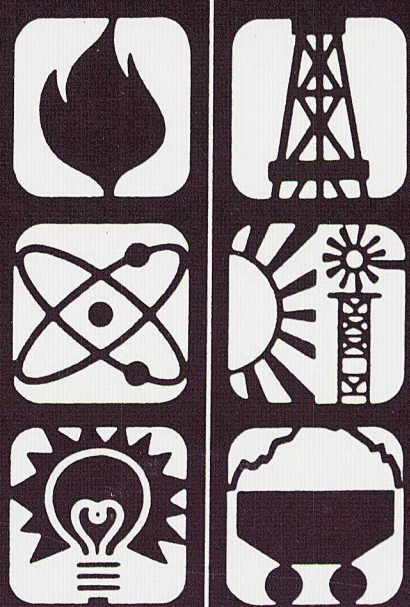
DOE/EIA-0035(83/12 [3])

Monthly Energy Review

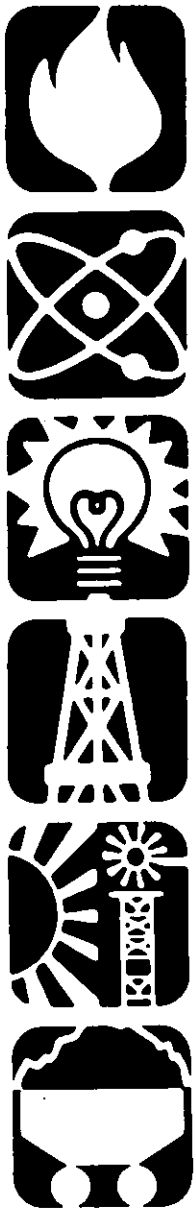
Energy Information Administration
Washington, D.C.

December 1983 [3]

November 1983 Data
Published February 1984



See Special Notice Inside



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

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

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

Subscriptions

This publication is available on an annual subscription basis from the Superintendent of Documents, U.S. Government Printing Office (GPO). Prices and ordering information for this and other Energy Information Administration (EIA) publications may be obtained from the GPO or the EIA's National Energy Information Center. Addresses and telephone numbers appear below. An order form is enclosed for your convenience.

National Energy Information Center, EI-20
Energy Information Administration
Room 1F-048, Forrestal Building
Washington, D.C. 20585
(202) 252-8800

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402
(202) 783-3238

Information

Questions on energy statistics may be directed to the National Energy Information Center at the address and phone number shown above.

Released for printing: February 27, 1984

Special Notice

Publications Date Change

The Energy Information Administration (EIA) is undertaking a program to make the dates of its periodicals consistent and explicit. Beginning in January 1984, issues of all EIA periodicals will be dated according to the bulk of the data in them, NOT (as in the past) the date of publication. The data date will be displayed prominently on covers, title pages, and spines. The publication date will be less prominently displayed.

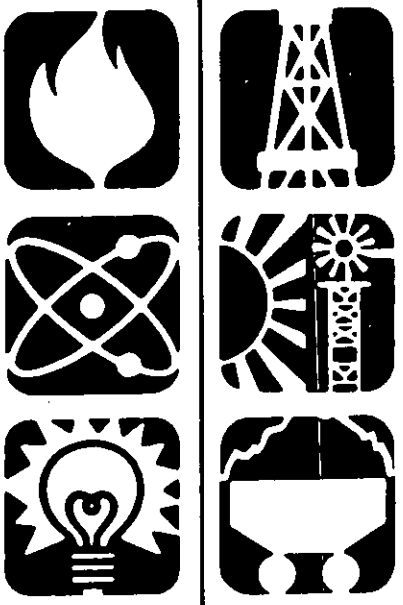
Some monthly periodicals will have to have more than one December issue (designated December 1983 [1], December 1983 [2], etc.). Once the bulk of the data in these periodicals is vintage January 1984, the periodical will be dated January 1984. In the case of the *Monthly Energy Review,* for example, there will be four "December 1983" issues; the January 1984 issue will be published in April. Other monthly periodicals will follow similar procedures.

Monthly Energy Review

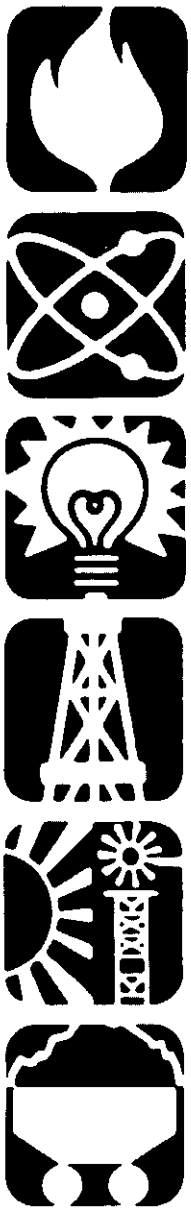
December 1983 [3]

Energy Information Administration
Office of Energy Markets
and End Use
U.S. Department of Energy
Washington, D.C. 20585

DOE/EIA-0035(83/12 [3])
Dist. Category UC-98



This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should not be construed as advocating or necessarily reflecting any policy position of the Department of Energy or any other organization.



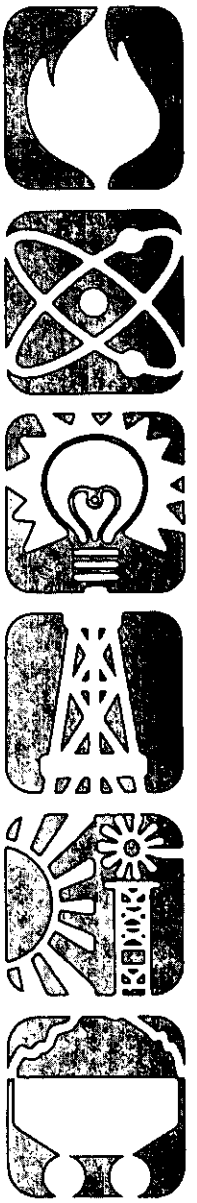
Contacts

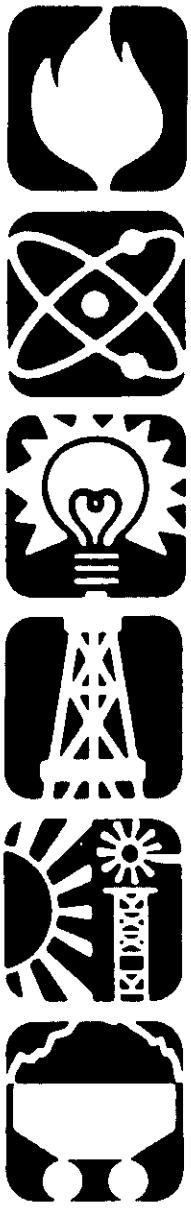
The *Monthly Energy Review* is prepared in the Statistics Branch of the Office of Energy Markets and End Use, Energy Information Administration, under the direction of Katherine E. Seiferlein (202) 252-5692.

Questions concerning the contents of the *Monthly Energy Review* may be referred to the following subject specialists:

Special Features		Barbara T. Fichman (202) 252-5737
Part 1.	**Executive Summary** and **Part 2. Consumption**	Roberta Searles (202) 252-5736 Dianne R. Dunn (202) 252-2792
Part 3.	**Petroleum**	Christine D. Gray (202) 252-8995
Part 4.	**Natural Gas**	Gordon W. Koelling (202) 252-6305
Part 5.	**Oil and Gas Resource Development**	Lawrence R. Mangen (202) 252-4804
Part 6.	**Coal**	Leonard Westerstrom (202) 252-5220
Part 7.	**Electric Utilities**	
	Generation, Consumption, and Stocks	Vicki Moorhead (202) 252-6521
	Sales	Charlene Harris-Russell (202) 252-2028
Part 8.	**Nuclear**	Hal Steinberg (202) 252-1332
Part 9.	**Price**	
	Petroleum	
	Heating Oil	Annie P. Whatley (202) 252-6612
	All Other Petroleum	Charles Riner (202) 252-6610
	Natural Gas	
	Wellhead and Residential	Gordon W. Koelling (202) 252-6305
	Electric Utilities	Kenneth M. McClevey (202) 252-5310
	Electricity	
	Fuel Costs to Steam Plants	Dean Fennell (202) 252-6523
	Prices for Privately Owned Utilities	Charlene Harris-Russell (202) 252-2028
Part 10.	**International**	
	Petroleum	Patricia A. Smith (202) 252-6925
	Nuclear Electricity Generation	Hal Steinberg (202) 252-1332

Contents





Articles

Feature articles on energy-related subjects and highlights from recently published Energy Information Administration reports are often included in this publication. The following articles and highlights have appeared in previous issues:

Energy Consumption ..... March 1975
Nuclear Power ..... April 1975
The Price of Crude Oil ..... June 1975
U.S. Coal Resources and Reserves ..... July 1975
Propane, A National Energy Resource ..... September 1975
Short-Term Energy Supply and Demand Forecasting at FEA ..... October 1975
Curtailments of Natural Gas Service ..... January 1976
Home Heating Conservation Alternatives and the Solar Collector Industry ..... March 1976
Trends in United States Petroleum Imports ..... September 1976
Crude Oil Entitlements Program ..... January 1977
Motor Gasoline Supply and Demand ..... July 1977
Short-Term Petroleum Supply and Demand ..... May 1978
The Energy Requirements of U.S. Agriculture ..... July 1979
Three Mile Island—Possible Regulatory Responses and Their Impacts on the Nation's Short-Term Electric Utility Fuel Outlook ..... October 1979
Reduction in Natural Gas Requirements Due to Fuel Switching ..... December 1979
The Solar Collector Industry and Solar Energy ..... February 1980
Trends in the Installation of Energy Using Equipment in New Residential Buildings ..... March 1980
The Energy Information Administration's Oil and Gas Reserves Program—The First Year's Report ..... June 1980
Energy From Urban Waste ..... August 1980
Natural Gas Liquids: Revisions to 1979 Data ..... October 1980
EIA Weekly Petroleum Data: Data Collection and Methods of Estimation ..... November 1980
The Department of Energy Disclosure Policy for Individually Identifiable Information Maintained by the Energy Information Administration ..... December 1980
Changes in 1981 Petroleum Data Series ..... May 1981
Information Services of the Energy Information Administration ..... September 1981
An Overview of Natural Gas Markets ..... December 1981
The Interstate and Intrastate Natural Gas Markets ..... January 1982
Natural Gas Drilling and Production Under the Natural Gas Policy Act ..... February 1982
Highlights: *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1981 Annual Report* ..... September 1982
Impacts of Financial Constraints on the Electric Utility Industry ..... October 1982
Highlights: *Energy Company Development Patterns in the Postembargo Era, Volume One* ..... November 1982
Highlights: *Residential Energy Consumption Survey: Consumption and Expenditures* ..... January 1983
Highlights: *Residential Energy Consumption Survey: Housing Characteristics* ..... February 1983
The Effect of Weather on Energy Use ..... April 1983
Trends in U.S. Energy Since 1973 ..... May 1983
Highlights: *Energy Price and Expenditure Data Report, 1970–1980* ..... July 1983
Data Series on Petroleum Use at Electric Utilities ..... July 1983
Highlights: *Railroad Deregulation: Impact on Coal* ..... August 1983
Highlights: *Port Deepening and User Fees: Impact on U.S. Coal Exports* ..... August 1983
Highlights: *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1982 Annual Report* ..... September 1983
Residential Energy Consumption, 1978 Through 1981 ..... September 1983
Exploring for Oil and Gas ..... November 1983
The Influence of Federal Actions on Petroleum Exploration ..... December[2] 1983

Aggregate Statistics: Accurate or Misleading?

by
Ned W. Dearborn
Energy Information Administration

How is it possible, asks a riddle sometimes used in statistics classes, for the average depth of water on the earth's surface to exceed 10 feet and yet for the human race to survive, somehow, without gills? The point brought home by the riddle is that aggregate statistics can be simultaneously accurate *and* misleading. Some analyses require a greater degree of data disaggregation than others in order to produce meaningful results. The degree of disaggregation required depends on both the nature of the phenomena described by the statistics and the purpose for which the statistics are to be used.

This article addresses geographic disaggregation. Statistics pertaining to the United States as a whole do not provide any indication of the extent to which corresponding statistics of the individual States are similar to each other and to national statistics. The following analysis uses the best available data and estimates compiled by the Energy Information Administration (EIA) to describe the State-level variation associated with selected national-level energy statistics. This analysis also draws some conclusions regarding the potential analytic significance of the variation thus described.

The national statistics selected for this review were developed from the same EIA sources as the national statistics presented in the *Monthly Energy Review* (MER) and are consistent with those statistics. Their State counterparts also were developed from EIA sources (cited at the end of this article) and are consistent with MER national statistics.[1] Conceptually, these State counterparts can be thought of as components of the national statistics; computationally, however, the State-level numbers under review have generally been derived from national data rather than the other way around and tend to embody greater measurement error than the corresponding national statistics (for reasons discussed in the cited EIA sources). To avoid possible misunderstanding regarding their origin and quality, the State statistics are purposely identified in this article as "counterparts" rather than "components" and as "estimates" rather than "data."

The selected statistics summarize patterns in the consumption and price of major fuels in the residential sector in the 50 States and the District of Columbia.[2] The patterns examined pertain to comparisons between estimates associated with a single time interval—1 year—rather than to changes in estimates over time. These cross-sectional patterns are of particular interest in analyzing the relative dependence of different regions on different fuels.

[1] In some cases, these State counterparts may not be fully consistent with MER regional statistics, due to the nature of the analytic procedures discussed in the cited sources.

[2] Throughout this article, unless otherwise noted, the term "State" is used to refer to the District of Columbia as well as to the 50 States.

The energy consumption and price patterns are based on estimates pertaining to the most recent years for which comprehensive and internally consistent information is currently available—1981 for State consumption estimates and 1980 for State price estimates. To a large extent, these relative relationships among the States change only marginally from year to year, since they tend to be associated with fairly stable State-level structural characteristics (for example, climate and the relative availability of various energy sources). Because of this approximate temporal continuity and because changes in energy consumption patterns have often been found to lag behind associated changes in energy price patterns by a year or more, this analysis includes statistics comparing 1981 consumption estimates and 1980 price estimates.

It should be noted, however, that the actual phenomena involved in producing these patterns and in interrelating them are numerous and complex. In addition to State variations in climate and the relative availability of various energy sources, they include variations in population size and composition, physical dimension and location, statutory and regulatory environment, and a host of other physical and socioeconomic factors whose delineation is beyond the scope of this article. In order to avoid presenting a misleadingly reductive or anecdotal analysis of these complex causal influences, there is no attempt in this article to account for these patterns, beyond comparing the selected consumption and price estimates and calling attention to the major strengths and limitations of such comparisons.

The following is intended to present a broad overview and discussion of the selected statistics. A more detailed accounting may be found in the tables, figures, and footnotes specified in the text and in the sources cited in the analytic note at the end of the article. The accompanying glossary defines selected statistical and other terms that may be obscure or subject to alternative definition.

Patterns in Residential Energy Consumption

In 1981, the Nation's residential sector consumed 9 quadrillion British thermal units (Btu) of energy—38 million Btu per person.[3] For reasons previously noted, the State counterparts of these national statistics exhibited a wide range of values (Table 1 and Figure 1).

[3]Throughout this article, all references to consumption are to direct consumption as defined in the accompanying glossary.

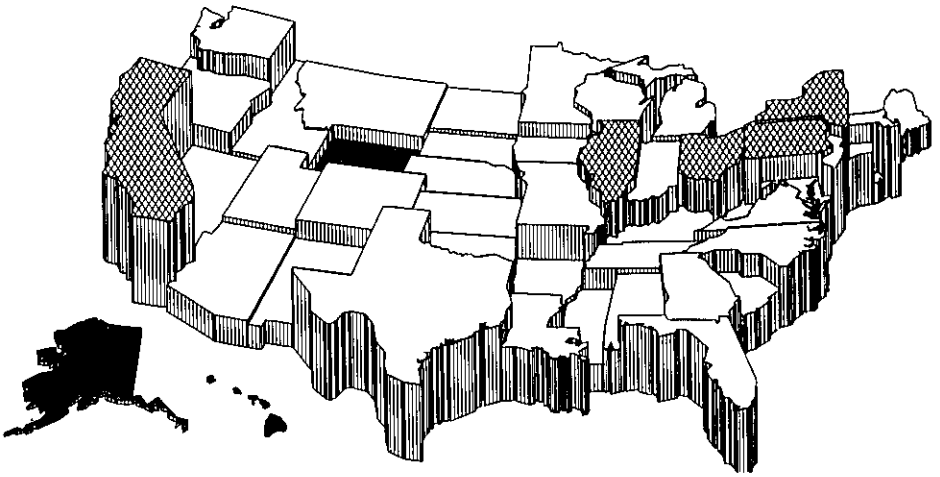
Table 1. Residential Energy Consumption Statistics (Direct Use), 1981

Univariate Statistics (Unweighted)	Total (Trillion Btu)	Per Capita (Million Btu)
Minimum	9.4 (Hawaii)	9.6 (Hawaii)
Maximum	697.6 (California)	54.7 (Michigan)
Mean	171.5	37.5
Median	117.6	38.5
Standard Deviation	183.4	9.0

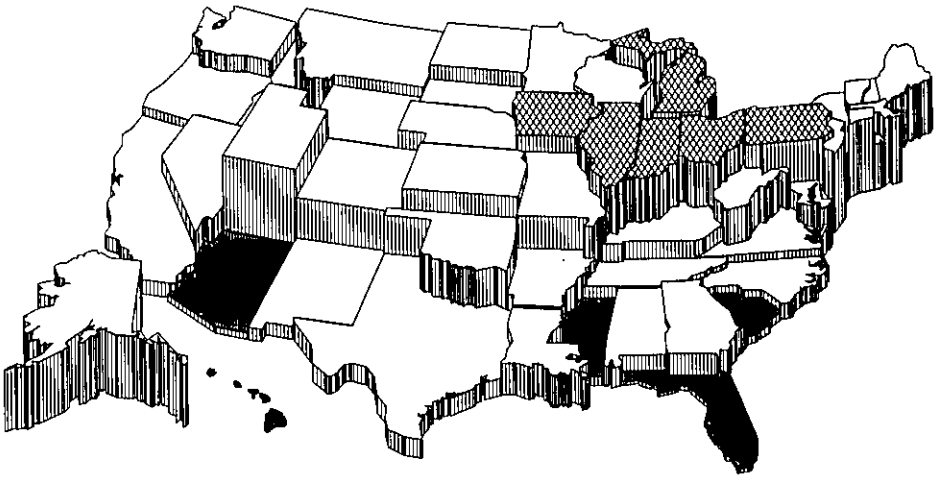
Note: • Statistics are based on estimates of direct-use consumption in the 50 States and the District of Columbia. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Figure 1. Residential Energy Consumption (Direct Use), 1981

Total



Total Per Capita



Note: • Each prism map has been individually scaled, as specified in Table 1, in order to highlight marginal differences in the variable values presented on that map. On each map, the lowest variable value is always represented as having no elevation, and the highest as having the maximum elevation. As a result, regional patterns stand out in high relief. • States having the five highest values are identified by cross-hatching. States having the five lowest values are identified by dark shading. • More than 10 States may be distinctively marked, since more than 1 State may have the same value at the level of precision used in preparing the prism map (one decimal place). Some States having relatively low values may be concealed by States having relatively higher values. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

The maximum State-level estimate of total residential energy consumption was more than 70 times as large as the minimum State-level estimate, with a relatively small number of diversely located States accounting for most of the national total. Specifically, the top 5 States[4] accounted for 36 percent of the total, the top 10 States for 56 percent, and the top 15 States for 68 percent.

