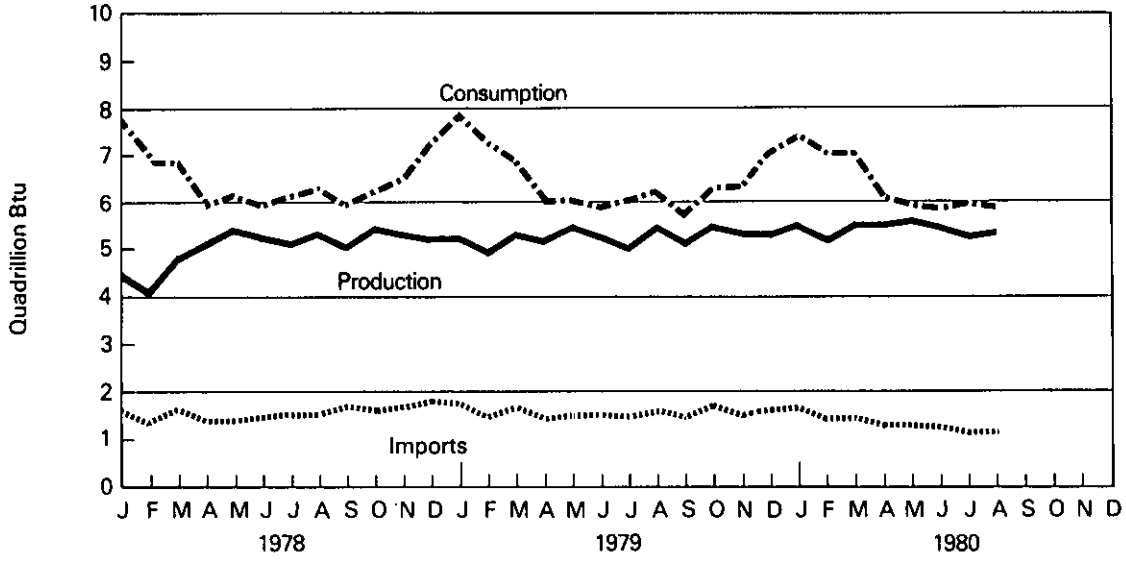
Executive Summary

Energy Summary

Yearly



Monthly



Executive Summary

Production of Energy by Type

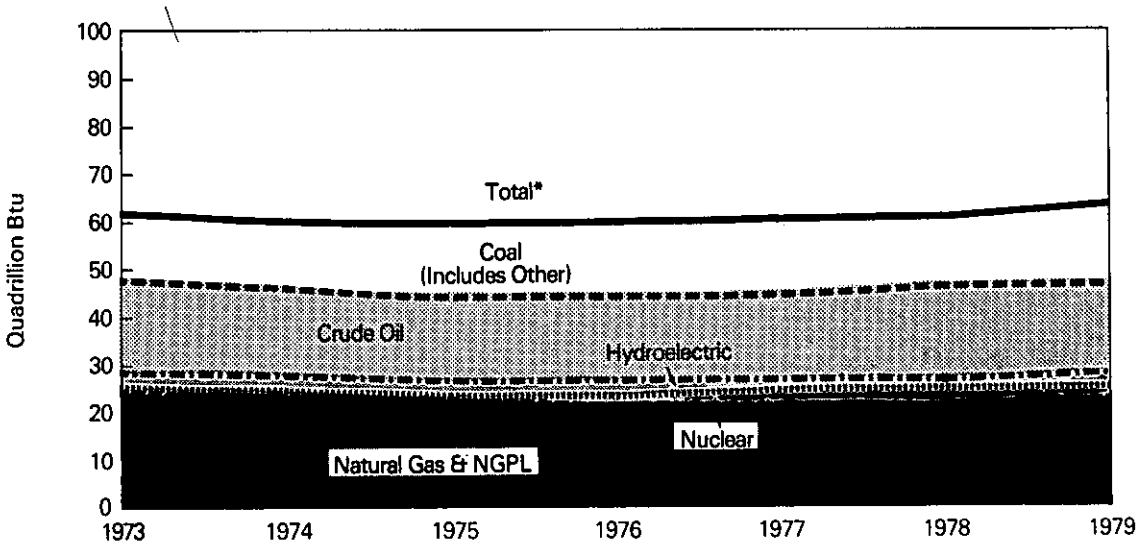
		Coal[1]	Crude Oil[2]	NGPL[3]	Natural Gas (Dry)	Hydro-electric Power[4]	Nuclear Electric Power	Other[5]	Total Energy Produced	Yearly Cumulative Energy Produced
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**14.366**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.433**	
1974	**TOTAL**	**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**	**60.090**	
1977	**TOTAL**	**15.829**	**17.454**	**2.327**	**19.565**	**2.337**	**2.702**	**0.082**	**60.297**	
1978	**TOTAL**	**15.037**	**18.434**	**2.245**	**19.485**	**2.962**	**2.977**	**0.068**	**61.208**	
1979	January	1.297	1.521	0.186	1.718	0.264	0.299	0.007	5.291	5.291
	February	1.230	1.380	0.172	1.606	0.225	0.279	0.006	4.897	10.188
	March	1.498	1.544	0.188	1.706	0.274	0.262	0.008	5.479	15.668
	April	1.435	1.485	0.190	1.641	0.268	0.198	0.007	5.223	20.891
	May	1.559	1.544	0.191	1.670	0.305	0.162	0.007	5.438	26.329
	June	1.586	1.463	0.185	1.606	0.264	0.173	0.007	5.284	31.613
	July	1.203	1.502	0.190	1.613	0.241	0.224	0.007	4.981	36.594
	August	1.607	1.564	0.192	1.641	0.225	0.261	0.008	5.497	42.091
	September	1.449	1.473	0.184	1.587	0.201	0.235	0.007	5.136	47.227
	October	1.763	1.540	0.196	1.655	0.213	0.225	0.008	5.600	52.827
	November	1.537	1.505	0.197	1.671	0.237	0.207	0.008	5.362	58.189
	December	1.363	1.544	0.198	1.762	0.240	0.222	0.009	5.338	63.528
	TOTAL	**17.526**	**18.064**	**2.269**	**19.875**	**2.957**	**2.748**	**0.089**	**63.528**	
1980	January	1.532	1.555	0.200	1.772	0.267	0.213	0.008	5.547	5.547
	February	1.451	1.463	0.188	1.663	0.226	0.208	0.008	5.206	10.752
	March	1.578	1.566	0.191	1.782	0.257	0.216	0.008	5.599	16.351
	April	1.652	1.512	0.191	1.626	0.272	0.202	0.008	5.465	21.816
	May	1.641	1.553	0.189	1.651	0.305	0.198	0.010	5.547	27.362
	June	1.645	1.512	0.183	1.544	0.292	0.197	0.009	5.382	32.744
	July	1.408	1.555	0.188	R1.573	0.257	0.226	0.010	R5.218	R37.962
	August	1.622	1.539	0.183	1.539	0.217	0.262	0.011	5.372	43.333
	TOTAL (Year-to-date)	**12.529**	**12.256**	**1.513**	**13.150**	**2.092**	**1.722**	**0.072**	**43.333**	

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

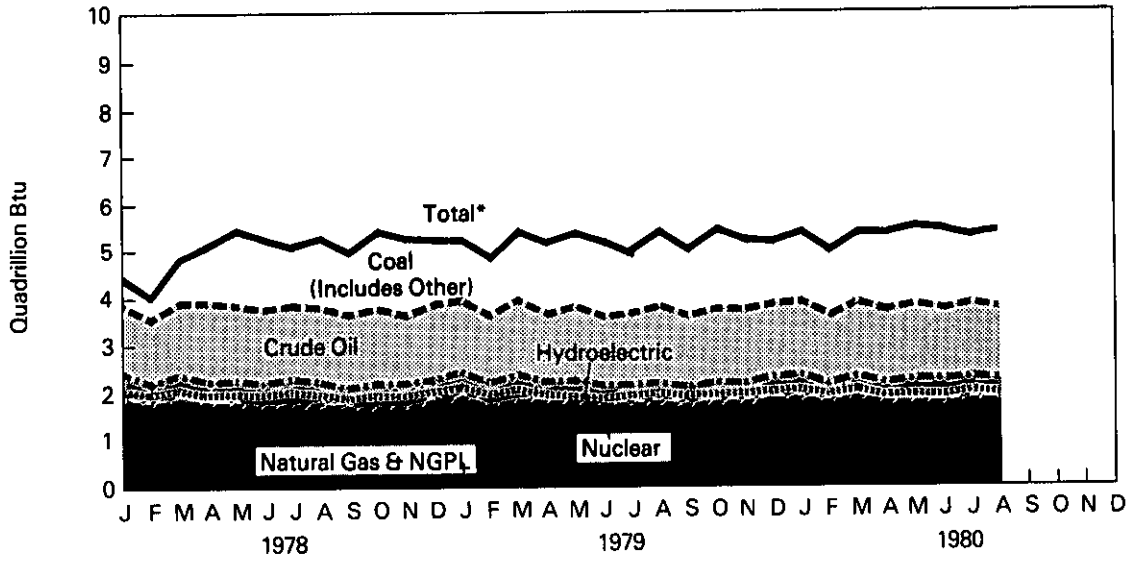
Executive Summary

Production of Energy by Type

Yearly



Monthly



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

Executive Summary

Consumption of Energy by Type

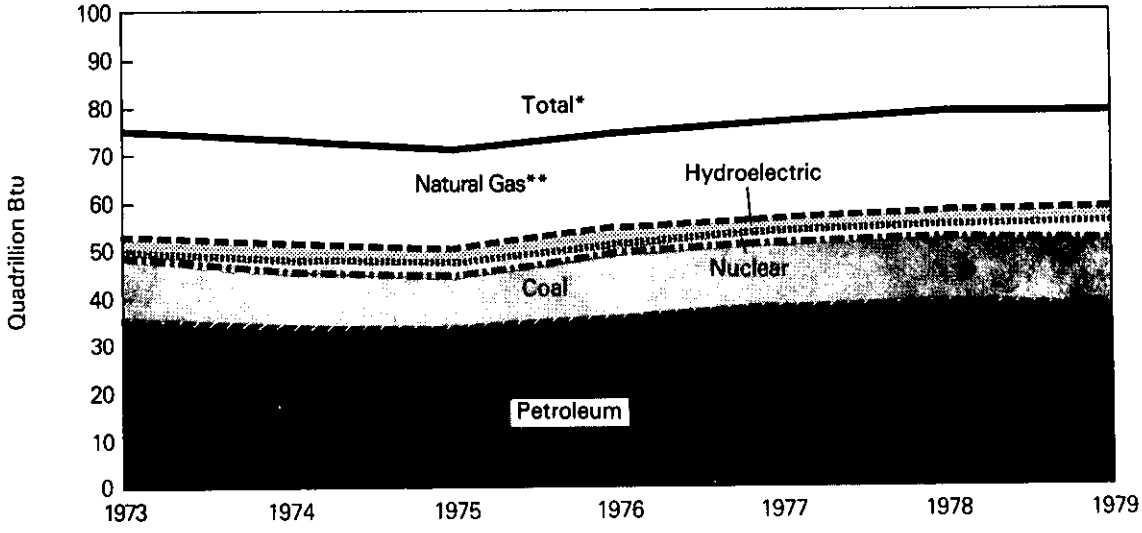
		Coal[1]	Natural Gas (Dry)	Petroleum	Hydroelectric Power[2]	Nuclear Electric Power	Net Imports of Coal Coke[3]	Other[4]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**13.300**	**22.512**	**34.840**	**3.010**	**0.910**	**(0.008)**	**0.046**	**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**	**13.732**	**20.345**	**35.175**	**3.066**	**2.111**	**0.000**	**0.081**	**74.509**	
1977	**TOTAL**	**13.965**	**19.931**	**37.176**	**2.519**	**2.702**	**0.015**	**0.082**	**76.390**	
1978	**TOTAL**	**13.846**	**20.000**	**37.965**	**3.168**	**2.977**	**0.131**	**0.068**	**78.154**	
1979	January	1.355	2.463	3.524	0.281	0.299	0.004	0.007	7.933	7.933
	February	1.206	2.237	3.286	0.241	0.279	0.003	0.006	7.257	15.191
	March	1.215	1.912	3.297	0.291	0.262	0.002	0.008	6.987	22.177
	April	1.143	1.616	2.886	0.285	0.198	0.005	0.007	6.140	28.317
	May	1.196	1.454	3.049	0.323	0.162	0.011	0.007	6.203	34.520
	June	1.241	1.339	2.940	0.281	0.173	0.010	0.007	5.990	40.510
	July	1.337	1.348	2.926	0.258	0.224	0.008	0.007	6.109	46.619
	August	1.345	1.362	3.116	0.242	0.261	0.009	0.008	6.343	52.963
	September	1.201	1.347	2.886	0.218	0.235	0.008	0.007	5.901	58.864
	October	1.234	1.579	3.107	0.231	0.225	0.004	0.008	6.388	65.252
	November	1.240	1.792	3.036	0.253	0.207	0.000	0.008	6.537	71.789
	December	1.357	2.096	3.221	0.258	0.222	0.002	0.009	7.164	78.953
	TOTAL	**15.070**	**20.546**	**37.272**	**3.163**	**2.748**	**0.066**	**0.089**	**78.953**	
1980	January	1.409	2.323	3.167	0.284	0.213	0.003	0.008	7.407	7.407
	February	1.323	2.235	2.996	0.242	0.208	(0.001)	0.008	7.011	14.418
	March	1.304	2.220	2.956	0.275	0.216	(0.003)	0.008	6.976	21.394
	April	R1.166	1.599	2.751	0.289	0.202	(0.005)	0.008	R6.011	R27.405
	May	R1.170	1.382	2.762	0.322	0.198	(0.006)	0.010	R5.838	R33.243
	June	R1.242	1.277	2.729	0.309	0.197	(0.004)	0.009	R5.759	R39.002
	July	1.419	R1.327	2.713	0.274	0.226	(0.004)	0.010	R5.964	R44.967
	August	1.417	1.274	2.709	0.234	0.262	(0.003)	0.011	5.904	50.870
	TOTAL (Year-to-date)	**10.450**	**13.636**	**22.783**	**2.229**	**1.722**	**(0.023)**	**0.072**	**50.870**	

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.

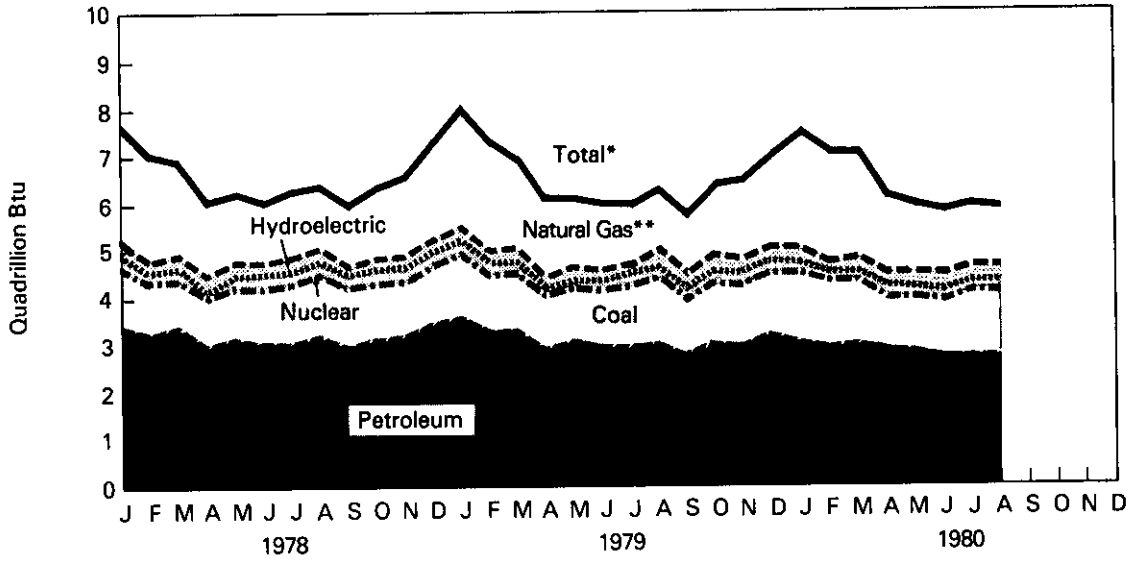
Executive Summary

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]

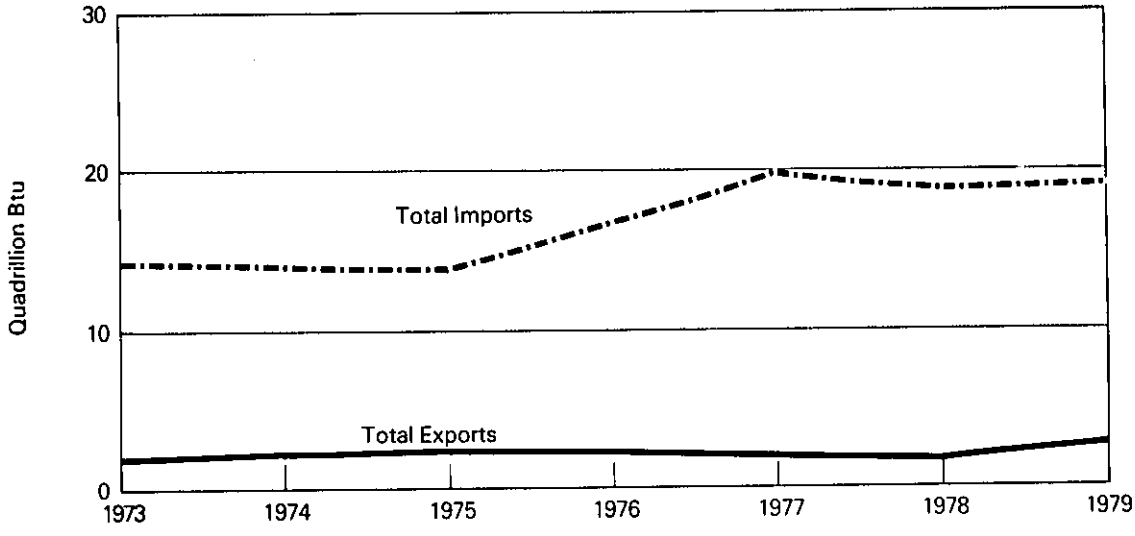
		Coal[2]	Crude Oil[3]	Refined Petroleum Products[4]	Natural Gas (Dry)	Electricity[5]	Coal Coke	Net Imports	Yearly Cumulative Net Imports of Energy
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**(1.442)**	**6.883**	**6.097**	**0.981**	**0.148**	**(0.008)**	**12.659**	
1974	**TOTAL**	**(1.586)**	**7.389**	**5.273**	**0.907**	**0.133**	**0.059**	**12.174**	
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**	**(1.023)**	**13.125**	**3.932**	**0.941**	**0.206**	**0.131**	**17.311**	
1979	January	(0.093)	1.202	0.372	0.099	0.017	0.004	1.602	1.602
	February	(0.067)	1.013	0.311	0.095	0.016	0.003	1.371	2.973
	March	(0.122)	1.078	0.398	0.111	0.017	0.002	1.485	4.457
	April	(0.138)	1.036	0.258	0.104	0.017	0.005	1.282	5.739
	May	(0.165)	1.095	0.287	0.102	0.017	0.011	1.349	7.088
	June	(0.156)	1.111	0.260	0.099	0.017	0.010	1.341	8.429
	July	(0.168)	1.105	0.310	0.101	0.017	0.008	1.374	9.803
	August	(0.160)	1.181	0.290	0.096	0.017	0.009	1.434	11.237
	September	(0.134)	1.085	0.243	0.096	0.017	0.008	1.315	12.552
	October	(0.197)	1.201	0.283	0.107	0.017	0.004	1.415	13.967
	November	(0.163)	1.025	0.305	0.114	0.017	0.000	1.298	15.265
	December	(0.166)	1.090	0.378	0.109	0.017	0.002	1.432	16.696
	TOTAL	**(1.729)**	**13.223**	**3.697**	**1.234**	**0.206**	**0.066**	**16.696**	
1980	January	(0.117)	1.088	0.325	0.118	0.017	0.003	1.434	1.434
	February	(0.104)	0.947	0.292	0.111	0.016	(0.001)	1.261	R2.695
	March	(0.150)	0.982	0.274	0.106	0.017	(0.003)	1.228	3.923
	April	(0.202)	0.929	0.213	0.088	0.017	(0.005)	1.040	4.963
	May	(0.227)	0.857	0.225	0.066	0.017	(0.006)	0.933	5.896
	June	(0.237)	0.888	0.183	0.059	0.017	(0.004)	0.905	6.801
	July	(0.221)	0.793	0.191	0.060	0.017	(0.004)	0.835	R7.636
	August	(0.246)	0.826	0.215	0.057	0.017	(0.003)	0.867	8.503
	TOTAL (Year-to-date)	**(1.505)**	**7.310**	**1.919**	**0.664**	**0.138**	**(0.023)**	**8.503**	

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 1978 are used in estimating 1979 and 1980 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.

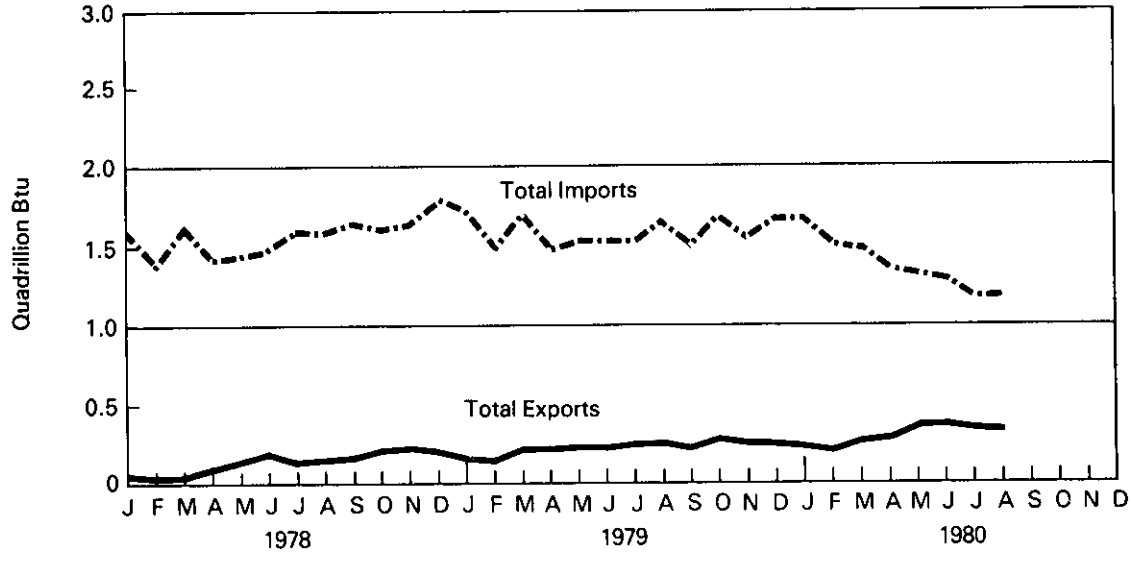
Executive Summary

Energy Imports and Exports

Yearly



Monthly



Executive Summary

Merchandise Trade Value[1]

		Exports				Imports			
		Energy	Manufactured Products	Agricultural, Chemical, and Other	Total	Energy	Manufactured Products	Agricultural, Chemical, and Other	Total
		Million dollars							
1973	**TOTAL**	**1,671**	**38,982**	**29,643**	**70,296**	**8,173**	**42,537**	**19,122**	**69,832**
1974	**TOTAL**	**3,444**	**54,704**	**39,085**	**97,233**	**25,454**	**51,205**	**23,989**	**100,648**
1975	**TOTAL**	**4,470**	**62,260**	**39,832**	**106,562**	**26,476**	**47,384**	**22,714**	**96,574**
1976	**TOTAL**	**4,226**	**67,282**	**42,159**	**113,667**	**33,996**	**60,004**	**27,010**	**121,010**
1977	**TOTAL**	**4,184**	**69,339**	**45,484**	**119,007**	**44,537**	**71,583**	**31,550**	**147,670**
1978	**TOTAL**	**3,881**	**81,850**	**55,310**	**141,041**	**42,096**	**93,887**	**35,996**	**171,979**
1979	January	350	7,035	4,965	12,349	4,228	8,391	3,227	15,846
	February	292	7,446	4,966	12,705	3,525	7,480	2,771	13,776
	March	436	8,842	6,020	15,298	3,948	8,432	3,385	15,765
	April	467	8,038	5,506	14,011	4,241	8,550	3,381	16,172
	May	471	8,474	5,584	14,529	4,166	8,690	3,655	16,512
	June	500	8,527	6,054	15,081	4,528	9,247	3,661	17,436
	July	534	7,879	6,077	14,490	5,075	8,778	3,262	17,115
	August	496	7,981	6,237	14,714	5,460	8,988	3,482	17,931
	September	438	8,086	6,142	14,666	6,084	8,539	3,452	18,076
	October	567	9,072	7,352	16,991	6,559	9,255	3,430	19,243
	November	522	8,849	7,577	16,948	5,411	9,363	3,884	18,658
	December	543	9,030	7,039	16,612	6,836	9,037	3,924	19,797
	TOTAL	**5,616**	**99,259**	**73,519**	**178,394**	**60,061**	**104,750**	**41,514**	**206,327**
1980	January	481	8,837	6,696	16,015	6,559	R9,772	3,801	R20,132
	February	436	9,684	6,556	16,675	7,742	9,226	3,671	20,639
	March	567	10,870	7,865	19,302	7,392	R9,801	3,848	R21,041
	April	631	10,481	6,691	17,803	6,346	R9,543	3,737	R19,626
	May	737	10,574	7,079	18,390	6,895	R9,791	3,818	R20,503
	June	730	10,570	7,000	18,300	6,938	9,745	3,837	20,520
	July	707	9,669	6,491	16,867	5,792	9,797	3,736	19,324
	August	703	9,974	6,947	17,624	6,237	9,195	3,428	18,859
	September	710	10,158	6,632	17,500	5,831	9,443	3,806	19,080
	TOTAL (Year-to-date)	**5,702**	**90,817**	**61,957**	**158,476**	**59,732**	**R86,313**	**33,682**	**179,724**

Note: The U.S. trade statistics include the 50 States, the District of Columbia, and Puerto Rico, except data on shipments between the United States, Puerto Rico, and U.S. possessions, between U.S. possessions and foreign countries, shipments to U.S. Armed Forces and diplomatic missions abroad for their own use and American goods returned to the United States by its Armed Forces, intransit shipments, etc.

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

[1]Data presented are free alongside ship (f.a.s.) basis and are unadjusted for seasonality and working days. Beginning January 1979, the data excludes U.S. Department of Defense Military Assistance Program Grant-Aid Shipments. Commodity categories shown above include groups of BOC sections as follows: Energy—BOC section 3. (Mineral fuels, lubricants, and related materials). Manufactured products—BOC sections 6. (Manufactured goods classified chiefly by material), 7. (Machinery and transport equipment), and 8. (Miscellaneous manufactured articles, not elsewhere classified). Agricultural, chemical, and other—BOC sections 0. (Food and live animals), 1. (Beverages and tobacco), 2. (Crude material inedible, except fuels), 4. (Animal and vegetable fats and oils), 5. (Chemicals), and 9. (Commodities and transactions not classified according to kind).

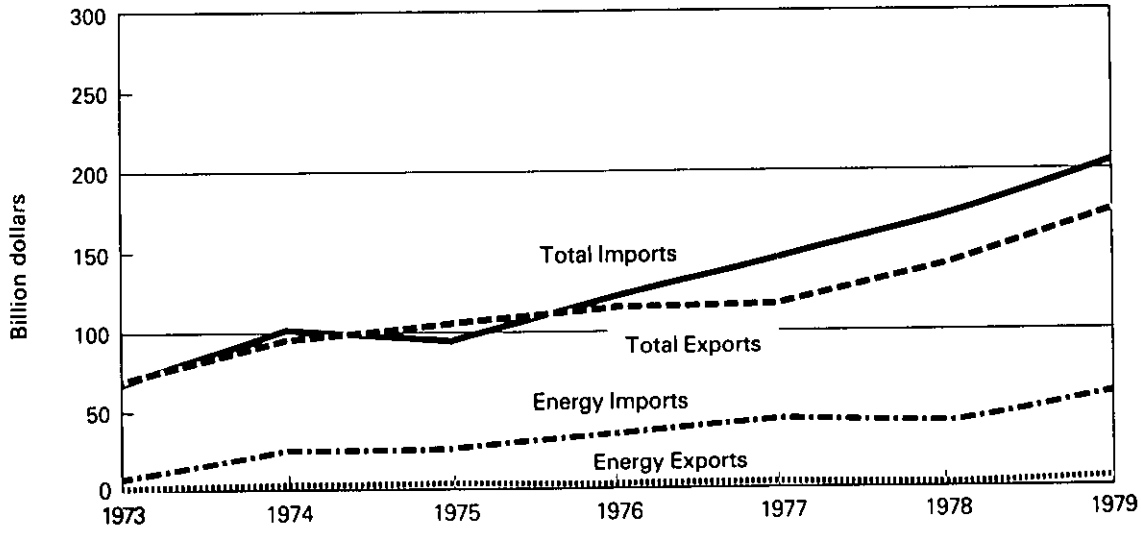
R = Revised data.