After adjustment to take into account population differences, the disparity among States narrows greatly but remains large, with the maximum State estimate of total per capita residential energy consumption more than five times as large as the minimum State estimate. In general, State per capita consumption estimates tended to be higher in the northern States and lower in the southern States. States with the highest per capita consumption estimates tended to be closest to the Great Lakes. Four of the top 15 consuming States prior to taking population into consideration[5] were among the bottom 15 consuming States on a per capita basis.

Fuel Shares

In 1981, for the Nation as a whole, most of the energy consumed by the residential sector (on a Btu basis) was natural gas. Roughly twice as much natural gas was consumed as electricity, and roughly twice as much electricity as distillate fuel.[6] The specific fuel-share profile (expressed as percentages) for natural gas, electricity, and distillate fuel was 53—28—13. However, for reasons previously noted, the State counterparts of these national statistics exhibited a wide range of values (Table 2 and Figure 2).

Only two States[7] were within 5 percentage points of the national residential fuel-share profile with respect to all three fuels, and only six additional States[8] were within 10 percentage points of the profile for all three fuels. In contrast, 21 States had profiles that differed from the national profile by over 20 percentage points for at least one of the three fuels. Seven States[9] were over 20 percentage points more dependent on distillate fuel, and nine States[10] were over 20 percentage points more

[4]California, Illinois, New York, Ohio, and Pennsylvania. (In all footnotes, groups of States are listed in alphabetical order.)
[5]California, Florida, Georgia, and Texas.

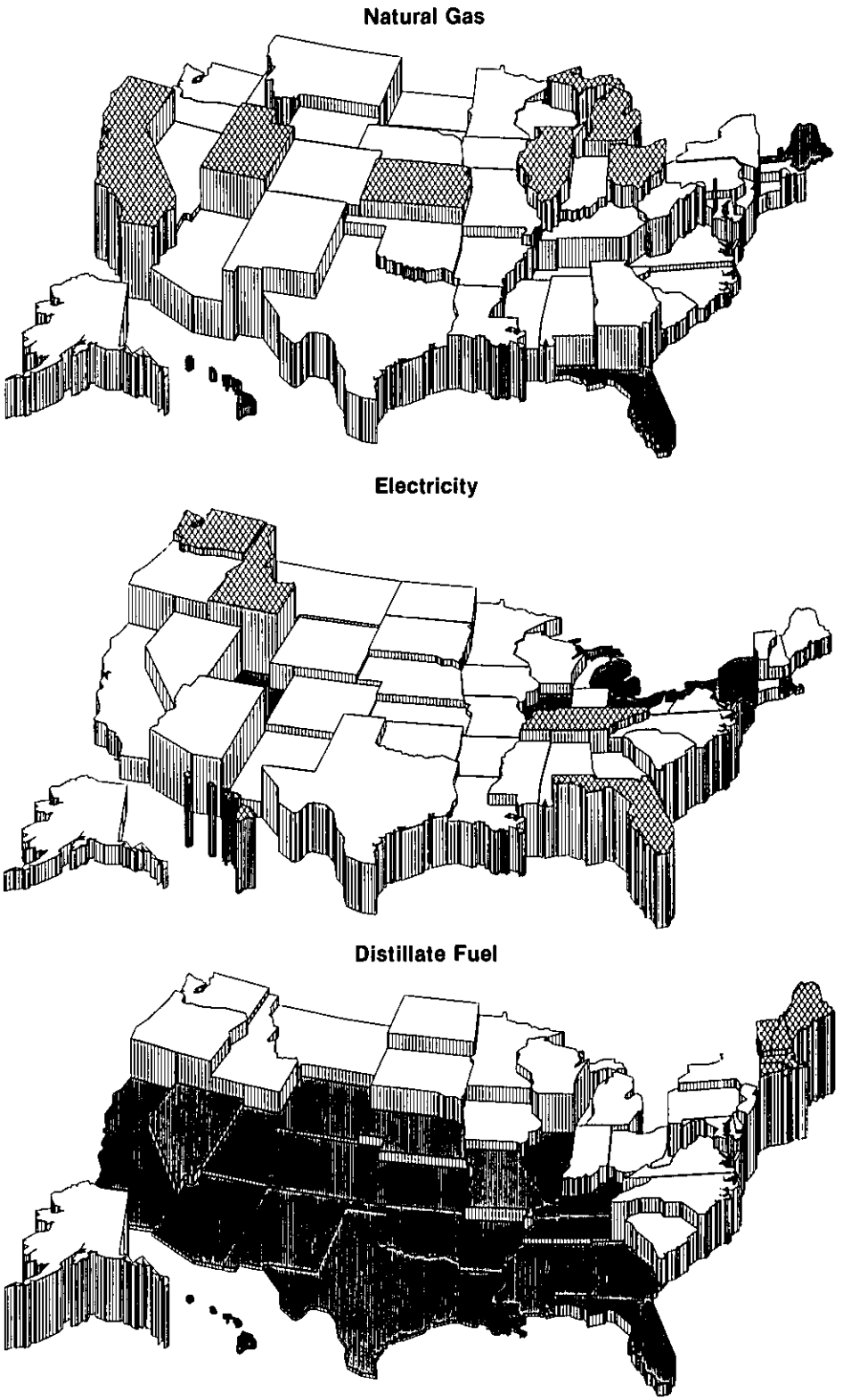
[6]The three remaining residential fuels included in the data bases under review—liquefied petroleum gases (LPG), kerosene, and coal—collectively accounted for only 6 percent of total residential consumption, on a national basis. In order to clarify consumption and price patterns involving the three predominant fuels, this analysis does not review patterns involving the three less predominant fuels. In 12 States, however, LPG, kerosene, and coal accounted for 10 to 20 percent of total direct-use consumption, with LPG accounting for 10 to 16 percent of total direct-use consumption in 4 States (Hawaii, Mississippi, South Dakota, and Wyoming).
[7]Iowa and Minnesota.
[8]Indiana, Missouri, Montana, Nebraska, West Virginia, and Wisconsin.
[9]All of New England plus New Jersey.
[10]Arizona, Florida, Hawaii, Idaho, North Carolina, Oregon, South Carolina, Tennessee, and Washington.

Table 2. Residential Energy Consumption Statistics by Fuel Share, 1981 (Percent of Total Direct-Use Consumption)

Statistical Measure (Unweighted)	Natural Gas	Electricity	Distillate Fuel
Univariate Statistics			
Minimum	1 (Maine)	15 (Michigan; New York)	0 (12 States)
Maximum	79 (Illinois)	79 (Florida)	69 (Maine)
Mean	45	33	14
Median	49	27	8
Standard Deviation	20	16	17
Correlation Coefficients (with 1981 fuel shares)			
Natural Gas	1.00	−0.54	−0.56
Electricity	−0.54	1.00	−0.37
Distillate Fuel	−0.56	−0.37	1.00

Note: • Statistics are based on estimates of direct-use consumption in the 50 States and the District of Columbia. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Figure 2. Residential Energy Consumption by Fuel Share, 1981



Note: • Each prism map has been individually scaled, as specified in Table 2, in order to highlight marginal differences in the variable values presented on that map. On each map, the lowest variable value is always represented as having no elevation, and the highest as having the maximum elevation. As a result, regional patterns stand out in high relief. • States having the five highest values are identified by cross-hatching. States having the five lowest values are identified by dark shading. • More than 10 States may be distinctively marked, since more than 1 State may have the same value at the level of precision used in preparing the prism map (no decimal places). Some States having relatively low values may be concealed by States having relatively higher values. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

dependent on electricity. Most of these 16 States were also over 20 percentage points less dependent than the profile on natural gas (as were 2 additional States[11]); however, 3 States[12] were over 20 percentage points more dependent on natural gas.

Fuel Prices

An important perspective on these differing State fuel-share patterns (based on 1981 estimates) can be obtained by reviewing them in the context of differing State price patterns (based on 1980 estimates, the most recent year for which price estimates of similar consistency and comprehensiveness are available).

In 1980, for the Nation as a whole, the most expensive energy source in the residential sector (on a Btu basis) was electricity, which was roughly twice as expensive as distillate fuel, while distillate fuel was roughly twice as expensive as natural gas. The specific fuel-price profile (1980 dollars per million Btu) for natural gas, electricity, and distillate fuel was 3.60—15.70—7.04. However, for reasons previously noted, the State counterparts of these national statistics exhibited a wide range of values (Table 3 and Figure 3).

No States were within 5 percent of the national residential fuel-price profile with respect to all three fuels, and only seven States[13] were within 10 percent of the profile for all three fuels. (Only two[14] of the seven were also within 10 percentage points of the national fuel-share profile.) In contrast, 28 States had fuel-price profiles that differed from the national profile by more than 20 percent with respect to at least one of the three fuels.

[11]North Dakota and Virginia.
[12]Illinois, Michigan, and Utah.

[13]Alabama, Colorado, Missouri, Nevada, Ohio, Texas, and Wisconsin.
[14]Missouri and Wisconsin.

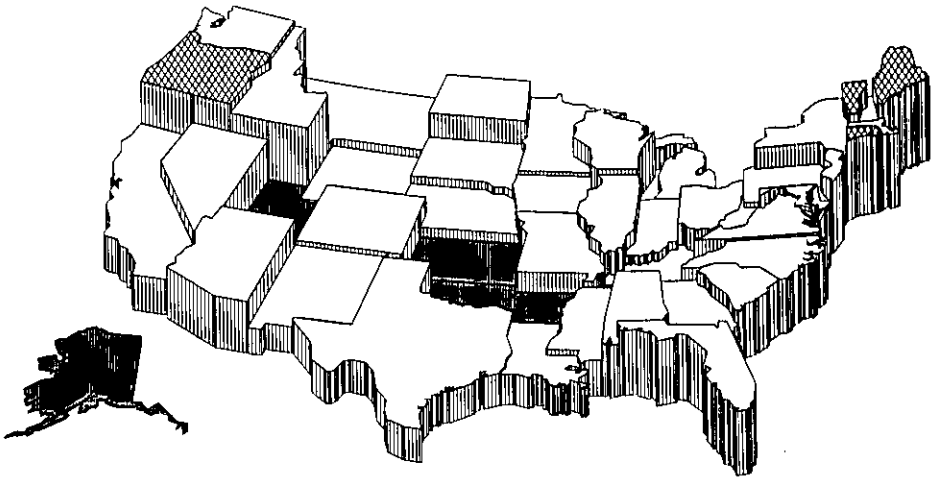
Table 3. Residential Energy Price Statistics by Major Energy Source, 1980 (1980 Dollars per Million Btu)

Statistical Measure (Unweighted)	Natural Gas	Electricity	Distillate Fuel
Univariate Statistics			
Minimum	1.73 (Alaska)	5.60 (Washington)	6.47 (Texas)
Maximum	6.29 (Vermont)	24.93 (New Jersey)	7.39 (District of Columbia)
Mean	3.80	15.59	6.94
Median	3.57	14.98	6.93
Standard Deviation	1.02	4.21	0.20
Correlation Coefficients (with 1980 fuel prices)			
Natural Gas	1.00	0.38	0.61
Electricity	0.38	1.00	0.17
Distillate Fuel	0.61	0.17	1.00
Correlation Coefficients (with 1981 fuel shares)			
Natural Gas	−0.67	−0.03	−0.31
Electricity	0.06	−0.40	−0.18
Distillate Fuel	0.72	0.45	0.54

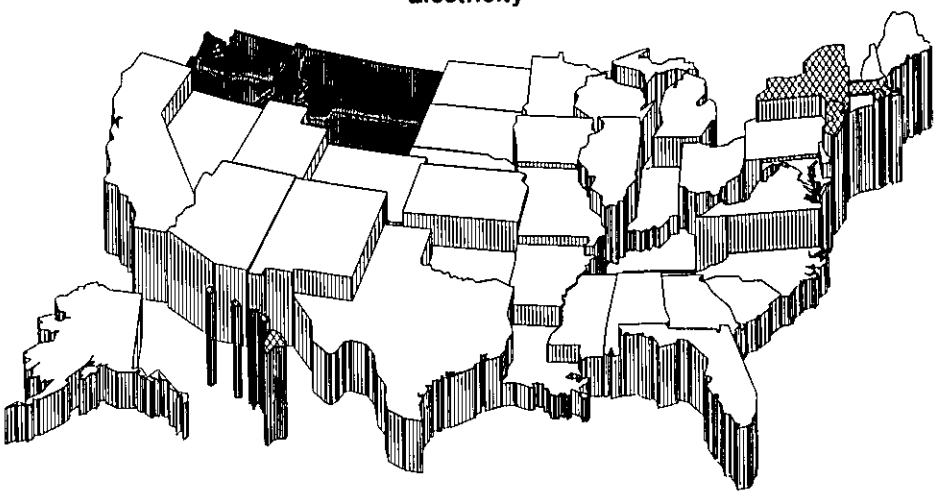
Note: • Statistics are based on the 50 States plus the District of Columbia, except that calculations involving natural gas price omit Hawaii. Direct comparisons between the price of Hawaii's synthetic natural gas (SNG) and the price of natural gas consumed in other regions may be misleading, because in Hawaii, the relatively small quantity of natural gas delivered to consumers consists entirely of high-cost SNG. In 1980, the price of natural gas to residential consumers in Hawaii was $13.49 per million Btu (Energy Information Administration, *Natural Gas Annual 1980*, DOE/EIA-0131(80), Washington, D.C., February 1982, p. 36). • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Figure 3. Residential Energy Prices by Major Energy Source, 1980

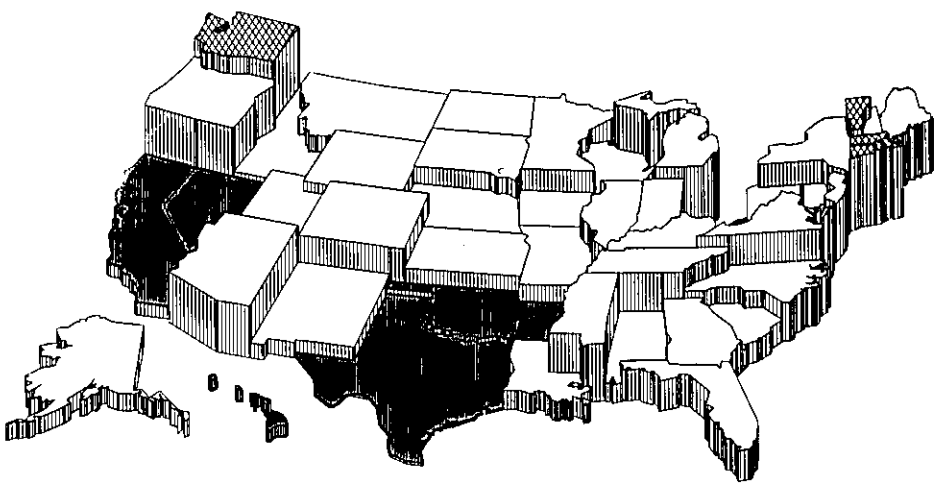
Natural Gas



Electricity



Distillate Fuel



Note: • Each prism map has been individually scaled, as specified in Table 3, in order to highlight marginal differences in the variable values presented on that map. On each map, the lowest variable value is always represented as having no elevation, and the highest as having the maximum elevation. As a result, regional patterns stand out in high relief. • States having the five highest values are identified by cross-hatching. States having the five lowest values are identified by dark shading. • More than 10 States may be distinctively marked, since more than 1 State may have the same value at the level of precision used in preparing the prism map (two decimal places). Some States having relatively low values may be concealed by States having relatively higher values. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Differing relative fuel-price patterns within each State (that is, the ratio of one fuel price to another within each State) also provide an important perspective on differing State fuel-share patterns (Table 4 and Figure 4). The price of distillate fuel, for example, was high in the New England States as compared to most other States. However, the price of distillate fuel relative to the price of natural gas or electricity was low in the New England States as compared to most other States. This helps explain why the distillate fuel share of residential energy consumption was comparatively high in New England.

Groups of Similar States

Figures 1 through 4 reveal a wide range of complex patterns in the State counterparts of the selected national energy statistics. To render these patterns more intelligible, these 51 entities may be grouped in many ways, depending on the judgment of the analyst doing the grouping—that is, depending on which data are selected and which procedures are followed in grouping the data.

Figure 5 summarizes the results of a grouping based on similarities in fuel-share profiles.[15] In general, this grouping shows that in 1981 the Northeast tended to be distinctively characterized by its predominant use of distillate fuel and the Northwest and Southeast by their predominant use of electricity; in contrast, the Southwest, Great Plains, and Great Lakes regions tended to make relatively more extensive use of natural gas.

For the most part, groups of similar States were contiguous, but there were some notable exceptions—in particular, the group making use of electricity. Inspection of Figures 3 and 4 suggests that groupings based on similarities in fuel-price and relative fuel-price profiles would also be likely to contain groups comprised of contiguous and noncontiguous States.

[15]The methodology used to produce this grouping is briefly described in the analytic note.

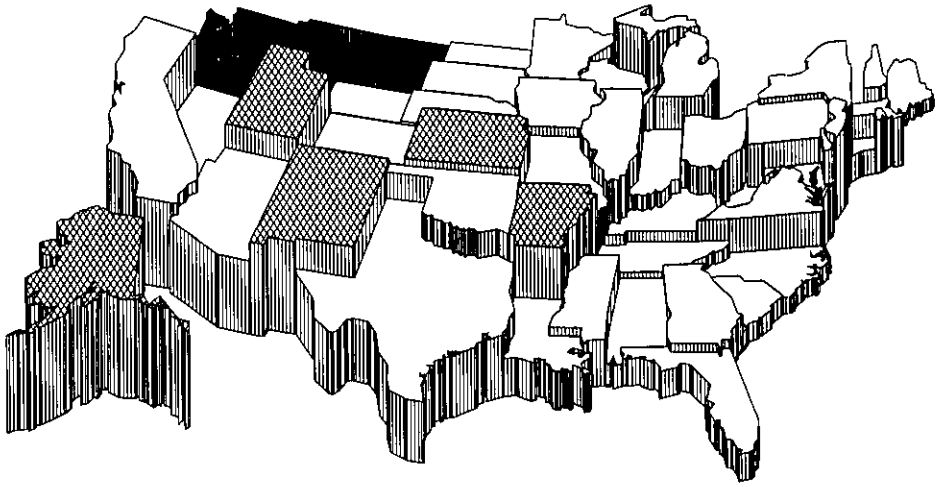
Table 4. Residential Energy Price Ratio Statistics, 1980

Statistical Measure (Unweighted)	Electricity to Natural Gas	Electricity to Distillate Fuel	Distillate Fuel to Natural Gas
Univariate Statistics			
Minimum	1.1 (Washington)	0.8 (Washington)	1.1 (Maine)
Maximum	8.0 (Alaska)	3.7 (Hawaii)	3.9 (Alaska)
Mean	4.2	2.2	1.9
Median	4.1	2.2	1.9
Standard Deviation	1.2	0.6	0.5
Correlation Coefficients (with 1980 fuel-price ratios)			
Electricity/Natural Gas	1.00	0.50	0.66
Electricity/Distillate Fuel	0.50	1.00	−0.30
Distillate Fuel/Natural Gas	0.66	−0.30	1.00
Correlation Coefficients (with 1980 fuel prices)			
Natural Gas	−0.59	0.32	−0.92
Electricity	0.45	0.99	−0.34
Distillate Fuel	−0.36	0.06	−0.47
Correlation Coefficients (with 1981 fuel shares)			
Natural Gas	0.59	0.00	0.55
Electricity	−0.52	−0.37	−0.13
Distillate Fuel	−0.15	0.39	−0.51

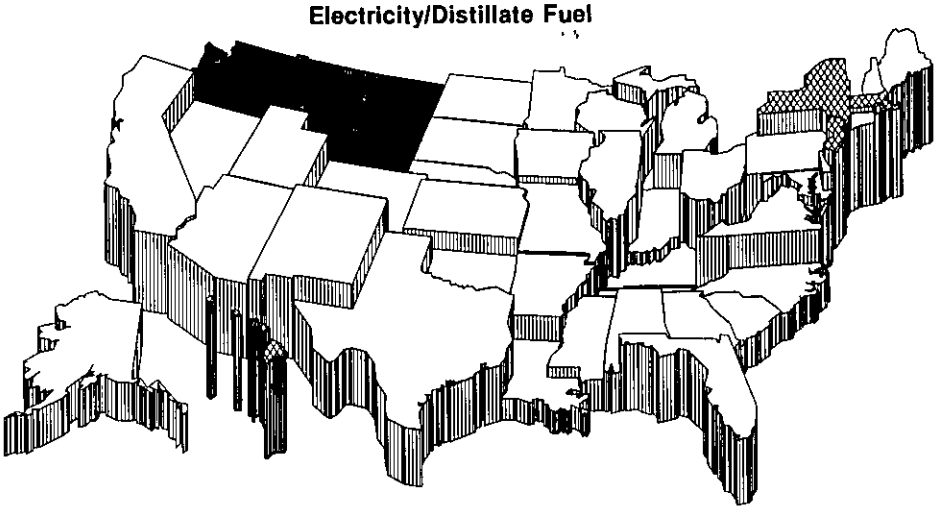
Note: • Statistics are based on the 50 States plus the District of Columbia, except that calculations involving natural gas price omit Hawaii. Direct comparisons between the price of Hawaii's synthetic natural gas (SNG) and the price of natural gas consumed in other regions may be misleading, because in Hawaii, the relatively small quantity of natural gas delivered to consumers consists entirely of high-cost SNG. In 1980, the price of natural gas to residential consumers in Hawaii was $13.49 per million Btu (Energy Information Administration, *Natural Gas Annual 1980*, DOE/EIA-0131(80), Washington, D.C., February 1982, p. 36). • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Figure 4. Residential Energy Price Ratios, 1980

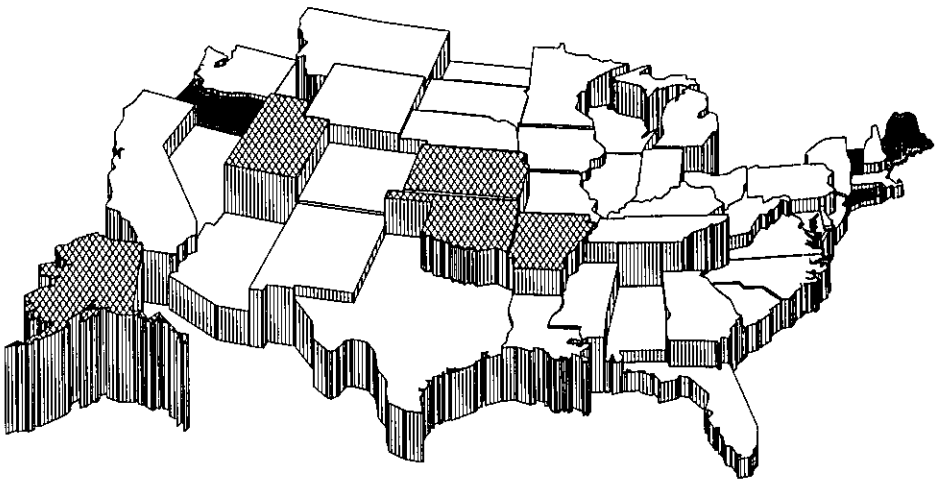
Electricity/Natural Gas



Electricity/Distillate Fuel



Distillate Fuel/Natural Gas



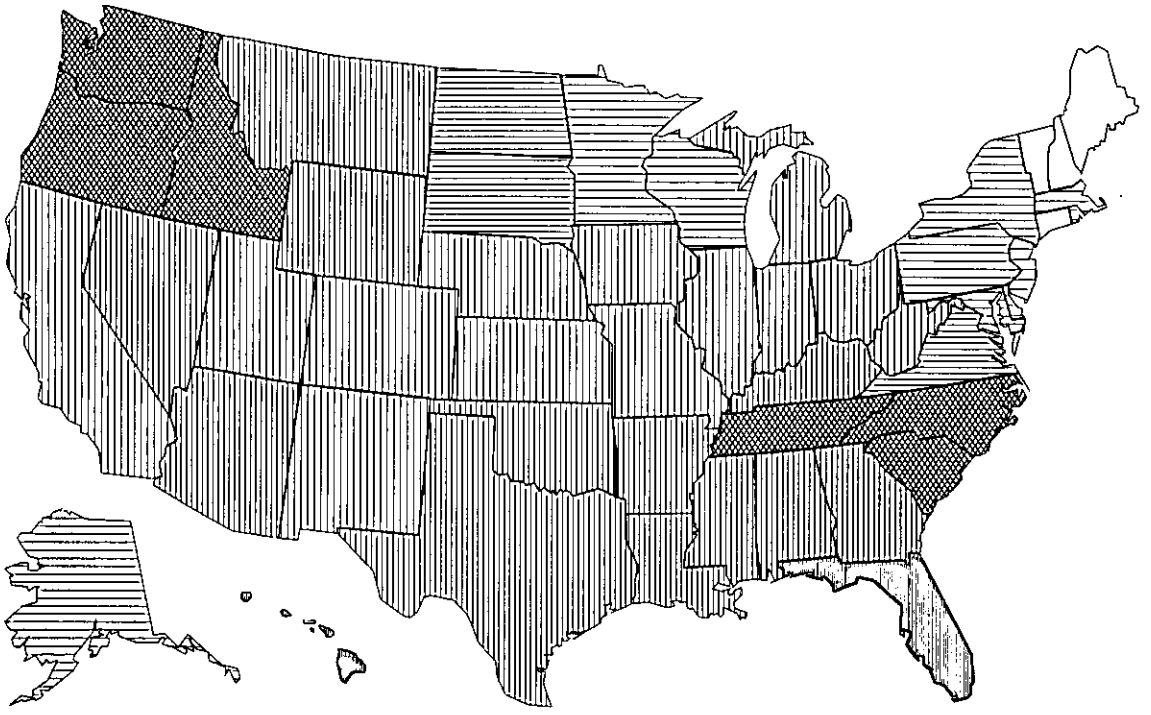
Note: • Each prism map has been individually scaled, as specified in Table 4, in order to highlight marginal differences in the variable values presented on that map. On each map, the lowest variable value is always represented as having no elevation, and the highest as having the maximum elevation. As a result, regional patterns stand out in high relief. • States having the five highest values are identified by cross-hatching. States having the five lowest values are identified by dark shading. • More than 10 States may be distinctively marked, since more than 1 State may have the same value at the level of precision used in preparing the prism map (two decimal places). Some States having relatively low values may be concealed by States having relatively higher values. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

Many of the groupings commonly used in energy analyses, however, are comprised almost entirely of contiguous areas (Figure 6). In many cases, these commonly used groupings combine States with widely disparate fuel-share profiles (or fuel-price and relative fuel-price profiles). For example, four of the five groupings combine California with Washington and Oregon—and three also add Alaska and Hawaii to the same region. Other groupings combine States as disparate (in terms of the analysis presented in Figure 5) as Florida and Virginia or Idaho and Colorado. As a consequence of these disparities, the range of State-level variation in some regions shown in Figure 6 is almost as great as the State variation in the United States as a whole.

Conclusions

In general, the State counterparts of the national energy statistics reviewed in this article exhibited marked heterogeneity. Because of this disaggregated diversity, it is clear that for many purposes, the selected national statistics (taken by themselves) may provide evidence that is only marginally relevant to analysis of energy markets that are essentially regional in character.

Figure 5. Groups of States by Fuel Shares[1]



[1] Based on major fuel consumption as a percentage of total direct-use fuel consumption in the residential sector in 1981.
Note: • The methodology used to produce this grouping is briefly described in the analytic note. • Refer to glossary for definitions of selected terms and to analytic note for source citations.

For example, the national fuel-share profile in 1981 was significantly different from the corresponding fuel-share profiles for most States. In other words, the relative dependence of most States on various fuels to meet the needs of their residential sectors was not approximated by the relative dependence of the Nation as a whole. Most States were significantly more dependent on one fuel or another than these national statistics would suggest.

To the extent that there are physical or economic impediments to the free movement of fuels among the States, these large State differences in energy use and prices are likely to have important policy implications. In particular, assessments of U.S. vulnerability to energy supply disruptions may be seriously misleading if those assessments are based solely on the analysis of national statistics, without taking into consideration the wide range of State variation associated with them. For certain purposes, the Nation's overall vulnerability may be better assessed in terms of its area of greatest vulnerability rather than in terms of its average vulnerability. For example, in 1981, the residential sectors of most New England States were more than 50 percent dependent on distillate fuel, although the Nation's overall residential sector was only 13 percent dependent on distillate

Figure 5. Groups of States by Fuel Shares (continued)

Legend

(Percentage of Total Direct-Use Residential Consumption)

Predominant Distillate Fuel

State	Natural Gas	Electricity	Distillate Fuel
Connecticut	24	21	53
Maine	1	23	69
New Hampshire	12	23	55
Vermont	6	27	55
Mean	**11**	**24**	**58**

Significant Natural Gas With More Distillate Fuel and Roughly Equal Distillate Fuel and Natural Gas

Delaware	33	23	29
Massachusetts	39	16	43
New Jersey	43	16	39
Rhode Island	40	17	41
Mean	**39**	**18**	**38**

Electricity

Alaska	46	24	30
Maryland	45	26	25
Minnesota	55	23	16
New York	51	15	30
Pennsylvania	50	18	24
Wisconsin	53	22	20
Mean	**50**	**21**	**24**

Roughly Equal Natural Gas and Electricity

North Dakota	32	32	22
South Dakota	38	32	15
Virginia	31	42	19
Mean	**34**	**35**	**19**

Significant Natural Gas With Less Distillate Fuel and Less Electricity

California	72	26	0
Colorado	67	25	0
District of Columbia	69	18	8
Illinois	79	16	2
Indiana	60	24	9
Iowa	56	24	8
Kansas	70	24	0

Significant Natural Gas With Less Distillate Fuel and Less Electricity *(continued)*

State	Natural Gas	Electricity	Distillate Fuel
Michigan	74	15	9
Missouri	61	26	4
Nebraska	63	27	3
New Mexico	68	22	0
Ohio	70	20	6
Utah	78	16	1
West Virginia	59	28	6
Mean	**68**	**22**	**4**

More Electricity

Alabama	44	46	0
Arizona	44	53	0
Arkansas	55	36	0
Georgia	53	39	1
Kentucky	53	34	2
Louisiana	56	41	0
Mississippi	42	47	0
Montana	57	32	5
Nevada	48	43	3
Oklahoma	57	37	0
Texas	49	45	0
Wyoming	49	30	1
Mean	**51**	**40**	**1**

Predominant Electricity With Less Natural Gas and Distillate Fuel

Florida	8	79	3
Hawaii	14	70	0
Mean	**11**	**75**	**2**

More Natural Gas and Distillate Fuel

Idaho	24	61	9
North Carolina	20	49	19
Oregon	22	56	18
South Carolina	24	54	10
Tennessee	31	60	2
Washington	18	65	12
Mean	**23**	**58**	**12**

fuel. In the event of another foreign oil disruption, this much greater dependency would be of significant consequence not only to the wellbeing of those New England States but also to the well being of the Nation as a whole.

This example and others suggest that, in general, considerable caution should be exercised in drawing conclusions from national statistics alone. Such statistics may, by default, seem to imply a degree of homogeneity among States that may not, in fact, exist and whose nonexistence, for certain analytic purposes, may be highly significant. Because even regional statistics may encompass a wide range of State heterogeneity, similar caution should also be exercised in drawing conclusions from regional statistics.

As noted at the beginning of this article, the degree of disaggregation required for a given analysis depends on both the nature of the phenomena described by the statistics used in the analysis and the purpose for which the analysis itself is to be used. In addition, the quality of available statistics must also be taken into account—including their timeliness and reliability and the extent to which they measure phenomena that exactly correspond to the phenomena for which measures are sought. Sometimes, analytic approximations or compromises must be considered. For example, for some analyses, relevant statistics may not be available at an ideal level of disaggregation, because limited resources constrain the appropriate statistical agency to collecting data only at a more aggregate level.

Not all analyses should use State estimates. For some analyses, national data may provide insights that are more than the sum of State-level parts; for others, even State estimates may be too highly aggregated. Determining the suitability of the evidence presented in support of a given analysis requires careful judgment. In turn, this judgment must be informed by an awareness and understanding of the potentially heterogeneous components of the statistics that are actually used in the analysis.

Analytic Note

The preceding analysis is based on the most recently published State consumption estimates available from EIA's State Energy Data System (SEDS) and State price estimates available from EIA's Energy Price and Expenditure Data System (EPEDS).