Source: • U.S. Department of Commerce, Bureau of the Census (BOC) publication FT 900, *Summary of U.S. Export and Import Merchandise Trade.*

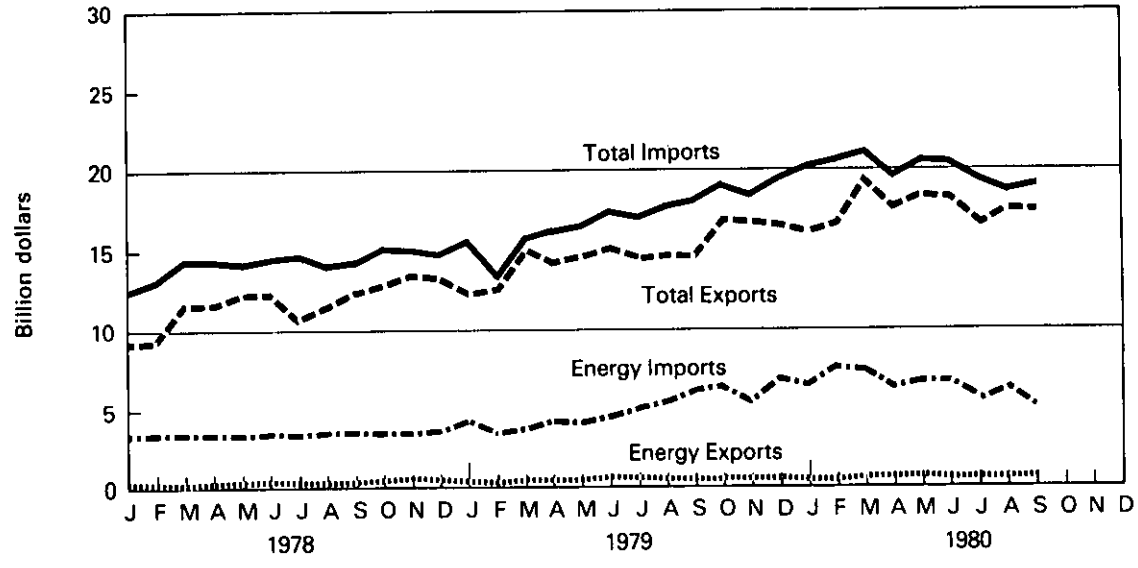
Executive Summary

Merchandise Trade Value

Yearly



Monthly



Executive Summary

Heating Degree-Days[1]

Petroleum Administration For Defense (PAD) Districts	Cumulative July 1 through November 2				
	1980	1979[2]		Normal (1941–70[2])	
PAD District I	384	393	(−2.2)	337	(14.0)
New England Conn., Maine, Mass., N.H., R.I., Vt.	611	631	(−3.1)	533	(14.8)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	455	475	(−4.2)	405	(12.4)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W. Va.	178	165	(8.3)	149	(19.6)
PAD District II Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.	601	546	(9.9)	500	(20.0)
PAD District III Ala., Ark., La., Miss., N. Mex., Tex.	139	88	(57.5)	100	(38.5)
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	582	504	(15.4)	662	(−12.1)
PAD District V Ariz., Calif., Nev., Oreg., Wash.	242	177	(36.3)	311	(−22.4)
U.S. AVERAGE[3]	**410**	**379**	**(8.2)**	**367**	**(11.9)**

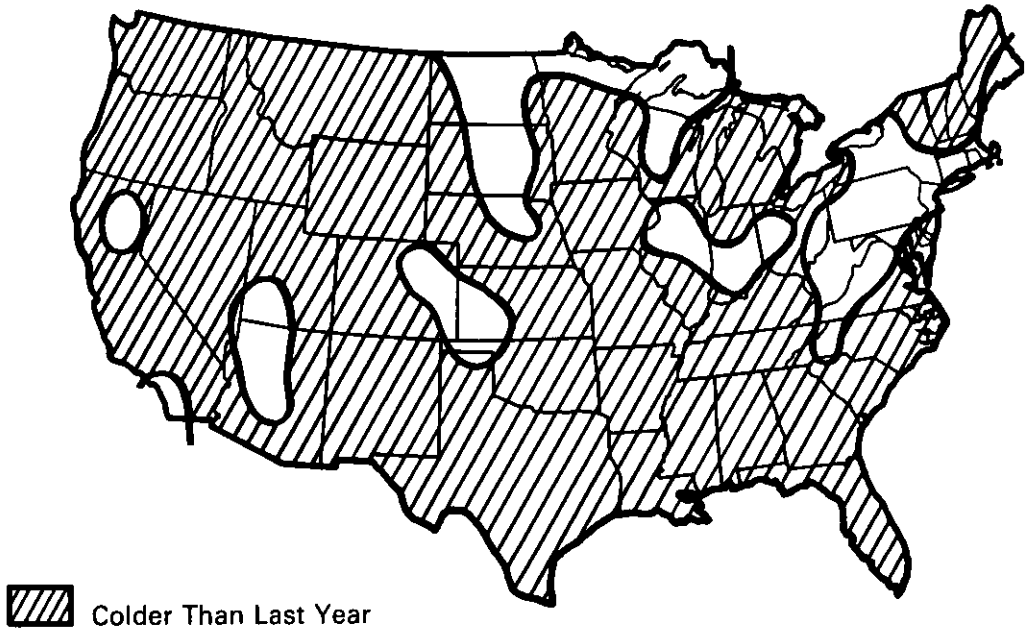
[1]See Explanatory Note 6 for explanation of degree-days.
[2]Percentage change in parentheses.
[3]Excludes Alaska and Hawaii.

Executive Summary

Heating Degree-Days

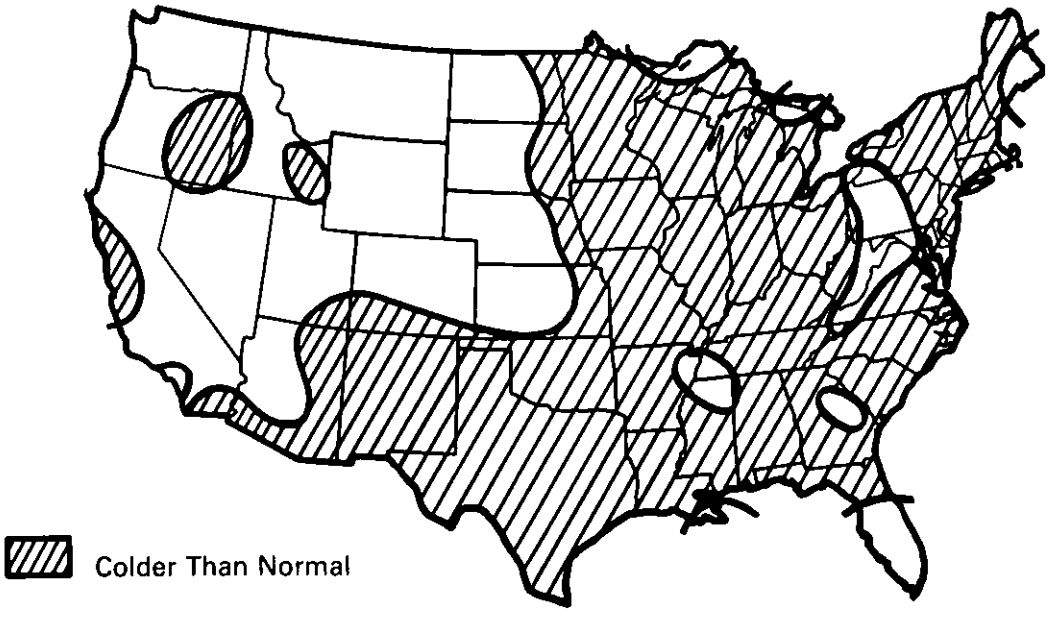
Heating Degree-Days Accumulated from July 1 through November 2

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	60.4	74.609	1.307	1.235	0.91	2.99	6.26	17.31
1974	AVERAGE	59.7	72.759	1.413	1.218	0.75	3.28	6.11	16.65
1975	AVERAGE	58.8	70.707	1.529	1.202	1.38	3.60	6.06	16.32
1976	AVERAGE	58.5	74.509	1.702	1.273	2.42	5.07	7.31	17.46
1977	AVERAGE	57.0	76.390	1.900	1.341	3.19	6.19	8.81	18.43
1978	AVERAGE	55.9	78.154	2.128	1.399	2.96	5.75	8.36	18.85
1979	1st Qtr	62.8	89.847	2.292	1.431	3.24	5.87	8.81	20.30
	2nd Qtr	51.6	73.337	2.330	1.422	3.16	5.44	8.09	17.57
	3rd Qtr	50.7	72.663	2.397	1.433	2.95	5.68	8.31	17.51
	4th Qtr	55.3	79.598	2.457	1.440	2.80	5.46	8.44	18.39
	AVERAGE	55.0	78.816	2.369	1.432	3.04	5.61	8.41	18.43
1980	1st Qtr	59.5	86.046	2.521	1.445	3.00	4.97	7.90	18.16
	2nd Qtr	50.7	71.579	2.523	1.411	2.57	4.25	6.72	16.54

Geographic coverage: the 50 United States and District of Columbia.
[1]Thousand Btu per 1972 constant dollar.
[2]Current dollars converted to 1972 constant dollars by the formula:

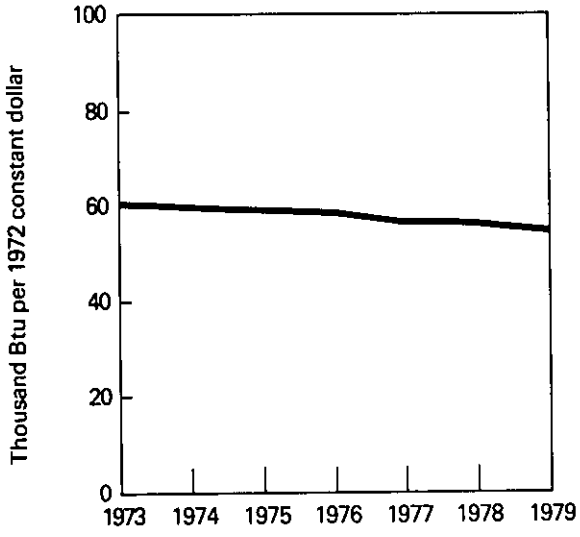
$$\text{Constant 1972 dollars} = \frac{\text{Current dollars in year N}}{\text{Gross National Product implicit price deflator in year N}} \times 100$$

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.
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.

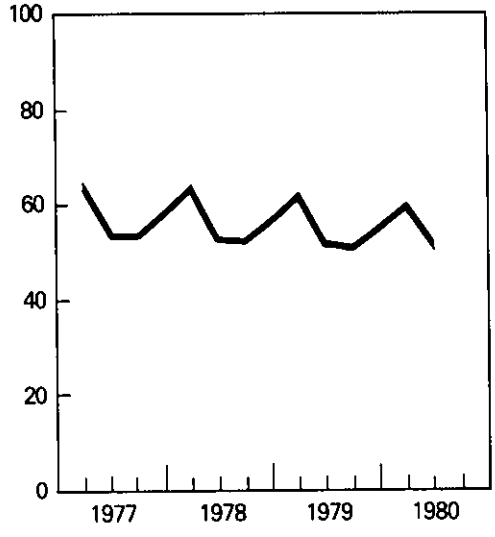
Executive Summary

Energy Consumption per GNP Dollar

Yearly

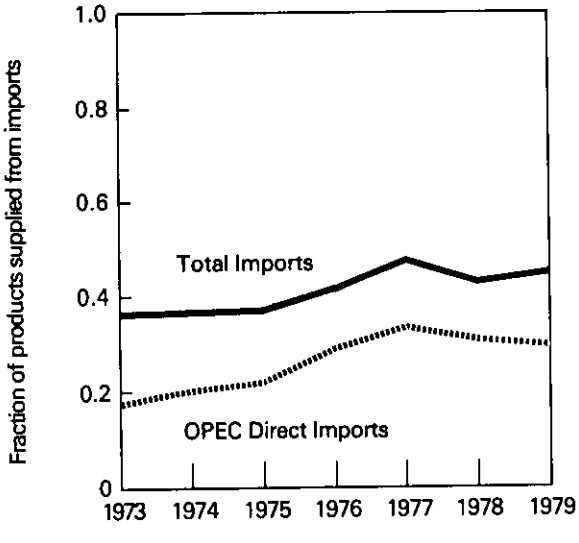


Quarterly

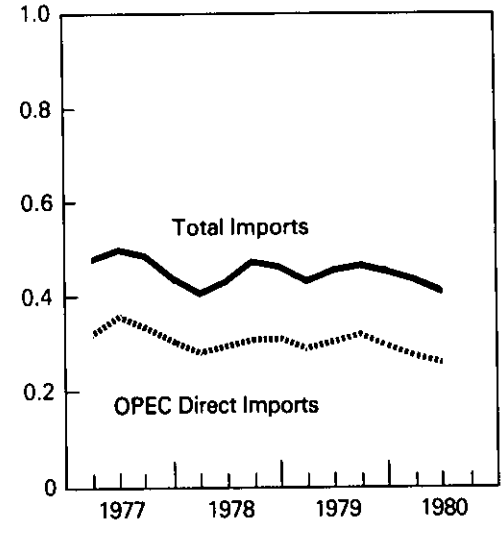


U.S. Dependence on Petroleum Imports

Yearly



Quarterly

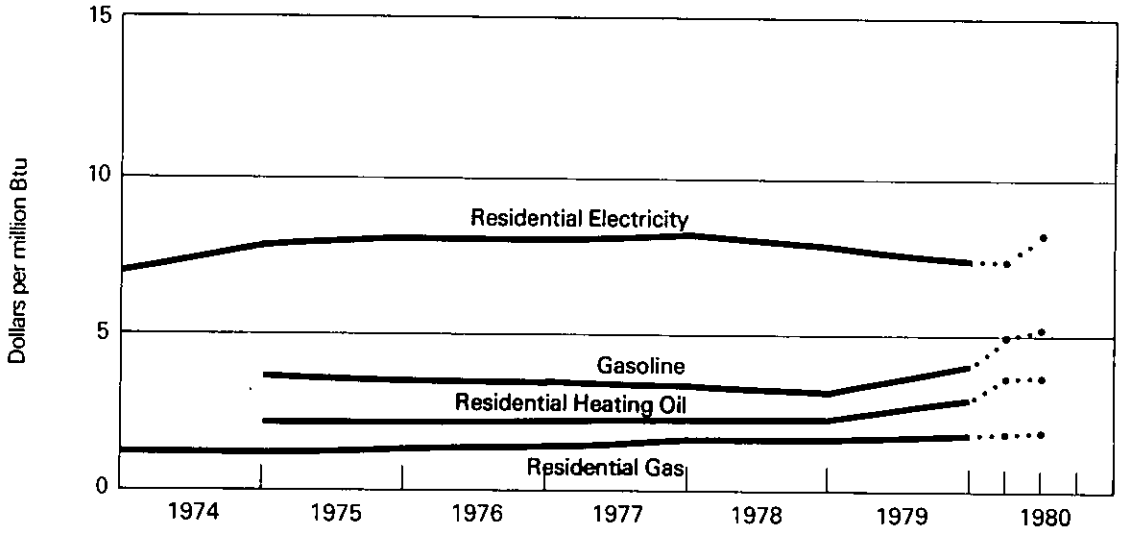


Executive Summary

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**	**30.2**	**2.18**	**145.4**	**1.43**	**2.74**	**8.03**
1977	**AVERAGE**	**42.9**	**3.43**	**31.2**	**2.25**	**162.2**	**1.59**	**2.80**	**8.20**
1978	**AVERAGE**	**40.1**	**3.21**	**31.7**	**2.29**	**164.4**	**1.62**	**2.76**	**8.10**
1979	1st Qtr	41.5	3.32	33.8	2.44	179.4	1.77	2.51	7.36
	2nd Qtr	46.9	3.75	37.2	2.68	181.3	1.79	2.74	8.03
	3rd Qtr	53.3	4.26	44.0	3.17	189.0	1.86	2.79	8.17
	4th Qtr	54.9	4.39	46.4	3.35	193.1	1.90	2.66	7.79
	AVERAGE	**49.3**	**3.94**	**40.8**	**2.94**	**185.3**	**1.88**	**2.66**	**7.79**
1980	1st Qtr	62.3	4.98	49.8	3.59	190.8	1.88	2.53	7.42
	2nd Qtr	63.6	5.09	49.8	3.59	197.0	1.94	2.75	8.06

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 quarterly numbers, Bureau of Labor Statistics.
- Electricity—1973 through February 1980: FPC Form 5, "Reports of Classes A and B Privately Owned Electric Utilities"; March 1980 forward: FERC Form 5, " Electric Utility Company Monthly Statement."
- Deflator—The Consumer Price Index.

Energy Consumption

Energy consumption in the 50 United States and the District of Columbia in August 1980 was 5.9 quadrillion Btu, 1.0 percent lower than during a month earlier. This figure was 6.9 percent lower than the August 1979 consumption level.

The Residential and Commercial Sector consumption was 2.2 quadrillion Btu in August 1980, virtually unchanged from July 1980 and 1.0 percent higher than the amount consumed during August 1979. The Residential and Commercial Sector consumed 37.6 percent of the total consumption for August 1980, up from the sector's 34.7 percent share in August 1979.

The Industrial Sector consumption was 2.2 quadrillion Btu in August 1980, down 0.5 percent from July 1980, and down 11.4 percent from the consumption level in August 1979. The Industrial Sector consumed 37.0 percent of the August 1980 total, as compared to the 38.8 percent share of August 1979.

The Transportation Sector consumption was 1.5 quadrillion Btu in August 1980, down 3.0 percent from July 1980 and down 10.6 percent from the consumption level in August 1979. This sector consumed 25.5 percent of the August 1980 total, as compared to a 26.5 percent share in August 1979.

The Electric Utilities consumption was an estimated 2.3 quadrillion Btu of energy in August 1980, 1.2 percent lower than in the previous month, and 3.3 percent higher than the energy consumed in August 1979. Coal contributed 48.8 percent of the energy consumed by Electric Utilities in August 1980, while natural gas contributed 18.4 percent, nuclear power 11.5 percent, petroleum 10.7 percent, hydroelectric power 10.1 percent, and geothermal, wood and waste 0.5 percent.

Consumption

Energy Consumption Summary for August 1980
Quadrillion (10^{15}) Btu

Primary Energy Source	Sector: Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL
Coal	0.014	0.288	0.000	1.115	1.417
Natural Gas (dry)	0.224	0.598	0.033	0.420	1.274
Petroleum	0.484	0.513	1.467	0.245	2.709
Hydroelectric	0.000	0.003	0.000	0.231	0.234
Nuclear	0.000	0.000	0.000	0.262	0.262
Net Coke Imports	0.000	(0.003)	0.000	0.000	(0.003)
Other	0.000	0.000	0.000	0.011	0.011
TOTAL PRIMARY ENERGY	**0.723**	**1.398**	**1.500**	**2.283**	**5.904**
Electricity Sales	0.439	0.230	0.001	(0.669)	
Net Energy Consumption	1.161	1.628	1.501		4.290
Electrical Energy Losses	1.057	0.554	0.002	(1.613)	1.613
TOTAL ENERGY CONSUMED	**2.219**	**2.182**	**1.503**		**5.904**

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 on the last page of this section.

Consumption

Consumption of Energy by the End-Use Sector[1]

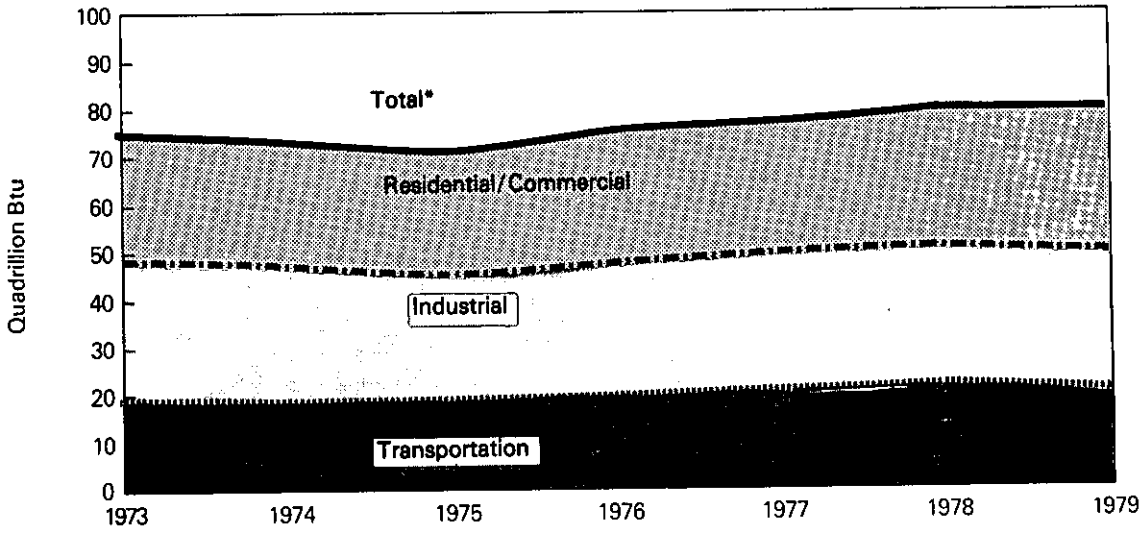
		Residential and Commercial	Industrial	Transportation	Total Energy Consumed
		Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**27.396**	**28.685**	**18.525**	**74.609**
1974	**TOTAL**	**26.699**	**27.998**	**18.057**	**72.759**
1975	**TOTAL**	**26.635**	**25.881**	**18.186**	**70.707**
1976	**TOTAL**	**27.831**	**27.603**	**19.071**	**74.509**
1977	**TOTAL**	**28.193**	**28.442**	**19.751**	**76.390**
1978	**TOTAL**	**28.807**	**28.716**	**20.626**	**78.154**
1979	January	3.419	2.733	1.780	7.933
	February	3.236	2.337	1.684	7.257
	March	2.814	2.419	1.753	6.987
	April	2.299	2.257	1.584	6.140
	May	2.074	2.466	1.663	6.203
	June	1.990	2.403	1.597	5.990
	July	R2.098	R2.425	1.587	6.109
	August	R2.198	R2.463	1.682	6.343
	September	2.001	2.348	1.552	5.901
	October	2.103	2.634	1.651	6.388
	November	2.320	2.627	1.589	6.537
	December	2.774	2.722	1.667	7.164
	TOTAL	**R29.325**	**R29.836**	**19.787**	**78.953**
1980	January	3.086	2.702	1.618	7.407
	February	3.026	2.430	1.555	7.011
	March	2.825	2.565	1.586	6.976
	April	R2.252	R2.220	1.538	R6.011
	May	R2.006	R2.299	1.533	R5.838
	June	R2.038	R2.243	1.478	R5.759
	July	R2.220	R2.194	R1.550	R5.964
	August	2.219	2.182	1.503	5.904
	TOTAL (Year-to-date)	**19.672**	**18.836**	**12.359**	**50.870**

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 on the last page of this section.
R = Revised data.
Source: •See Notes and Sources on the last page of this section.

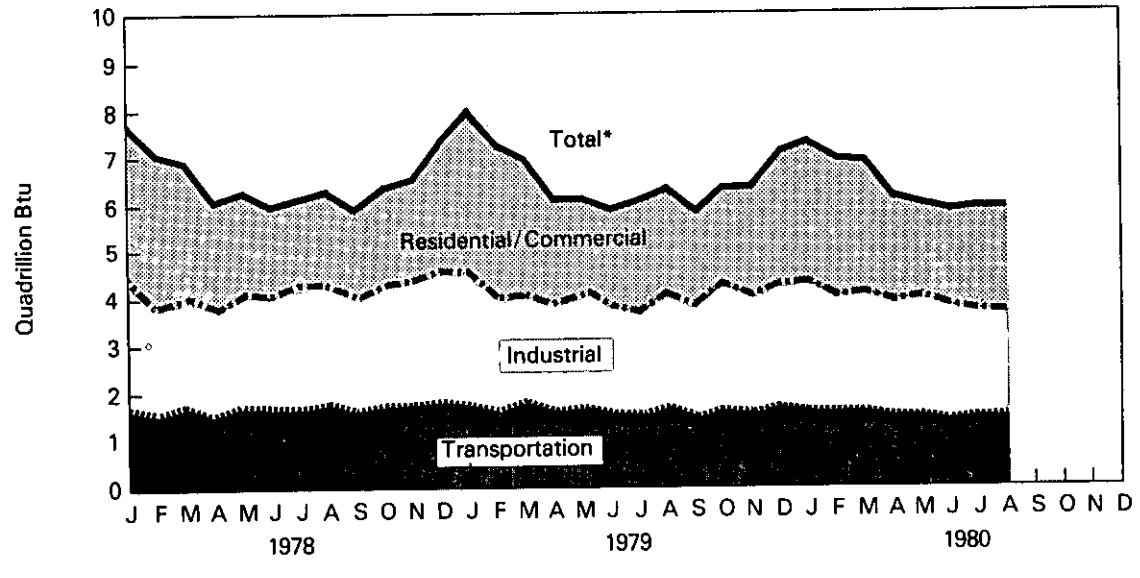
Consumption

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**	**7.524**	**3.495**	**8.460**	**27.396**	
1974	**TOTAL**	**0.293**	**7.518**	**6.865**	**3.475**	**8.548**	**26.699**	
1975	**TOTAL**	**0.239**	**7.581**	**6.413**	**3.588**	**8.814**	**26.635**	
1976	**TOTAL**	**0.227**	**7.866**	**6.919**	**3.729**	**9.089**	**27.831**	
1977	**TOTAL**	**0.225**	**7.461**	**6.869**	**3.936**	**9.702**	**28.193**	
1978	**TOTAL**	**0.250**	**7.624**	**6.916**	**4.100**	**9.918**	**28.807**	
1979	January	0.031	1.294	0.698	0.399	0.997	3.419	3.419
	February	0.020	1.316	0.646	0.388	0.866	3.236	6.655
	March	0.015	0.982	0.582	0.352	0.883	2.814	9.469
	April	0.013	0.740	0.496	0.312	0.738	2.299	11.767
	May	0.012	0.457	0.541	0.299	0.765	2.074	13.841
	June	0.013	0.316	0.528	0.323	0.810	1.990	15.831
	July	0.012	0.270	0.532	R0.366	R0.918	R2.098	R17.929
	August	0.011	0.249	0.580	R0.393	R0.966	R2.198	R20.127
	September	0.014	0.260	0.531	0.368	0.828	2.001	R22.128
	October	0.019	0.359	0.598	0.321	0.806	2.103	R24.231
	November	0.023	0.626	0.568	0.314	0.788	2.320	R26.551
	December	0.025	0.902	0.604	0.349	0.894	2.774	R29.325
	TOTAL	**0.209**	**7.770**	**6.905**	**R4.183**	**R10.258**	**R29.325**	
1980	January	0.025	1.113	0.597	0.381	0.970	3.086	3.086
	February	0.022	1.191	0.552	0.375	0.886	3.026	6.112
	March	0.015	1.053	0.513	0.359	0.885	2.825	8.937
	April	R0.014	0.716	0.433	0.319	0.770	R2.252	R11.189
	May	R0.009	0.450	0.451	0.298	0.799	R2.006	R13.195
	June	R0.007	0.329	0.467	0.334	0.901	R2.038	R15.233
	July	R0.014	0.243	0.470	R0.410	R1.084	R2.220	R17.453
	August	0.014	0.224	0.484	0.439	1.057	2.219	19.672
	TOTAL (Year-to-date)	**0.120**	**5.319**	**3.966**	**2.916**	**7.353**	**19.672**	

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 on the last page 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 on the last page 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**	**4.350**	**10.397**	**5.893**	**0.035**	**(0.008)**	**2.341**	**5.676**	**28.685**	
1974	**TOTAL**	**4.057**	**10.012**	**5.750**	**0.033**	**0.059**	**2.337**	**5.751**	**27.998**	
1975	**TOTAL**	**3.801**	**8.531**	**5.530**	**0.032**	**0.014**	**2.304**	**5.669**	**25.881**	
1976	**TOTAL**	**3.791**	**8.768**	**6.325**	**0.033**	**0.000**	**2.525**	**6.162**	**27.603**	
1977	**TOTAL**	**3.494**	**8.642**	**7.106**	**0.037**	**0.015**	**2.635**	**6.513**	**28.442**	
1978	**TOTAL**	**3.462**	**8.540**	**7.179**	**0.036**	**0.131**	**2.732**	**6.637**	**28.716**	
1979	January	0.315	0.869	0.726	0.003	0.004	0.233	0.583	2.733	2.733
	February	0.295	0.629	0.661	0.003	0.003	0.231	0.515	2.337	5.070
	March	0.300	0.610	0.669	0.003	0.002	0.238	0.597	2.419	7.490
	April	0.289	0.565	0.592	0.003	0.005	0.239	0.564	2.257	9.747
	May	0.290	0.674	0.615	0.003	0.011	0.245	0.627	2.466	12.213
	June	0.282	0.657	0.590	0.003	0.010	0.245	0.615	2.403	14.616
	July	0.318	0.662	0.583	0.003	0.008	R0.242	0.608	R2.425	R17.041
	August	0.297	0.689	0.616	0.003	0.009	R0.246	0.604	R2.463	R19.504
	September	0.286	0.703	0.572	0.003	0.008	0.239	0.538	2.348	R21.853
	October	0.297	0.846	0.627	0.003	0.004	0.244	0.613	2.634	R24.486
	November	0.301	0.850	0.638	0.003	0.000	0.238	0.597	2.627	R27.113
	December	0.331	0.883	0.686	0.003	0.002	0.230	0.588	2.722	R29.836
	TOTAL	**3.602**	**8.636**	**7.576**	**0.037**	**0.066**	**R2.869**	**7.049**	**R29.836**	
1980	January	0.311	0.864	0.703	0.003	0.003	0.231	0.587	2.702	2.702
	February	0.291	0.714	0.639	0.003	(0.001)	0.233	0.551	2.430	5.132
	March	0.297	0.816	0.634	0.003	(0.003)	0.236	0.582	2.565	7.698
	April	R0.278	0.577	0.575	0.003	(0.005)	0.232	0.560	R2.220	R9.917
	May	R0.272	0.605	0.580	0.003	(0.006)	0.229	0.614	R2.299	R12.217
	June	R0.256	0.567	0.580	0.003	(0.004)	0.228	0.614	R2.243	R14.460
	July	R0.283	R0.614	0.484	0.003	(0.004)	R0.224	R0.591	R2.194	R16.654
	August	0.288	0.598	0.513	0.003	(0.003)	0.230	0.554	2.182	18.836
	TOTAL (Year-to-date)	**2.277**	**5.354**	**4.708**	**0.025**	**(0.023)**	**1.842**	**4.653**	**18.836**	

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 on the last page 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 on the last page 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**	**17.751**	**0.009**	**0.020**	**18.525**	
1974	**TOTAL**	**0.002**	**0.685**	**17.341**	**0.009**	**0.021**	**18.057**	
1975	**TOTAL**	**0.001**	**0.595**	**17.557**	**0.010**	**0.024**	**18.186**	
1976	**TOTAL**	**(s)**	**0.559**	**18.477**	**0.010**	**0.025**	**19.071**	
1977	**TOTAL**	**(s)**	**0.543**	**19.173**	**0.010**	**0.024**	**19.751**	
1978	**TOTAL**	**(s)**	**0.539**	**20.057**	**0.009**	**0.020**	**20.626**	
1979	January	(s)	0.064	1.714	0.001	0.002	1.780	1.780
	February	(s)	0.058	1.624	0.001	0.002	1.684	3.465
	March	(s)	0.049	1.701	0.001	0.002	1.753	5.217
	April	(s)	0.042	1.540	0.001	0.002	1.584	6.801
	May	(s)	0.038	1.623	0.001	0.002	1.663	8.464
	June	(s)	0.035	1.560	0.001	0.002	1.597	10.060
	July	(s)	0.035	1.549	0.001	0.002	1.587	11.647
	August	(s)	0.035	1.644	0.001	0.002	1.682	13.329
	September	(s)	0.035	1.514	0.001	0.002	1.552	14.880
	October	(s)	0.041	1.607	0.001	0.002	1.651	16.531
	November	(s)	0.046	1.540	0.001	0.002	1.589	18.120
	December	(s)	0.054	1.610	0.001	0.002	1.667	19.787
	TOTAL	**(s)**	**0.530**	**19.227**	**0.009**	**0.021**	**19.787**	
1980	January	(s)	0.060	1.555	0.001	0.002	1.618	1.618
	February	(s)	0.058	1.495	0.001	0.002	1.555	3.173
	March	(s)	0.057	1.526	0.001	0.002	1.586	4.758
	April	(s)	0.041	1.495	0.001	0.002	1.538	6.296
	May	(s)	0.036	1.495	0.001	0.002	1.533	7.829
	June	(s)	0.033	1.442	0.001	0.002	1.478	9.307
	July	(s)	R0.034	R1.513	0.001	0.002	R1.550	R10.857
	August	(s)	0.033	1.467	0.001	0.002	1.503	12.359
	TOTAL (Year-to-date)	**(s)**	**0.352**	**11.987**	**0.006**	**0.014**	**12.359**	

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 on the last page 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 Transportaion Sector has been negligible.
R=Revised data.
Source: •See Notes and Sources on the last page of this section.