The most recent SEDS estimates are published in EIA's *State Energy Data Report: 1960 through 1981*, DOE/EIA-0214(81) (Washington, D.C., June 1983). The most recent EPEDS estimates are published in EIA's *Energy Price and Expenditure Data Report, 1970-1980 (State and U.S. Total)*, DOE/EIA-0376 (Washington, D.C., July 1983). Both publications include extensive appendixes describing their data sources and methodologies. In addition, the EPEDS publication includes a review of significant limitations in both sets of data (Appendix C). These publications are available from the following sources:

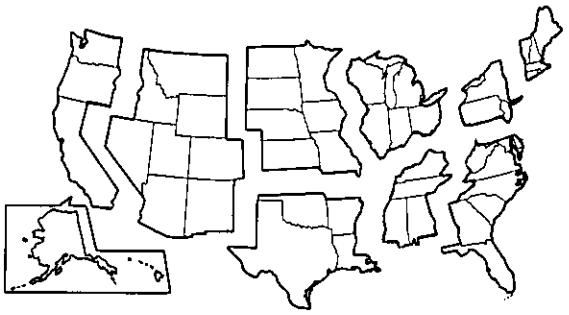
- National Energy Information Center, EI-20
  Energy Information Administration
  Room 1F-048, Forrestal Building
  Washington, D.C. 20585
  (202) 252-8800

- Superintendent of Documents
  U.S. Government Printing Office
  Washington, D.C. 20402
  (202) 783-3238

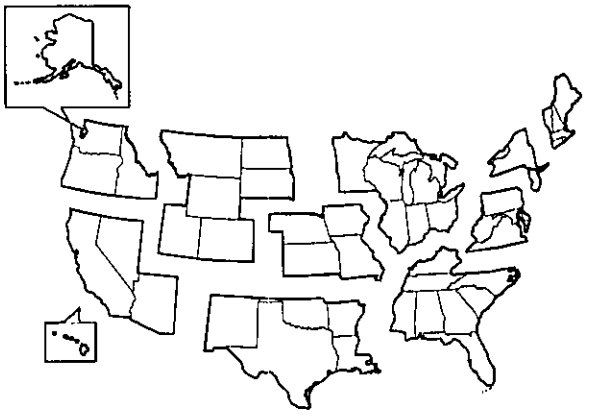
Magnetically encoded copies of both data bases, intended for computer-assisted public use, may be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161. The NTIS order number for the SEDS file is PB83-229351, and the NTIS order number for the EPEDS file is PB83-244400.

The cluster analysis summarized in Figure 5 was performed by first standardizing the data pertaining to each of the three fuel-share variables presented to a mean of zero and a standard deviation of one, in order to emphasize interfuel differences by giving equal weight to each energy source.

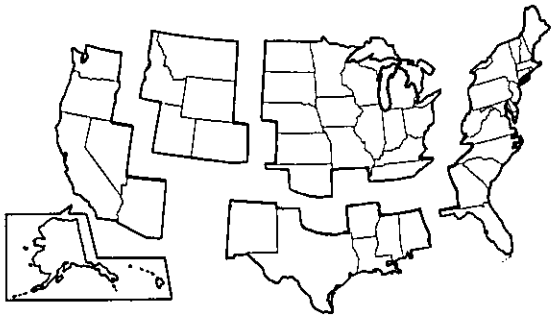
Figure 6. Regional Groupings Commonly Used in Energy Analysis



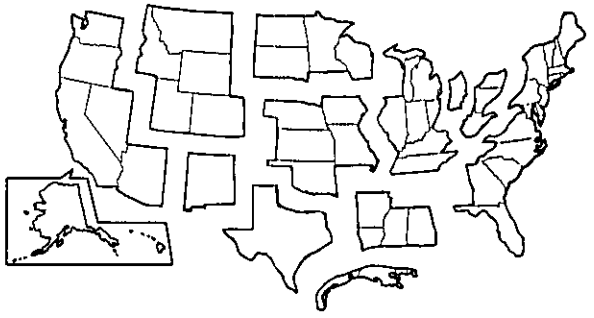
U.S. Census Regions and Divisions



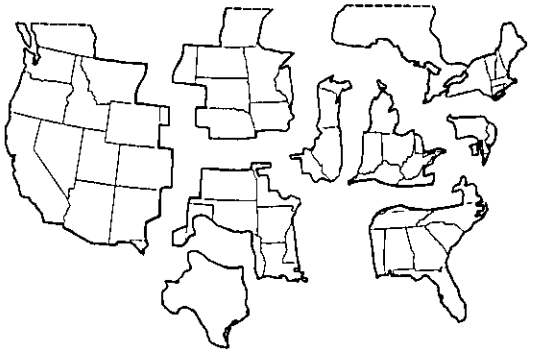
Standard Federal Administrative Regions



Petroleum Administration for Defense Districts



Bureau of Mines Refining Districts



Regional Electric Reliability Council Areas

Then the two most similar geographic entities were iteratively merged until the 51 original entities were reduced to 8, an arbitrary termination point chosen to facilitate comparison with the regional groupings presented in Figure 6. Similarity was measured inversely by the average squared mathematical "distance" between pairs of observations (one in each geographic entity), a procedure biased in favor of producing clusters with roughly the same variance.

Additional perspectives on residential energy consumption by State are presented in the following EIA publications:

- *State Energy Data Report Supplement, 1960 through 1981*, DOE/EIA-0214 (81)S (Washington, D.C., June 1983)
- *State Energy Overview*, DOE/EIA-0354(82) (Washington, D.C., October 1983)
- *State Energy Price System, Volume I: Overview and Technical Documentation* and *Volume II: Data Base Development*, DOE/NBB-0029 (Washington, D.C., November 1982).

The EIA also compiles information on residential energy consumption by region, using significantly different (and in many respects, more detailed) data collection procedures. These procedures, known collectively as the Residential Energy Consumption Survey (RECS) Series, were discussed in the article "Residential Energy Consumption, 1978 Through 1981," published in the September 1983 issue of the *Monthly Energy Review*. A bibliography of related EIA publications is included in the most recent RECS publication:

- *Consumption and Expenditures, April 1981 Through March 1982: Part 2 Regional Data*, DOE/EIA-0321/2(81) (Washington, D.C., November 1983).

Glossary

Cluster Analysis. Any of various analytic procedures intended to place objects into groups (clusters) suggested by the data describing them (rather than defined a priori), so that objects in a given cluster tend to be similar to each other in some specified sense, and objects in different clusters tend to be dissimilar. See the analytic note for the procedure used in this analysis.

Correlation Coefficient. A measure of the similarity (and potential interrelationship) between two sets of values, paired with each other. The maximum value of +1.00 indicates that higher values of one set are perfectly paired with higher values of the other (as measured by this statistic) and lower values of one set perfectly paired with lower values of the other. The minimum value of −1.00 indicates that higher values of one set are perfectly paired with lower values of the other, and lower values of one set with higher values of the other. A value of 0.00 indicates that there is no consistent pairing relationship, as measured by this statistic; however, other types of statistics may or may not reveal more subtle pairing relationships between the same sets of values.

Direct Energy Consumption. Energy consumption by final users. (In most cases, consumption estimates are based on energy deliveries and sales data.) For example, direct natural gas consumption in the residential sector includes natural gas consumed directly by private household establishments but excludes natural gas first converted into electricity by electric utilities and subsequently consumed in the form of electricity by private household establishments. In 1981, 8.7 quadrillion Btu of total energy were directly consumed by the Nation's residential sector, but 14.6 quadrillion Btu were directly and indirectly consumed, after various transmission, conversion, and distribution losses were taken into account. See **Total Energy Consumption.**

Fuel Share. A specific energy source's percentage share of total direct energy consumption (in the residential sector, in this analysis). See **Total Energy Consumption** and **Direct Energy Consumption.**

Mean. The arithmetic average of a set of values. If the mean of a set of values does not equal its median, then the set's values are not symmetrically distributed with respect to its mean; for example, if a set's mean is significantly higher than its median, then the set may contain a relatively small number of relatively high values. If its mean equals its median, then the set's values may or may not be symmetrically distributed with respect to its mean. See **Median.**

Median. The middle value (or midpoint between two middle values) in a set of values arranged in order of increasing or decreasing magnitude. In the case of sets containing a relatively small number of relatively high or low values, the median may provide a more representative measure than the mean of most values in the set. See **Mean.**

Residential Sector Energy Consumption. Energy consumed directly by private household establishments (excluding apartments), primarily for space heating, water heating, air conditioning, cooking, and clothes drying. See **Direct Energy Consumption.**

Standard Deviation. A measure of the spread of a set of values around its arithmetic average. The smaller the standard deviation, the more tightly the set of values is generally clustered around its mean; the larger the standard deviation, the wider the general distribution of the set of values around its mean. The standard deviation is expressed in the same units as the set of values it measures; hence, in general, the standard deviation may be applicable in comparing sets that are expressed in the same units but should be avoided in comparing sets not expressed in the same units.

Total Energy Consumption. Energy consumed directly (in the residential sector, in this analysis) from the three predominant fuels reviewed in this article (natural gas, electricity, and distillate fuel), plus liquefied petroleum gases, kerosene, and coal (see footnote 6). Excludes consumption of energy sources for which consistent historical data are not available, such as fuelwood and solar thermal energy (as discussed in the sources cited at the end of this article). See **Direct Energy Consumption.**

Univariate Statistics. Summary numbers describing a set of values assumed by a single variable. In contrast, multivariate statistics (for example, correlation coefficients) describe relationships involving sets of values assumed by more than one variable.

Unweighted Statistics. Summary numbers calculated by giving equal weight to each value in the set of values being summarized. For example, the unweighted mean pertaining to the natural gas fuel shares presented in Table 2 was calculated by summing the relevant fuel shares for each of the 50 States and the District of Columbia and then dividing the sum by 51. This procedure gives equal weight to each State (regardless of total direct fuel consumption) in order to calculate a summary number more representative of the natural gas fuel share for most States than the weighted mean (which, by giving proportionately more weight to States with proportionately more total direct fuel consumption, appropriately measures the natural gas fuel share for the United States as a whole). In this example, the unweighted mean is 45 percent, whereas the weighted mean is 53 percent.

Note: These definitions have been prepared specifically for this article and are purposely informal. For more formal definitions, either standard statistical texts or the sources cited at the end of this article should be consulted, as appropriate.

Part 1 Executive Summary

Overview

January through November Summary

The United States produced 4.8 percent* less energy during the first 11 months of 1983 than during the same period in 1982, and U.S. energy consumption was down 1.8 percent. Net imports of all energy were 8.4 percent higher, but net imports of petroleum were down 2.6 percent compared to the first 11 months of 1982.

Production

Energy production during November 1983 totaled 5.2 quadrillion Btu, a 2.6-percent increase compared to the level of production during November 1982. Coal production increased 10.9 percent while natural gas production fell 3.3 percent and petroleum production fell 0.6 percent. Production of all other forms of energy combined increased 6.9 percent compared to production 1 year earlier.

*All percentage increases/decreases are calculated using a daily rate prior to rounding.

Consumption

Energy consumption during November 1983 totaled 6.0 quadrillion Btu, 2.5 percent above the level of consumption during November 1982. Coal consumption increased 6.9 percent and petroleum consumption was up 3.5 percent. Natural gas consumption decreased 3.9 percent. Consumption of all other forms of energy combined increased 6.7 percent compared to consumption during November 1982.

Net Imports

Net imports of energy during November 1983 totaled 0.7 quadrillion Btu, 5.5 percent below the level of imports during November 1982. Net imports of natural gas decreased 12.8 percent, and net imports of petroleum decreased 9.6 percent. Net exports of coal were down 24.8 percent compared to the level in November 1982.

Energy Summary
(Quadrillion (10^{15}) Btu)

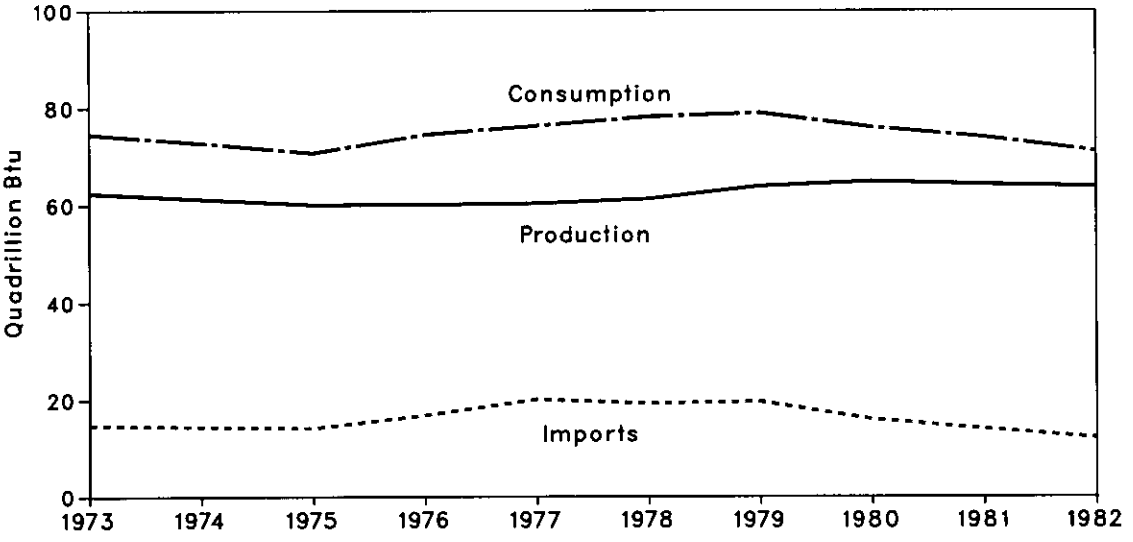
	November			Cumulative January through November				
	1983	1982	Percent Change	1983	1983 Daily Rate	1982	1982 Daily Rate	Percent Change[1]
Total Production	**5.216**	**5.082**	**+2.6**	**55.744**	**0.167**	**58.565**	**0.175**	**-4.8**
Petroleum[2]	1.693	1.703	-0.6	18.832	0.056	18.789	0.056	+0.2
Natural Gas	1.389	1.436	-3.3	14.633	0.044	16.555	0.050	-11.6
Coal	1.590	1.434	+10.9	16.104	0.048	17.349	0.052	-7.2
Other[3]	0.544	0.509	+6.9	6.174	0.018	5.872	0.018	+5.1
Total Consumption	**5.971**	**5.827**	**+2.5**	**63.576**	**0.190**	**64.750**	**0.194**	**-1.8**
Petroleum[4]	2.539	2.453	+3.5	27.375	0.082	27.800	0.083	-1.5
Natural Gas	1.538	1.601	-3.9	15.226	0.046	16.703	0.050	-8.8
Coal	1.324	1.239	+6.9	14.516	0.043	14.099	0.042	+3.0
Other[5]	0.570	0.534	+6.7	6.459	0.019	6.148	0.018	+5.1
Net Imports	**0.724**	**0.767**	**-5.5**	**7.389**	**0.022**	**6.819**	**0.020**	**+8.4**
Petroleum[6]	0.774	0.856	-9.6	8.147	0.024	8.363	0.025	-2.6
Natural Gas	0.076	0.087	-12.8	0.799	0.002	0.786	0.002	+1.7
Coal[7]	(0.152)	(0.202)	(-24.8)	(1.842)	(0.006)	(2.606)	(0.008)	(-29.3)
Other[8]	0.026	0.025	+2.2	0.285	0.001	0.276	0.001	+3.1

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

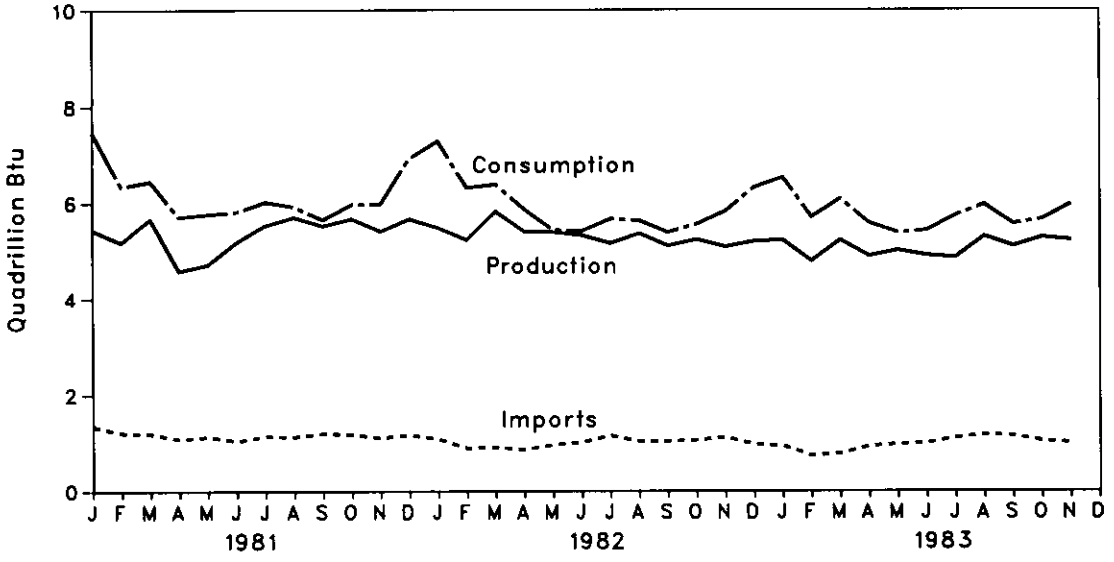
Executive Summary

Energy Summary

Yearly



Monthly



Executive Summary

Energy Summary[1]

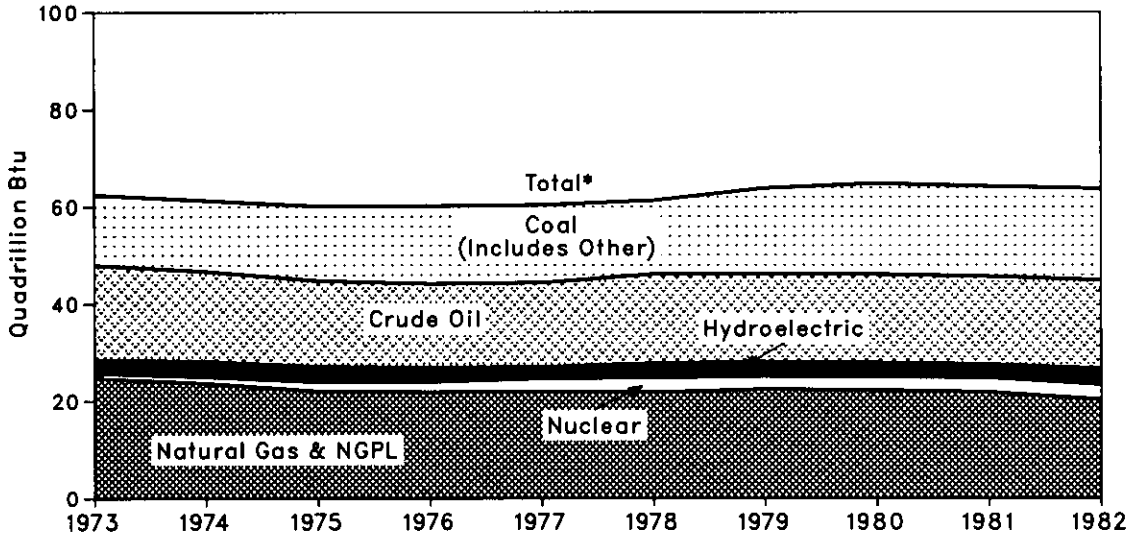
		Energy Production[2]	Energy Consumption[3]	Energy Imports[2]	Energy Exports
			Quadrillion (10^{15}) Btu		
1973	**TOTAL**	**62.433**	**74.609**	**14.732**	**2.073**
1974	**TOTAL**	**61.229**	**72.759**	**14.417**	**2.241**
1975	**TOTAL**	**60.059**	**70.707**	**14.113**	**2.389**
1976	**TOTAL**	**60.091**	**74.510**	**16.838**	**2.213**
1977	**TOTAL**	**60.293**	**76.332**	**20.092**	**2.097**
1978	**TOTAL**	**61.231**	**78.175**	**19.261**	**1.952**
1979	**TOTAL**	**63.851**	**78.910**	**19.620**	**2.900**
1980	**TOTAL**	**64.812**	**75.988**	**15.972**	**3.726**
1981	January	5.428	7.459	1.346	0.261
	February	5.169	6.331	1.210	0.278
	March	5.660	6.439	1.193	0.370
	April	4.576	5.708	1.084	0.325
	May	4.711	5.764	1.131	0.274
	June	5.180	5.816	1.041	0.246
	July	5.524	6.022	1.140	0.393
	August	5.699	5.923	1.132	0.420
	September	5.520	5.649	1.201	0.412
	October	5.671	5.972	1.179	0.466
	November	5.403	5.975	1.109	0.440
	December	5.666	6.921	1.172	0.431
	TOTAL	**64.207**	**73.979**	**13.939**	**4.318**
1982	January	5.478	7.284	1.086	0.318
	February	5.228	6.312	0.890	0.376
	March	5.828	6.379	0.915	0.442
	April	5.400	5.873	0.859	0.426
	May	5.387	5.433	0.960	0.419
	June	5.318	5.405	1.014	0.415
	July	5.156	5.669	1.154	0.385
	August	5.356	5.633	1.034	0.358
	September	5.102	5.382	1.034	0.376
	October	5.230	5.553	1.059	0.438
	November	5.082	5.827	1.117	0.351
	December	5.193	6.307	0.966	0.322
	TOTAL	**63.757**	**71.057**	**12.089**	**4.626**
1983	January	5.218	6.517	0.935	0.302
	February	4.782	5.705	0.727	0.264
	March	5.218	6.081	0.773	0.318
	April	4.888	5.581	0.930	0.311
	May	5.008	5.373	0.973	0.342
	June	4.901	5.420	0.997	0.334
	July	4.856	5.741	1.107	0.273
	August	5.293	5.965	1.171	0.346
	September	5.094	5.563	1.151	0.325
	October	5.270	5.659	R1.040	0.325
	November	5.216	5.971	1.004	0.280

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

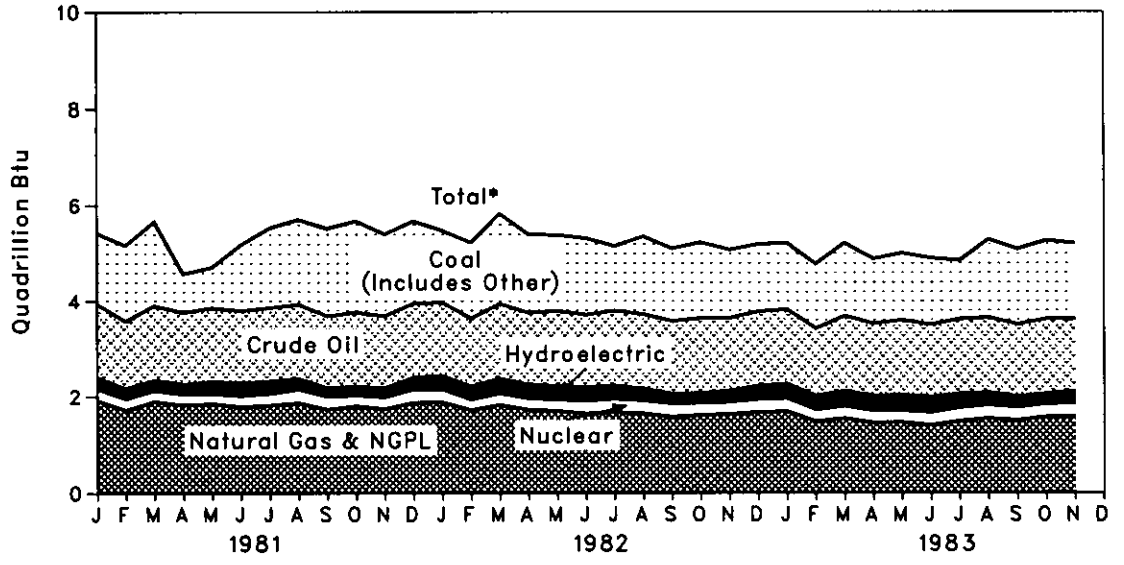
Executive Summary

Production of Energy by Source

Yearly



Monthly



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

Executive Summary

Production of Energy by Source

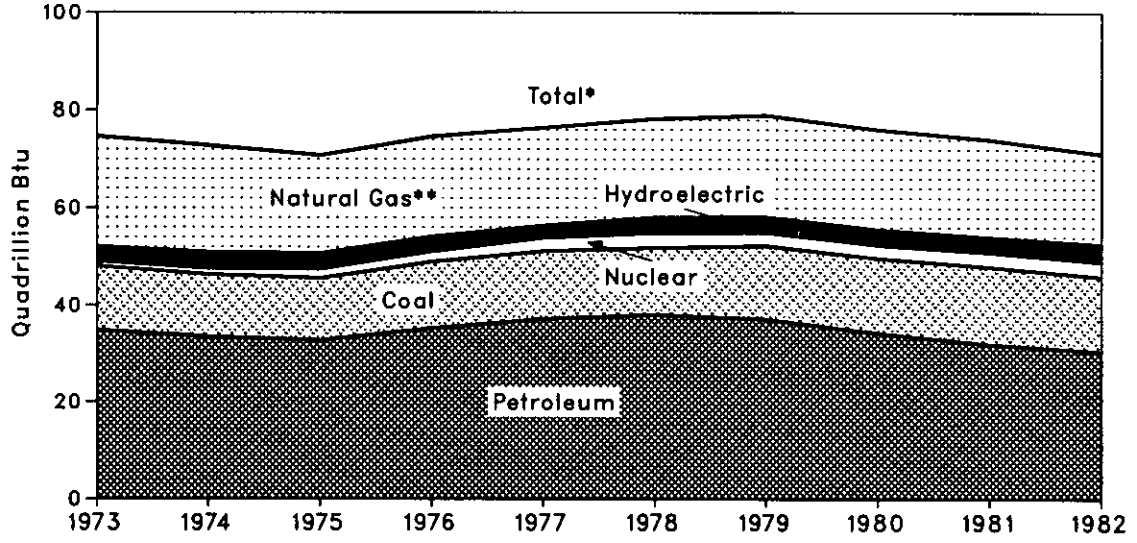
		Coal[1]	Crude Oil[2]	NGPL[3]	Natural Gas (Dry)	Hydro-electric Power[4]	Nuclear Electric Power	Other[5]	Total Energy Produced	Yearly Cumulative Energy Produced
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**14.366**	**19.493**	**2.569**	**22.187**	**2.861**	**0.910**	**0.046**	**62.433**	
1974	**TOTAL**	**14.468**	**18.575**	**2.471**	**21.210**	**3.177**	**1.272**	**0.056**	**61.229**	
1975	**TOTAL**	**15.189**	**17.729**	**2.374**	**19.640**	**3.155**	**1.900**	**0.072**	**60.059**	
1976	**TOTAL**	**15.853**	**17.262**	**2.327**	**19.480**	**2.976**	**2.111**	**0.081**	**60.091**	
1977	**TOTAL**	**15.829**	**17.454**	**2.327**	**19.565**	**2.333**	**2.702**	**0.082**	**60.293**	
1978	**TOTAL**	**15.037**	**18.434**	**2.245**	**19.485**	**2.937**	**3.024**	**0.068**	**61.231**	
1979	**TOTAL**	**17.651**	**18.104**	**2.286**	**20.076**	**2.931**	**2.715**	**0.089**	**63.851**	
1980	**TOTAL**	**18.640**	**18.249**	**2.254**	**19.916**	**2.900**	**2.739**	**0.114**	**64.812**	
1981	January	1.476	1.535	0.201	1.709	0.235	0.259	0.011	5.428	5.428
	February	1.588	1.397	0.182	1.535	0.222	0.236	0.010	5.169	10.597
	March	1.752	1.549	0.198	1.693	0.217	0.240	0.011	5.660	16.256
	April	0.812	1.489	0.188	1.633	0.218	0.225	0.010	4.576	20.833
	May	0.853	1.529	0.194	1.656	0.254	0.215	0.010	4.711	25.544
	June	1.378	1.501	0.188	1.595	0.277	0.231	0.010	5.180	30.724
	July	1.659	1.528	0.189	1.622	0.264	0.252	0.011	5.524	36.248
	August	1.764	1.543	0.197	1.664	0.227	0.294	0.011	5.699	41.947
	September	1.829	1.497	0.190	1.539	0.187	0.266	0.011	5.520	47.467
	October	1.908	1.540	0.195	1.603	0.190	0.224	0.011	5.671	53.138
	November	1.715	1.494	0.192	1.545	0.199	0.249	0.010	5.403	58.541
	December	1.709	1.544	0.194	1.676	0.251	0.284	0.010	5.666	64.207
	TOTAL	**18.443**	**18.146**	**2.307**	**19.469**	**2.741**	**2.974**	**0.127**	**64.207**	
1982	January	1.503	1.530	0.192	1.682	0.282	0.280	0.009	5.478	5.478
	February	1.593	1.413	0.172	1.542	0.280	0.220	0.008	5.228	10.706
	March	1.879	1.558	0.191	1.630	0.313	0.248	0.007	5.828	16.534
	April	1.647	1.495	0.182	1.539	0.293	0.238	0.007	5.400	21.934
	May	1.592	1.561	0.185	1.510	0.294	0.236	0.008	5.387	27.321
	June	1.606	1.504	0.178	1.465	0.294	0.262	0.010	5.318	32.639
	July	1.355	1.557	0.184	1.485	0.286	0.278	0.010	5.156	37.795
	August	1.632	1.552	0.186	1.452	0.251	0.273	0.010	5.356	43.151
	September	1.521	1.514	0.179	1.393	0.209	0.277	0.010	5.102	48.253
	October	1.586	1.565	0.186	1.421	0.207	0.254	0.011	5.230	53.483
	November	1.434	1.513	0.190	1.436	0.244	0.253	0.011	5.082	58.565
	December	1.414	1.546	0.198	1.470	0.291	0.266	0.009	5.193	63.757
	TOTAL	**18.763**	**18.309**	**2.224**	**18.024**	**3.245**	**3.084**	**0.108**	**63.757**	
1983	January	1.390	1.552	0.203	1.480	0.308	0.274	0.011	5.218	5.218
	February	1.354	1.406	0.174	1.304	0.293	0.242	0.008	4.782	10.000
	March	1.533	1.560	0.188	1.349	0.318	0.261	0.010	5.218	15.218
	April	1.357	1.511	0.177	1.275	0.315	0.244	0.009	4.888	20.106
	May	1.410	1.561	0.181	1.281	0.327	0.241	0.007	5.008	25.114
	June	1.395	1.510	0.179	1.222	0.322	0.264	0.010	4.901	30.015
	July	1.229	1.555	0.187	1.299	0.294	0.279	0.012	4.856	34.870
	August	1.633	1.556	0.190	1.349	0.271	0.279	0.016	5.293	40.164
	September	1.573	1.508	0.188	1.311	0.228	0.271	0.014	5.094	45.257
	October	1.639	1.556	0.195	1.374	0.217	0.273	0.015	5.270	50.528
	November	1.590	1.501	0.193	1.389	0.259	0.272	0.013	5.216	55.744

[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.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