Consumption

Consumption of Energy by the Electric Utilities

		Coal[1]	Natural Gas (Dry)	Petro-leum	Hydro-electric power[2]	Nuclear Electric Power	Other[3]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**8.655**	**3.746**	**3.671**	**2.975**	**0.910**	**0.046**	**20.004**	
1974	**TOTAL**	**8.524**	**3.518**	**3.499**	**3.276**	**1.272**	**0.056**	**20.144**	
1975	**TOTAL**	**8.783**	**3.241**	**3.231**	**3.187**	**1.900**	**0.072**	**20.414**	
1976	**TOTAL**	**9.714**	**3.153**	**3.454**	**3.032**	**2.111**	**0.081**	**21.544**	
1977	**TOTAL**	**10.245**	**3.285**	**4.028**	**2.482**	**2.702**	**0.082**	**22.825**	
1978	**TOTAL**	**10.134**	**3.297**	**3.813**	**3.132**	**2.977**	**0.068**	**23.421**	
1979	January	1.009	0.236	0.386	0.279	0.299	0.007	2.215	2.215
	February	0.892	0.235	0.354	0.238	0.279	0.006	2.003	4.218
	March	0.900	0.270	0.345	0.288	0.262	0.008	2.073	6.291
	April	0.840	0.270	0.258	0.282	0.198	0.007	1.855	8.146
	May	0.894	0.286	0.270	0.319	0.162	0.007	1.938	10.084
	June	0.946	0.331	0.262	0.278	0.173	0.007	1.996	12.080
	July	1.007	0.382	0.261	0.255	0.224	0.007	2.136	14.217
	August	1.037	0.390	0.275	0.239	0.261	0.008	2.210	16.427
	September	0.901	0.350	0.268	0.215	0.235	0.007	1.976	18.403
	October	0.917	0.334	0.274	0.228	0.225	0.008	1.987	20.390
	November	0.916	0.270	0.289	0.250	0.207	0.008	1.940	22.330
	December	1.000	0.257	0.320	0.255	0.222	0.009	2.064	24.394
	TOTAL	**11.258**	**3.610**	**3.563**	**3.125**	**2.748**	**0.089**	**24.394**	
1980	January	1.073	0.286	0.312	0.281	0.213	0.008	2.172	2.172
	February	1.010	0.272	0.311	0.239	0.208	0.008	2.048	4.221
	March	0.992	0.293	0.283	0.271	0.216	0.008	2.064	6.284
	April	0.874	0.265	0.249	0.286	0.202	0.008	1.884	8.169
	May	0.890	0.291	0.236	0.319	0.198	0.010	1.944	10.112
	June	0.979	0.349	0.240	0.306	0.197	0.009	2.080	12.193
	July	R1.122	0.435	R0.247	0.271	0.226	0.010	R2.311	R14.504
	August	1.115	0.420	0.245	0.231	0.262	0.011	2.283	16.787
	TOTAL (Year-to-date)	**8.054**	**2.611**	**2.123**	**2.204**	**1.722**	**0.072**	**16.787**	

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 net imports of electricity.
[3]Includes geothermal power and electricity produced from wood and waste.
R=Revised data.
Source: See Notes and Sources on the last page of this section.

Notes and Sources for the Consumption Section

1. See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.
2. **Coal**: Coal is bituminous coal, anthracite, 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 through 1980, 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 through 1980, DOE, EIA, *Energy Data Reports*, "Weekly Coal Report."
• Electric Utility 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 Sector consumption to the months in proportion to the American Gas Association (AGA) monthly sales to the 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 through 1980, DOE, *Energy Data Reports*, "Natural Gas Monthly Production and Consumption."
• Electric Utilities consumption: 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."
• 1977 through 1980, 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 1978: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
• 1979 and 1980: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Monthly." DOE, EIA, Monthly Petroleum Statistics Report. DOE, EIA, estimates based on EIA weekly data.
DOE, EIA estimates for current and previous month data for several minor petroleum products' total consumption.
Each product's total is allocated to end-use sectors as follows:
• Aviation gasoline—Transportation.
• Asphalt and road oil—Commercial.
• Distillate fuel, residual fuel, kerosene end-uses are proportioned according to sales by end-use reported for 1973 through 1976 in the DOI, BOM, *Mineral Industry Surveys*, "Fuel Oil Sales, Annual," and for 1976 through 1978 in the DOE, EIA, *Energy Data Reports*, "Fuel Oil Sales, Annual." The proportions from 1978 are applied to 1979 and 1980 data.
• 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.
• Liquefied petroleum gases—end-uses are proportioned according to sales by end-use reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys*, "Liquefied Petroleum Gas Sales, Annual," and for 1976 through 1978 in the DOE, EIA, *Energy Data Reports*, "Liquefied Petroleum Gas Sales, Annual." The proportions from 1978 are applied to 1979 and 1980 data.
• Lubricants—allocated to Industrial and Transportation Sectors 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, 1977."
• 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. The proportions from 1978 are applied to 1979 and 1980 data.
• Petroleum coke consumed by the Electric Utilities—FPC, Form 4, "Monthly Power Plant Report."
• All other products are allocated to the Industrial Sector.
Sources: • 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
• 1976 through 1978: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
• 1979 and 1980: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Monthly" and "Monthly Petroleum Statistics Report," and EIA estimates based on data from the American Petroleum Institute, "Weekly Statistical Bulletin."
• Electric Utility consumption of petroleum sources: 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."
• 1977 through 1980: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."
5. **Hydroelectric**: Industrial and electric utility generation of hydropower. *Sources:* • 1973 through 1976, FPC, Form 4, "Monthly Power Plant Report."
• 1977 through 1980: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."
• Imports and exports of electricity—*Sources:* 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. 1978 data are temporarily used for 1979 and 1980.
6. **Nuclear**: *Sources:* • 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."
• 1977 through 1980: 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 through 1980: 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.
9. **Electricity Sales**: Energy consumed by electric utilities to produce electricity is distributed to the major end-use sectors using EIA data in kilowatt-hour sales to ultimate customers. "Other" sales, largely for use in government buildings, are distributed to the Residential and Commercial Sector and a small portion to the Transportation Sector. *Source:* • Sales data—1973 through February 1980:—FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income"; 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.

Crude Oil and Refined Petroleum Products*

Domestic crude oil production during September 1980 averaged 8.5 million barrels per day. This production rate was 0.9 percent higher than in September 1979 and 0.2 percent lower than in August 1980.

Total petroleum imports averaged 5.9 million barrels per day in September 1980, 26.9 percent less than the September 1979 rate and 3.7 percent lower than in August 1980.

In September 1980, 16.2 million barrels per day of petroleum products were supplied for domestic use. Motor gasoline accounted for 41.3 percent of the total, distillate fuel oil 15.6 percent, and residual fuel oil 13.7 percent.

The average for motor gasoline supplied during September 1980 was 6.7 million barrels per day, 2.5 percent lower than the amount supplied in September 1979 and 1.8 percent higher than in August 1980.

In September 1980, 2.5 million barrels of distillate fuel oil were supplied per day, 5.1 percent lower than the amount supplied a year ago and 13.4 percent higher than in August 1980. Distillate fuel oil stocks were 230.2 million barrels at the end of September 1980, 4.5 percent above the stock level 1 year ago, and 1.5 percent higher than the previous month's level.

Residual fuel oil supplied in September 1980 averaged 2.2 million barrels per day, 14.9 percent lower than in September 1979. Residual fuel oil stocks measured 86.0 million barrels at the end of September 1980, 2.1 percent below the level a year ago and 0.8 percent lower than the previous month.

*Estimates for the most recent month are based on 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 months, crude production is an EIA estimate.

Petroleum

Crude Oil

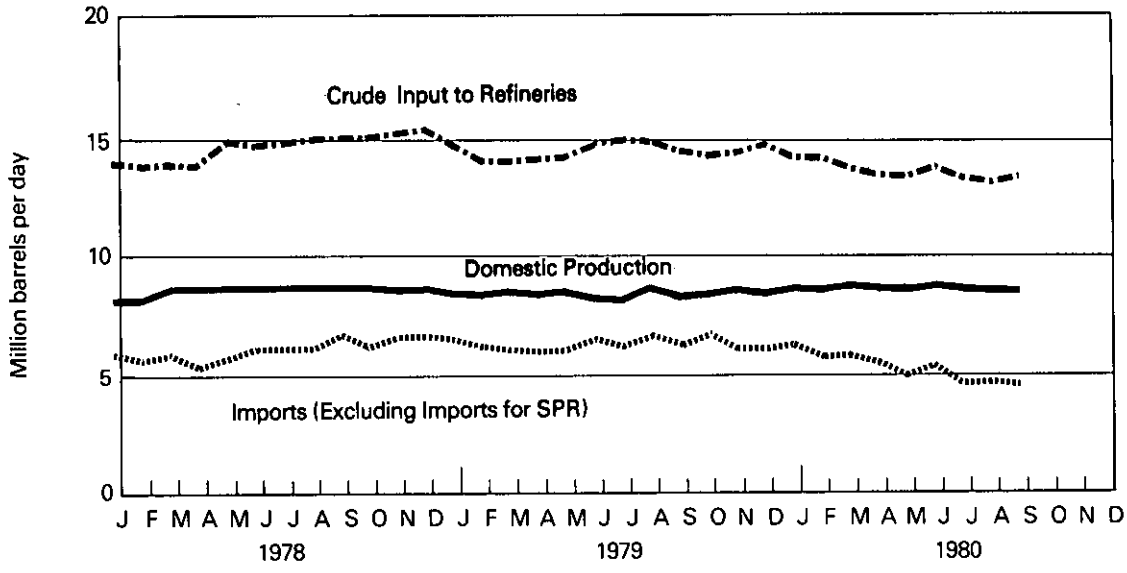
		Crude Input to Refineries	Total Domestic Production[1,2]	Alaskan Production	Crude Oil Imports[1,3]	Strategic Petroleum Reserve (SPR) Imports	Crude Oil Exports	Primary Crude Oil Stocks[1,5]	Strategic Petroleum Reserve (SPR) Stocks[5]
		Thousand barrels per day						Thousand barrels	
1973	**AVERAGE**	**12,431**	**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**	**21**	**50**	**‡339,857**	**‡7,826**
1978	**AVERAGE**	**14,739**	**8,707**	**1,229**	**6,195**	**161**	**158**	**‡309,421**	**‡66,860**
1979	January	14,833	8,457	1,351	6,656	204	177	302,728	73,142
	February	14,315	8,498	1,267	6,344	179	288	302,981	78,166
	March	14,259	8,585	1,355	6,240	122	370	317,432	82,501
	April	14,570	8,533	1,347	6,145	66	260	319,759	83,867
	May	14,452	8,585	1,350	6,163	97	171	316,355	86,880
	June	14,806	8,409	1,247	6,554	65	235	325,893	88,567
	July	15,098	8,355	1,405	6,349	41	244	312,852	90,101
	August	14,964	8,699	1,434	6,774	35	242	320,745	91,189
	September	14,595	8,466	1,436	6,410	0	175	323,854	91,189
	October	14,423	8,568	1,481	6,854	0	179	344,679	•91,191
	November	14,524	8,649	1,614	6,154	0	264	347,367	91,191
	December	14,875	8,587	1,520	6,273	0	210	339,080	91,191
	AVERAGE	**14,646**	**8,533**	**1,401**	**6,411**	**67**	**234**		
1980	January	14,147	8,648	1,634	6,359	0	311	353,611	91,191
	February	14,094	8,696	1,630	5,936	0	310	361,648	91,191
	March	13,603	8,712	1,647	5,785	0	323	361,742	91,191
	April	13,376	8,688	1,649	5,555	0	216	379,352	91,191
	May	13,326	8,640	R1,627	5,071	0	308	383,902	91,191
	June†	13,702	*8,690*	*1,618*	5,467	0	365	382,135	91,191
	July†	13,240	*8,650*	*1,607*	4,645	0	238	380,737	91,191
	August†	R13,012	*8,560*	*1,610*	R4,673	0	78	R388,839	91,191
	September†	*13,244*	*8,540*	*1,607*	*4,564*	54	NA	*395,075*	92,824
	AVERAGE	**13,524**	**8,647**	**1,626**	**5,337**	**6**	**NA**		

Geographic coverage: the 50 United States and District of Columbia.
[1]See Definitions.
[2]Includes Alaskan production.
[3]Excludes SPR. Strategic Petroleum Reserve storage began in October 1977.
[4]Indicates an adjustment in reported barrels in storage.
Estimated data in italics. These are likely to be revised next month.
‡Total as of December 31.
†Preliminary data. R=Revised data. NA=Not available.
Sources: •See Sources on the last page of this section.

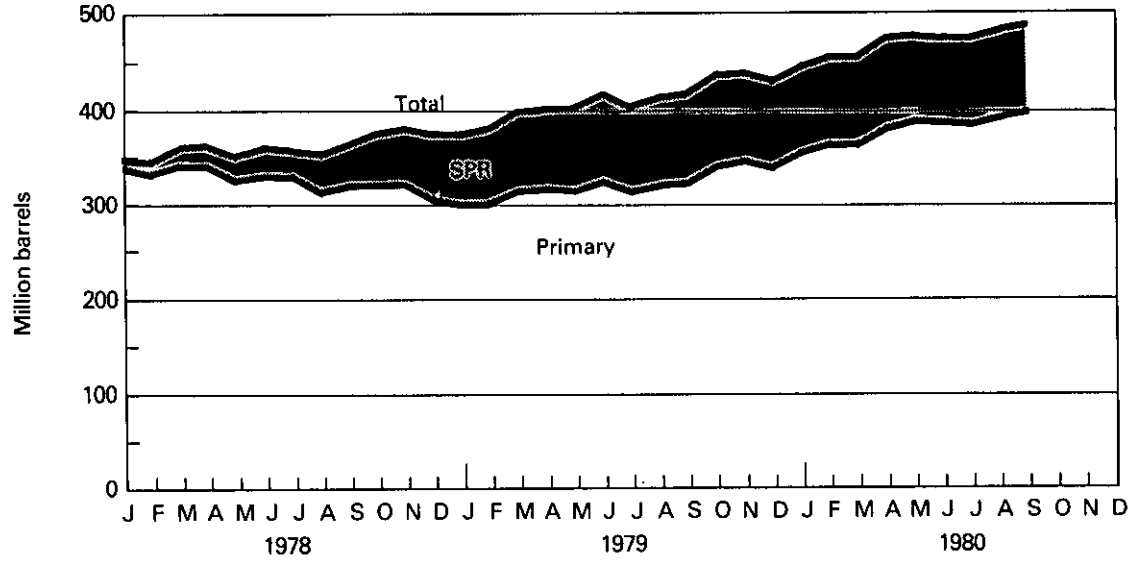
Petroleum

Crude Oil

Production, Refinery Input and Imports



Stocks



Petroleum

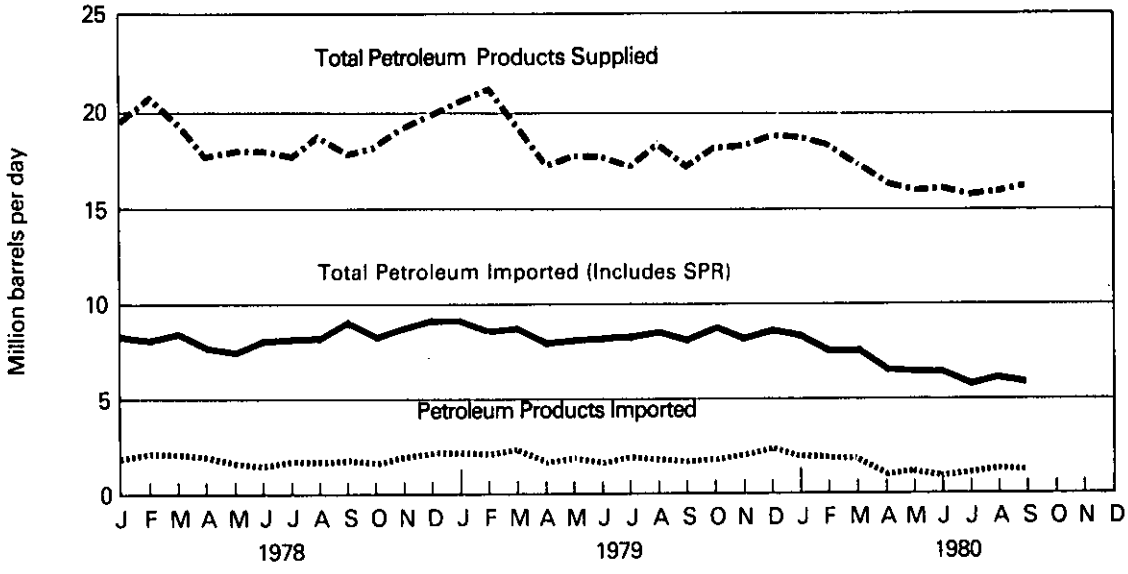
		Total Petroleum Products[1]			Total Crude Oil and Petroleum Products Trade				
		Products Supplied[1]	Product Imports[2]	Product Exports	Total Imports (Excluding SPR)	SPR Imports[3]	Total Imports (Including SPR)[3]	Total Exports	Net Imports
		Thousand barrels per day			Thousand barrels per day				
1973	**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**	**21**	**8,807**	**243**	**8,565**
1978	**AVERAGE**	**18,847**	**2,008**	**204**	**8,202**	**161**	**8,363**	**362**	**8,002**
1979	January	20,596	2,222	212	8,878	204	9,082	388	8,694
	February	21,266	2,062	200	8,406	179	8,585	488	8,096
	March	19,270	2,385	234	8,625	122	8,747	604	8,144
	April	17,429	1,673	235	7,820	66	7,885	495	7,390
	May	17,822	1,826	278	7,989	97	8,087	449	7,638
	June	17,755	1,672	220	8,226	65	8,291	455	7,836
	July	17,100	1,932	258	8,280	41	8,322	502	7,819
	August	18,211	1,778	210	8,552	35	8,587	451	8,136
	September	17,428	1,596	241	8,006	0	8,006	416	7,590
	October	18,159	1,785	258	8,639	0	8,639	437	8,202
	November	18,336	1,946	246	8,099	0	8,099	510	7,590
	December	18,824	2,305	262	8,577	0	8,577	472	8,105
	AVERAGE	**18,502**	**1,933**	**238**	**8,344**	**67**	**8,411**	**472**	**7,939**
1980	January	18,509	1,983	228	8,342	0	8,342	539	7,803
	February	18,721	1,911	227	7,847	0	7,847	536	7,311
	March	17,279	1,724	243	7,509	0	7,509	566	6,943
	April	16,616	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†	16,481	1,304	289	6,771	0	6,771	654	6,117
	July†	15,856	1,322	293	5,967	0	5,967	531	5,436
	August†	R15,836	R1,402	241	R6,075	0	R6,075	319	5,756
	September†	*16,219*	*1,286*	NA	*5,850*	54	*5,904*	NA	NA
	AVERAGE	**16,842**	**1,537**	**NA**	**6,874**	**6**	**6,880**	**NA**	**NA**

Geographic coverage: the 50 United States and the 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 next month.
†Preliminary data. R=Revised data. NA=Not available.
Sources: •See Sources on the last page of this section.

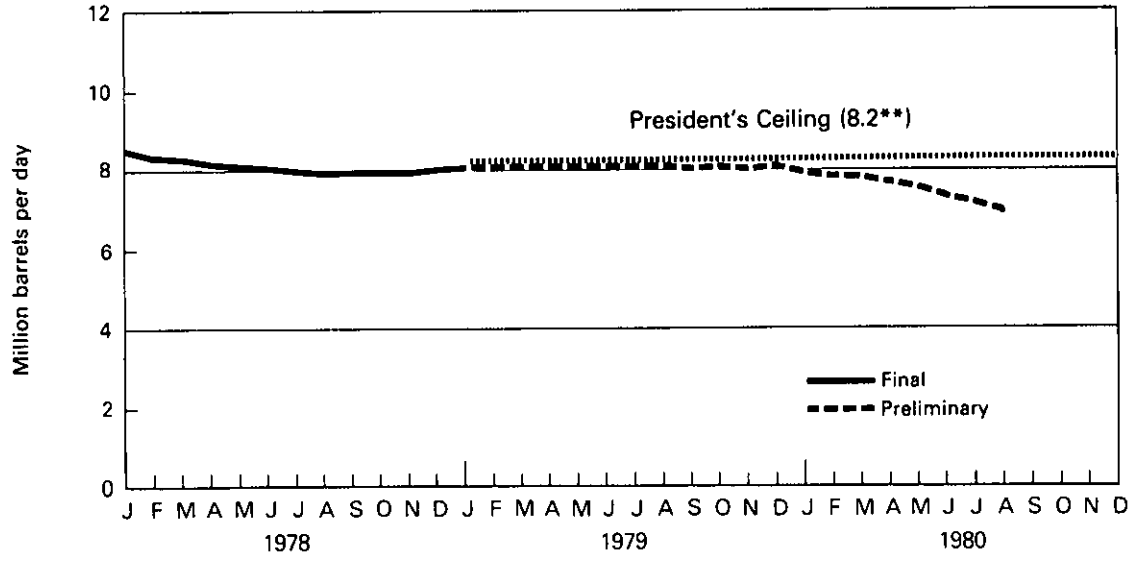
Petroleum

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, the President 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	**136.0**	**213.3**	**222.8**	**164.4**	**458.8**	**485.7**	**70.6**	**1,134.9**	**106.4**	**2,992.9**	**914.7**
1974 AVERAGE	**190.1**	**300.4**	**468.8**	**4.4**	**713.4**	**461.3**	**73.9**	**979.1**	**88.4**	**3,279.8**	**752.5**
1975 AVERAGE	**282.4**	**389.6**	**280.4**	**231.8**	**761.8**	**714.6**	**116.7**	**702.5**	**121.5**	**3,601.3**	**1,382.6**
1976 AVERAGE	**432.2**	**538.8**	**298.5**	**453.3**	**1,024.7**	**1,229.8**	**254.4**	**700.1**	**134.0**	**5,065.8**	**2,424.1**
1977 AVERAGE	**558.6**	**541.0**	**535.0**	**722.6**	**1,143.0**	**1,380.4**	**335.3**	**690.4**	**286.7**	**6,193.1**	**3,185.1**
1978 AVERAGE	**648.7**	**573.3**	**555.3**	**653.9**	**919.5**	**1,143.9**	**385.4**	**644.9**	**226.0**	**5,750.9**	**2,963.2**
1979											
January	669.2	502.8	187.1	734.9	1,158.6	1,562.9	341.4	661.0	240.4	6,058.4	3,405.9
February	746.3	521.3	85.8	613.7	984.3	1,628.2	309.8	745.9	170.8	5,806.0	3,403.8
March	579.0	418.9	22.2	598.3	1,403.0	1,298.4	298.4	851.4	272.5	5,742.0	2,938.3
April	686.8	376.1	51.6	770.8	988.9	1,483.5	285.2	619.3	129.6	5,391.8	3,311.0
May	755.5	342.5	196.5	650.5	1,117.9	1,273.4	291.9	671.2	147.5	5,447.0	3,023.7
June	559.9	390.5	318.3	764.2	932.0	1,258.3	281.9	609.4	363.8	5,478.4	3,156.6
July	591.4	416.1	410.7	654.2	981.4	1,359.9	252.6	675.8	170.6	5,509.1	2,956.0
August	669.3	499.1	516.0	657.2	1,183.0	1,332.4	247.1	731.0	261.5	6,096.6	3,051.7
September	510.2	358.7	372.9	610.5	1,103.3	1,281.1	269.9	726.2	199.8	5,432.6	2,833.1
October	601.5	452.2	495.6	761.6	973.7	1,262.1	234.0	616.7	304.4	5,701.9	3,064.2
November	614.2	332.9	548.6	469.5	1,007.1	1,162.9	307.1	713.0	151.4	5,306.7	2,602.6
December	589.2	394.5	413.8	559.2	1,079.9	1,279.4	241.5	677.6	130.5	5,365.6	2,729.7
AVERAGE	**630.5**	**416.9**	**303.2**	**654.0**	**1,077.6**	**1,346.8**	**279.7**	**691.1**	**212.2**	**5,612.0**	**3,037.4**
1980											
January	484.2	433.0	80.5	616.8	1,054.4	1,562.1	201.6	583.3	179.1	5,195.1	3,000.7
February	638.7	317.1	9.2	603.3	1,012.6	1,398.9	304.0	543.0	140.3	4,967.1	3,016.7
March	472.0	405.4	0.0	654.1	924.2	1,389.5	370.1	352.3	174.8	4,742.3	2,978.6
April	555.9	373.6	0.0	682.7	722.3	1,294.3	150.1	339.2	227.9	4,346.0	2,866.2
May	441.0	360.1	0.0	468.4	954.9	1,149.4	172.0	405.0	132.4	4,083.1	2,314.4
June†	496.6	327.5	0.0	548.9	998.3	1,327.4	178.1	393.8	105.6	4,376.2	2,584.6
July†	537.0	290.2	0.0	492.3	720.5	1,178.9	157.6	411.3	55.5	3,843.2	2,378.1
August†	432.5	259.6	0.0	412.4	802.2	1,141.2	142.1	404.1	49.8	3,643.7	2,143.4
AVERAGE	**506.0**	**346.0**	**11.3**	**559.0**	**898.1**	**1,304.4**	**209.0**	**428.6**	**132.8**	**4,395.3**	**2,656.9**

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.
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	**174.0**	**1,324.8**	**15.7**	**584.7**	**99.5**	**254.8**	**329.4**	**480.3**	**3,263.2**
1974 AVERAGE	**163.8**	**1,069.5**	**8.5**	**511.0**	**90.4**	**250.8**	**391.0**	**347.4**	**2,832.4**
1975 AVERAGE	**152.4**	**846.4**	**71.4**	**331.8**	**89.7**	**242.4**	**406.4**	**313.9**	**2,454.4**
1976 AVERAGE	**118.5**	**599.3**	**87.2**	**275.4**	**88.1**	**274.3**	**422.3**	**381.7**	**2,246.8**
1977 AVERAGE	**170.5**	**516.9**	**179.4**	**210.9**	**105.1**	**289.3**	**466.2**	**675.8**	**2,614.1**
1978 AVERAGE	**159.9**	**466.8**	**317.8**	**229.2**	**93.8**	**253.1**	**428.7**	**663.2**	**2,612.5**
1979									
January	159.5	564.1	584.1	237.9	109.1	116.0	477.0	776.3	3,023.9
February	103.6	560.3	415.4	254.8	68.2	191.4	421.1	763.6	2,778.5
March	93.6	614.5	397.5	314.1	63.8	214.7	561.6	745.5	3,005.4
April	129.4	577.0	301.6	178.7	64.9	154.3	474.7	612.4	2,492.9
May	134.8	554.8	402.9	191.1	101.7	216.6	382.0	655.7	2,639.7
June	138.1	468.4	457.7	171.4	105.7	169.5	413.7	888.2	2,812.6
July	193.2	488.6	370.3	208.7	117.2	169.1	451.2	814.2	2,812.4
August	156.6	463.1	439.4	246.5	92.5	237.9	357.1	497.4	2,490.4
September	149.1	463.4	431.3	275.8	86.2	166.2	285.7	715.9	2,573.5
October	150.5	486.3	531.1	242.4	60.2	199.7	403.0	863.6	2,936.7
November	181.7	554.5	417.7	195.8	109.7	161.1	438.4	733.8	2,792.7
December	178.1	595.8	453.9	257.4	120.3	236.7	507.5	862.1	3,211.9
AVERAGE	**147.7**	**532.5**	**434.1**	**231.3**	**91.8**	**186.3**	**431.5**	**744.0**	**2,799.1**
1980									
January	175.1	568.9	545.2	289.0	55.9	239.4	467.2	809.1	3,146.8
February	111.5	539.6	462.6	205.2	95.3	191.8	521.6	752.5	2,880.1
March	124.0	459.7	459.6	184.0	81.3	188.7	443.2	826.6	2,767.1
April	55.7	411.2	545.6	230.8	63.1	143.4	418.2	771.0	2,639.0
May	77.1	418.5	576.4	184.4	87.9	220.8	303.4	597.1	2,465.6
June†	77.1	387.8	598.8	190.6	64.6	161.6	307.4	606.7	2,394.8
July†	42.9	335.4	434.2	225.5	80.7	175.2	365.1	464.9	2,123.8
August†	62.0	358.8	602.5	250.8	84.8	153.9	263.6	654.8	2,431.3
AVERAGE	**90.7**	**434.4**	**528.3**	**220.2**	**76.7**	**184.5**	**385.3**	**684.4**	**2,604.5**

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.
Sources: •See Sources on the last page of this section.