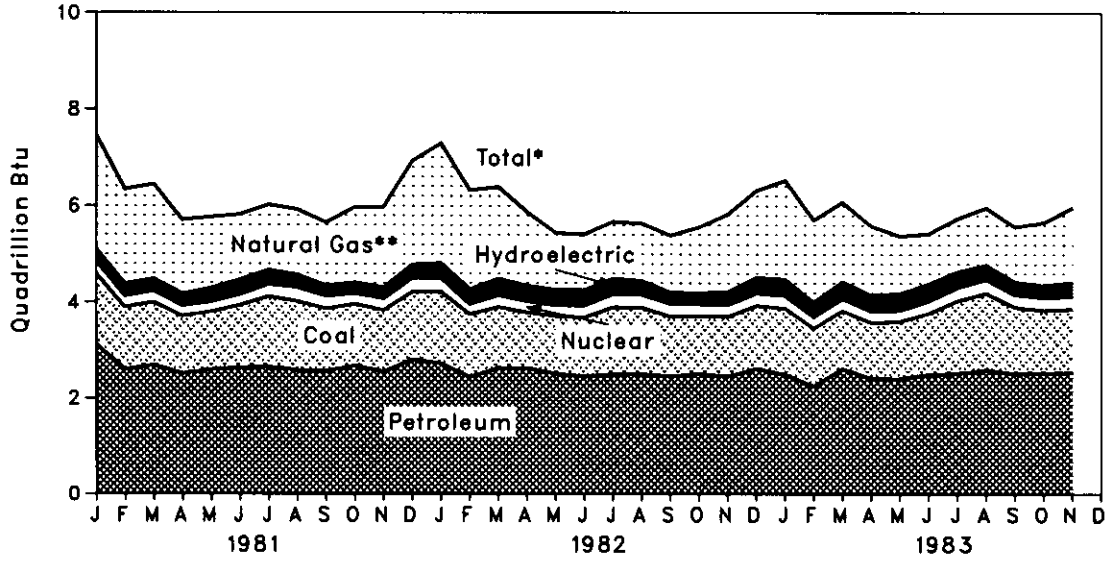
Executive Summary

Consumption of Energy by Source

Yearly



Monthly



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

Executive Summary

Consumption of Energy by Source

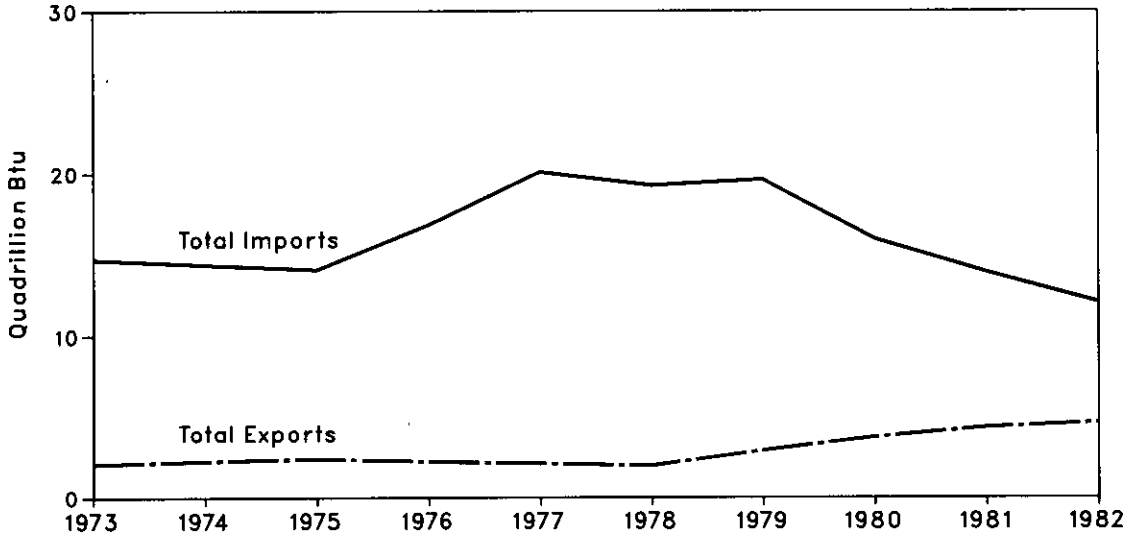
		Coal[1]	Natural Gas (Dry)	Petroleum	Hydroelectric Power[2]	Nuclear Electric Power	Net Imports of Coal Coke[3]	Other[4]	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu					
1973	**TOTAL**	**13.300**	**22.512**	**34.840**	**3.010**	**0.910**	**(0.008)**	**0.046**	**74.609**	
1974	**TOTAL**	**12.876**	**21.732**	**33.455**	**3.309**	**1.272**	**0.059**	**0.056**	**72.759**	
1975	**TOTAL**	**12.823**	**19.948**	**32.731**	**3.219**	**1.900**	**0.014**	**0.072**	**70.707**	
1976	**TOTAL**	**13.733**	**20.345**	**35.175**	**3.066**	**2.111**	**0.000**	**0.081**	**74.510**	
1977	**TOTAL**	**13.964**	**19.931**	**37.122**	**2.515**	**2.702**	**0.015**	**0.082**	**76.332**	
1978	**TOTAL**	**13.846**	**20.000**	**37.965**	**3.141**	**3.024**	**0.131**	**0.068**	**78.175**	
1979	**TOTAL**	**15.109**	**20.666**	**37.123**	**3.141**	**2.715**	**0.066**	**0.089**	**78.910**	
1980	**TOTAL**	**15.461**	**20.391**	**34.202**	**3.118**	**2.739**	**(0.037)**	**0.114**	**75.988**	
1981	January	1.473	2.341	3.113	0.263	0.259	0.000	0.011	7.459	7.459
	February	1.302	1.946	2.592	0.247	0.236	(0.001)	0.010	6.331	13.791
	March	1.310	1.950	2.686	0.244	0.240	(0.003)	0.011	6.439	20.230
	April	1.191	1.528	2.509	0.245	0.225	(0.001)	0.010	5.708	25.938
	May	1.200	1.465	2.593	0.281	0.215	0.000	0.010	5.764	31.701
	June	1.301	1.344	2.631	0.304	0.231	(0.004)	0.010	5.816	37.518
	July	1.469	1.349	2.649	0.292	0.252	0.000	0.011	6.022	43.540
	August	1.437	1.348	2.578	0.255	0.294	0.000	0.011	5.923	49.462
	September	1.302	1.299	2.559	0.214	0.266	(0.002)	0.011	5.649	55.112
	October	1.290	1.560	2.672	0.218	0.224	(0.003)	0.011	5.972	61.084
	November	1.280	1.663	2.548	0.226	0.249	0.000	0.010	5.975	67.059
	December	1.418	2.132	2.803	0.278	0.284	(0.003)	0.010	6.921	73.979
	TOTAL	**15.973**	**19.926**	**31.931**	**3.066**	**2.974**	**(0.017)**	**0.127**	**73.979**	
1982	January	1.498	2.465	2.723	0.310	0.280	0.000	0.009	7.284	7.284
	February	1.303	2.038	2.441	0.305	0.220	(0.001)	0.008	6.312	13.596
	March	1.270	1.888	2.628	0.341	0.248	(0.002)	0.007	6.379	19.976
	April	1.161	1.525	2.623	0.320	0.238	(0.001)	0.007	5.873	25.848
	May	1.196	1.167	2.507	0.322	0.236	(0.003)	0.008	5.433	31.281
	June	1.220	1.145	2.451	0.320	0.262	(0.004)	0.010	5.405	36.686
	July	1.392	1.176	2.503	0.314	0.278	(0.003)	0.010	5.669	42.355
	August	1.385	1.182	2.506	0.278	0.273	(0.001)	0.010	5.633	47.988
	September	1.237	1.171	2.455	0.236	0.277	(0.003)	0.010	5.382	53.370
	October	1.200	1.346	2.509	0.235	0.254	(0.001)	0.011	5.553	58.923
	November	1.239	1.601	2.453	0.271	0.253	(0.002)	0.011	5.827	64.750
	December	1.313	1.786	2.616	0.319	0.266	(0.001)	0.009	6.307	71.057
	TOTAL	**15.412**	**18.489**	**30.416**	**3.571**	**3.084**	**(0.023)**	**0.108**	**71.057**	
1983	January	1.376	2.029	2.494	0.335	0.274	(0.001)	0.011	6.517	6.517
	February	1.190	1.695	2.253	0.318	0.242	(0.001)	0.008	5.705	12.222
	March	1.207	1.644	2.615	0.345	0.261	(0.001)	0.010	6.081	18.303
	April	1.150	1.423	2.415	0.341	0.244	(0.002)	0.009	5.581	23.884
	May	1.184	1.181	2.407	0.355	0.241	(0.002)	0.007	5.373	29.258
	June	1.270	1.031	2.498	0.349	0.264	(0.001)	0.010	5.420	34.678
	July	1.518	1.093	2.519	0.322	0.279	(0.002)	0.012	5.741	40.418
	August	1.603	1.175	2.595	0.298	0.279	(0.001)	0.016	5.965	46.383
	September	1.384	1.125	2.516	0.255	0.271	(0.001)	0.014	5.563	51.946
	October	1.310	1.292	2.524	0.245	0.273	(0.001)	0.015	5.659	57.605
	November	1.324	1.538	2.539	0.285	0.272	(0.001)	0.013	5.971	63.576

[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.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Source: • Energy Information Administration calculations based on data reported elsewhere in this publication.

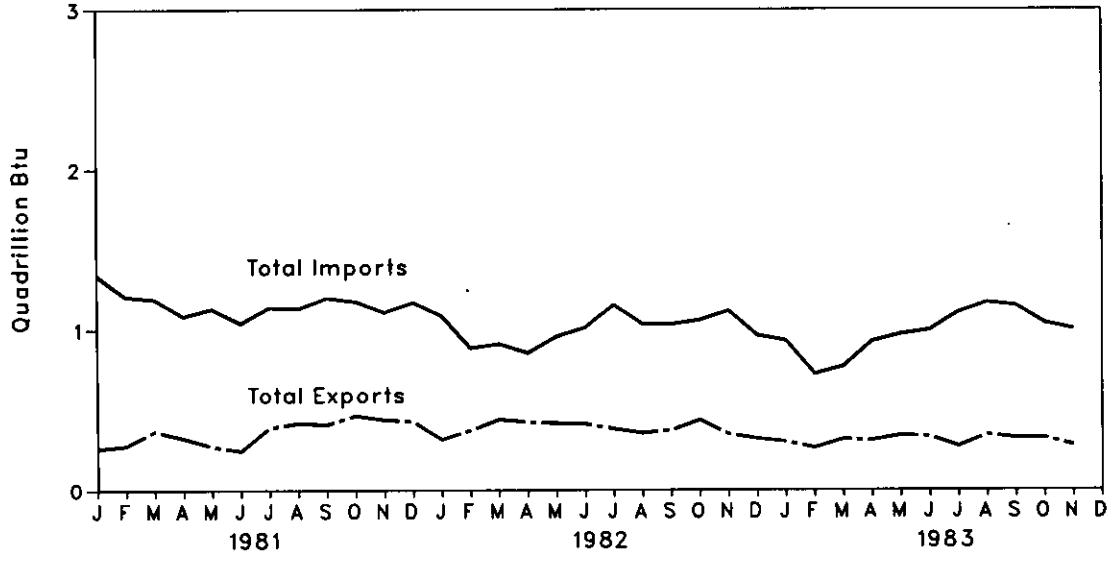
Executive Summary

Energy Imports and Exports

Yearly



Monthly



Executive Summary

Net Imports[1] of Energy by Source

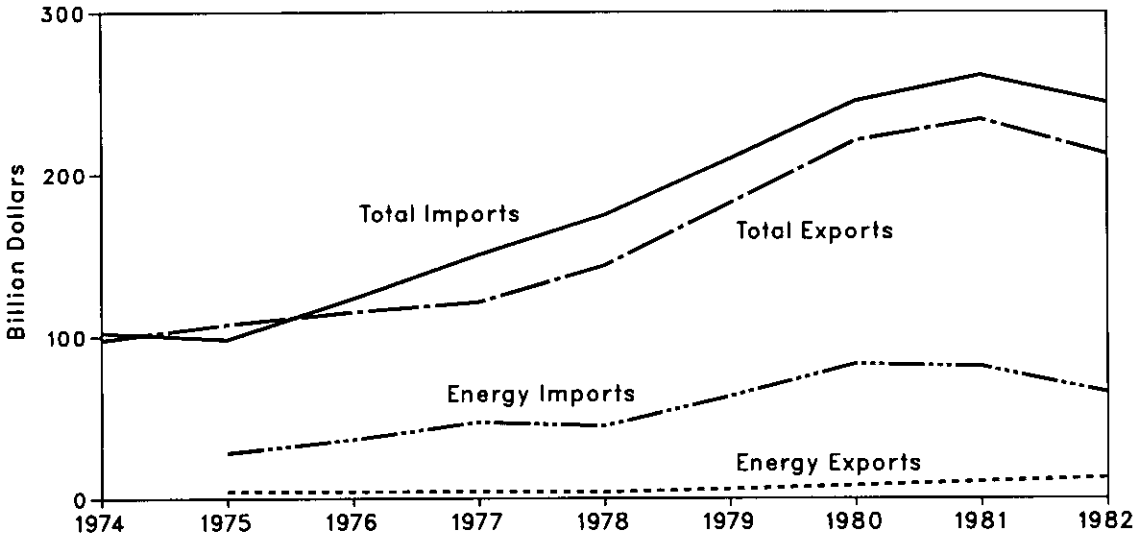
		Coal[2]	Crude Oil[3]	Refined Petroleum Products[4]	Natural Gas (Dry)	Electricity	Coal Coke	Total Net Imports	Yearly Cumulative Net Imports of Energy
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**(1.443)**	**6.883**	**6.097**	**0.981**	**0.148**	**(0.008)**	**12.659**	
1974	**TOTAL**	**(1.585)**	**7.389**	**5.273**	**0.907**	**0.133**	**0.059**	**12.175**	
1975	**TOTAL**	**(1.766)**	**8.708**	**3.800**	**0.904**	**0.064**	**0.014**	**11.725**	
1976	**TOTAL**	**(1.590)**	**11.221**	**3.982**	**0.922**	**0.089**	**0.000**	**14.625**	
1977	**TOTAL**	**(1.424)**	**13.921**	**4.321**	**0.981**	**0.182**	**0.015**	**17.995**	
1978	**TOTAL**	**(1.024)**	**13.125**	**3.932**	**0.941**	**0.204**	**0.131**	**17.309**	
1979	**TOTAL**	**(1.730)**	**13.328**	**3.603**	**1.243**	**0.211**	**0.066**	**16.720**	
1980	**TOTAL**	**(2.390)**	**10.586**	**2.912**	**0.957**	**0.217**	**(0.037)**	**12.246**	
1981	January	(0.151)	0.829	0.293	0.087	0.028	0.000	1.085	1.085
	February	(0.175)	0.762	0.240	0.081	0.025	(0.001)	0.932	2.018
	March	(0.252)	0.778	0.196	0.076	0.028	(0.003)	0.823	2.840
	April	(0.215)	0.723	0.161	0.065	0.027	(0.001)	0.759	3.599
	May	(0.157)	0.717	0.210	0.059	0.028	0.000	0.857	4.456
	June	(0.158)	0.687	0.181	0.061	0.027	(0.004)	0.794	5.250
	July	(0.281)	0.728	0.210	0.062	0.028	0.000	0.747	5.997
	August	(0.292)	0.717	0.199	0.060	0.028	0.000	0.712	6.709
	September	(0.310)	0.794	0.219	0.062	0.027	(0.002)	0.790	7.498
	October	(0.321)	0.749	0.184	0.075	0.028	(0.003)	0.713	8.211
	November	(0.308)	0.658	0.214	0.078	0.027	0.000	0.668	8.879
	December	(0.299)	0.712	0.215	0.089	0.028	(0.003)	0.741	9.621
	TOTAL	**(2.918)**	**8.854**	**2.522**	**0.855**	**0.325**	**(0.017)**	**9.621**	
1982	January	(0.160)	0.623	0.181	0.096	0.028	0.000	0.768	0.768
	February	(0.234)	0.438	0.206	0.081	0.025	(0.001)	0.515	1.282
	March	(0.273)	0.461	0.181	0.078	0.028	(0.002)	0.473	1.755
	April	(0.283)	0.467	0.153	0.071	0.027	(0.001)	0.433	2.188
	May	(0.262)	0.550	0.166	0.063	0.028	(0.003)	0.541	2.730
	June	(0.279)	0.653	0.146	0.056	0.027	(0.004)	0.599	3.329
	July	(0.239)	0.725	0.195	0.063	0.028	(0.003)	0.769	4.098
	August	(0.190)	0.640	0.144	0.056	0.028	(0.001)	0.676	4.774
	September	(0.225)	0.603	0.196	0.062	0.027	(0.003)	0.658	5.432
	October	(0.259)	0.613	0.167	0.073	0.028	(0.001)	0.621	6.053
	November	(0.202)	0.629	0.228	0.087	0.027	(0.002)	0.767	6.819
	December	(0.157)	0.506	0.161	0.106	0.028	(0.001)	0.644	7.463
	TOTAL	**(2.763)**	**6.907**	**2.124**	**0.892**	**0.326**	**(0.023)**	**7.463**	
1983	January	(0.115)	0.509	0.097	0.117	0.028	(0.001)	0.633	0.633
	February	(0.113)	0.327	0.127	0.098	0.025	(0.001)	0.463	1.096
	March	(0.162)	0.371	0.132	0.087	0.028	(0.001)	0.455	1.552
	April	(0.156)	0.535	0.144	0.073	0.027	(0.002)	0.620	2.171
	May	(0.179)	0.533	0.189	0.062	0.028	(0.002)	0.630	2.802
	June	(0.187)	0.586	0.181	0.057	0.027	(0.001)	0.663	3.464
	July	(0.159)	0.672	0.243	0.052	0.028	(0.002)	0.833	4.298
	August	(0.216)	0.722	0.238	0.055	0.028	(0.001)	0.825	5.123
	September	(0.194)	0.706	0.228	0.061	0.027	(0.001)	0.826	5.949
	October	R(0.208)	0.596	0.239	0.062	0.028	(0.001)	R0.716	R6.665
	November	(0.152)	0.546	0.229	0.076	0.027	(0.001)	0.724	7.389

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

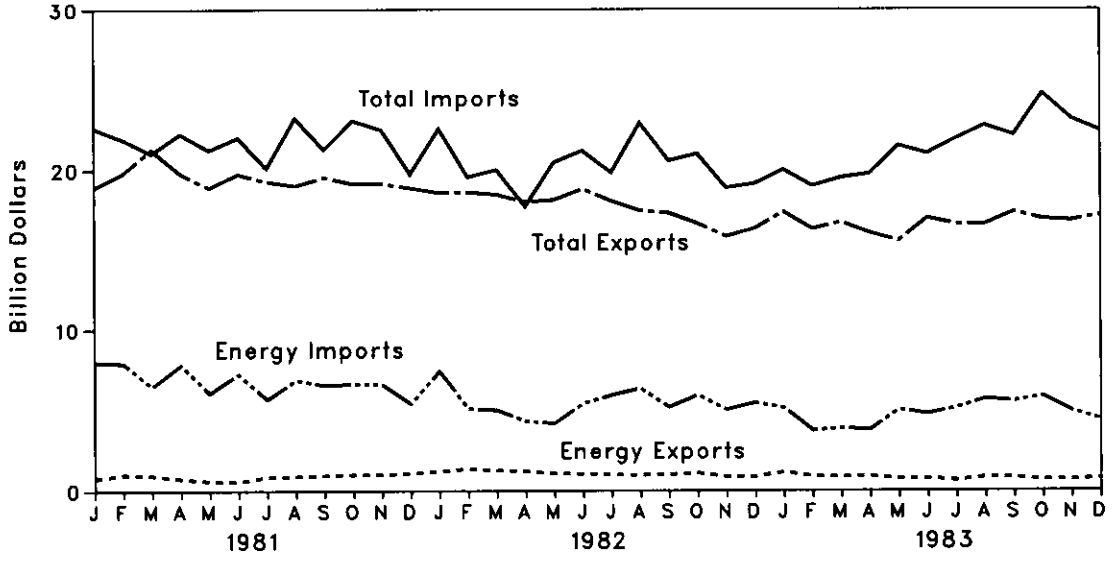
Executive Summary

Merchandise Trade Value

Yearly



Monthly



Executive Summary

Merchandise Trade Value

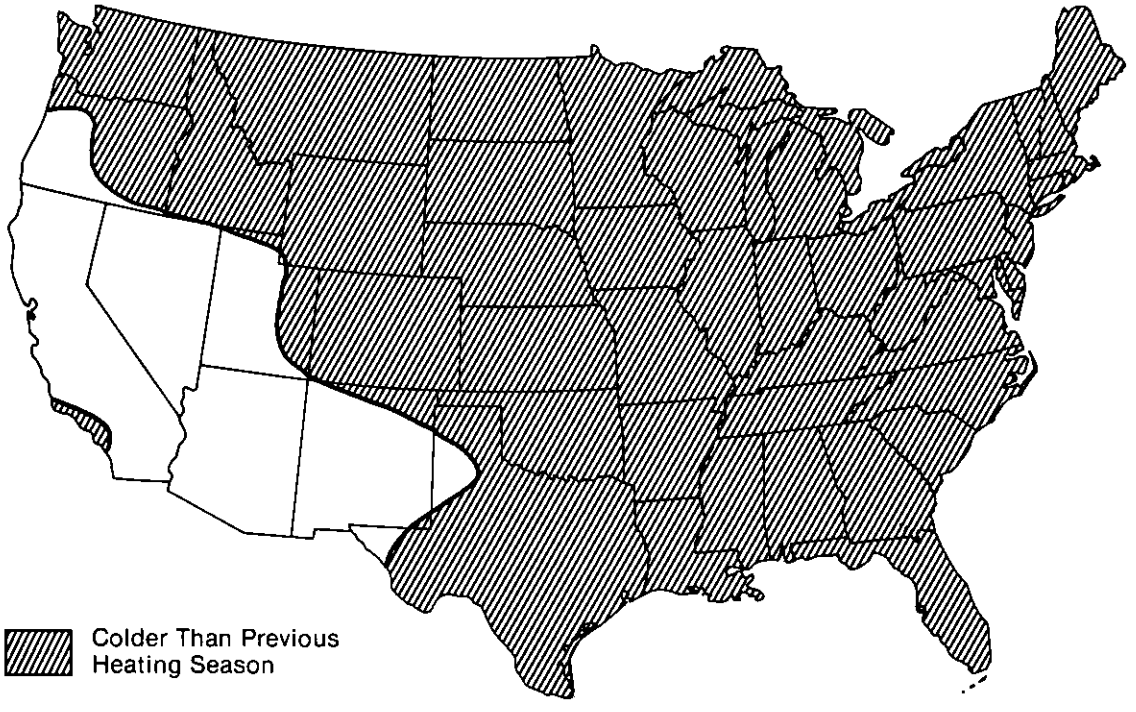
		Exports			Imports			Trade Balance		
		Energy	All Other	Total	Energy	All Other	Total	Energy	All Other	Total
					Million dollars					
1974	**TOTAL**	**NA**	**NA**	**98,092**	**NA**	**NA**	**102,559**	**NA**	**NA**	**-4,467**
1975	**TOTAL**	**4,470**	**103,182**	**107,652**	**28,325**	**70,178**	**98,503**	**-23,855**	**+33,004**	**+9,149**
1976	**TOTAL**	**4,226**	**110,997**	**115,223**	**36,384**	**87,093**	**123,477**	**-32,158**	**+23,904**	**-8,254**
1977	**TOTAL**	**4,184**	**117,048**	**121,232**	**47,153**	**103,237**	**150,390**	**-42,969**	**+13,811**	**-29,158**
1978	**TOTAL**	**3,882**	**139,799**	**143,681**	**44,763**	**129,994**	**174,757**	**-40,881**	**+9,805**	**-31,076**
1979	**TOTAL**	**5,675**	**176,185**	**181,860**	**63,077**	**146,381**	**209,458**	**-57,402**	**+29,804**	**-27,599**
1980	**TOTAL**	**7,982**	**212,644**	**220,626**	**82,924**	**161,947**	**244,871**	**-74,942**	**+50,697**	**-24,244**
1981	January	756	18,146	18,902	8,007	14,609	22,616	-7,251	+3,537	-3,714
	February	999	18,789	19,788	7,939	13,977	21,916	-6,940	+4,812	-2,127
	March	939	20,339	21,278	6,471	14,558	21,029	-5,532	+5,781	+249
	April	738	19,048	19,786	7,831	14,418	22,249	-7,093	+4,630	-2,463
	May	593	18,306	18,899	6,075	15,157	21,232	-5,482	+3,149	-2,333
	June	565	19,185	19,750	7,252	14,753	22,005	-6,687	+4,432	-2,255
	July	847	18,442	19,289	5,687	14,427	20,114	-4,840	+4,015	-825
	August	884	18,147	19,031	6,876	16,366	23,242	-5,992	+1,781	-4,212
	September	939	18,612	19,551	6,555	14,719	21,274	-5,616	+3,893	-1,724
	October	991	18,172	19,163	6,638	16,439	23,077	-5,648	+1,733	-3,914
	November	997	18,156	19,153	6,608	15,900	22,508	-5,611	+2,256	-3,356
	December	1,067	17,818	18,885	5,422	14,324	19,746	-4,355	+3,494	-861
	TOTAL	**10,279**	**223,398**	**233,677**	**81,360**	**179,622**	**260,982**	**-71,081**	**+43,776**	**-27,305**
1982	January	1,205	17,379	18,584	7,439	15,134	22,573	-6,234	+2,245	-3,989
	February	1,361	17,253	18,614	5,107	14,463	19,570	-3,746	+2,790	-956
	March	1,256	17,206	18,462	5,009	15,010	20,019	-3,753	+2,196	-1,557
	April	1,201	16,804	18,005	4,312	13,402	17,714	-3,111	+3,402	+291
	May	1,065	17,059	18,124	4,167	16,310	20,477	-3,102	+749	-2,353
	June	1,035	17,788	18,823	5,427	15,760	21,187	-4,392	+2,028	-2,364
	July	974	17,086	18,060	5,943	13,906	19,849	-4,969	+3,180	-1,790
	August	961	16,502	17,463	6,353	16,577	22,930	-5,392	-75	-5,467
	September	998	16,322	17,320	5,201	15,380	20,581	-4,203	+942	-3,261
	October	1,072	15,599	16,671	5,947	15,059	21,006	-4,875	+540	-4,335
	November	847	15,005	15,852	5,037	13,855	18,892	-4,190	+1,150	-3,041
	December	855	15,492	16,347	5,468	13,686	19,154	-4,613	+1,806	-2,808
	TOTAL	**12,729**	**199,464**	**212,193**	**65,409**	**178,543**	**243,952**	**-52,680**	**+20,921**	**-31,759**
1983	January	1,132	16,261	17,393	5,142	14,879	20,021	-4,010	+1,382	-2,628
	February	878	15,448	16,326	3,704	15,311	19,015	-2,826	+137	-2,689
	March	850	15,902	16,752	3,865	15,660	19,525	-3,015	+241	-2,774
	April	892	15,182	16,074	3,763	16,008	19,771	-2,871	-826	-3,697
	May	724	14,842	15,566	5,033	16,481	21,514	-4,309	-1,639	-5,948
	June	752	16,256	17,008	4,767	16,257	21,024	-4,015	-1	-4,016
	July	628	16,001	16,629	5,164	16,786	21,950	-4,536	-785	-5,321
	August	828	15,802	16,630	5,703	17,079	22,782	-4,875	-1,277	-6,152
	September	800	16,587	17,387	5,571	16,604	22,175	-4,771	-17	-4,788
	October	682	16,269	16,951	5,872	18,891	24,763	-5,190	-2,622	-7,812
	November	660	16,188	16,848	4,951	18,228	23,179	-4,291	-2,040	-6,331
	December	766	16,414	17,180	4,417	18,031	22,448	-3,651	-1,617	-5,268
	TOTAL	**9,500**	**190,986**	**200,486**	**57,952**	**200,096**	**258,048**	**-48,452**	**-9,110**	**-57,562**

NA=Not available.
Notes: • Annual totals are unadjusted and may not equal the sum of monthly totals, which are adjusted for seasonal and working-day variation, if present and identifiable.
• The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which is comprised of the 50 States, the District of Columbia, and Puerto Rico) and the Virgin Islands.
Additional Notes and Sources: • See the last page of this section.

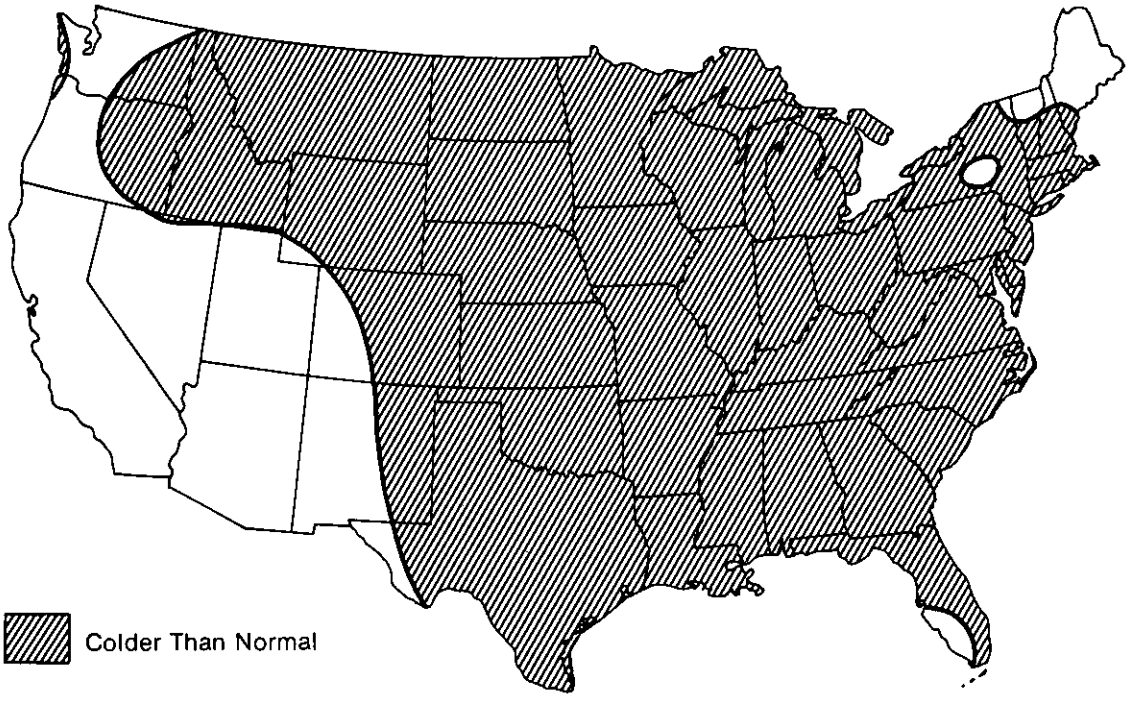
Executive Summary

Heating Degree-Days Accumulated from July 1, 1983, through January 28, 1984

Departure from Previous Heating Season



Departure from Normal



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

Executive Summary

Population Weighted Heating Degree-Days[1]

Census Divisions	January 1 through January 31					Cumulative July 1 through January 31				
				Percent Change					Percent Change	
	Normal[2]	1982	1983	Normal to 1983	1982 to 1983	Normal[2]	1982	1983	Normal to 1983	1982 to 1983
New England Conn., Maine, Mass., N.H., R.I., Vt.	1,230	1,155	1,316	7.0	13.9	3,651	3,345	3,668	0.5	9.7
Middle Atlantic N.J., N.Y., Pa.	1,156	1,073	1,260	9.0	17.4	3,290	2,966	3,475	5.6	17.2
Eastern North Central Ill., Ind., Mich., Ohio, Wisc.	1,299	1,139	1,409	8.5	23.7	3,657	3,233	4,006	9.5	23.9
Western North Central Iowa, Kans., Minn., Mo., Nebr., N.Dak., S.Dak.	1,411	1,213	1,376	-2.5	13.4	3,969	3,657	4,311	8.6	17.9
South Atlantic Del., Fla., Ga., Md. and D.C., N.C., S.C., Va., W.Va.	667	677	742	11.2	9.6	1,810	1,640	1,968	8.7	20.0
Eastern South Central Ala., Ky., Miss., Tenn.	803	797	933	16.2	17.1	2,187	1,931	2,467	12.8	27.8
Western South Central Ark., La., Okla., Tex.	601	609	706	17.5	15.9	1,494	1,453	1,822	22.0	25.4
Mountain Ariz., Colo., Idaho, Mont., Nev., N.Mex., Utah, Wyo.	1,015	892	1,023	0.8	14.7	3,251	3,204	3,257	0.2	1.7
Pacific Coast Calif., Oreg., Wash.	599	522	516	-13.9	-1.1	1,961	1,746	1,596	-18.6	-8.6
U.S. AVERAGE[3]	**962**	**885**	**1,022**	**6.2**	**15.5**	**2,744**	**2,491**	**2,895**	**5.5**	**16.2**

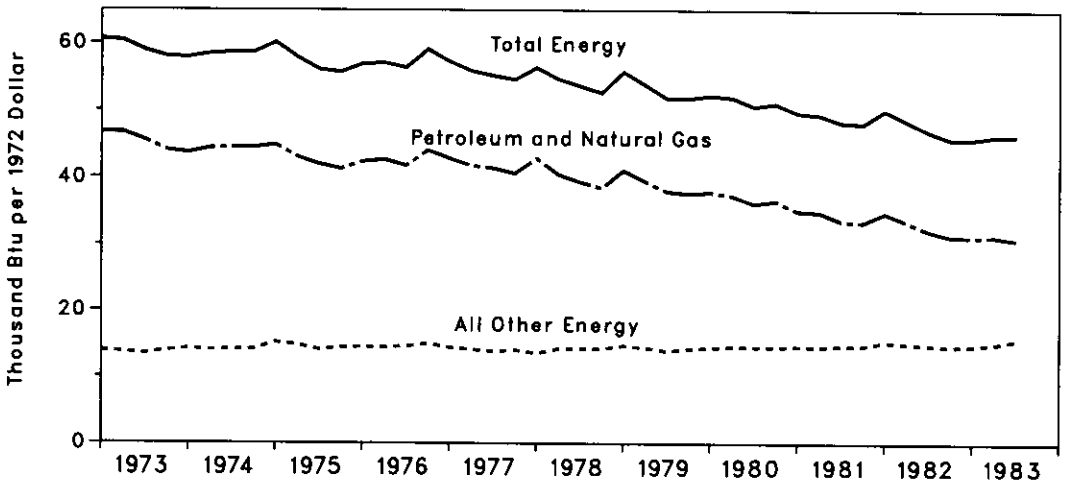
[1] See Note on the last page of this section for explanation of degree-days.
[2] Normal is based on calculations of data from 1951 through 1980.
[3] Excludes Alaska and Hawaii.

Executive Summary

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

		Annual Rate of Energy Consumption	Gross National Product (GNP)	Energy Consumption per Dollar of GNP (Seasonally Adjusted)		
				Total Energy	Petroleum and Natural Gas	All Other Energy
		Quadrillion Btu	Trillion 1972 dollars	Thousand Btu per 1972 dollar		
1973		**74.609**	**1.254**	**59.5**	**45.7**	**13.8**
1974		**72.759**	**1.246**	**58.4**	**44.3**	**14.1**
1975		**70.707**	**1.232**	**57.4**	**42.8**	**14.6**
1976		**74.510**	**1.298**	**57.4**	**42.8**	**14.6**
1977		**76.332**	**1.370**	**55.7**	**41.6**	**14.1**
1978		**78.175**	**1.439**	**54.3**	**40.3**	**14.0**
1979		**78.910**	**1.479**	**53.4**	**39.1**	**14.3**
1980		**75.988**	**1.475**	**51.5**	**37.0**	**14.5**
1981	1st Qtr[2]	75.105	1.510	49.7	35.1	14.6
	2nd Qtr[2]	74.729	1.513	49.4	34.9	14.5
	3rd Qtr[2]	73.706	1.526	48.3	33.6	14.7
	4th Qtr[2]	72.413	1.507	48.1	33.4	14.7
	YEAR	**73.979**	**1.514**	**48.9**	**34.3**	**14.6**
1982	1st Qtr[2]	74.407	1.486	50.1	34.8	15.3
	2nd Qtr[2]	72.150	1.489	48.5	33.5	15.0
	3rd Qtr[2]	69.771	1.486	47.0	32.2	14.8
	4th Qtr[2]	67.989	1.481	45.9	31.3	14.6
	YEAR	**71.057**	**1.485**	**47.8**	**32.9**	**14.9**
1983	1st Qtr[2]	68.332	1.490	45.9	31.2	14.7
	2nd Qtr[2]	70.610	1.525	46.3	31.3	15.0
	3rd Qtr[2]	72.103	1.553	46.4	30.8	15.6

Quarterly Energy Consumption per Dollar of Gross National Product[2] (Seasonally Adjusted)



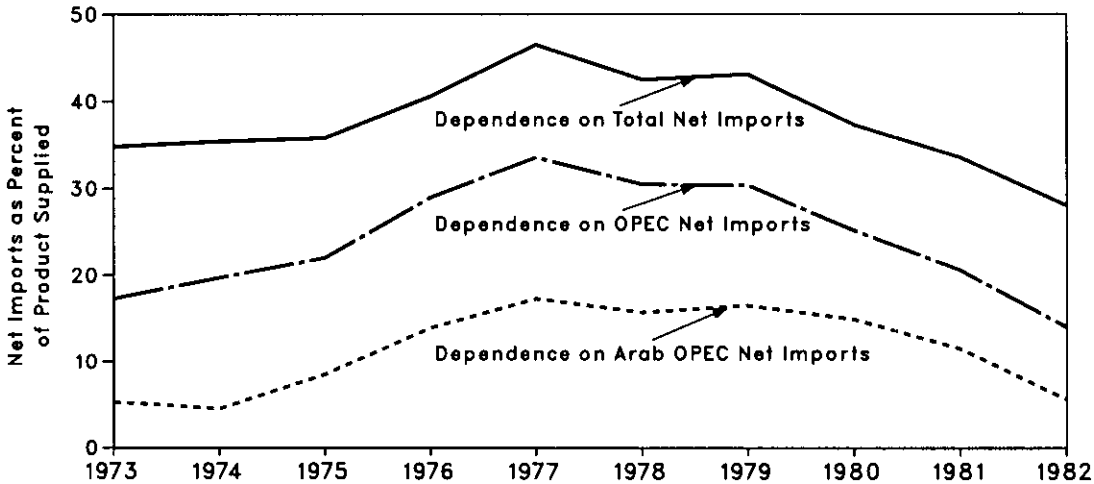
[1]Current dollars are converted to 1972 dollars by the Department of Commerce, Bureau of Economic Analysis.
[2]Quarterly data are seasonally adjusted and shown at annual rates.
Notes • Geographic coverage is the 50 States and the District of Columbia.
• Yearly data may not equal sum of quarters due to seasonality adjustments and independent rounding.
Sources: • See the last page of this section.