Petroleum

Motor Gasoline

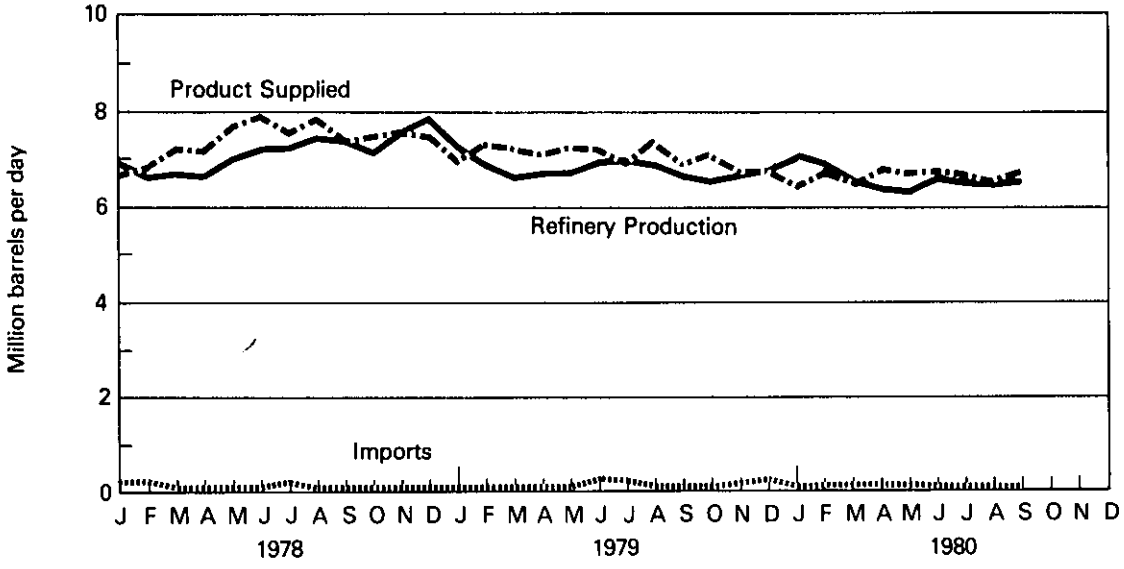
		Product Supplied						
		Total	Unleaded	Unleaded Percent of Total	Refinery Production[1]	Imports	Exports	Stocks[1]
		Thousand barrels per day						Thousand barrels
1973	**AVERAGE**	**6,674**	**NA**	**NA**	**6,527**	**134**	**4**	**‡209,395**
1974	**AVERAGE**	**6,537**	**NA**	**NA**	**6,358**	**204**	**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	January	6,893	2,609	37.8	7,272	179	2	255,664
	February	7,267	2,715	37.4	6,941	160	2	251,346
	March	7,218	2,733	37.9	6,654	168	1	239,162
	April	7,068	2,786	39.4	6,765	156	1	235,192
	May	7,203	2,751	38.2	6,786	145	2	227,193
	June	7,187	2,787	38.8	6,987	261	1	229,349
	July	6,850	2,789	40.7	7,006	222	1	241,536
	August	7,332	2,970	40.5	6,882	147	1	232,742
	September	6,878	2,815	40.9	6,626	135	1	229,608
	October	7,022	2,802	39.9	6,483	150	1	218,066
	November	6,771	2,928	43.2	6,654	182	1	220,486
	December	6,690	2,890	43.2	6,962	263	1	237,503
	AVERAGE	**7,030**	**2,798**	**39.8**	**6,835**	**181**	**1**	
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	44.5	6,268	152	1	271,729
	May	6,726	2,980	44.3	R6,294	132	1	R262,938
	June†	6,645	3,099	46.6	6,552	147	1	264,572
	July†	6,754	3,131	46.4	6,446	145	3	259,523
	August†	R6,584	3,135	47.6	R6,434	R141	1	R259,203
	September†	*6,703*	NA	NA	*6,513*	*108*	NA	*256,328*
	AVERAGE	**6,616**	**NA**	**NA**	**6,541**	**141**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
[1]See Definitions.
Estimated data in italics. These are likely to be revised next month.
‡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.

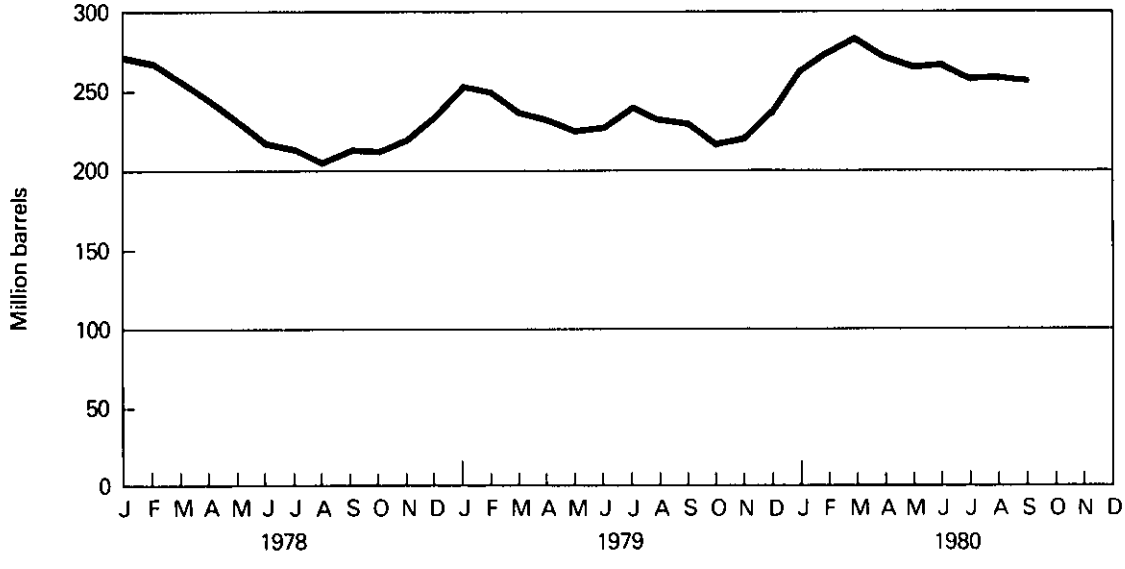
Petroleum

Motor Gasoline

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Jet Fuel

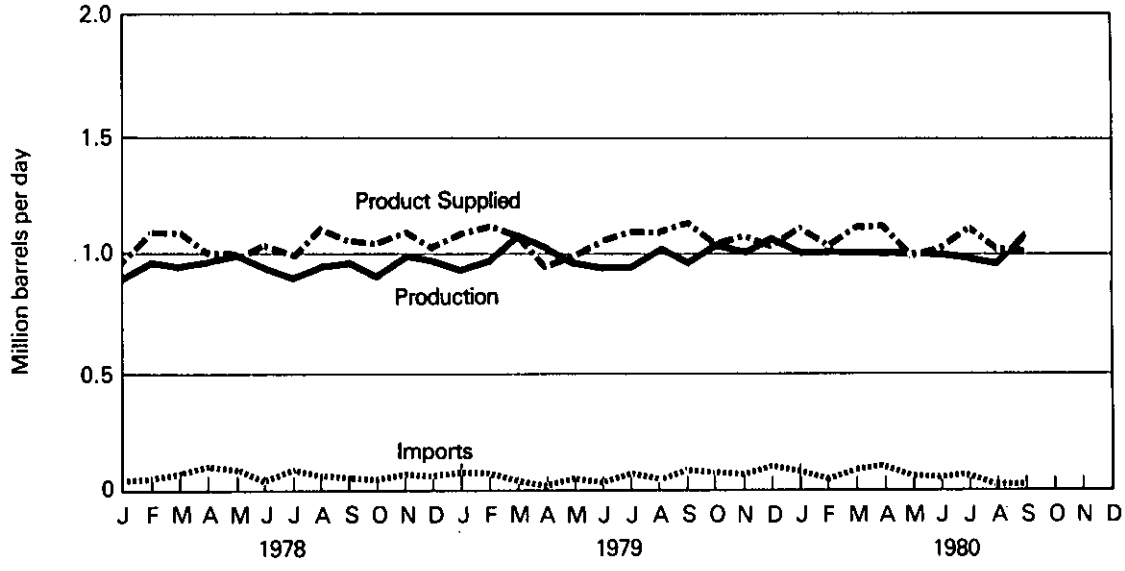
		Product Supplied	Refinery Production	Imports	Exports	Stocks
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**1,059**	**859**	**212**	**4**	**‡28,544**
1974	**AVERAGE**	**993**	**836**	**163**	**3**	**‡29,435**
1975	**AVERAGE**	**1,001**	**871**	**133**	**2**	**‡30,380**
1976	**AVERAGE**	**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	January	1,100	950	97	1	31,993
	February	1,137	996	88	2	30,449
	March	1,088	1,097	61	1	32,607
	April	961	1,040	43	1	36,217
	May	1,008	976	75	1	37,547
	June	1,073	956	57	1	35,741
	July	1,105	964	90	1	34,152
	August	1,088	1,040	49	1	34,156
	September	1,105	958	84	1	32,251
	October	1,050	1,046	90	(s)	34,891
	November	1,070	1,027	83	1	36,058
	December	1,095	1,068	108	2	38,520
	AVERAGE	**1,073**	**1,011**	**77**	**1**	
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†	1,027	1,002	64	1	42,414
	July†	1,113	974	83	2	40,612
	August†	R1,028	R961	R60	1	R40,347
	September†	*1,021*	*1,073*	*50*	NA	43,819
	AVERAGE	**1,067**	**1,010**	**76**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
Estimated data in italics. These are likely to be revised next month.
‡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.

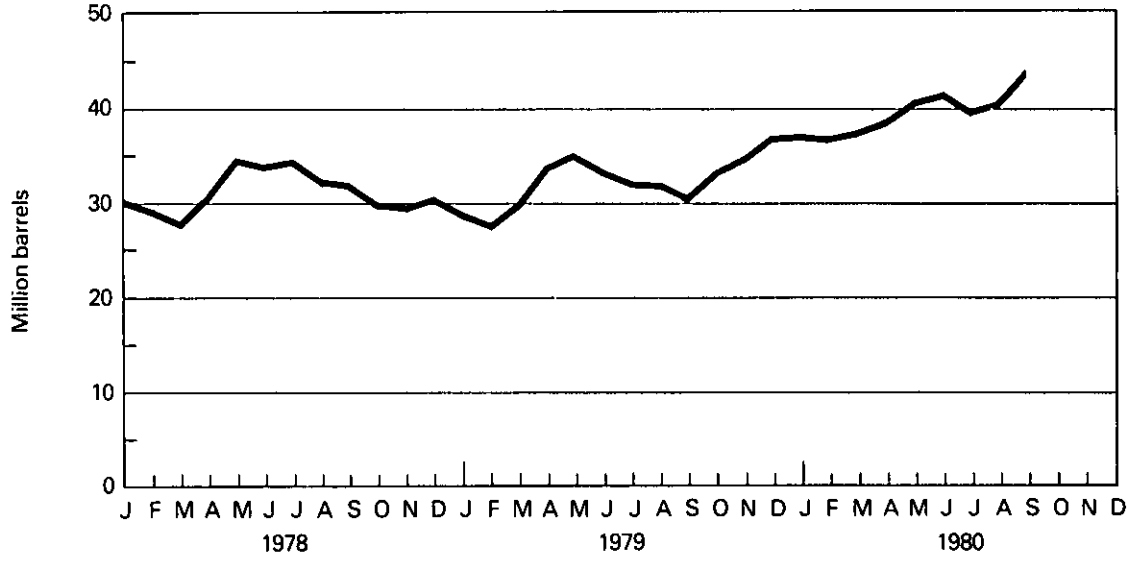
Petroleum

Jet Fuel

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Distillate Fuel Oil

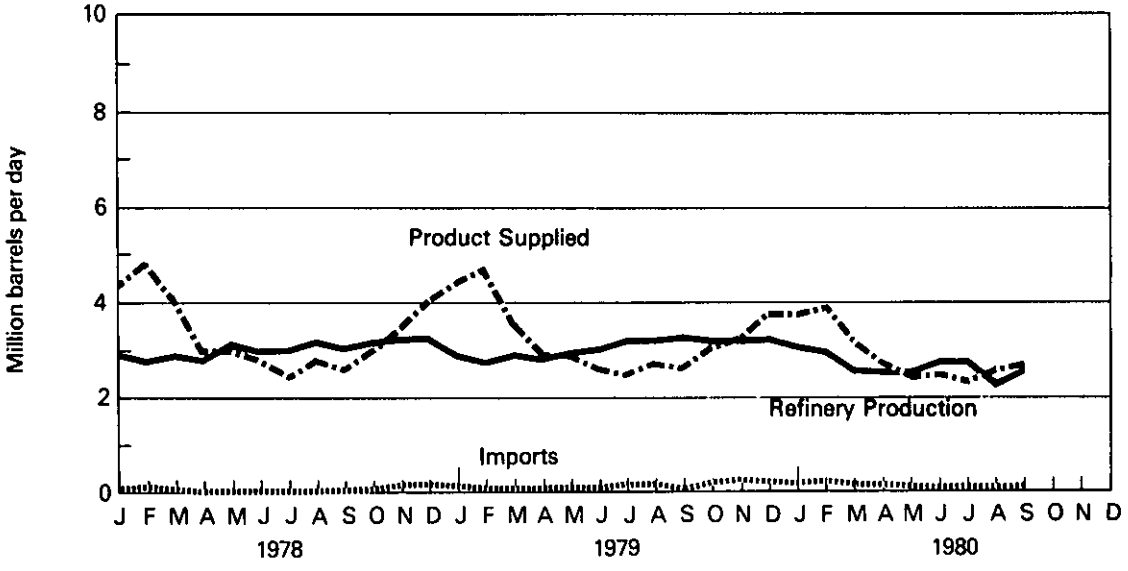
		Product Supplied	Refinery Production[1]	Imports	Exports	Stocks[1]
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**3,092**	**2,820**	**392**	**9**	**‡196,421**
1974	**AVERAGE**	**2,948**	**2,668**	**289**	**2**	**‡200,029**
1975	**AVERAGE**	**2,851**	**2,653**	**155**	**1**	**‡208,787**
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	January	4,543	3,005	226	1	175,695
	February	4,792	2,863	196	7	127,034
	March	3,627	2,992	176	5	112,728
	April	3,006	2,935	149	4	114,989
	May	2,989	3,064	185	2	123,059
	June	2,707	3,137	180	1	141,365
	July	2,552	3,305	219	9	171,243
	August	2,772	3,332	217	2	195,339
	September	2,659	3,368	126	3	220,328
	October	3,104	3,248	211	10	231,083
	November	3,311	3,257	235	(s)	236,554
	December	3,722	3,238	229	1	228,706
	AVERAGE	**3,308**	**3,147**	**196**	**4**	
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†	2,404	2,720	94	(s)	194,794
	July†	2,294	2,782	106	3	213,307
	August†	R2,226	R2,578	R86	(s)	R226,858
	September†	*2,524*	*2,646*	*99*	NA	*230,163*
	AVERAGE	**2,784**	**2,669**	**137**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
[1]See Definitions.
Estimated data in italics. These are likely to be revised next month.
‡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.

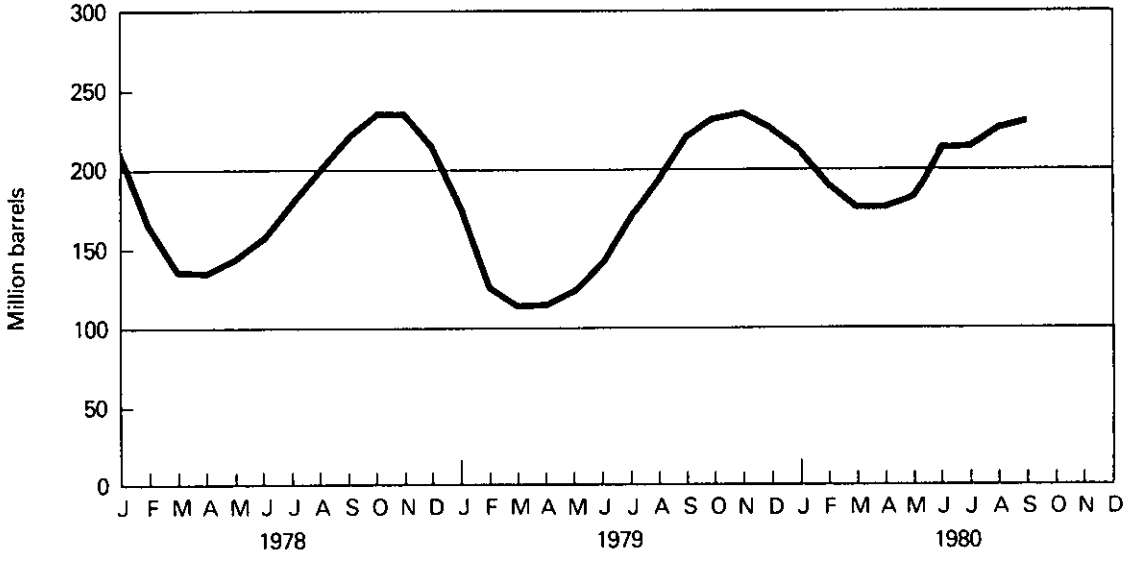
Petroleum

Distillate Fuel Oil

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Residual Fuel Oil

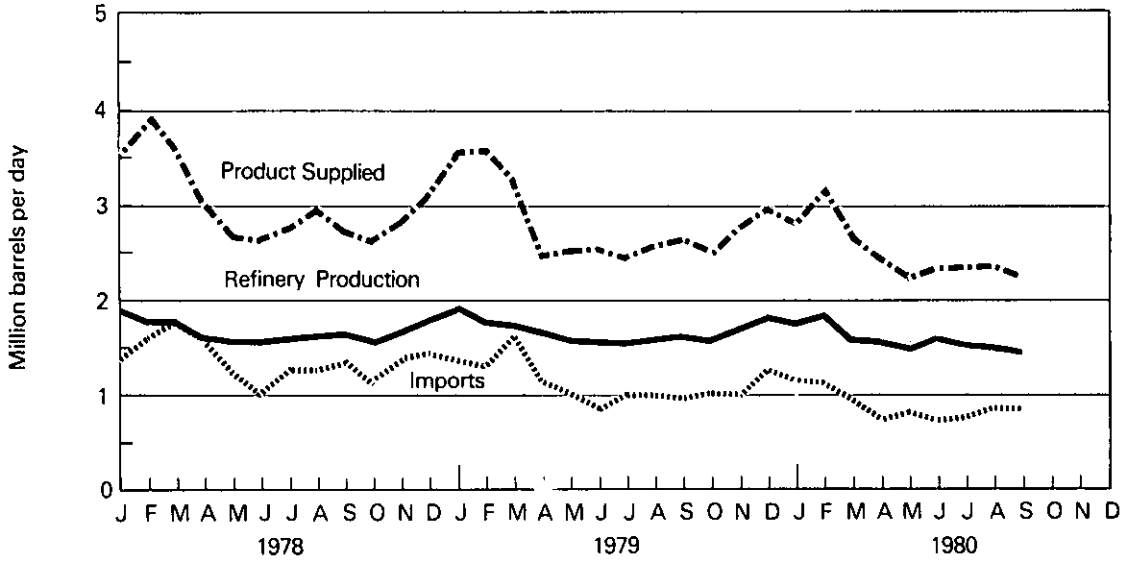
		Product Supplied	Refinery Production	Imports	Exports	Stocks
		Thousand barrels per day				Thousand barrels
1973	**AVERAGE**	**2,822**	**971**	**1,853**	**23**	**‡53,480**
1974	**AVERAGE**	**2,639**	**1,070**	**1,587**	**14**	**‡59,694**
1975	**AVERAGE**	**2,462**	**1,235**	**1,223**	**15**	**‡74,126**
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	January	3,550	1,907	1,371	6	81,997
	February	3,589	1,792	1,300	10	68,229
	March	3,238	1,718	1,642	14	71,968
	April	2,487	1,643	1,134	2	81,002
	May	2,519	1,588	1,051	8	84,855
	June	2,552	1,534	880	8	80,893
	July	2,451	1,576	1,065	18	86,631
	August	2,582	1,590	1,023	14	87,542
	September	2,617	1,638	979	2	87,775
	October	2,553	1,611	1,042	8	90,896
	November	2,793	1,742	1,037	5	90,636
	December	2,976	1,879	1,272	16	95,859
	AVERAGE	**2,822**	**1,684**	**1,150**	**9**	
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	[1]40	85,219
	May	2,234	1,507	812	20	87,639
	June†	2,363	1,612	745	14	87,356
	July†	2,341	1,532	788	60	85,517
	August†	R2,334	R1,507	R874	2	R86,665
	September†	*2,228*	*1,460*	*849*	NA	*85,954*
	AVERAGE	**2,503**	**1,591**	**895**	**NA**	

Geographic coverage: the 50 United States and District of Columbia.
[1]Beginning in April 1980, residual fuel oil exports increased due to shipments of high sulfur fuel to a Caribbean refinery to be desulfurized and returned to the United States.
Estimated data in italics. These are likely to be revised next month.
‡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.

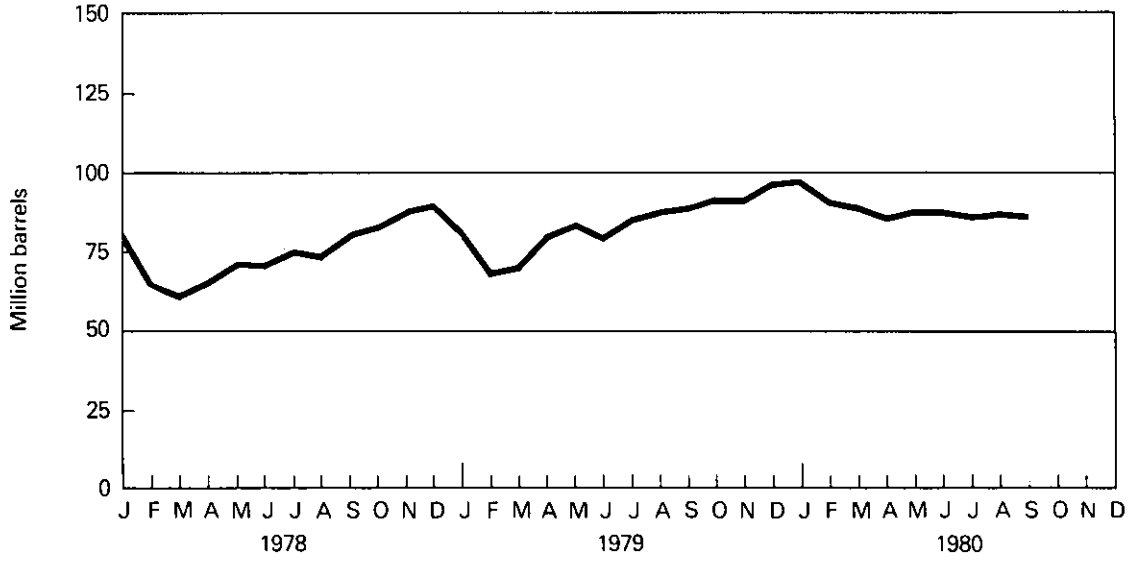
Petroleum

Residual Fuel Oil

Product Supplied, Refinery Production and Imports



Stocks



Petroleum

Natural Gas Plant Liquids, Including Liquefied Refinery Gases

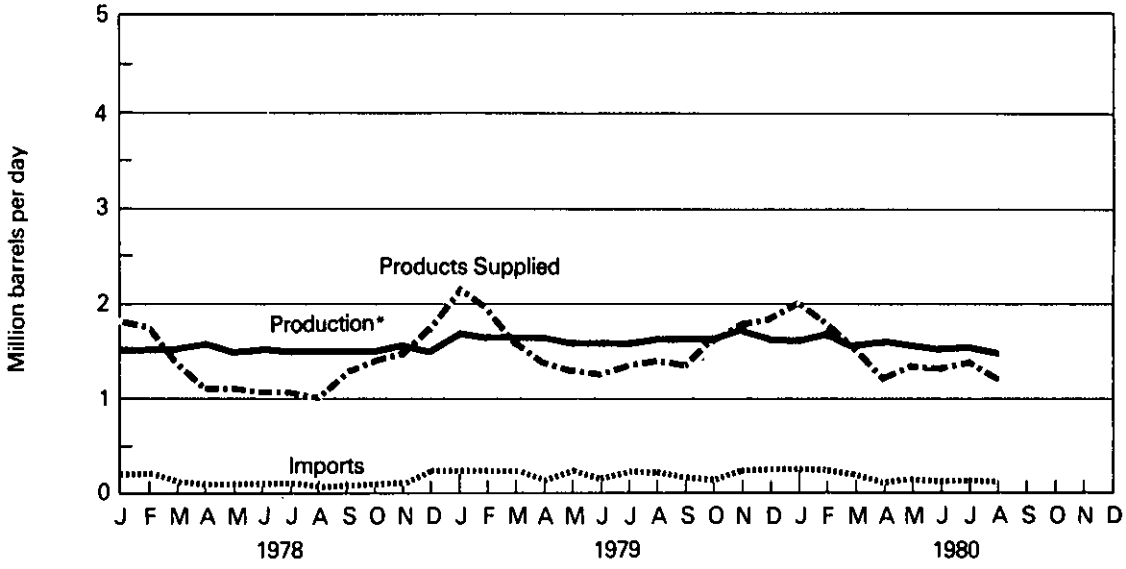
		Products Supplied[1]	Production[1]		Used at Refineries[1]	Imports	Stocks[1]
			At processing plants	At refineries			
		Thousand barrels per day					Thousand barrels
1973	**AVERAGE**	**1,454**	**1,738**	**375**	**815**	**239**	**‡106,659**
1974	**AVERAGE**	**1,422**	**1,688**	**338**	**746**	**212**	**‡120,175**
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	January	1,745	1,530	337	589	256	128,112
	February	2,119	1,561	325	564	252	112,418
	March	1,760	1,548	333	521	257	107,513
	April	1,544	1,611	354	455	160	110,909
	May	1,476	1,570	389	476	255	118,647
	June	1,396	1,571	382	455	175	126,620
	July	1,454	1,564	361	444	240	134,599
	August	1,504	1,575	363	461	236	140,776
	September	1,534	1,565	323	450	194	143,455
	October	1,700	1,607	321	506	193	140,411
	November	1,881	1,676	323	586	268	133,818
	December	1,917	1,626	343	572	273	125,479
	AVERAGE	**1,666**	**1,584**	**346**	**506**	**230**	
1980	January	2,076	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†	1,338	1,551	366	527	159	128,000
	July†	1,396	1,544	362	509	179	133,000
	August†	1,232	1,502	360	527	172	141,000
	AVERAGE	**1,504**	**1,580**	**347**	**536**	**202**	

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 of natural gas plant liquids totaled 135,031 thousand barrels.
‡Total as of December 31.
†Preliminary data. R=Revised data.
Sources: • 1973 through May 1980 are shown on last page of this section.
• June 1980 through August 1980: EIA estimates based on historical analyses.
• Sources for the *Energy Data Reports* are shown on the last page of this section.

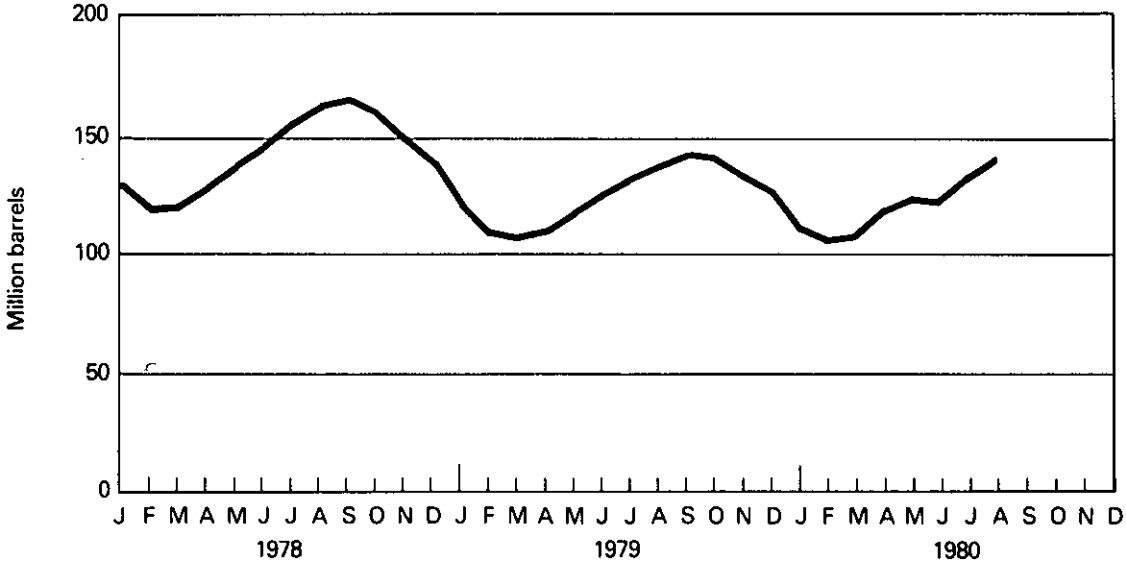
Petroleum

Natural Gas Plant Liquids

Products Supplied, Production and Imports



Stocks



*At processing plants.

Petroleum

Petroleum Primary Supply Balance

	1979				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
	Thousand barrels per day				
Primary Supply					
Crude oil and lease condensate production	8,514	8,510	8,507	8,601	8,533
Natural gas plant liquids production	1,546	1,584	1,568	1,636	1,584
Other hydrocarbon supply	32	38	64	70	51
Crude oil imported[1]	6,584	6,362	6,537	6,430	6,478
Petroleum products imported[2]	2,228	1,725	1,771	2,013	1,933
Total new primary supply	18,904	18,219	18,447	18,750	18,579
Processing gain	458	498	567	560	521
Stock change—all oils[3]	−1,553	+712	+1,061	+368	+155
Total net primary supply	20,915	18,005	17,953	18,942	18,945
Unaccounted for crude oil[4]	−58	+147	+100	−12	+45
Disposition					
Crude oil and petroleum products exported	494	466	457	473	472
Crude oil losses	15	16	16	16	16
Total products supplied[5]	20,348	17,671	17,581	18,441	18,502
Total disposition	20,857	18,153	18,054	18,929	18,990

	1980	
	1st Qtr.	2nd Qtr.†
Primary Supply		
Crude oil and lease condensate production	8,685	8,700
Natural gas plant liquids production	1,622	1,587
Other hydrocarbon supply	56	50
Crude oil imported[1]	6,029	5,344
Petroleum products imported[2]	1,872	1,379
Total new primary supply	18,263	17,060
Processing gain	629	570
Stock change—all oils[3]	−2	+677
Total net primary supply	18,895	16,953
Unaccounted for crude oil[4]	−175	+170
Disposition		
Crude oil and petroleum products exported	547	568
Crude oil losses	15	15
Total products supplied[5]	18,157	16,540
Total disposition	18,720	17,123

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.
Sources: • 1979 through the 1st Quarter 1980: Energy Information Administration (EIA) *Energy Data Reports,* "Petroleum Statement, Monthly."
- 2nd Quarter 1980: EIA, "Petroleum Statement, Monthly" and "Monthly Petroleum Statistics Report" (except domestic production and exports).
- Exports for May 1980 through June 1980 are preliminary data based on the EIA-87 and the Bureau of the Census publications EM 522 and EM 594.
- Domestic production for May 1980 through June 1980 are estimates based on historical data from State Conservation Agencies.
- Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are shown on 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 — Energy Information Administration (EIA) "Monthly Petroleum Statistics Report."
• 1977 and 1978: EIA *Energy Data Reports,* "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
• January 1979 through May 1980: EIA *Energy Data Reports,* "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly."
• June 1980 through August 1980: EIA "Monthly Petroleum Statistics Report"(except domestic production and exports).
• Domestic production for the 4 most recent months are EIA estimates based on historical data from State Conservation Agencies.
• Exports for June 1980 through August 1980 are preliminary data based on Form EIA-87 and the Bureau of the Census publications EM 522 and EM 594.
• Data for the most recent month are estimates based on EIA weekly data.
• 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 publications IM 145 (Imports), EM 522 (Exports), and EM 594 (Exports); and State Conservation Agencies (Crude Production).

Natural Gas

Consumption of natural gas in the United States during September 1980 was an estimated 1.3 trillion cubic feet (Tcf). This was 4.8 percent higher than in August 1980 and 0.9 percent lower than in September 1979. Estimated consumption during the first 3 quarters of 1980 totaled 14.7 Tcf, 0.7 percent lower than during the period January through September 1979.

Production of dry natural gas in September 1980 was an estimated 1.5 Tcf, slightly more than in August 1980 and approximately 2.4 percent less than in September 1979. Output during the first 3 quarters of 1980 totaled 14.4 Tcf, slightly less than during the comparable 1979 period.

Imports of natural gas in September 1980 were an estimated 58 billion cubic feet (Bcf), 40.8 percent less than in the previous September. There were no shipments of liquefied natural gas (LNG) from Algeria during September 1980. Imports of natural gas during the period January through September 1980 totaled an estimated 743 Bcf, 19.4 percent less than during the first 3 quarters of 1979.

Domestic producer sales to major interstate pipelines in August 1980 totaled 828 Bcf, 5.9 percent below sales for the previous August. Total sales during the first 8 months of 1980 were 7.0 Tcf, 2.0 percent above those for the comparable 1979 period.

Stocks of working gas* in underground natural gas storage reservoirs at the end of September 1980 totaled 3.1 Tcf, according to preliminary data. This was 6.2 percent above stocks available a year earlier. Net injections into storage during September 1980 were 254 Bcf, 18.6 percent lower than during the previous September.

*Gas available for withdrawal.

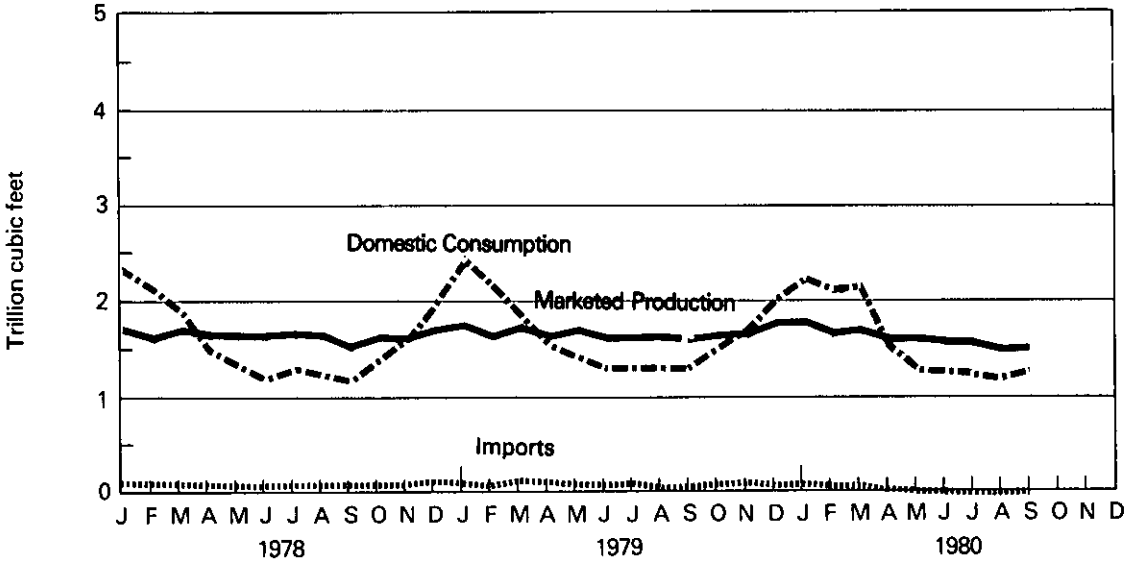
Natural Gas

		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	January	2,417	1,761	1,686	890	102	6
	February	2,195	1,646	1,576	819	97	5
	March	1,876	1,749	1,674	907	113	5
	April	1,586	1,682	1,610	871	106	5
	May	1,427	1,712	1,639	877	104	5
	June	1,314	1,646	1,576	812	101	5
	July	1,323	1,654	1,583	851	104	6
	August	1,337	1,682	1,610	880	97	4
	September	1,322	1,626	1,557	820	98	5
	October	1,550	1,696	1,624	888	107	3
	November	1,759	1,713	1,640	921	114	3
	December	2,057	1,806	1,729	960	110	4
	TOTAL	**20,163**	**20,373**	**19,504**	**10,496**	**1,253**	**56**
1980	January	2,280	1,817	1,739	981	119	5
	February	2,193	1,705	1,632	898	111	3
	March	2,179	1,827	1,749	960	108	5
	April	1,569	1,667	1,596	897	91	6
	May	1,356	1,692	1,620	859	70	6
	June	1,253	1,583	1,515	794	62	5
	July	R1,302	R1,613	R1,544	825	64	6
	August	R1,250	R1,580	R1,510	828	60	5
	September	1,310	1,590	1,520	NA	58	4
	TOTAL (Year-to-date)	**14,692**	**15,074**	**14,425**	**NA**	**743**	**45**

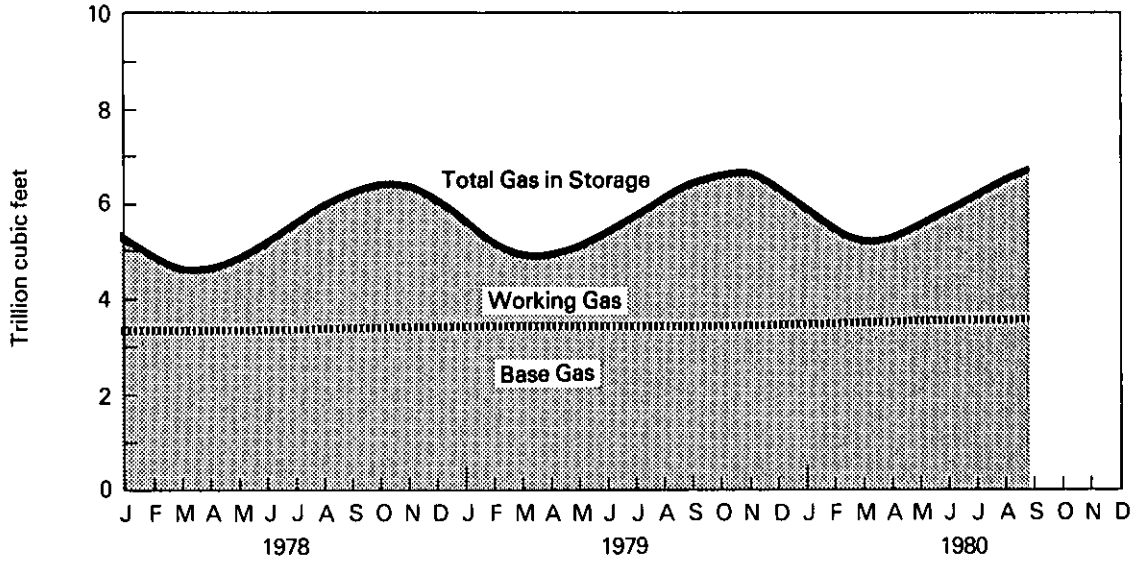
Geographic coverage: the 50 United States and District of Columbia.
R = Revised data. NA = Not available.
Sources: • Domestic Consumption — 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook,* "Natural Gas" chapter; January 1977 forward: EIA estimates based on a supply/disposition 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 1979: FPC Form 14, "Imports and Exports of Natural Gas"; January 1980 forward: EIA estimates based on import data from FPC Form 11.
- Exports — 1973 through 1979: FPC Form 14; January 1980 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		**‡5,358**	**‡3,150**	**‡2,208**	**NA**	**NA**	**NA**
1976		**‡5,231**	**‡3,310**	**‡1,921**	**1,952**	**2,074**	**(122)**
1977		**‡5,844**	**‡3,377**	**‡2,467**	**2,390**	**1,767**	**623**
1978		**‡5,999**	**‡3,459**	**‡2,540**	**2,330**	**2,176**	**154**
1979	January	5,348	3,458	1,890	21	673	(652)
	February	4,806	3,457	1,349	23	566	(543)
	March	4,695	3,459	1,236	94	205	(111)
	April	4,762	3,427	1,335	182	73	109
	May	5,057	3,438	1,619	308	13	295
	June	5,399	3,449	1,950	350	8	342
	July	5,743	3,459	2,284	361	19	342
	August	6,095	3,467	2,628	362	12	350
	September	6,401	3,481	2,920	326	14	312
	October	6,563	3,484	3,079	196	34	162
	November	6,541	3,496	3,045	108	132	(24)
	December	6,297	3,537	2,760	53	292	(239)
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†	6,698	3,598	3,100	265	11	254

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 9.
[2]Net Storage Injections = storage injection minus storage withdrawal. Parentheses indicate withdrawal greater than injection.
†Preliminary data.
‡Total as of December 31.
NA = Not available.
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 rotary rig count increased to 3,099 in September 1980, up from the 3,045 count of the month before. This represents a 35.7 percent increase over the September 1979 count of 2,284 rotary rigs.

Well completions reported in September 1980 totaled 6,118. This is a 32.0 percent increase from the number reported during September 1979.

Oil well completions reported in September 1980 (2,636 wells) were up 44.0 percent from September 1979 (1,831 wells). In September 1980, 1,721 gas wells were reported, 24.5 percent above the September 1979 level. Dry holes increased 23.8 percent (1,761 as compared to 1,423 during the previous September). Total footage drilled increased 24.2 percent (28.2 million feet as compared to 22.7 million feet the year before).

There were 44 crews engaged in seismic exploratory work offshore in September 1980. This is a 46.7 percent increase from the September 1979 level. September 1980 onshore seismic activity attained a new high of 523 crews, 29.8 percent higher than activity during September 1979.

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	January	2,199		1,372	996	1,278	3,646	17,963
	February	2,064		1,463	1,139	1,076	3,678	18,017
	March	1,971		1,544	1,343	1,372	4,259	21,175
	April	1,943		1,135	1,085	926	3,146	16,019
	May	1,960		1,335	1,024	1,166	3,525	17,451
	June	1,999		1,696	1,199	1,252	4,147	19,520
	July	2,094		1,535	1,090	1,131	3,756	16,910
	August	2,222		1,529	1,245	1,366	4,140	19,555
	September	2,284		R1,831	R1,382	R1,423	R4,636	R22,676
	October	2,380		1,623	1,123	1,287	4,033	18,840
	November	2,460		1,867	1,273	1,496	4,636	21,846
	December	2,552		2,383	1,739	1,886	6,008	27,010
	AVERAGE	**2,177**	**TOTAL**	**19,383**	**14,681**	**15,752**	**49,816**	**238,659**
1980	January	2,571		1,440	781	1,243	3,464	16,438
	February	2,613		1,632	1,007	1,311	3,950	18,988
	March	2,658		2,383	1,839	1,547	5,769	27,665
	April	2,682		1,836	1,120	1,168	4,124	18,884
	May	2,797		2,061	1,080	1,202	4,343	20,034
	June	2,850		2,232	1,296	1,463	4,991	24,640
	July	2,953		2,068	1,037	1,333	4,438	21,649
	August	3,045		2,340	1,270	1,537	5,147	24,037
	September	3,099		2,636	1,721	1,761	6,118	28,168
	AVERAGE	**2,808**	**TOTAL**	**18,641**	**11,134**	**12,553**	**42,328**	**200,459**

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	January	28	327	355			
	February	29	321	350			
	March	32	332	364			
	April	30	330	360			
	May	28	355	383			
	June	32	372	404			
	July	31	376	407			
	August	31	393	424			
	September	30	403	433			
	October	29	407	436			
	November	31	408	439			
	December	31	419	450			
	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			
	AVERAGE	**36**	**479**	**515**			

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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 August 1980 was 72.3 million tons, 0.9 percent above the 71.6 million tons produced in August 1979. Production in the first 8 months of 1980 totaled 558.4 million tons, 9.8 percent higher than production in the first 8 months of 1979.

Imports of coal in August 1980 totaled 0.2 million tons, 0.2 million tons below the amount imported during August 1979. Exports of coal in August 1980 totaled 9.3 million tons, 3.0 million tons more than the amount exported during August 1979. During August 1980, coal exports were principally to Canada (20.9 percent) and Japan (22.8 percent).

Electric utility coal consumption in August 1980 totaled 53.2 million tons, 4.7 million tons more than consumption in August 1979. Coke plants, the second largest coal consuming sector, used 4.9 million tons in August 1980, 24.0 percent below the amount consumed in August 1979.

Electric utility stockpiles increased from 134.3 million tons at the end of August 1979 to 171.9 million tons at the end of August 1980. Coal stocks held by coke plants declined from 9.0 million tons at the end of August 1979 to 7.9 million tons at the end of August 1980.

Coal

Bituminous, Lignite, and Anthracite

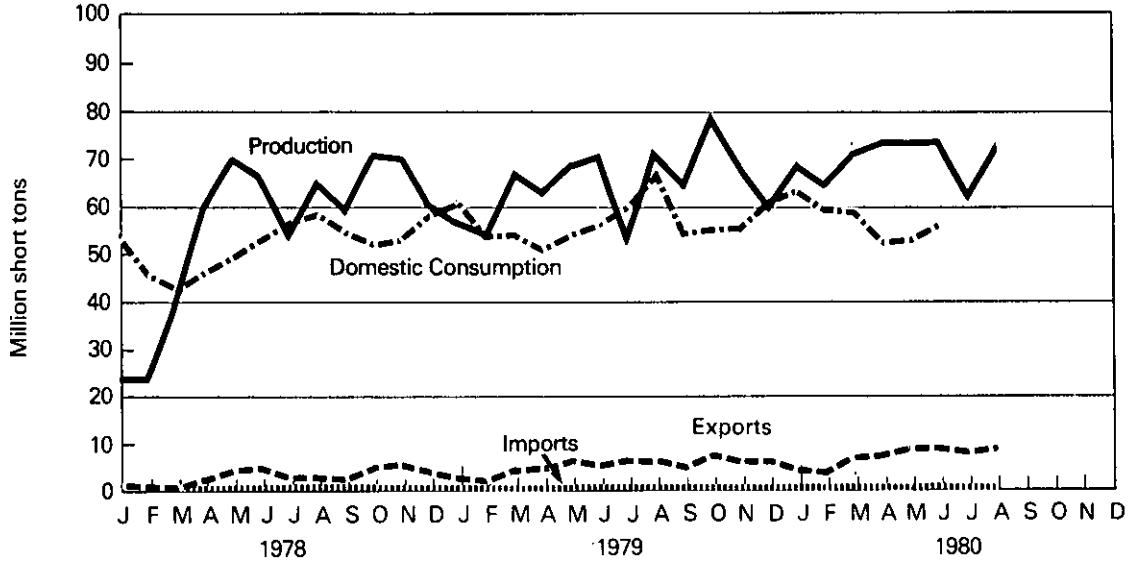
		Production	Domestic Consumption	Imports[1]	Exports[2,3]	Stocks[4]
				Thousand short tons		
1973	**TOTAL**	**598,568**	**562,584**	**127**	**53,587**	**104,335**
1974	**TOTAL**	**610,023**	**558,402**	**2,080**	**60,661**	**96,323**
1975	**TOTAL**	**654,641**	**562,641**	**940**	**66,309**	**128,050**
1976	**TOTAL**	**684,913**	**603,791**	**1,203**	**60,021**	**134,438**
1977	**TOTAL**	**697,205**	**625,290**	**1,647**	**54,312**	**157,098**
1978	**TOTAL**	**670,164**	**625,225**	**2,953**	**40,691**	**145,551**
1979	January	57,794	61,199	186	3,605	136,425
	February	54,810	54,463	252	2,726	129,042
	March	66,775	54,864	123	4,642	134,044
	April	63,937	51,601	161	5,268	142,328
	May	69,488	54,026	112	6,215	151,269
	June	70,698	56,025	209	5,975	155,406
	July	53,595	60,397	88	6,297	148,265
	August	71,616	60,750	320	6,248	152,787
	September	64,590	54,219	180	5,146	158,016
	October	78,563	55,719	152	7,446	169,633
	November	68,506	55,997	130	6,170	177,722
	December	60,762	61,263	146	6,278	181,646
	TOTAL	**781,134**	**680,524**	**2,059**	**66,016**	
1980	January	68,276	63,615	121	4,460	179,424
	February	64,678	59,761	193	4,041	176,772
	March	70,326	58,904	93	5,633	176,637
	April	73,645	52,641	63	7,563	183,956
	May	73,130	52,842	207	8,597	193,782
	June	73,295	56,107	104	8,899	199,110
	July	62,750	NA	32	8,247	NA
	August	72,295	NA	166	9,270	NA
	TOTAL (Year-to-date)	**558,395**	**NA**	**979**	**56,710**	**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]Data include bituminous coal and anthracite only from 1973 through 1979. 1980 includes lignite (about 2,000 short tons in August 1980).
[3]Excludes shipments of anthracite to U.S. Armed Forces overseas (300,000 tons in 1979).
[4]Stocks held by electric utilities, coke plants, and the other Industrial Sector at the end of period.
NA = Not available.
Sources: • See Sources on the last page of this section.

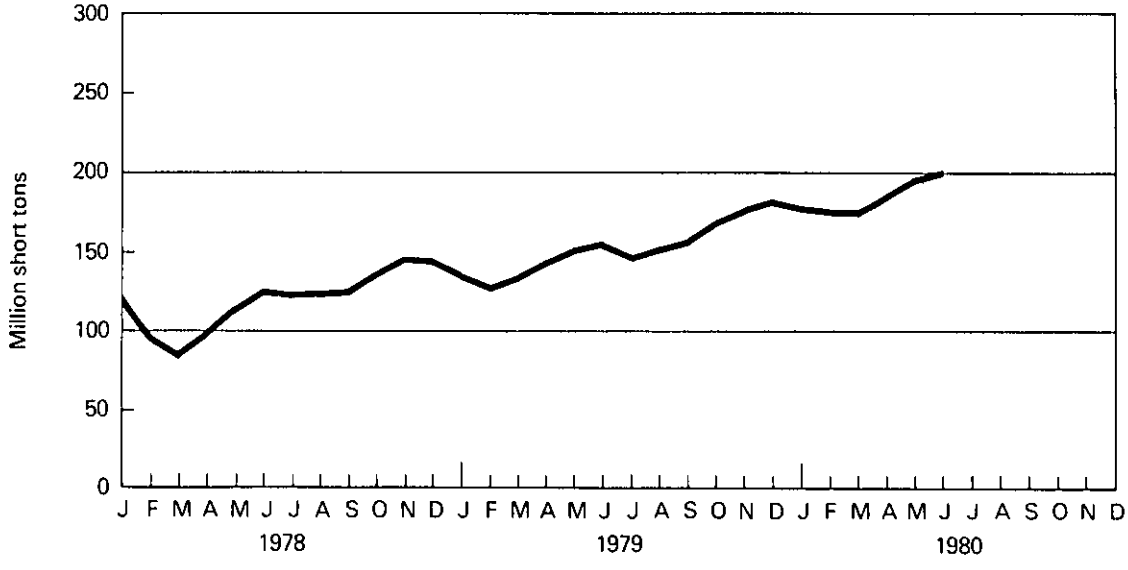
Coal

Bituminous, Lignite, and Anthracite

Domestic Production, Consumption, Imports, and Exports



Stocks



Coal

Consumption — Bituminous, Lignite, and Anthracite

			Industrial			
		Electric Utilities	Coke Plants[1]	Other Industrial[2] Including Transportation	Residential and Commercial	Total
			Thousand short tons			
1973	**TOTAL**	**389,212**	**94,101**	**68,154**	**11,117**	**562,584**
1974	**TOTAL**	**391,811**	**90,191**	**64,983**	**11,417**	**558,402**
1975	**TOTAL**	**405,962**	**83,598**	**63,670**	**9,410**	**562,641**
1976	**TOTAL**	**448,371**	**84,704**	**61,800**	**8,916**	**603,791**
1977	**TOTAL**	**477,126**	**77,739**	**61,472**	**8,954**	**625,290**
1978	**TOTAL**	**481,235**	**71,394**	**63,085**	**9,511**	**625,225**
1979	January	46,902	6,578	6,428	1,291	61,199
	February	41,891	5,954	5,836	782	54,463
	March	41,781	6,850	5,617	616	54,864
	April	38,979	6,558	5,511	553	51,601
	May	41,532	6,725	5,269	500	54,026
	June	44,008	6,470	5,034	513	56,025
	July	48,216	6,513	5,223	445	60,397
	August	48,549	6,417	5,363	421	60,750
	September	42,167	6,334	5,159	559	54,219
	October	42,970	6,404	5,565	780	55,719
	November	42,980	6,138	5,946	933	55,997
	December	47,075	6,427	6,766	995	61,263
	TOTAL	**527,051**	**77,368**	**67,717**	**8,388**	**680,524**
1980	January	50,369	6,343	5,923	980	63,615
	February	47,513	6,010	5,380	858	59,761
	March	46,685	6,428	5,179	612	58,904
	April	40,692	6,247	5,132	570	52,641
	May	41,464	6,127	4,907	344	52,842
	June	45,821	5,326	4,688	272	56,107
	July	53,582	4,903	NA	NA	NA
	August	53,214	4,878	NA	NA	NA
	TOTAL (Year-to-date)	**379,340**	**46,262**	**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.
NA = Not available.
Sources: • See Sources on the last page of this section.

Coal

Stocks[1]—Bituminous, Lignite, and Anthracite

		Electric Utilities	Industrial		Total
			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	January	119,948	7,647	8,830	136,425
	February	114,394	6,763	7,885	129,042
	March	118,542	7,561	7,941	134,044
	April	125,776	8,482	8,070	142,328
	May	133,793	9,228	8,248	151,269
	June	136,627	10,051	8,728	155,406
	July	131,095	8,306	8,864	148,265
	August	134,257	9,021	9,509	152,787
	September	139,129	9,036	9,851	158,016
	October	149,949	9,724	9,960	169,633
	November	157,737	9,983	10,002	177,722
	December	159,714	10,155	11,777	181,646
1980	January	158,707	9,634	11,083	179,424
	February	157,120	9,263	10,389	176,772
	March	157,625	9,317	9,695	176,637
	April	164,524	9,579	9,907	184,010
	May	174,044	9,692	10,119	193,855
	June	178,959	9,913	10,332	199,204
	July	166,917	8,427	NA	NA
	August	171,891	7,866	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.
NA = Not available.
Sources: • See Sources on the last page of this section.

Sources for the Coal Section

- 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys.*
- October 1977 forward: Production: Association of American Railroads, Statement CS54A; Commonwealth of Pennsylvania, Department of Environmental Resources, "Anthracite Mines—Monthly Tonnage, Manhour and Accident Report" and "Annual Report on Mining, Oil and Gas, and Land Reclamation and Conservation Activities"; Energy Information Administration (EIA) "Weekly Coal Report," "Bituminous Coal and Lignite Quarterly Distribution Report" (Form EIA-6), "Bituminous Coal and Lignite, Production and Mine Operation—Annual Report" (Form EIA-7), and Bureau of Mines Form 6–1385A, "Pennsylvania Anthracite Production, Mines Without Preparation Plants," BOM Form 6–1387A, "Pennsylvania Anthracite Production, Contractor's Report," BOM Form 6–1388A, "Pennsylvania Anthracite Production, River Coal Report"; and Various States, Annual Coal Mining Reports.
- October 1977 forward: Domestic Consumption and Stocks: EIA, "Monthly Power Plant Report" (FPC Form 4), "Monthly Fuel Consumption Report—Manufacturing Plants" (Form EIA-3), "Coke and Coal Chemicals—Monthly/Annual" (Form EIA-5/5A), "Bituminous Coal and Lignite—Quarterly Distribution Report" (Form EIA-6) and "Monthly Coal Report, Retail Dealers and Upper Lakes Docks" (Form EIA-2).
- October 1977 forward: Imports/Exports: Bureau of the Census, Monthly Reports IM 145 (Imports) and EM 552 (Exports).

Part 7 Electric Utilities

Electric Utilities

August 1980 production of electricity by utilities was 215.4 billion kilowatt-hours, 5.2 percent above the August 1979 production level. Coal-fired production totaled 107.6 billion kilowatt-hours, natural gas-fired production totaled 37.6 billion kilowatt-hours, and nuclear production totaled 24.3 billion kilowatt-hours. These figures reflect increases of 9.9, 7.7, and 0.5 percent, respectively, above the August 1979 output levels. Petroleum-fired production totaled 24.9 billion kilowatt-hours, and hydroelectric production totaled 20.5 billion kilowatt-hours, 4.7 and 3.7 percent, respectively, below the August 1979 levels.

Sales of electricity to all ultimate consumers in the United States in August 1980 totaled 196.2 billion kilowatt-hours, an increase of 5.6 percent from sales of the month before and 4.7 percent above August 1979 sales. Sales to residential consumers during August 1980 were 74.9 billion kilowatt-hours, 15.6 percent above sales for the corresponding month in 1979. Commercial sales were 47.7 billion kilowatt-hours, 7.9 percent more than the amount for August 1979. Sales to industrial consumers totaled 67.4 billion kilowatt-hours in August 1980, about 6.4 percent less than the August 1979 figure. In August 1980 other sales totaled 6.3 billion kilowatt-hours, 1.4 percent below the August 1979 level.

Electric utility petroleum consumption during August 1980 was 43.0 million barrels, a 4.2 percent drop from the August 1979 level. Coal consumption for August 1980 was 53.2 million tons, 9.6 percent above the August 1979 rate. During August 1980, consumption of natural gas by electric utilities was 405.3 billion cubic feet, 8.0 percent above the August 1979 consumption level.

On August 31, 1980, utility stocks of anthracite, bituminous and lignite totaled 171.9 million tons. Stockpiles were 28.0 percent above the levels of August 1979.

Petroleum stocks (excluding petroleum coke) on August 31, 1980, totaled 137.6 million barrels, 12.9 percent above the levels for the same month of 1979.

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	January	94,986	39,474	22,093	27,792	25,021	326	209,692
	February	84,748	32,274	21,844	25,911	21,275	285	186,337
	March	85,220	22,076	24,916	24,335	25,921	382	182,849
	April	80,450	20,599	24,763	18,418	25,389	342	169,962
	May	86,149	21,470	26,135	15,025	28,939	350	178,069
	June	90,817	24,367	30,107	16,065	24,979	347	186,682
	July	97,879	25,750	34,676	20,825	22,761	364	202,255
	August	97,910	26,123	34,949	24,204	21,260	405	204,850
	September	85,664	22,509	31,442	21,804	18,978	354	180,751
	October	87,528	20,279	30,419	20,934	20,167	389	179,716
	November	87,456	23,380	24,661	19,255	22,367	387	177,506
	December	96,230	25,223	23,481	20,586	22,727	456	188,703
	TOTAL	**1,075,037**	**303,525**	**329,485**	**255,155**	**279,783**	**4,387**	**2,247,372**
1980	January	103,147	25,099	26,350	19,746	25,297	388	200,027
	February	98,148	24,784	24,748	19,277	21,378	373	188,708
	March	95,387	20,419	26,964	20,039	24,332	401	187,542
	April	83,534	16,064	24,015	18,794	25,745	410	168,562
	May	84,882	16,560	26,573	18,385	28,866	468	175,733
	June	93,690	18,034	31,282	18,322	27,656	445	189,430
	July	107,910	23,274	39,067	21,024	24,302	475	216,051
	August	107,580	24,889	37,644	24,333	20,476	517	215,439
	TOTAL (Year-to-date)	**774,260**	**169,142**	**236,635**	**159,920**	**198,168**	**3,478**	**1,541,602**

Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Includes Bituminous, 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**	**70,489**	**1,928,845**
1978	**TOTAL**	**671,094**	**459,908**	**800,656**	**73,152**	**2,004,814**
1979	January	69,939	40,362	68,324	6,762	185,387
	February	67,842	39,865	67,632	6,176	181,515
	March	59,314	38,123	69,783	6,029	173,249
	April	50,079	35,930	69,944	5,604	161,557
	May	45,730	36,398	71,798	5,625	159,551
	June	49,556	39,689	71,919	5,696	166,860
	July	R58,606	R42,773	R70,984	R5,976	R178,339
	August	R64,808	R44,199	R71,956	R6,346	R187,310
	September	59,251	42,416	70,075	6,479	178,220
	October	49,430	38,750	71,444	6,098	165,721
	November	49,480	36,656	69,787	6,173	162,096
	December	58,437	37,952	67,283	6,142	169,815
	TOTAL	**R682,472**	**R473,113**	**R840,929**	**R73,106**	**R2,069,620**
1980	January	65,852	39,516	67,634	6,658	179,660
	February	64,503	39,600	68,384	6,171	178,658
	March	60,497	38,784	69,058	6,028	174,368
	April	51,749	36,436	68,007	5,510	161,703
	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	74,893	47,679	67,377	6,255	196,205
	TOTAL (Year-to-date)	**484,071**	**323,779**	**539,965**	**48,381**	**1,396,199**

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.
R = Revised data.
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

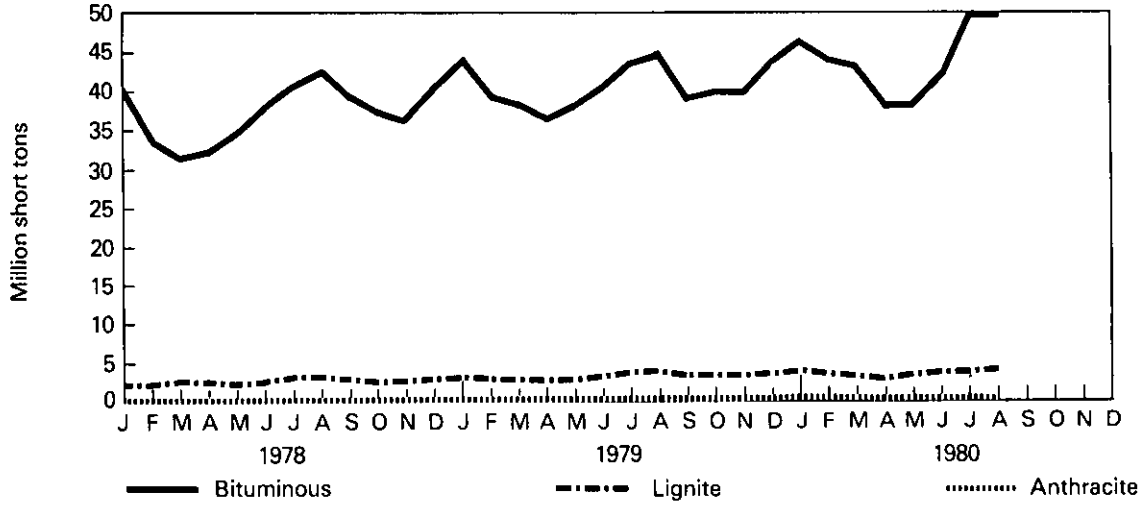
Primary Energy Consumed to Produce Electricity

		Coal				Petroleum			Natural Gas
		Anthracite	Bituminous	Lignite	Total	Steam	Gas Turb./ Int. Comb.	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**	**507**	**3,660,172**
1974	**TOTAL**	**1,498**	**378,643**	**11,670**	**391,811**	**483,146**	**53,128**	**625**	**3,443,428**
1975	**TOTAL**	**1,480**	**388,523**	**15,960**	**405,962**	**467,221**	**38,907**	**70**	**3,157,669**
1976	**TOTAL**	**1,350**	**425,205**	**21,817**	**448,371**	**514,077**	**41,843**	**68**	**3,080,868**
1977	**TOTAL**	**1,425**	**451,051**	**24,650**	**477,126**	**574,869**	**48,837**	**98**	**3,191,200**
1978	**TOTAL**	**1,064**	**448,763**	**31,407**	**481,235**	**588,319**	**47,520**	**398**	**3,188,363**
1979	January	89	43,791	3,021	46,902	62,226	6,244	33	228,479
	February	75	39,010	2,806	41,891	51,655	4,959	32	226,896
	March	65	38,865	2,852	41,781	36,371	1,872	22	260,351
	April	66	36,362	2,551	38,979	33,800	1,682	15	260,974
	May	106	38,669	2,757	41,532	35,285	2,053	23	277,318
	June	103	40,882	3,023	44,008	39,258	2,314	25	320,196
	July	96	44,391	3,730	48,216	41,895	2,413	23	369,318
	August	97	44,553	3,899	48,549	42,478	2,416	23	375,370
	September	86	38,920	3,162	42,167	36,768	1,747	17	338,308
	October	75	39,634	3,261	42,970	33,445	1,132	16	323,082
	November	92	39,571	3,317	42,980	37,822	1,954	18	260,982
	December	96	43,480	3,499	47,075	41,601	1,906	20	249,249
	TOTAL	**1,046**	**488,129**	**37,876**	**527,051**	**492,606**	**30,691**	**268**	**3,490,523**
1980	January	74	46,516	3,779	50,369	41,107	2,197	54	276,784
	February	72	43,969	3,471	47,513	40,238	1,920	21	263,709
	March	83	43,244	3,357	46,685	33,413	1,397	13	283,845
	April	71	37,971	2,651	40,692	27,030	673	7	256,606
	May	86	38,116	3,262	41,464	27,090	841	11	281,862
	June	89	42,073	3,658	45,821	29,635	1,139	11	336,894
	July	93	49,743	3,746	53,582	37,298	2,801	11	420,383
	August	80	49,077	4,057	53,214	40,165	2,832	15	405,338
	TOTAL (Year-to-date)	**649**	**350,710**	**27,981**	**379,339**	**275,978**	**13,801**	**144**	**2,525,375**

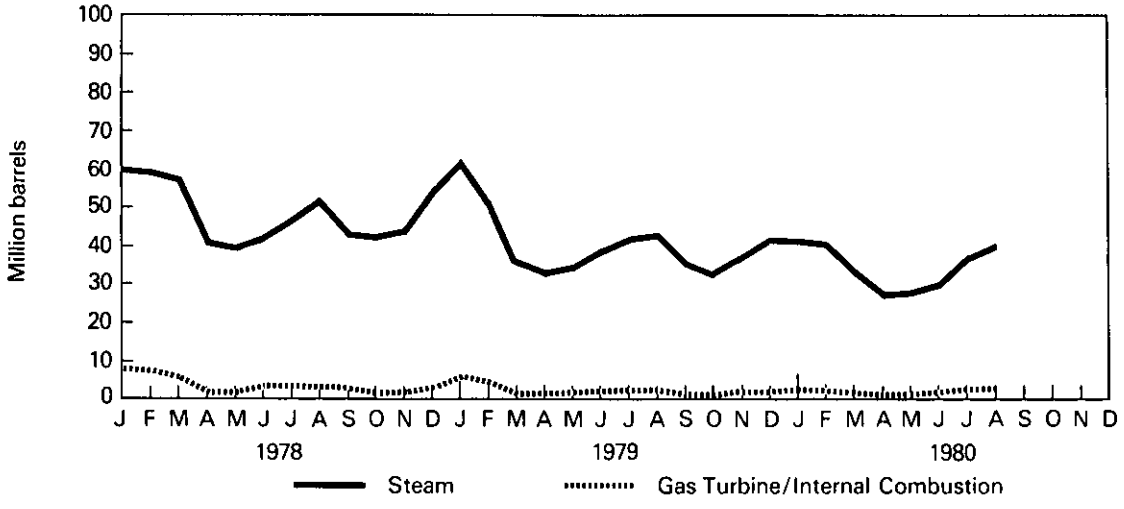
Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
Source: • Federal Power Commission Form 4, "Monthly Power Plant Report."

Electric Utilities

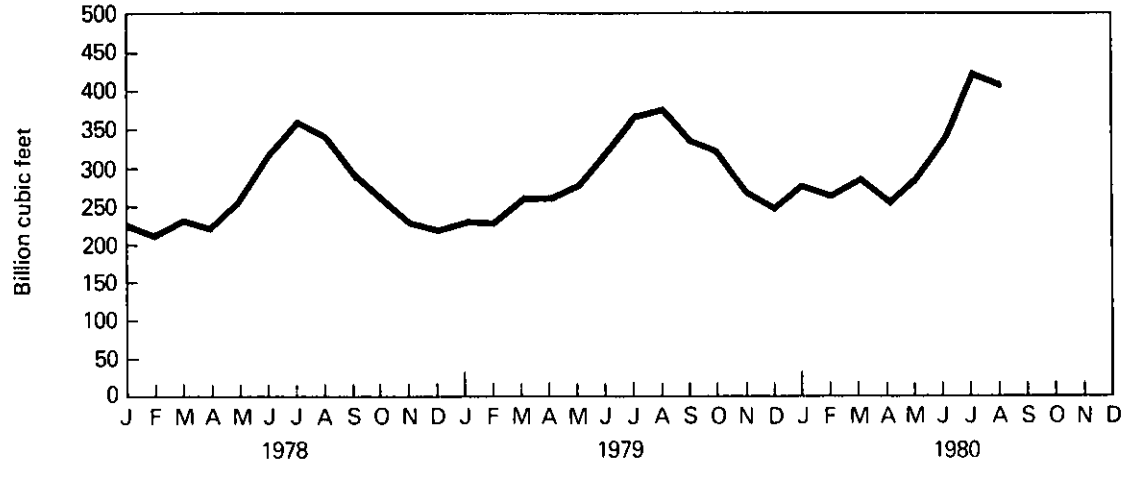
Coal Consumption



Petroleum Consumption



Natural Gas Consumption



Electric Utilities

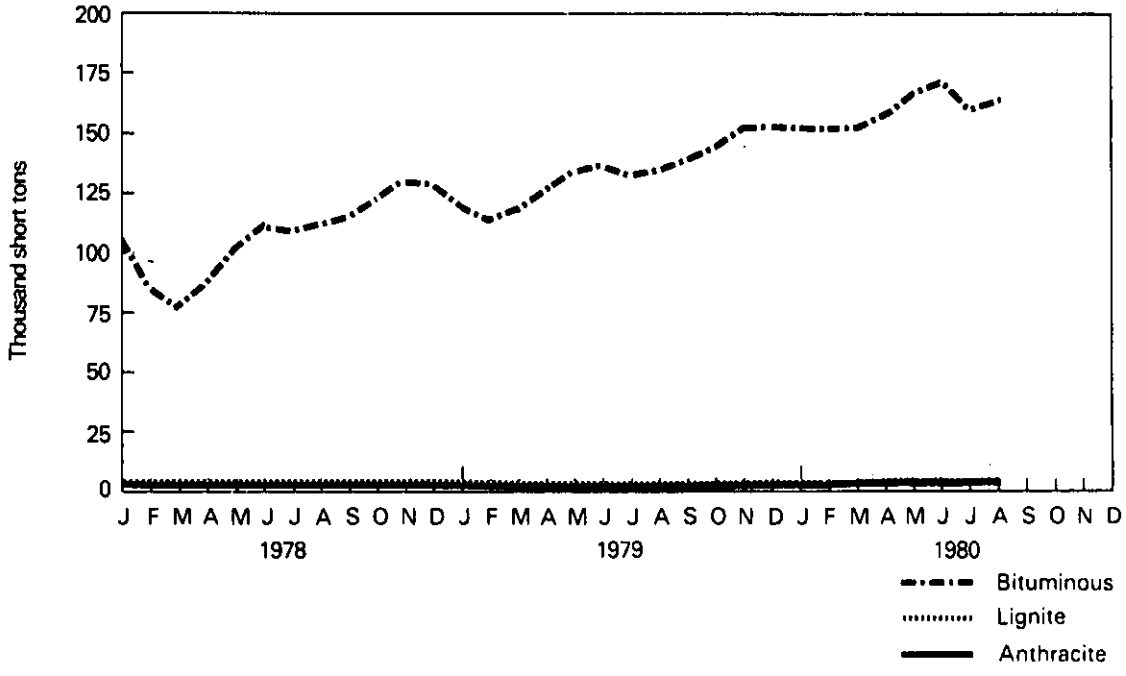
End-of-Month Coal and Petroleum Stocks

		Coal				Petroleum		
		Anthracite	Bituminous	Lignite	Total	Steam	Gas Turb./ Int. Comb.	Coke
		Thousand short tons				Thousand barrels		Thousand short tons
1973		**‡1,066**	**‡84,941**	**‡961**	**‡86,967**	**‡79,121**	**‡10,095**	**‡312**
1974		**‡930**	**‡81,712**	**‡867**	**‡83,509**	**‡97,718**	**‡15,199**	**‡35**
1975		**‡982**	**‡107,927**	**‡1,815**	**‡110,724**	**‡108,825**	**‡16,432**	**‡31**
1976		**‡1,000**	**‡114,130**	**‡2,306**	**‡117,436**	**‡106,993**	**‡14,703**	**‡32**
1977		**‡2,321**	**‡128,210**	**‡2,688**	**‡133,219**	**‡124,750**	**‡19,281**	**‡44**
1978		**‡2,178**	**‡123,020**	**‡3,027**	**‡128,225**	**‡102,402**	**‡16,386**	**‡198**
1979	January	2,154	114,980	2,814	119,948	89,583	15,635	181
	February	2,136	109,532	2,726	114,394	82,078	15,541	166
	March	2,170	113,669	2,704	118,542	96,033	16,386	170
	April	2,220	120,876	2,680	125,776	99,500	16,835	170
	May	2,231	128,962	2,600	133,793	106,017	16,974	159
	June	2,233	131,898	2,495	136,627	104,513	17,180	150
	July	2,290	126,328	2,478	131,095	104,170	17,578	160
	August	2,328	128,760	3,170	134,257	103,965	17,910	163
	September	2,385	133,605	3,139	139,129	104,857	18,733	164
	October	2,452	144,035	3,462	149,949	109,590	19,410	170
	November	2,496	151,848	3,393	157,737	111,072	19,714	170
	December	3,274	152,981	3,459	159,714	111,121	20,301	183
1980	January	3,371	151,881	3,455	158,707	114,007	19,607	175
	February	3,451	150,147	3,522	157,120	111,362	19,050	168
	March	3,488	151,022	3,116	157,625	116,291	18,909	154
	April	3,533	157,148	3,843	164,524	118,803	19,176	103
	May	3,725	166,339	3,980	174,044	122,832	19,463	69
	June	3,838	171,041	4,079	178,959	124,781	19,216	65
	July	3,955	159,205	3,691	166,852	121,619	20,490	65
	August	4,098	163,756	4,036	171,891	118,524	19,043	63

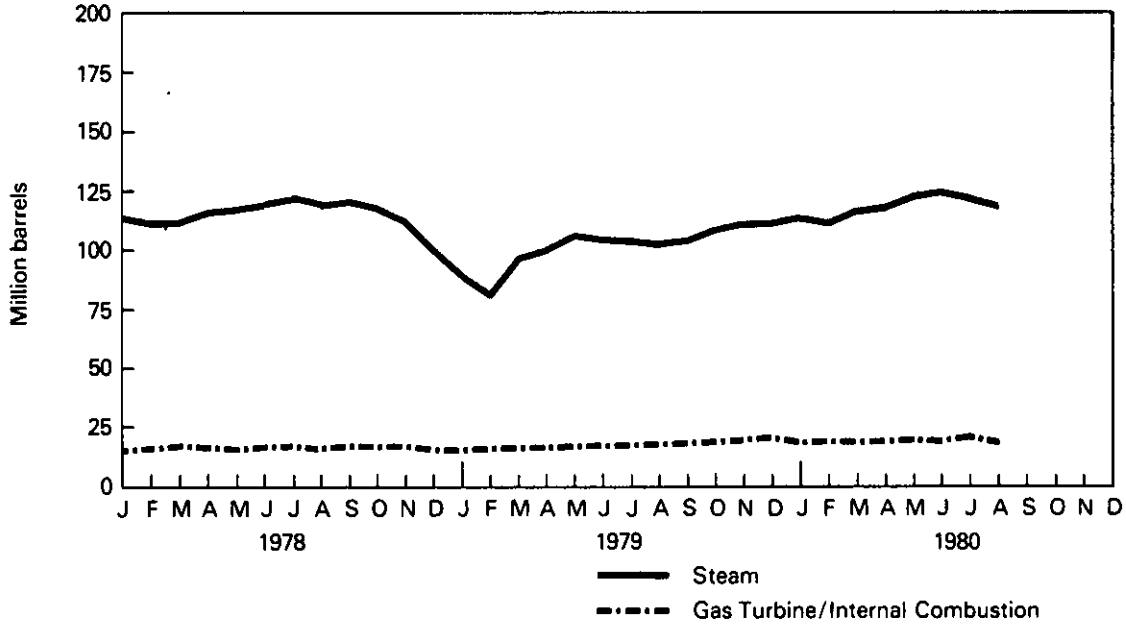
Geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
‡Total as of December 31.
Source: • Federal Power Commission Form 4, "Monthly Power Plant Report."

Electric Utilities

Coal Stocks (Bituminous, Lignite, and Anthracite)



Petroleum Stocks



Part 8 Nuclear Power

Nuclear Power

During August 1980, the 74 operational reactor units generated 24.3 billion net kilowatt-hours of electricity, representing an increase of 15.7 percent and an increase of 0.5 percent respectively, from the July 1980 and August 1979 levels.

In August 1980, the Nuclear Regulatory Commission granted a full-power operating license to North Anna Unit Number 2, owned by the Virginia Electric Power Company. This was the first full-power license granted since the accident at Three Mile Island In March 1979. The Tennessee Valley Authority's Sequoyah Unit Number 1 and the Public Service Electric and Gas Company's Salem Unit Number 2 currently have licenses allowing low-power testing and are expected to receive full-power licenses within several months.

As of August 31 the total number of reactor units planned or in operation was 176, unchanged from the July level, but 16 below the August 1979 level. This scaling back by utilities can be attributed to the increasing time and cost required to bring a nuclear unit on line and decreases in the projected rate of growth of electrical consumption.

Nuclear Power

Domestic Nuclear Powerplant Operations

		Maximum Dependable Capacity[1] All Plants[2]	Capacity Factor[3]	Electricity Generation[4]	Nuclear Portion of Domestic Electricity Generation
		Million net kilowatts	Percent	Million net kilowatt-hours	Percent
1973	**AVERAGE**	**13.850**	**63.2**	**83,479**	**4.5**
1974	**AVERAGE**	**29.921**	**43.5**	**113,976**	**6.1**
1975	**AVERAGE**	**35.671**	**55.2**	**172,505**	**9.0**
1976	**AVERAGE**	**40.642**	**53.5**	**191,104**	**9.4**
1977	**AVERAGE**	**45.554**	**62.9**	**250,883**	**11.8**
1978	**AVERAGE**	**49.385**	**63.9**	**276,403**	**12.5**
1979	January	50.771	73.6	27,792	13.3
	February	50.720	76.0	25,911	13.9
	March	50.720	64.5	24,335	13.3
	April	50.705	50.5	18,418	10.8
	May	50.705	39.8	15,025	8.4
	June	50.705	44.0	16,065	8.6
	July	50.759	55.1	20,825	10.3
	August	50.732	64.1	24,204	11.8
	September	50.781	59.6	21,804	12.1
	October	50.814	55.7	20,934	11.6
	November	49.917	53.6	19,255	10.8
	December	49.937	55.4	20,586	11.0
	AVERAGE	**50.604**	**57.6**	**255,155**	**11.4**
1980	January	49.945	53.1	19,746	9.9
	February	51.055	54.3	19,277	10.2
	March	51.031	52.8	20,039	10.7
	April	53.040	49.3	18,794	11.1
	May	53.040	46.6	18,385	10.5
	June	53.040	48.0	18,322	9.7
	July	53.093	53.2	21,024	9.7
	August	53.093	61.6	24,333	11.3
	AVERAGE	**52.169**	**52.4**	**159,920**	**10.4**

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 11 and Definitions.
[2]Includes all units authorized to generate commercial electricity, including units in start-up testing (see definitions) and those owned by the Government.
[3]Average percentage of Maximum Dependable Capacity utilized yearly or monthly.
[4]Annual figures for 1973-1979 and monthly figures for 1979 and 1980 represent totals rather than averages.
Sources: • Capacity data for units in commercial operation or start-up testing—Nuclear Regulatory Commission.
• Nuclear Regulatory Commission Report NUREG 0020, "Operating Units Status Report."
• Federal Power Commission Form 4, "Monthly Power Plant Report."

Nuclear Power

Status of Nuclear Reactor Units[1]

		In Operation or Start-up Testing[2]	Construction Permits Granted	Construction Permits Pending	Reactor Units Ordered	Reactor Units Announced	Total Reactor Units	Total Design Capacity (Million Gross 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	January	71	92	30	5	1	199	195
	February	71	92	28	5	1	197	193
	March	71	92	28	5	1	197	193
	April	71	92	27	5	0	195	190
	May	71	92	27	5	0	195	190
	June	71	92	27	5	0	195	190
	July	71	91	25	5	0	192	187
	August	71	91	25	5	0	192	187
	September	71	91	25	3	0	190	185
	October	71	91	25	3	0	190	185
	November	71	91	23	3	0	188	182
	December	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	168
	April	74	85	14	3	0	176	168
	May	74	85	14	3	0	176	168
	June	74	85	14	3	0	176	168
	July	74	85	14	3	0	176	168
	August	74	85	14	3	0	176	168

Geographic coverage: the 50 United States and District of Columbia.
[1]Monthly data are recorded the last day of the month. Annual data are recorded as of December 31 of each year.
[2]Includes Humboldt Bay shut-down for seismic modifications, and Three Mile Island 2 which was shut down due to an accident in March of 1979. Also includes two dual-purpose Department of Energy owned reactors, both operating. Does not include the Indian Point reactor which is in indefinite shut-down status.
Sources: • Compiled by the Energy Information Administration from various sources, but primarily from the Nuclear Regulatory Commission (NRC), Report NUREG 0380, "Program Summary Report."

Price

Crude Oil

The average price of domestic crude oil purchased at the wellhead was $22.28 per barrel in July 1980. The Alaskan North Slope price increased to $14.26 per barrel. Actual stripper price of $36.26 per barrel was a 2.1 percent increase from the June 1980 price. The Naval Petroleum Reserve crude oil price of $33.25 per barrel decreased 2.2 percent below the June 1980 level. The upper tier price of $14.57 per barrel increased by 1.0 percent above the previous month's figure, and the lower tier price of $6.55 per barrel was 0.6 percent above the June 1980 price.

During August 1980, the composite refiner acquisition cost of crude oil was $28.70 per barrel, $0.03 per barrel (0.1 percent) below the previous month's price. The imported price decreased $0.07 per barrel from the July 1980 level to $34.44 per barrel in August. This price was 0.2 percent below the previous month's level and 43.6 percent above the August 1979 level. The domestic price was $24.98, a decrease of $0.07 per barrel (0.3 percent) below the July average.

Residual Fuel Oil

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in July 1980 was $23.98 per barrel, $0.11 below the previous month's price (0.5 percent) and 20.6 percent over the July 1979 average. The average price, excluding taxes, for No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts was $21.25 per barrel, $0.81 above (4.0 percent) the June 1980 average and a 10.8 percent increase over the July 1979 average.

Heating Oil

The national average price of heating oil sold to residential customers decreased 0.1 cent in August 1980 to 97.8 cents per gallon. This was a 0.1 percent decrease below the selling price in July 1980 and a 24.7 percent increase over the August 1979 price. The average residential distributor margin in August was 15.1 cents per gallon, 16.2 percent above the margin of August 1979. Refiners' national average selling price to resellers and retailers was 79.8 cents per gallon, 21.5 percent above the August 1979 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 July 1980 was 89.7 cents per gallon, or 1.1 cents (1.2 percent) over the previous month's average and a 54.1 percent increase over the July 1979 average.

Motor Gasoline

The national average retail price for all grades and all types of motor gasoline was 123.1 cents per gallon in September 1980. Leaded regular gasoline at all types of stations sold for an average of 119.7 cents per gallon in September, 1.3 cents lower (1.1 percent) than the price in August. The price for unleaded regular gasoline at all types of stations was 125.7 cents per gallon in September, 1.0 cent lower (0.8 percent) than in August.

Liquefied Petroleum Gases

The average wholesale price for propane during July 1980, excluding taxes, was 41.3 cents per gallon, 0.1 cent above the previous month's level, or 0.2 percent, and 41.0 percent above the July 1979 level.

In July 1980, the average wholesale price for butane, excluding taxes, was 54.9 cents per gallon, 5.7 percent below the previous month's revised price and 7.4 percent above the July 1979 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	January	9.46	11.02	15.50	13.11	12.78	14.13
	February	9.69	11.34	15.88	13.42	13.72	14.68
	March	9.83	11.45	16.41	13.70	14.82	15.95
	April	10.33	12.06	17.58	14.52	15.51	16.61
	May	10.71	12.41	19.00	15.40	15.71	17.18
	June	11.70	13.24	21.03	17.00	17.81	17.97
	July	13.39	14.61	23.09	18.58	19.18	19.89
	August	14.00	15.73	23.98	19.75	19.00	20.33
	September	14.57	16.05	25.06	20.14	19.62	20.90
	October	15.11	16.93	25.05	20.68	20.88	21.59
	November	15.52	17.65	27.02	22.04	22.00	22.84
	December	17.03	18.84	28.91	23.63	23.55	24.44
	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	R20.22	23.75
	June	R21.53	24.48	34.48	28.80	20.44	R24.09
	July	22.28	25.05	34.51	28.73	21.25	23.98
	August	NA	24.98	34.44	28.70	NA	NA
	AVERAGE	**NA**	**23.02**	**33.40**	**27.32**	**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. Crude oil costs and volumes reported on the Economic Regulatory Administration (ERA) Form 49 exclude unfinished oils but include Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 include unfinished oils but exclude SPR. Imported averages derived from ERA Form 49 exclude crude oil purchased for Strategic Petroleum Reserve (SPR), whereas, the composite averages derived from the ERA Form 49 include SPR.
[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 forward: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report."
•No.6 residual oil price, FEA Form P302-M-1, "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 Grades[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	January	39.7	43.0	42.1	53.7	69.5	22.4	24.9
	February	41.8	46.1	44.5	56.3	70.7	21.8	28.5
	March	44.5	47.9	47.0	58.8	73.3	21.2	32.5
	April	47.7	50.6	49.3	61.1	78.0	22.0	35.4
	May	53.4	56.1	52.6	64.2	82.3	24.2	39.5
	June	58.7	65.0	56.9	69.1	88.0	27.9	46.9
	July	62.4	68.9	61.1	73.8	93.0	29.3	51.1
	August	66.0	72.3	64.6	78.4	96.7	30.8	48.0
	September	69.0	71.8	67.8	81.0	99.8	33.3	51.9
	October	71.1	74.8	68.1	82.3	100.6	35.2	56.1
	November	70.3	72.1	69.0	83.7	101.9	37.6	57.0
	December	73.0	80.7	70.8	85.8	104.2	40.4	65.8
	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	R88.6	82.5	97.9	124.6	R41.2	R58.2
	July	82.0	88.5	83.0	R97.9	124.7	41.3	54.9
	August	NA	NA	82.9	97.8	124.3	NA	NA
	September	NA	NA	NA	NA	123.1	NA	NA
	AVERAGE	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Geographic coverage: the 50 United States and District of Columbia.
Note: The average year-to-date gasoline price for the current year is not yet available from the Bureau of Labor Statistics.
[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]See Explanatory 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, "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."
•Gasoline price average, Bureau of Labor Statistics.
•Propane and Butane prices, FEA Form P302-M-1, "Petroleum Industry Monthly Report for Product Prices."

Price

Domestic Prices and Percentages of Crude Oil Purchased at the Wellhead[1]

		Incremental Tertiary[2]		Newly Discovered[2]		Marginal Property[2]		Heavy Crude[2]		Other Decontrolled Oil[2]		Tertiary Incentive[2]	
		Dollars per barrel											
		Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price	Percent
1976	AVERAGE												
1977	AVERAGE												
1978	AVERAGE												
1979	January												
	February												
	March												
	April												
	May												
	June	11.98	0.05	22.97	0.61	13.16	0.81	Not Applicable					
	July	15.09	0.02	26.60	1.12	13.28	1.13						
	August	16.14	0.15	26.63	1.66	13.37	1.33						
	September	17.89	0.06	30.38	2.38	13.67	3.08	16.77	2.82	12.54	NA	24.89	NA
	October	14.21	(0.01)	31.92	3.04	13.55	3.39	17.12	3.46	13.08	NA	21.07	NA
	November	26.17	NA	33.86	3.24	13.70	3.11	18.61	3.28	11.33	NA	NA	NA
	December	15.80	(0.03)	37.59	3.61	13.83	3.05	23.62	4.04	10.05	NA	NA	NA
1980	January	31.14	0.01	39.04	3.86	14.01	3.16	26.43	4.24	33.37	2.15	28.18	NA
	February	26.33	0.01	38.68	4.33	13.90	2.71	25.70	5.13	33.11	4.79	36.47	0.01
	March	29.82	0.01	38.97	4.76	14.07	2.52	25.55	5.15	32.91	7.42	39.00	0.04
	April	34.94	0.04	38.67	5.20	14.12	2.99	25.57	4.96	33.03	9.89	37.52	0.12
	May	34.46	0.03	39.07	5.53	14.21	2.79	25.42	5.38	32.97	12.52	34.60	0.43
	June	33.72	0.02	R38.93	R5.96	14.37	R2.75	R25.87	R5.34	R32.39	R14.58	R30.29	R0.53
	July†	21.87	0.00	38.73	6.35	14.36	2.96	25.66	5.91	32.28	16.86	30.21	0.67
	AVERAGE	**32.45**	**0.02**	**38.78**	**5.13**	**14.15**	**2.84**	**25.72**	**5.15**	**32.70**	**9.70**	**32.03**	**0.25**

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 12.
[2]See Definitions.
†Preliminary data. R=Revised data. NA=Not available.
Note: Parentheses indicate negative adjustment to recertify production as heavy oil.
Source: • Economic Regulatory Administration Form 182, "Domestic Crude Oil First Purchase Report."

Price

Domestic Prices and Percentages of Crude Oil Purchased at the Wellhead[1] (continued)

		Lower Tier[2]		Upper Tier[2]		Actual Stripper[3]		Alaskan North Slope[4]		Naval Petroleum Reserve[5]		Actual Domestic Average
		Dollars per barrel										
		Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price	Percent	Price
1976	**AVERAGE**	**5.13**	**54.4**	**11.71**	**31.5**	**12.16**	**14.1**	**NA**	**NA**	**NA**	**NA**	**8.19**
1977	**AVERAGE**	**5.19**	**45.92**	**11.22**	**36.11**	**13.59**	**13.32**	**6.35**	**4.14**	**12.34**	**0.51**	**8.57**
1978	**AVERAGE**	**5.46**	**37.54**	**12.15**	**34.41**	**13.95**	**14.03**	**5.22**	**12.96**	**12.85**	**1.08**	**9.00**
1979	January	5.75	35.51	12.66	34.25	14.55	14.14	5.79	14.88	13.10	1.20	9.46
	February	5.76	35.20	12.78	34.97	14.88	15.08	5.87	13.71	13.94	1.01	9.69
	March	5.82	34.59	12.84	34.56	14.88	14.95	6.66	14.58	13.97	1.29	9.83
	April	5.85	33.98	12.94	34.93	16.71	15.27	7.45	14.52	14.56	1.28	10.33
	May	5.91	33.55	13.02	34.77	17.53	15.62	8.47	14.71	15.85	1.32	10.71
	June	5.95	29.32	13.14	38.22	20.24	15.97	8.97	13.64	16.02	1.34	11.70
	July	5.98	26.96	13.25	37.49	24.76	16.01	13.35	15.86	20.13	1.38	13.39
	August	6.09	26.03	13.33	36.72	25.71	16.93	14.14	15.82	20.77	1.33	14.00
	September	6.09	23.52	13.53	33.89	27.09	16.55	13.09	16.08	20.85	1.57	14.57
	October	6.12	23.46	13.56	32.58	29.42	16.20	13.12	16.27	21.01	1.57	15.11
	November	6.09	23.11	13.68	32.76	30.64	15.35	13.48	17.49	26.48	1.61	15.52
	December	6.21	22.31	13.76	32.52	34.99	16.34	13.60	16.51	29.04	1.60	17.03
	AVERAGE	**5.95**	**28.91**	**13.20**	**34.79**	**22.93**	**15.71**	**10.57**	**15.36**	**19.40**	**1.38**	**12.64**
1980	January	6.24	21.19	13.86	31.12	36.02	15.61	13.77	17.06	28.94	1.54	17.86
	February	6.37	20.52	14.03	29.45	36.14	15.82	13.77	15.73	34.96	1.44	18.81
	March	6.35	19.83	13.99	28.22	36.26	15.18	13.77	15.30	34.67	1.55	19.34
	April	6.37	18.71	14.18	25.87	36.54	15.80	14.07	14.75	33.81	1.61	20.29
	May	6.47	17.62	14.29	25.21	36.11	15.43	14.36	13.48	34.16	1.56	21.01
	June	R6.51	R16.99	R14.42	R23.19	R35.53	R16.14	R14.14	R12.94	34.00	1.49	R21.53
	July†	6.55	16.46	14.57	21.95	36.26	16.08	14.26	11.12	33.25	1.58	22.28
	AVERAGE	**6.40**	**18.77**	**14.16**	**26.46**	**36.13**	**15.72**	**13.99**	**14.36**	**33.37**	**1.54**	**20.15**

Geographic coverage: the 50 United States and District of Columbia.
[1]See Explanatory Note 12.
[2]See Definitions.
[3]Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976 stripper oil was subject to upper tier price ceilings. Annual average is for 12 months (January through December 1976).
[4]Alaskan North Slope (ANS) crude oil prices are treated as Upper Tier for determining the applicable wellhead ceiling prices. ANS is included in the Actual Domestic Average price determination.
[5]The Naval Petroleum Reserves (NPR) are exempt from pricing regulations but have been reported here as Upper Tier prior to July 1977. NPR is included in the Actual Domestic Average price determination.
†Preliminary data. R=Revised data. NA=Not available.
Sources: • January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report."
• February 1976 forward: Economic Regulatory Administration Form 182, "Domestic Crude Oil First Purchase Report."

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	January	14.87	14.06	12.55	14.60	13.94	14.84	13.26	13.98	15.41	13.69
	February	14.89	14.18	12.56	15.15	14.17	14.98	13.47	14.28	15.33	13.26
	March	15.54	14.42	19.04	16.46	14.14	15.07	13.61	15.72	16.13	13.88
	April	16.80	15.98	17.96	17.40	17.02	18.18	14.77	16.24	17.40	14.58
	May	19.14	16.84	17.27	19.13	18.56	20.02	14.62	17.38	18.39	15.76
	June	21.04	18.59	19.95	20.87	17.43	22.11	17.98	18.91	20.88	16.01
	July	22.42	20.95	21.99	23.88	22.29	24.46	18.54	21.33	23.14	18.22
	August	23.44	21.65	21.40	24.93	22.56	25.43	18.32	21.45	23.88	18.66
	September	23.60	22.11	27.27	25.17	22.32	25.77	18.72	22.93	22.93	18.14
	October	24.40	24.39	31.80	27.39	24.43	26.33	21.44	21.85	25.09	22.36
	November	26.38	23.72	28.81	29.60	24.50	28.17	23.72	24.15	27.57	19.27
	December	28.67	25.29	35.13	31.86	24.50	29.82	22.99	27.90	25.89	20.62
	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	NA	35.88	30.56	35.59	26.85	29.34	34.34	24.03
	April	36.93	32.22	NA	35.30	30.24	36.11	27.78	30.38	34.15	23.85
	May	37.10	32.40	NA	36.13	30.68	36.50	28.50	32.67	34.10	24.82
	June†	37.61	32.90	NA	36.83	30.76	36.99	28.95	33.34	36.28	25.56

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.
NA = Not available.
†Preliminary data.
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	January	15.88	16.19	15.29	13.76	15.81	14.51	15.88	14.73	15.53	16.29	14.16
	February	16.18	16.68	15.62	14.25	16.49	14.76	16.13	14.88	16.05	16.07	14.17
	March	16.61	17.18	15.68	19.54	17.56	14.81	16.20	15.28	17.10	15.91	14.61
	April	17.93	17.39	17.31	19.06	18.59	17.40	19.11	16.18	17.70	18.23	15.19
	May	20.22	20.22	17.92	18.56	20.16	18.82	21.06	16.29	18.65	19.26	16.74
	June	22.52	19.12	20.11	21.27	22.21	17.85	23.23	19.49	20.42	21.64	16.80
	July	23.54	20.22	22.50	23.35	25.48	22.74	25.79	20.06	22.84	23.96	18.95
	August	24.85	22.67	23.10	22.64	26.27	23.12	26.72	19.85	23.12	25.05	19.42
	September	25.09	25.64	23.72	28.36	26.54	23.23	27.03	20.36	24.59	24.18	18.99
	October	25.59	23.54	26.36	33.17	28.56	24.98	27.41	22.99	23.98	26.39	23.05
	November	27.95	26.01	25.37	30.44	30.38	25.12	29.41	25.19	25.95	29.10	20.13
	December	29.99	26.32	26.84	36.64	33.29	25.31	31.21	24.48	29.93	27.07	21.72
	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	NA	37.18	31.17	36.93	28.26	30.96	35.73	24.97
	April	38.52	30.31	33.81	NA	36.57	30.77	37.41	29.14	32.29	35.34	25.10
	May	38.54	31.16	33.73	NA	37.36	31.22	37.53	30.30	34.06	35.82	25.93
	June†	38.71	31.26	34.51	NA	38.09	31.43	38.15	30.16	34.96	37.41	26.42

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.
NA = Not available. †Preliminary data.
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

		Crude Oil Entitlements and Supply Ratio			Unrecouped Costs for Refined Products for 29 Largest Refiners		
		Entitlement Benefit[1]	Entitlement Price[1]	National Old Oil (or Domestic Crude Oil) Supply Ratio[1]	Motor Gasoline	Other Products[2]	Total
		Dollars per barrel			Million Dollars		
1979	January	1.56	8.74	0.178	836	863	1,699
	February	1.67	9.03	0.185	1,110	878	1,988
	March	1.80	9.50	0.189	1,551	837	2,388
	April	2.06	10.53	0.196	2,067	1,649	3,716
	May	2.44	11.74	0.208	2,245	1,848	4,093
	June	3.01	13.70	0.220	2,507	1,973	4,480
	July	3.54	16.01	0.221	2,990	2,089	5,079
	August	3.78	17.26	0.218	2,856	2,347	5,203
	September	3.92	17.97	0.218	3,151	2,376	5,527
	October	4.00	18.27	0.219	3,094	2,295	5,389
	November	4.39	20.12	0.218	3,492	2,302	5,794
	December	4.71	21.91	0.215	3,724	1,171	4,895
1980	January	5.28	23.53	0.224	4,115	1,189	5,304
	February	5.14	24.70	0.208	5,362	1,167	6,529
	March	5.05	25.26	0.200	6,236	1,213	7,445
	April	5.10	25.74	0.198	6,202	1,391	7,593
	May	6.22	27.39	0.227	NA	NA	NA
	June	5.44	27.32	0.199	NA	NA	NA
	July	5.04	27.26	0.185	NA	NA	NA
	August†	4.75	26.86	0.177	NA	NA	NA

Geographic coverage: the 50 United States, District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
[1]See Definitions.
[2]Other includes propane, butane, natural gasoline, some natural gas liquids, and aviation jet fuel in January and February 1979 when aviation jet fuel was decontrolled. From March 1979 to December 1979, it includes butane, natural gasoline, propane and some natural gas liquids. Since January 1980, when butane and natural gasoline were decontrolled, only propane and some natural gas liquids are included in this category.
†Preliminary data. NA = Not available.
Sources: • Crude oil entitlements, Economic Regulatory Administration Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report."
• Unrecouped costs: EIA Form 14, "Refiners' Monthly Cost Allocation Report." Data provided by the Economic Regulatory Administration.

Price

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

		Leaded Regular	Unleaded Regular	Leaded Premium	Average for All Grades
		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	January	66.8	71.6	73.7	69.5
	February	68.1	73.0	75.0	70.7
	March	70.6	75.5	77.4	73.3
	April	75.3	80.2	82.4	78.0
	May	79.7	84.4	86.7	82.3
	June	85.6	90.1	92.0	88.0
	July	90.8	94.9	96.5	93.0
	August	94.3	98.8	100.4	96.7
	September	97.3	102.0	103.6	99.8
	October	98.2	102.8	104.6	100.6
	November	99.4	104.1	105.6	101.9
	December	101.8	106.5	108.0	104.2
	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

Geographic coverage: 85 urban areas selected to represent all urban consumers—80 percent of the total U.S. population.
[1] See Explanatory Note 16.
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	January	54.1	53.9	38.6	42.2	40.1
	February	54.6	55.1	39.1	44.3	40.2
	March	56.6	56.8	40.7	54.8	41.3
	April	58.2	59.1	43.2	60.1	45.4
	May	60.6	61.2	44.1	58.1	48.4
	June	64.8	66.8	49.5	59.9	50.9
	July	70.0	71.8	50.4	67.1	58.2
	August	74.2	75.6	55.0	71.4	60.8
	September	78.2	79.0	60.2	73.1	65.9
	October	79.8	80.4	64.6	80.6	68.4
	November	81.3	80.6	66.4	83.4	69.7
	December	84.1	83.4	73.3	83.2	72.3
	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	R89.0	R87.6
	June	107.7	111.4	90.0	R86.1	88.6
	July†	109.3	113.4	91.4	88.5	89.7
	AVERAGE	**103.8**	**106.2**	**84.6**	**87.0**	**85.6**

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 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, "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	January	40.9	42.1	11.8	53.7
	February	43.1	44.5	12.0	56.3
	March	45.8	47.0	12.0	58.8
	April	48.3	49.3	12.1	61.1
	May	53.2	52.6	12.1	64.2
	June	58.8	56.9	12.7	69.1
	July	62.5	61.1	13.0	73.8
	August	65.7	64.6	13.0	78.4
	September	69.0	67.8	13.7	81.0
	October	68.6	68.1	14.8	82.3
	November	70.0	69.0	15.1	83.7
	December	71.7	70.8	15.5	85.8
	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	R15.3	R97.9
	August†	79.8	82.9	15.1	97.8
	AVERAGE	**78.2**	**79.1**	**16.5**	**95.1**

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."

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	NA	49.6	50.4	47.6	50.8
	February	57.7	57.3	55.5	53.2	53.7	NA	51.3	51.4	49.4	52.9
	March	60.6	59.8	57.5	54.3	56.3	NA	54.7	55.3	50.8	55.3
	April	62.8	61.9	60.0	57.3	58.8	NA	58.2	58.4	53.8	57.8
	May	65.9	64.8	63.4	61.2	62.8	NA	62.0	62.7	56.2	60.8
	June	70.5	69.7	68.4	66.2	68.5	NA	68.9	67.8	62.2	66.4
	July	75.9	73.9	72.9	70.9	73.2	NA	72.0	72.5	68.4	72.3
	August	80.1	78.6	77.7	74.8	78.5	NA	76.4	77.1	71.7	77.2
	September	83.3	81.4	80.0	79.4	81.5	NA	79.5	80.1	76.8	81.4
	October	84.1	82.5	81.7	79.1	82.6	NA	80.2	81.3	81.2	82.6
	November	85.1	83.7	82.4	80.5	83.9	NA	82.2	84.0	80.4	82.3
	December	87.2	85.7	85.1	82.9	86.1	NA	85.3	86.3	82.6	84.6
1980	January	91.8	91.0	90.2	88.6	90.4	NA	90.0	90.2	89.6	91.0
	February	96.7	95.3	94.7	93.0	93.5	NA	93.6	93.5	95.8	95.7
	March	98.7	97.2	96.5	94.8	94.3	NA	95.1	95.9	93.9	97.6
	April	99.2	97.3	96.6	94.1	94.5	NA	95.3	99.5	94.7	99.0
	May	98.7	97.3	96.4	94.2	95.8	NA	95.2	97.7	95.5	98.6
	June	99.8	97.9	96.8	95.1	95.8	NA	95.3	98.4	96.0	99.8
	July	R100.3	98.1	R96.6	R94.2	R96.2	NA	93.1	R97.0	R96.7	R100.2
	August†	100.1	97.7	96.6	94.7	95.8	NA	95.4	92.1	99.7	100.4

[1]DOE regions are defined in Explanatory Note 18.
†Preliminary data.
R = Revised data.
NA = Not available. Data for Region 6 are based on a sample of less than four reporting firms.
Source: • FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."

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	January	15.16	16.12	13.68	14.79	11.00	11.92	12.78	14.13
	February	16.12	17.28	15.01	15.30	11.31	12.28	13.72	14.68
	March	16.08	18.05	15.90	16.94	13.48	14.00	14.82	15.95
	April	17.79	19.09	16.34	17.44	13.70	14.59	15.51	16.61
	May	18.04	19.45	15.74	17.89	14.69	15.37	15.71	17.18
	June	20.92	19.79	18.08	18.51	15.95	16.40	17.81	17.97
	July	21.85	23.07	21.25	20.47	16.51	17.86	19.18	19.89
	August	21.05	22.63	19.49	21.28	17.51	18.32	19.00	20.33
	September	21.81	22.92	21.01	21.66	17.54	18.94	19.62	20.90
	October	23.80	23.29	22.99	22.33	18.31	19.53	20.88	21.59
	November	26.68	25.54	24.07	24.31	19.31	19.51	22.00	22.84
	December	27.09	27.78	25.83	25.01	20.67	21.05	23.55	24.44
	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	R20.22	23.75
	June	R25.06	31.37	R22.35	R25.44	R17.72	R19.27	20.44	R24.09
	July†	25.51	28.53	23.54	25.83	19.11	20.67	21.25	23.98
	AVERAGE	**26.53**	**30.19**	**23.53**	**26.65**	**18.63**	**20.25**	**21.46**	**24.84**

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, "Petroleum Industry Monthly Report for Product Prices."

Price

Natural Gas

		Average Wellhead Value	Delivered to Electric Plant[1]	Average Residential Heating
		Cents per thousand cubic feet		
1973	**AVERAGE**	**21.6**	**R35.0**	**108.2**
1974	**AVERAGE**	**30.4**	**R49.0**	**125.3**
1975	**AVERAGE**	**44.5**	**R76.9**	**154.2**
1976	**AVERAGE**	**58.0**	**R105.9**	**184.6**
1977	**AVERAGE**	**79.0**	**R133.4**	**226.4**
1978	**AVERAGE**	**90.5**	**R147.9**	**262.6**
1979	January	99.5	R154.7	292.9
	February	101.8	R164.8	295.6
	March	106.3	R168.6	300.6
	April	107.0	R169.6	299.6
	May	111.6	R182.2	314.9
	June	112.9	R183.9	320.0
	July	116.4	R184.0	328.4
	August	119.0	R187.0	330.8
	September	120.6	R189.4	341.4
	October	124.0	R195.7	352.8
	November	125.6	R186.9	347.6
	December	128.9	R190.0	351.9
	AVERAGE	**114.4**	**R180.3**	**323.1**
1980	January	129.1	R201.1	354.9
	February	132.0	R210.5	357.9
	March	132.2	R214.7	368.1
	April	134.7	R210.4	367.8
	May	134.3	R218.1	393.9
	June	137.1	R216.4	394.8
	July	140.0	237.3	410.6
	August	NA	NA	413.1

Geographic coverage: the 50 United States and District of Columbia.
[1]Includes all electric utility generating plants with a combined capacity of 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	January	115.8	228.1	150.2	150.4	4.07	4.28	2.81	3.55	3.64
	February	114.6	240.6	159.1	154.3	4.09	4.30	2.85	3.73	3.66
	March	116.8	258.8	163.0	152.3	4.28	4.44	2.91	3.87	3.76
	April	120.1	264.6	164.7	151.4	4.51	4.54	2.92	3.87	3.82
	May	121.1	274.1	177.5	158.0	4.69	4.65	2.98	3.98	3.91
	June	121.8	289.3	179.5	161.2	4.88	4.73	3.04	4.05	4.03
	July	122.2	311.8	178.9	168.7	R4.92	R4.77	R3.13	R4.22	R4.15
	August	122.5	323.5	180.9	167.1	4.94	4.79	R3.13	R3.88	R4.18
	September	125.3	333.5	183.5	167.9	4.95	4.84	3.14	4.08	4.18
	October	127.4	346.1	189.1	167.3	4.94	4.89	3.14	3.89	4.13
	November	127.7	363.1	180.3	171.5	4.83	4.92	3.16	4.09	4.12
	December	129.2	394.8	183.3	183.8	4.71	4.90	3.23	4.18	4.15
	AVERAGE	**122.4**	**299.7**	**175.4**	**162.1**	**4.63**	**4.67**	**3.03**	**3.94**	**3.97**
1980	January	128.7	423.5	194.8	187.3	4.69	4.90	3.29	4.19	4.19
	February	129.9	429.7	203.9	189.8	4.74	4.96	3.31	4.64	4.24
	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	NA	NA	NA	NA	5.72	5.64	3.94	4.81	5.07

Geographic coverage: Fossil Fuels—the lower 48 States and the District of Columbia. Electricity—the 50 United States and the District of Columbia.
[1]Prices are for 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 sale to ultimate consumers.
R = Revised data.
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 Regulartory Commission, Form 5, "Electric Utility Company Monthly Statement."

International

Crude Oil Production

World crude oil production during July 1980 was 60.0 million barrels per day, up just 0.1 million barrels per day from June.

OPEC output during July increased 0.1 million barrels per day from June, averaging 27.3 million barrels per day. Average Arab OPEC production, however, declined 0.2 million barrels per day in July. This was a result primarily of Iraq's decrease of production at the same rate. Among OPEC producers Iran and Venezuela increased production by 0.2 and 0.1 million barrels per day, respectively.

Production by non-OPEC nations decreased during July to 32.7 million barrels per day, down 0.1 million barrels per day from the previous month. This occured despite an increase of 0.2 million barrels per day by the USSR.

Petroleum Consumption

Petroleum consumption by International Energy Agency (IEA) member nations was 31.6 million barrels per day during June 1980. This preliminary figure indicates a 0.5 million barrels per day increase from the consumption rate during May 1980, and a 2.1 million barrels per day decrease from the June 1979 rate of 33.7 million barrels per day.

Preliminary consumption data for July 1980 were available for only France, Italy, and the United States. Consumption in both the United States and France was down more than 0.9 million barrels per day from the June 1980 levels. In Italy petroleum consumption was about even. While January through June data indicate a decline in the rate of consumption for all IEA nations, as compared to the same period of time during 1979, the most significant decreases were seen in France (not an IEA member), the United Kingdom, and the United States, down 6.6, 14.9 and 8.5 percent, respectively.

Nuclear Energy Production

A total of 18 non-Communist countries produced electricity commercially from nuclear power. As of August 1980, these countries had a total of 201 reactor units, including 74 in the United States. The reactors had a total capacity of 123 million kilowatts, including 53 million kilowatts for those in the United States.

During August 1980 nuclear electricity generation from these 18 nations totaled 52.5 billion gross kilowatt-hours, an increase of 6.2 percent from July 1980 and an increase of 9.2 percent from the August 1979 totals. Nuclear electricity generated in the United States during August 1980 was 25.7 billion gross kilowatt-hours, 14.7 percent greater than in July 1980 but 0.3 percent below the August 1979 total. Generation by the remaining 17 nations was 26.8 billion gross kilowatt-hours in August 1980, down 0.9 percent from the July 1980 level and 20.1 percent above the August 1979 total.

International

Crude Oil Production for Major Petroleum Exporting Countries

		Algeria	Iraq	Kuwait[1]	Libya	Qatar	Saudi Arabia[1]	United Arab Emirates	Arab OPEC	Indonesia	Iran
		Thousand barrels per day									
1973	**AVERAGE**	**1,070**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**17,982**	**1,339**	**5,860**
1974	**AVERAGE**	**960**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,675**	**1,375**	**6,022**
1975	**AVERAGE**	**960**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,963**	**1,307**	**5,350**
1976	**AVERAGE**	**1,020**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,523**	**1,504**	**5,863**
1977	**AVERAGE**	**1,100**	**2,350**	**1,980**	**2,065**	**445**	**9,210**	**2,000**	**19,150**	**1,685**	**5,665**
1978	**AVERAGE**	**1,160**	**2,560**	**2,135**	**1,985**	**485**	**8,300**	**1,830**	**18,455**	**1,635**	**5,240**
1979	January	1,235	3,535	2,605	2,165	550	9,790	1,840	21,720	1,600	410
	February	1,235	3,535	2,695	2,150	555	9,780	1,835	21,785	1,615	760
	March	1,235	3,535	2,580	2,070	370	9,780	1,830	21,400	1,625	2,190
	April	1,235	3,535	2,535	2,060	550	8,790	1,755	20,460	1,605	3,800
	May	1,235	3,535	2,575	2,040	540	8,780	1,860	20,565	1,565	4,100
	June	1,235	3,535	2,575	2,015	455	8,780	1,870	20,465	1,610	3,950
	July	1,035	3,335	2,540	2,070	520	9,780	1,835	21,115	1,600	3,750
	August	1,035	3,335	2,515	2,080	535	9,770	1,835	21,105	1,595	3,600
	September	1,035	3,335	2,365	2,020	455	9,780	1,840	20,830	1,575	3,600
	October	1,035	3,335	2,365	2,030	490	9,725	1,785	20,765	1,570	3,930
	November	1,035	3,335	2,435	2,085	525	9,795	1,870	21,080	1,570	3,170
	December	1,035	3,335	2,240	2,090	545	9,775	1,875	20,895	1,565	3,000
	AVERAGE	**1,135**	**3,435**	**2,500**	**2,065**	**505**	**9,530**	**1,835**	**21,005**	**1,590**	**3,035**
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	1,615	1,700	460	9,765	1,710	19,350	1,565	1,700

[1]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In July 1980 total production in this region amounted to approximately 545,000 barrels per day.
Additional footnotes on following page.
†Preliminary data.

International

Crude Oil Production for Major Petroleum Exporting Countries (continued)

		Nigeria	Venezuela	Total OPEC[2]	Canada	Mexico	United Kingdom	United States	China	USSR	Other[3]	World
		Thousand barrels per day										
1973	**AVERAGE**	**2,054**	**3,366**	**30,961**	**1,800**	**450**	**8**	**9,208**	**1,140**	**8,420**	**3,843**	**55,830**
1974	**AVERAGE**	**2,255**	**2,976**	**30,683**	**1,695**	**580**	**9**	**8,774**	**1,310**	**9,020**	**3,805**	**55,875**
1975	**AVERAGE**	**1,783**	**2,346**	**27,134**	**1,420**	**720**	**20**	**8,375**	**1,490**	**9,630**	**4,201**	**52,990**
1976	**AVERAGE**	**2,067**	**2,294**	**30,711**	**1,300**	**800**	**245**	**8,132**	**1,735**	**10,170**	**4,302**	**57,395**
1977	**AVERAGE**	**2,085**	**2,240**	**31,230**	**1,320**	**980**	**770**	**8,245**	**1,875**	**10,700**	**4,490**	**59,610**
1978	**AVERAGE**	**1,895**	**2,165**	**29,800**	**1,315**	**1,215**	**1,080**	**8,707**	**2,080**	**11,215**	**4,698**	**60,190**
1979	January	2,440	2,265	28,880	1,450	1,395	1,465	8,457	2,120	11,370	4,743	59,880
	February	2,430	2,345	29,380	1,575	1,400	1,505	8,498	2,120	11,370	4,622	60,470
	March	2,440	2,425	30,515	1,405	1,310	1,335	8,585	2,120	11,370	5,230	61,870
	April	2,420	2,385	31,095	1,510	1,400	1,460	8,533	2,120	11,510	4,882	62,510
	May	2,400	2,385	31,445	1,465	1,405	1,645	8,585	2,120	11,110	4,695	62,470
	June	2,420	2,245	31,115	1,465	1,440	1,745	8,409	2,120	11,460	4,766	62,520
	July	2,380	2,325	31,515	1,520	1,440	1,710	8,355	2,120	11,400	5,630	63,690
	August	2,185	2,325	31,230	1,450	1,460	1,640	8,699	2,120	11,560	5,171	63,330
	September	2,115	2,365	30,895	1,490	1,475	1,675	8,466	2,120	11,460	5,129	62,710
	October	2,135	2,370	31,180	1,545	1,515	1,615	8,568	2,120	11,630	5,152	63,325
	November	2,150	2,390	30,770	1,525	1,620	1,520	8,649	2,120	11,700	5,236	63,140
	December	2,150	2,410	30,430	1,545	1,660	1,545	8,587	2,120	11,700	5,033	62,620
	AVERAGE	**2,305**	**2,355**	**30,710**	**1,495**	**1,460**	**1,570**	**8,533**	**2,120**	**11,470**	**5,042**	**62,400**
1980	January	2,155	2,280	29,535	1,515	1,720	1,600	8,648	2,120	11,560	5,027	61,725
	February	2,160	2,200	29,805	1,475	1,725	1,660	8,696	2,120	11,550	4,994	62,025
	March	2,155	1,995	29,100	1,475	1,830	1,670	8,712	2,120	11,640	5,183	61,730
	April†	2,100	2,045	27,965	1,390	1,885	1,510	8,688	2,120	11,630	5,427	60,615
	May†	2,200	2,150	27,645	1,470	1,910	1,600	8,640	2,120	11,700	5,285	60,370
	June†	2,110	2,050	27,175	1,535	1,905	1,625	8,690	2,120	11,630	5,250	59,930
	July†	2,100	2,170	27,305	1,500	2,015	1,585	8,650	2,120	11,800	5,040	60,015

United States geographic coverage: the 50 United States and District of Columbia.
[2]OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.
[3]Other is a calculated total derived from the difference between world production and the nations represented above.
†Preliminary data.
R = Revised data.
Note: Monthly data may not average to annual data.
Sources: • 1973–1978 annual data for OPEC nations: *OPEC Annual Statistical Bulletin.*
- 1978 and 1979 annual data and 1980 monthly data (except U.S.): Central Intelligence Agency, *International Energy Statistical Review.*
- 1979 monthly data (except U.S.) are EIA estimates based on CIA revisions to annual data.
- 1973–1980 United States data: See sources on the last page of the Petroleum Section.

International

Petroleum Consumption for Major Free World Industrialized Countries[1]

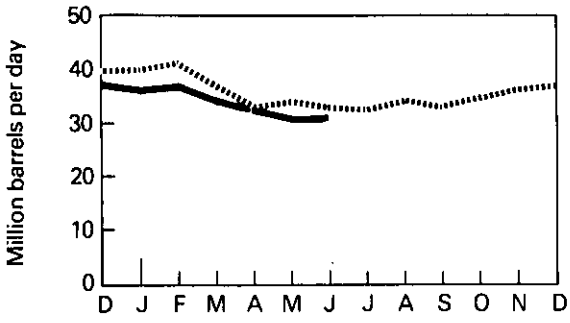
		Canada	France[2]	Italy	Japan	United Kingdom	United States	West Germany	Other IEA[3]	Total IEA[4]
		Thousand barrels per day								
1973	**AVERAGE**	**1,597**	**2,219**	**1,525**	**5,000**	**1,958**	**17,308**	**2,693**	**4,069**	**34,150**
1974	**AVERAGE**	**1,630**	**2,094**	**1,521**	**4,872**	**1,829**	**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	January	1,881	2,786	1,950	5,579	1,883	R20,596	2,893	5,157	40,000
	February	2,019	2,731	1,912	6,009	2,067	R21,266	2,708	5,240	41,100
	March	1,654	2,315	1,601	5,708	1,949	R19,270	2,592	4,716	37,400
	April	1,605	2,150	1,447	5,009	1,703	R17,429	2,590	4,327	34,000
	May	1,650	2,039	1,402	4,757	1,648	R17,822	2,641	4,384	34,200
	June	1,737	1,663	1,312	4,709	1,517	R17,755	2,613	4,137	33,700
	July	1,700	1,604	1,314	4,689	1,435	R17,100	2,626	4,281	33,100
	August	1,775	1,553	1,311	4,894	1,488	R18,211	2,617	4,531	34,800
	September	1,619	1,721	1,617	4,809	1,520	R17,428	2,597	4,468	33,900
	October	1,852	2,007	1,807	4,771	1,652	R18,159	2,846	4,448	35,500
	November	1,840	2,481	1,890	5,359	1,858	R18,336	2,763	4,428	36,400
	December	1,877	2,278	1,744	5,800	1,606	R18,824	2,489	4,801	37,100
	•AVERAGE	**1,766**	**2,107**	**1,607**	**5,173**	**1,690**	**R18,502**	**2,664**	**4,569**	**35,900**
1980	January	1,812	2,465	1,778	5,255	1,769	18,509	2,665	4,521	36,300
	February	1,946	2,444	1,864	5,722	1,621	18,721	2,393	4,734	37,000
	March	1,734	1,982	1,657	5,403	1,585	17,279	2,405	4,334	34,400
	April†	1,550	2,110	1,532	4,647	1,472	16,616	2,656	4,320	32,800
	May†	1,560	1,855	1,443	4,358	1,357	16,143	R2,203	R4,036	R31,100
	June†	NA	1,818	R1,493	4,196	1,296	16,481	2,353	NA	31,600
	July†	NA	1,517	1,506	NA	NA	15,856	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 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.
†Preliminary data
R = Revised data.
NA = Not available.
Sources: • Central Intelligence Agency, "International Energy Statistical Review," 30 September 1980 (except United States).
• 1973–1980 United States data: See sources on last page of the Petroleum Section.
• IEA totals for most recent months are EIA estimates.

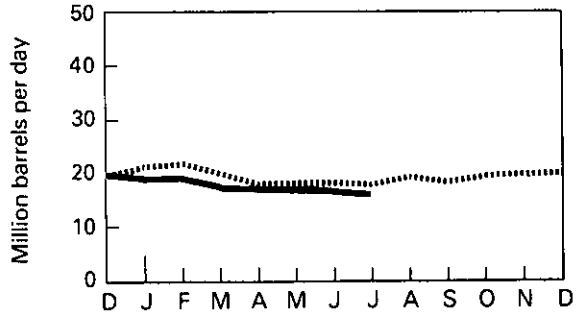
International

Petroleum Consumption

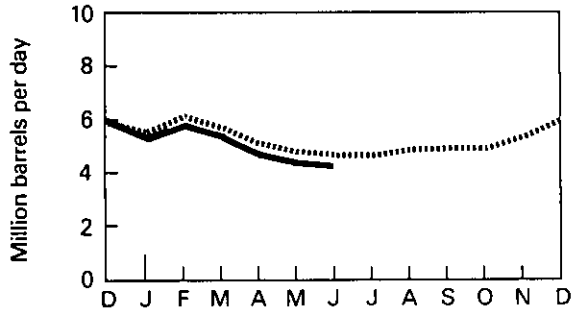
Total IEA



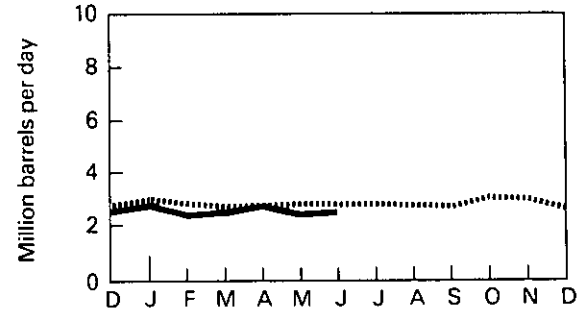
United States



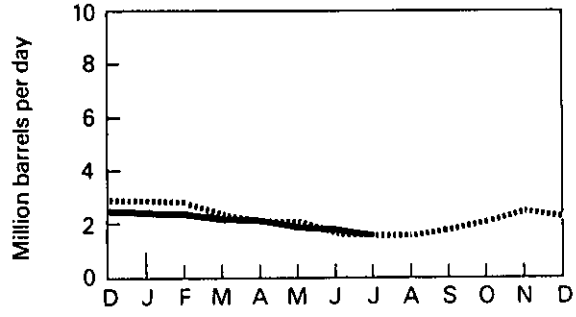
Japan*



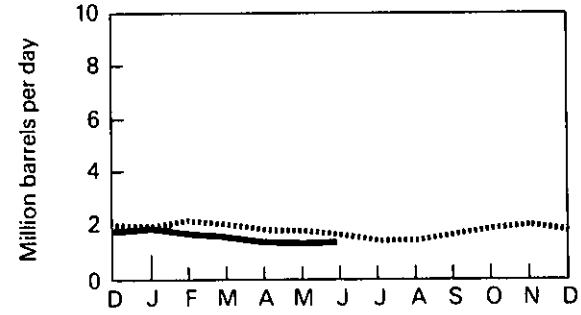
West Germany



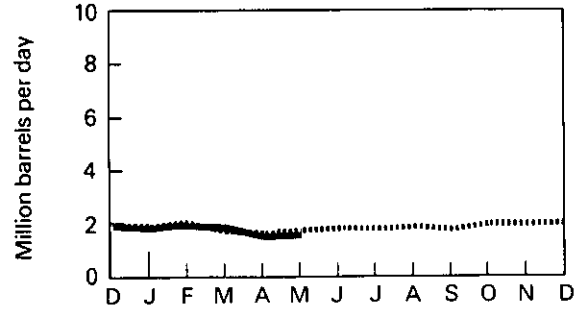
France**



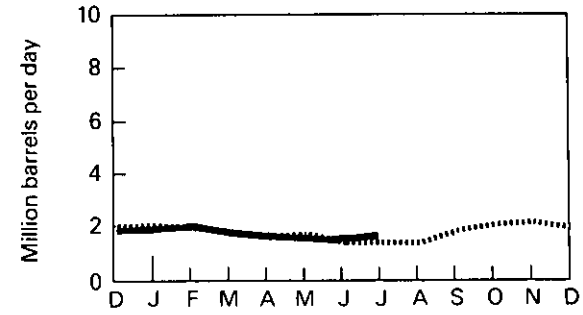
United Kingdom



Canada



Italy***



*Excludes liquefied petroleum gases and condensates.
**Not a member of IEA.
***Principal products only.

1979
1980

International

Nuclear Power Generation by Non-Communist Countries[1,2]

		Argentina	Belgium	Canada	Finland	France	India	Italy	Japan	Nether-lands	Pakistan
		Million gross kilowatt-hours									
1973	**TOTAL**	**0**	**0**	**18,273**	**0**	**11,217**	**1,936**	**3,142**	**9,439**	**1,038**	**458**
1974	**TOTAL**	**1,035**	**121**	**15,410**	**0**	**14,703**	**2,475**	**3,410**	**18,097**	**3,349**	**584**
1975	**TOTAL**	**2,517**	**6,763**	**13,243**	**0**	**18,296**	**2,514**	**3,801**	**16,696**	**3,335**	**546**
1976	**TOTAL**	**2,572**	**10,011**	**18,016**	**0**	**15,764**	**3,194**	**3,797**	**36,689**	**3,872**	**487**
1977	**TOTAL**	**1,637**	**11,855**	**26,759**	**2,675**	**17,940**	**2,779**	**3,384**	**27,260**	**3,710**	**338**
1978	**TOTAL**	**2,896**	**12,490**	**32,925**	**3,179**	**30,547**	**2,264**	**4,429**	**50,861**	**4,060**	**229**
1979	January	266	838	3,816	320	3,831	356	401	5,471	390	23
	February	175	559	2,945	721	3,465	248	277	4,967	353	12
	March	181	786	2,909	467	3,192	215	241	4,160	383	0
	April	261	1,047	3,104	623	3,151	218	290	3,756	223	0
	May	254	1,293	2,717	520	3,294	239	200	3,864	343	0
	June	229	1,161	3,194	394	2,963	285	132	4,570	365	0
	July	168	992	3,848	491	2,604	166	0	5,862	373	0
	August	275	558	2,820	391	2,341	125	122	6,724	254	0
	September	142	792	2,956	709	3,094	248	169	5,238	362	0
	October	247	1,119	3,316	780	3,808	314	203	6,186	267	0
	November	255	964	2,909	561	3,563	304	227	5,353	37	0
	December	239	1,263	3,849	692	4,613	209	365	5,852	140	0
	TOTAL	**2,692**	**11,370**	**38,383**	**6,671**	**39,920**	**2,927**	**2,627**	**62,003**	**3,489**	**35**
1980	January	264	1,180	3,582	822	5,519	215	156	8,013	381	0
	February	126	1,011	3,476	765	5,324	107	441	7,379	365	0
	March	0	1,006	3,678	790	5,058	163	523	7,995	385	0
	April	68	499	3,193	754	5,041	273	391	5,637	343	0
	May	179	687	2,494	314	4,186	294	294	6,033	323	0
	June	250	1,115	3,108	0	4,077	242	97	6,642	341	0
	July	162	1,292	3,559	383	4,832	228	131	7,553	369	3
	August	256	1,266	3,876	392	3,246	303	111	8,264	369	19
	TOTAL (Year-to-date)	**1,305**	**8,056**	**26,965**	**4,220**	**37,283**	**1,826**	**2,143**	**57,516**	**2,876**	**22**

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.
[2]In some cases, monthly figures are adjusted to reflect amended cumulative totals from *Nucleonics Week*.
Source: • *Nucleonics Week*.

International

Nuclear Power Generation by Non-Communist Countries[1,2] (continued)

		South Korea	Spain	Sweden	Switzer-land	Taiwan	United Kingdom	West Germany	Non-Communist World Excluding U.S.	United States	Total Non-Communist World
						Million gross kilowatt-hours					
1973	**TOTAL**	**0**	**6,545**	**2,111**	**6,192**	**0**	**27,996**	**12,561**	**100,908**	**87,440**	**188,348**
1974	**TOTAL**	**0**	**7,223**	**1,647**	**7,037**	**0**	**34,020**	**11,154**	**120,265**	**119,919**	**240,184**
1975	**TOTAL**	**0**	**7,544**	**12,021**	**7,721**	**0**	**30,508**	**21,672**	**147,177**	**181,808**	**328,985**
1976	**TOTAL**	**0**	**7,555**	**15,992**	**7,900**	**0**	**36,799**	**24,524**	**187,172**	**201,570**	**388,742**
1977	**TOTAL**	**71**	**6,525**	**19,890**	**8,070**	**99**	**38,043**	**35,807**	**206,842**	**262,644**	**469,486**
1978	**TOTAL**	**2,324**	**7,649**	**23,781**	**8,349**	**2,670**	**36,642**	**32,478**	**257,772**	**292,664**	**550,436**
1979	January	272	549	2,326	804	445	3,787	3,866	27,761	29,164	56,925
	February	354	622	1,973	725	306	3,811	3,045	24,558	27,307	51,865
	March	324	706	2,679	796	521	3,969	3,300	24,829	25,517	50,346
	April	262	637	1,449	774	565	3,210	4,674	24,244	19,320	43,564
	May	250	216	1,268	714	482	2,265	3,243	21,162	15,808	36,970
	June	300	360	1,003	827	645	3,150	3,048	22,626	17,087	39,713
	July	337	444	1,008	981	691	2,731	3,094	23,790	22,481	46,271
	August	384	663	1,099	826	646	2,409	2,667	22,304	25,732	48,036
	September	386	425	1,370	1,234	644	3,116	2,441	23,326	23,352	46,678
	October	282	676	2,048	1,288	509	2,771	3,456	27,270	22,497	49,767
	November	0	719	2,302	1,418	316	3,279	3,642	25,849	20,520	46,369
	December	0	683	2,515	1,461	559	4,070	3,874	30,384	21,933	52,317
	TOTAL	**3,152**	**6,700**	**21,039**	**11,848**	**6,329**	**38,568**	**40,350**	**298,103**	**270,718**	**568,821**
1980	January	110	719	2,512	1,505	859	3,704	4,450	33,991	21,111	55,102
	February	1	333	2,423	1,197	685	3,380	3,940	30,952	20,818	51,770
	March	351	426	2,333	1,278	799	4,217	2,954	31,956	21,218	53,174
	April	385	355	1,865	1,444	743	2,693	3,625	27,309	19,631	46,940
	May	379	368	1,648	1,399	436	2,559	3,501	25,094	19,612	44,706
	June	84	307	1,570	622	507	2,818	2,877	24,657	19,386	44,043
	July	411	316	1,337	577	827	2,031	3,034	27,045	22,367	49,412
	August	293	366	1,261	705	773	2,579	2,712	26,791	25,662	52,453
	TOTAL (Year-to-date)	**2,014**	**3,191**	**14,949**	**8,727**	**5,629**	**23,981**	**27,092**	**227,795**	**169,805**	**397,600**

United States geographic coverage: the 50 United States and District of Columbia.
Totals may not equal sum of components due to independent rounding.
[1]Figures are for gross 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.
[2]In some cases monthly figures are adjusted to reflect amended cumulative totals from *Nucleonics Week*.
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.

Base Production Control Level

(See Crude Oil)

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.

Ceiling Price

The maximum permissible selling price, prior to February 1, 1976, for a particular grade of domestic crude oil in a particular field is the May 15, 1973, posted price, plus $1.35 per barrel.

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.

Base Production Control Level (BPCL): Prior to February 1, 1976, BPCL means the monthly total number of barrels of crude oil produced and sold from a property in 1972 or the average monthly production as defined in Section 212.72 of the Federal Energy Guidelines. After January 31, 1976, BPCL means either the daily average number of barrels produced and sold in 1975 multiplied by the number of days in the month (in 1972) or the daily number of barrels of crude oil produced and sold from the property in 1972 (leap year) multiplied by the number of days of the month (in 1972). A detailed explanation of BPCL and adjustments thereto may be found in Section 212.72 of the Federal Energy Guidelines.

A. Lower Tier (Old) Crude Oil: (1) Prior to February 1, 1976, the total number of barrels of domestic crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month, and less the total number of barrels of *released* crude oil for that property in that month. (2) Effective February 1, 1976, the total number of barrels of domestic crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

B. Upper Tier (New) Crude Oil: With respect to a specific property, (1) prior to February 1, 1976, the total number of barrels of domestic crude oil produced and sold in a specified month, less (a) the base production control level for that month, and less (b) the current cumulative deficiency; (2) effective February 1, 1976, the total number of barrels of domestic crude oil produced and sold in a specific month less (a) the property's base production control level for that month and less (b) the current cumulative deficiency since February 1, 1976; and (3) that the total number of barrels of domestic crude oil shall not in either period include any number of barrels not certified as new crude oil pursuant to the provisions of 10 CFR 313.131(a)(1) within the consecutive 2-month period immediately succeeding the month in which the crude oil is produced and sold except where such recertification is explicitly required or permitted by DOE order, interpretation, or ruling.

C. Decontrolled Oil: Crude oil (exclusive of Stripper oil, Naval Petroleum Reserves oil, Newly Discovered, and Incremental Tertiary oil) which has been explicitly exempted by rule or the exception process from Federal crude oil price controls.

1. Heavy Crude Oil: Crude oil produced and sold from a property whose production of crude oil in June 1979 (or if there was no such production sold in that month, the last preceding month in which there was such production sold) had a weighted average gravity of 16° API or less corrected to 60° F based on the average gravity reported on the run tickets. Effective December 29, 1979, regulations redefined heavy crude oil as 20° API gravity, or less.

2. Incremental Tertiary Oil: Oil which is produced under a qualified tertiary enhanced recovery project certified by the Economic Regulatory Administration, DOE, and which is certified as "incremental tertiary" crude oil in accordance with 10 CFR 212.78.

3. Marginal Property Oil: Oil which is produced from a property which has qualified as a "marginal" property under the average well-completion depth and daily production qualification thresholds of 10 CFR 212.72 and which has been released for sale at upper tier prices.

4. Newly Discovered Crude Oil: Crude oil sold after May 31, 1979, which was produced from: (1) an area in the Outer Continental Shelf for which the

lease was entered into on or after January 1, 1979, and from which there was no production in calendar year 1978; or (2) an onshore property from which no crude oil was produced in calendar year 1978.

5. Stripper Oil: Crude oil which is produced from property whose average daily production per well (excluding condensate recovered in nonassociated natural gas production) did not exceed 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972. Stripper oil was exempt from price controls beginning September 1, 1976.

6. Tertiary Incentive Oil: Price-controlled crude oil which has been released for sale at the market-clearing prices to provide front-end money to initiate or expand qualified tertiary enhanced recovery projects and which has been certified as "tertiary incentive" oil in accordance with 10 CFR 212.78.

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 Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil. It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976, and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

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.

Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month. An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by the Economic Regulatory Administration (ERA). A refiner must purchase entitlements for the amount of his "deemed old oil" receipts in excess of the national domestic crude oil supply ratio (NDCOSR). The NDCOSR, as calculated by ERA, reflects the differences in costs to refiners of "old" oil, "upper tier" crude oil, and imported crude oil.

Entitlement Price

The price of an entitlement, fixed by ERA, is the exact differential as reported for the month between the weighted average delivered cost per barrel to refiners of both imported crude oil and stripper crude oil, and the weighted average delivered cost per barrel to refiners of "old oil".

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 gas 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 traverses.

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.

Lower Tier Crude Oil

(See Crude Oil, Part A.)

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

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.

National Domestic Crude Oil Supply Ratio

Old oil receipts adjusted for upper tier receipts, small refiner bias, and other minor adjustments, divided by crude runs to stills adjusted for residual fuel entitlements.

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, 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.

New Crude Oil

(See Crude Oil, Part B.)

Old Crude Oil

(See Crude Oil, Part A.)

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.

Property

Prior to August 26, 1976, a property was defined as the right to produce domestic crude oil, which arises from a lease or from a fee interest. This definition was interpreted to apply only to a surface lease. In August 1976 the definition of a property was changed so that a producer may treat as a separate property each separate and distinct producing reservoir subject to the same right to produce crude oil, provided that such reservoir is recognized by the appropriate governmental regulatory authority as a producing formation that is separate and distinct from, and not in communication with any other producing formation. Although this new definition was not implemented until August 25, 1976, it was made effective retroactively to February 1, 1976. (F.R. 36171, August 26, 1976.)

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 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 Oil, Bunker C 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 Reserves

A plan developed to reduce the impact of interruption of imports of pertroleum. 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 petroleum 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 disposltion of crude oil is the sum of refinery input, exports of crude oil, crude oil burned as fuel, and crude oil losses.

Unrecouped Costs

Costs which have not been recovered in the current month's product prices but which have been "banked" for later use.

Upper Tier Crude Oil

(See Crude Oil, Part B.)

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, 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 relate energy consumption to 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.

Preliminary monthly estimates for 1980 production, stocks, and products supplied are obtained by multiplying the reported data for the most recent month available by an appropriate ratio derived from data for the prior 3 years. For example, if an estimate were required for June 1980 and the most recent monthly data available were for April, the preliminary estimate would be obtained by multiplying the April 1980 data by the average of the June to April ratios for the years 1977 through 1979.

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. Bituminous coal and lignite production is calculated from the number of railroad cars loaded at mines, based on the assumption that approximately 60 percent of the coal produced is transported by rail. Production data are estimated by EIA from Association of American Railroads reports of carloadings.

Bituminous coal and lignite consumption is calculated by Energy Information Administration (EIA) from information provided by the Federal Energy Regulatory Commission, Department of Commerce, and reports from selected manufacturing industries and retailers.

Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is 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, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The normal rating (expressed in thermal megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed in kilowatt-hours (kWh). This enables a more direct comparison to design capacity and to previous months' performances.

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. For the 2-year period January 1974 through January 1976, the old oil price at the wellhead was originally estimated to be $5.25 per barrel based on representative postings. This estimate was revised in July 1976 after a survey of crude oil purchasers was implemented and more complete data became available. Estimates of the average old oil price given in the table for months prior to February 1976 are based on prices for old oil reported on new leases, and were not derived from a statistically valid sample of old oil leases.

13. The refiner acquisition cost of domestic crude oil is the price paid by refiners for domestic crude oil and natural gas plant liquids and includes transportation costs from the wellhead to the refinery. The refiner acquisition cost of imported crude oil is the average landed cost of imported crude oil to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees

(including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States

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). These prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-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 top 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

Thermal Conversion Factors

Approximate Heat Content of Various Fuels		1973	1974	1975	1976	1977	1978–79–80
Anthracite							
Production	Btu/short ton	23,170,000	22,560,000	23,390,000	22,770,000	23,180,000	23,520,000
Imports and Exports	Btu/short ton	25,400,000	25,400,000	25,400,000	25,400,000	25,400,000	25,400,000
Consumption, average	Btu/short ton	22,710,000	21,950,000	21,740,000	22,150,000	22,710,000	22,970,000
Electric utility consumption	Btu/short ton	17,920,000	17,200,000	17,060,000	17,530,000	17,240,000	17,100,000
Non-utility consumption	Btu/short ton	24,340,000	23,750,000	23,650,000	23,840,000	24,990,000	25,170,000
Bituminous coal and lignite							
Production	Btu/short ton	24,010,000	23,730,000	23,200,000	23,150,000	22,700,000	22,430,000
Imports	Btu/short ton	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000	25,000,000
Exports	Btu/short ton	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000	27,000,000
Consumption, average	Btu/short ton	23,650,000	23,070,000	22,800,000	22,750,000	22,330,000	22,140,000
Electric utility consumption	Btu/short ton	22,260,000	21,800,000	21,660,000	21,690,000	21,480,000	21,280,000
Non-utility consumption	Btu/short ton	26,840,000	26,120,000	25,810,000	25,870,000	25,130,000	25,070,000
Coal Coke	Btu/short ton	26,000,000	26,000,000	26,000,000	26,000,000	26,000,000	26,000,000
Crude petroleum[1]							
Production	Btu/barrel	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
Imports	Btu/barrel	5,817,000	5,827,000	5,821,000	5,808,000	5,810,000	5,802,000
Exports	Btu/barrel	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
Crude petroleum and products							
Imports, average	Btu/barrel	5,897,000	5,884,000	5,858,000	5,856,000	5,834,000	5,839,000
Exports, average	Btu/barrel	5,752,000	5,774,000	5,748,000	5,745,000	5,797,000	5,808,000
Petroleum products							
Consumption, average	Btu/barrel	5,515,000	5,504,000	5,494,000	5,504,000	5,526,000	5,519,000
Residential and Commercial	Btu/barrel	5,498,000	5,494,000	5,496,000	5,517,000	5,522,000	5,530,000
Industrial	Btu/barrel	5,515,000	5,473,000	5,443,000	5,457,000	5,519,000	5,487,000
Transportation	Btu/barrel	5,395,000	5,394,000	5,392,000	5,397,000	5,402,000	5,410,000
Electric Utility	Btu/barrel	6,223,000	6,215,000	6,229,000	6,235,000	6,231,000	6,227,000
Imports	Btu/barrel	5,983,000	5,959,000	5,935,000	5,980,000	5,908,000	5,955,000
Exports	Btu/barrel	5,752,000	5,773,000	5,747,000	5,743,000	5,796,000	5,814,000
Natural gas plant liquid production	Btu/barrel	4,049,000	4,011,000	3,984,000	3,964,000	3,941,000	3,925,000
Natural gas, dry							
Production and consumption	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019
Electric utility consumption	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034
Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016
Imports	Btu/cubic foot	1,026	1,027	1,026	1,025	1,026	1,030
Exports	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013
Hydropower[2]	Btu/kWh	10,389	10,442	10,406	10,373	10,435	10,435
Nuclear power[2]	Btu/kWh	10,903	11,161	11,013	11,047	10,769	10,769
Geothermal power[2]	Btu/kWh	21,674	21,674	21,611	21,611	21,611	21,611
Electricity consumption	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412

Refined Petroleum Products:	Btu/barrel
Asphalt	6,636,000
Aviation gasoline	5,048,000
Butane	4,326,000
Butane-propane mixture[3]	4,130,000
Distillate fuel oil	5,825,000
Ethane	3,082,000
Isobutane	3,974,000
Jet fuel—kerosene type	5,670,000
Jet fuel—naphtha type	5,355,000
Kerosene	5,670,000
Lubricants	6,065,000
Motor gasoline	5,253,000
Natural gasoline	4,620,000
Petrochemical feedstocks	
Naphtha 400°	5,248,000
Other oils over 400°	5,825,000
Still gas	6,000,000
Petroleum coke	6,024,000
Plant condensate	5,418,000
Propane	3,836,000
Residual fuel oil	6,287,000
Road oil	6,636,000
Special naphtha	5,248,000
Still gas	6,000,000
Unfinished oils	5,825,000
Wax	5,537,000
Miscellaneous	5,796,000

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] 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.

[3] 60 percent butane and 40 percent propane.

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