Executive Summary

Energy Indicator—U.S. Dependence on Petroleum Net Imports[1]

		Net Imports[2]			Domestic Petroleum Products Supplied	Net Imports as Percent of U.S. Petroleum Products Supplied		
		from Arab OPEC[3] Countries	from All OPEC[4] Countries	from All Countries		from Arab OPEC[3] Countries	from All OPEC[4] Countries	from All Countries
ANNUAL RATE			Thousand Barrels per Day				Percent	
1973	**AVERAGE**	**915**	**2,991**	**6,025**	**17,308**	**5.3**	**17.3**	**34.8**
1974	**AVERAGE**	**751**	**3,277**	**5,892**	**16,653**	**4.5**	**19.7**	**35.4**
1975	**AVERAGE**	**1,382**	**3,598**	**5,846**	**16,322**	**8.5**	**22.0**	**35.8**
1976	**AVERAGE**	**2,423**	**5,063**	**7,090**	**17,461**	**13.9**	**29.0**	**40.6**
1977	**AVERAGE**	**3,184**	**6,190**	**8,565**	**18,431**	**17.3**	**33.6**	**46.5**
1978	**AVERAGE**	**2,962**	**5,747**	**8,002**	**18,847**	**15.7**	**30.5**	**42.5**
1979	**AVERAGE**	**3,054**	**5,632**	**7,985**	**18,513**	**16.5**	**30.4**	**43.1**
1980	**AVERAGE**	**2,549**	**4,293**	**6,365**	**17,056**	**14.9**	**25.2**	**37.3**
1981	1st Qtr	2,060	3,804	5,964	17,113	12.0	22.2	34.9
	2nd Qtr	1,786	3,117	5,099	15,597	11.5	20.0	32.7
	3rd Qtr	1,857	3,181	5,400	15,532	12.0	20.5	34.8
	4th Qtr	1,679	3,167	5,151	16,008	10.5	19.8	32.2
	AVERAGE	**1,845**	**3,315**	**5,401**	**16,058**	**11.5**	**20.6**	**33.6**
1982	1st Qtr	1,105	2,391	4,038	15,891	7.0	15.1	25.4
	2nd Qtr	817	1,925	4,074	15,292	5.3	12.6	26.6
	3rd Qtr	820	2,239	4,720	14,893	5.5	15.0	31.7
	4th Qtr	672	1,990	4,353	15,120	4.4	13.2	28.8
	AVERAGE	**851**	**2,136**	**4,298**	**15,296**	**5.6**	**14.0**	**28.1**
1983	1st Qtr	346	1,139	3,024	15,015	2.3	7.6	20.1
	2nd Qtr	446	1,655	4,142	14,764	3.0	11.2	28.1
	3rd Qtr	841	2,478	5,297	15,223	5.5	16.3	34.8

U.S. Dependence on Petroleum Net Imports



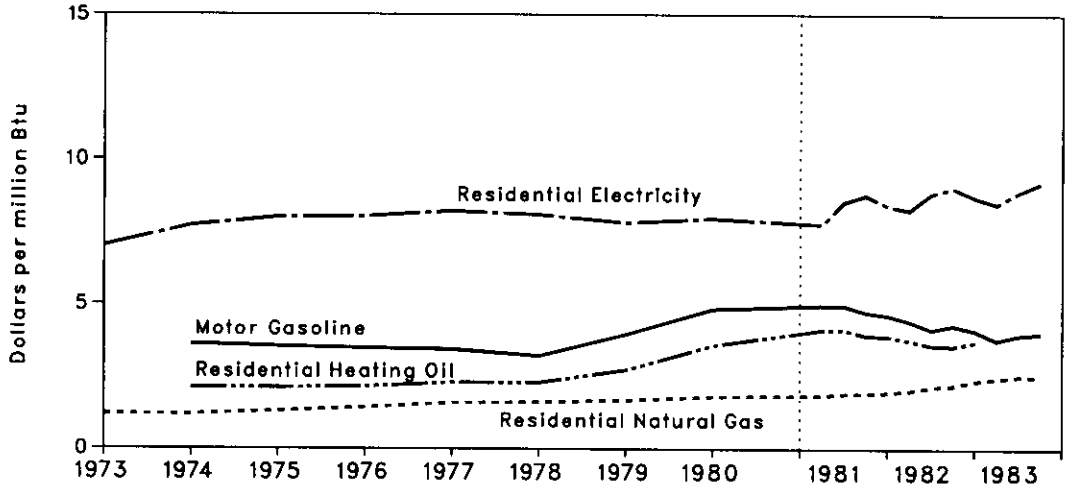
[1]Beginning in October 1977, Strategic Petroleum Reserves are included.
[2]Net imports equals imports minus exports. Imports from OPEC countries exclude indirect imports which are refined products imported primarily from Caribbean and West European areas and refined from crude oil produced in OPEC countries.
[3]Includes Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
[4]Includes Arab OPEC countries plus Ecuador, Gabon, Indonesia, Iran, Nigeria, and Venezuela.
Note: • Geographic coverage is the 50 States and the District of Columbia.
Sources: • See the last page of this section.

Executive Summary

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

		Leaded Regular Motor Gasoline		Residential Heating Oil		Residential Natural Gas		Residential Electricity	
		cent/gal	$/MMBtu	cent/gal	$/MMBtu	cent/Mcf	$/MMBtu	cent/kWh	$/MMBtu
1973	**AVERAGE**	**NA**	**NA**	**NA**	**NA**	**121.4**	**1.19**	**2.39**	**7.00**
1974	**AVERAGE**	**45.1**	**3.61**	**29.4**	**2.12**	**121.3**	**1.18**	**2.63**	**7.71**
1975	**AVERAGE**	**44.1**	**3.53**	**29.3**	**2.11**	**132.9**	**1.30**	**2.73**	**8.00**
1976	**AVERAGE**	**43.4**	**3.47**	**29.8**	**2.15**	**145.5**	**1.43**	**2.74**	**8.03**
1977	**AVERAGE**	**42.9**	**3.43**	**31.8**	**2.29**	**162.2**	**1.59**	**2.80**	**8.21**
1978	**AVERAGE**	**40.1**	**3.21**	**31.7**	**2.29**	**164.2**	**1.62**	**2.76**	**8.09**
1979	**AVERAGE**	**49.4**	**3.95**	**37.8**	**2.73**	**171.8**	**1.69**	**2.67**	**7.83**
1980	**AVERAGE**	**60.5**	**4.84**	**49.7**	**3.58**	**186.8**	**1.82**	**2.72**	**7.97**
1981	1st Qtr	62.1	4.97	57.0	4.11	190.6	1.86	2.65	7.77
	2nd Qtr	62.1	4.97	57.2	4.12	197.0	1.92	2.91	8.53
	3rd Qtr	59.3	4.74	54.4	3.92	197.4	1.93	2.99	8.76
	4th Qtr	57.9	4.63	54.0	3.89	202.2	1.97	2.87	8.41
	AVERAGE	**60.4**	**4.83**	**55.7**	**4.01**	**197.3**	**1.92**	**2.85**	**8.35**
1982	1st Qtr	55.3	4.42	52.2	3.76	208.5	2.03	2.82	8.26
	2nd Qtr	51.7	4.13	49.8	3.59	221.6	2.16	3.01	8.82
	3rd Qtr	53.5	4.28	49.4	3.56	226.4	2.21	3.08	9.03
	4th Qtr	51.3	4.10	51.3	3.70	243.0	2.37	2.97	8.70
	AVERAGE	**53.0**	**4.24**	**51.4**	**3.71**	**224.1**	**2.19**	**2.97**	**8.70**
1983	1st Qtr	47.1	3.77	NA	NA	251.3	2.45	2.89	8.47
	2nd Qtr	49.3	3.94	NA	NA	259.1	2.53	3.03	8.88
	3rd Qtr	50.0	4.00	NA	NA	257.7	2.51	3.14	9.20

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



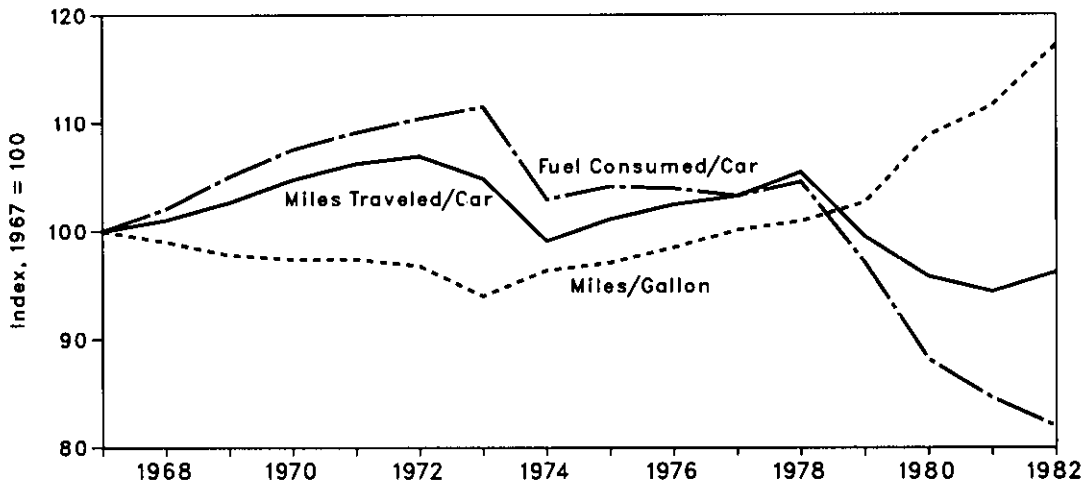
NA = Not available.
Note: • Geographic coverage is the 50 States and the District of Columbia.
Sources: • See the last page of this section.

Executive Summary

Energy Indicator—U.S. Passenger Car Efficiency

	Average Fuel Consumed per Car		Average Miles Traveled per Car		Average Miles Traveled per Gallon of Fuel Consumed	
	Gallons	Index	Miles	Index	Miles	Index
1967	684	100.0	9,531	100.0	13.93	100.0
1968	698	102.0	9,627	101.0	13.79	99.0
1969	718	105.0	9,782	102.6	13.63	97.8
1970	735	107.5	9,978	104.7	13.57	97.4
1971	746	109.1	10,121	106.2	13.57	97.4
1972	755	110.4	10,184	106.9	13.49	96.8
1973	763	111.5	9,992	104.8	13.10	94.0
1974	704	102.9	9,448	99.1	13.43	96.4
1975	712	104.1	9,634	101.1	13.53	97.1
1976	711	103.9	9,763	102.4	13.72	98.5
1977	706	103.2	9,839	103.2	13.94	100.1
1978	715	104.5	10,046	105.4	14.06	100.9
1979	664	97.1	9,485	99.5	14.29	102.6
1980	603	88.2	9,135	95.8	15.15	108.8
1981	579	84.6	9,002	94.4	15.54	111.6
1982	561	82.0	9,167	96.2	16.33	117.2

U.S. Passenger Car Efficiency Index



Note: • Geographic coverage is the 50 States and the District of Columbia.
Sources: • See the last page of this section.

Notes and Sources for the Executive Summary Section

Notes

1. **Domestic Production:** Domestic production of energy includes production of coal (anthracite, bituminous coal, and lignite), crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydropower, and electricity generated from nuclear power, geothermal power, and wood and waste. The volumetric data were converted to approximate heat contents (Btu values) of these energy sources using conversion factors listed on the inside back cover of this publication.
2. **Domestic Consumption:** Domestic consumption of energy includes consumption of coal (anthracite, bituminous coal, and lignite), natural gas (dry), refined petroleum products supplied, electric utility and industrial production of hydropower, net imports of electricity produced from hydropower, net imports of coke made from coal, and electricity generated from nuclear power, geothermal power, and wood and waste. Approximate heat contents (Btu values) were derived using conversion factors listed on the inside back cover of this publication.
3. **U.S. Energy Imports:** U.S. energy imports include imports of bituminous coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.
4. **U.S. Energy Exports:** U.S. energy exports include bituminous coal, crude oil, refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.
5. **Merchandise Trade Value:** The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory (which includes the 50 United States, the District of Columbia, and Puerto Rico) and the Virgin Islands. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions, as well as shipments between the United States and Puerto Rico and the Virgin Islands, between the United States and other U.S. possessions, and between any of these outlying areas. From January 1981 forward, import data presented are on a customs value basis. All other values are on a free alongside ship (f.a.s.) basis. Monthly data are adjusted for seasonal and working-day variation, if present and identifiable; annual data are unadjusted, and annual totals may not equal sum of monthly totals. Statistics include nonmonetary gold. Statistics exclude Department of Defense Military Program Grant-Aid shipments. "All Other" and "Total" columns include foreign exports (i.e., reexports). The "Energy" columns include mineral fuels, lubricants, and related material. "Imports" represent general imports (i.e., entries for immediate consumption, entries into customs bonded warehouses, and entries for the Strategic Petroleum Reserve). "Trade Balance" is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. The "All Other" columns are calculated by subtracting "Energy" from "Total."
6. **Degree-Days:** Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65° F by convention. Heating degree-days are deviations of the mean daily temperature below 65° F. For example, if a weather station recorded a mean daily temperature of 78° F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40° F would report 25 heating degree-days (and 0 cooling degree-days).

There are several degree-day data bases maintained by the National Oceanic and Atmospheric Administration. The information published in the *Monthly Energy Review* (MER) is developed by the National Weather Service Climate Analysis Center, Camp Springs, Maryland. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Census Divisions and into the national average. The population weights currently in use represent resident State population data estimated for 1980 by the U.S. Department of Commerce, Bureau of the Census. The data shown in the MER are available sooner than the Historical Climatology Series 5-1 and 5-2 developed by the National Climatic Center, Asheville, North Carolina, which compiles data from some 8,000 weather stations.

Sources

Merchandise Trade Value: • 1974 through 1980: U.S. Department of Commerce, Bureau of the Census, "Highlights of U.S. Export and Import Trade," FT990 (January 1982), Appendix for total imports and exports. Energy imports and exports from U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December issues, plus Bureau of the Census reports EA691 "Exports from the Virgin Islands to Foreign Countries," and IA245V "U.S. Imports for Consumption and General Imports into the Virgin Islands."
• 1981 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," most recent monthly issue.
Gross National Product: • U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business.*
U.S. Dependence on Petroleum Net Imports: • Imports and products supplied—Part 3 of this publication.
• Exports—1973 through 1976: Bureau of Mines, *Mineral Industry Surveys*; 1977 through 1981: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual;" 1982 forward: EIA, *Petroleum Statement, Monthly.*
Cost of Fuels to End Users in Constant (1972) Dollars: • Motor gasoline—Bureau of Labor Statistics.
• Heating oil—Energy Information Administration (EIA), 1974 and 1975: Form CLC-92, "No. 2 Heating Oil Monthly Price Adjustment Report"; 1976 forward: FEA Form P112-M-1 and EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."
• Natural gas—Annual data from EIA, *Natural Gas Annual*, 1973 through 1982 based on Form EIA-176, 'Supply and Distribution of Natural Gas' and predecessors. Monthly data are EIA estimates based on the Bureau of Labor Statistics Urban Consumer Price Index for natural gas and are adjusted to conform with final reported annual data. See Note 9 in the Notes and Sources for the Price Section.
• Electricity—Federal Energy Regulatory Commission (FERC), 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."
• Deflator (The Consumer Price Index)—U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business.*
U.S. Passenger Car Efficiency: • Indexes prepared from statistics published by the U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

Energy Consumption

Total U.S. energy consumption in November 1983 was 6.0 quadrillion Btu, 2.5 percent above the November 1982 level.

Residential and commercial sector consumption was 2.0 quadrillion Btu in November 1983, down 0.3 percent from the November 1982 level. The residential and commercial sector accounted for 33.7 percent of the November 1983 total, down from the sector's 34.7-percent share in November 1982.

Industrial sector consumption was 2.4 quadrillion Btu in November 1983, up 6.1 percent from the November 1982 level. This sector consumed 39.6 percent of the November 1983 total, up from the sector's 38.2-percent share in November 1982.

Transportation sector consumption was 1.6 quadrillion Btu in November 1983, up 0.8 percent from the November 1982 level. This sector consumed 26.5 percent of the November 1983 total, down from the sector's 27.0-percent share in November 1982.

The electric utilities consumption was an estimated 2.0 quadrillion Btu of energy in November 1983, 5.0 percent higher than in November 1982. Coal contributed 54.8 percent of the energy consumed by electric utilities in November 1983, while hydroelectric contributed 14.4 percent; nuclear, 13.8 percent; natural gas, 11.2 percent; petroleum, 5.0 percent; and geothermal and wood and waste, 0.7 percent.

Energy Consumption Summary for November 1983

(Quadrillion (10^{15}) Btu)

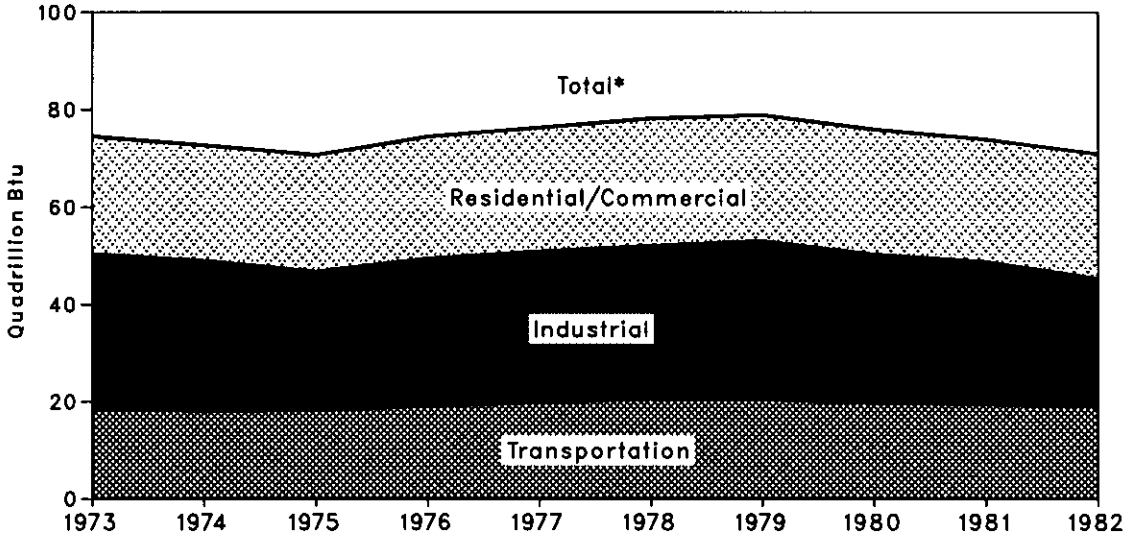
Primary Energy Source	Sector: Residential and Commercial	Industrial	Transportation	Electric Utilities	TOTAL
Coal	0.022	0.217	0.000	1.079	1.324
Natural Gas (dry)	0.559	0.706	0.051	0.221	1.538
Petroleum	0.249	0.660	1.530	0.099	2.539
Hydroelectric	0.000	0.002	0.000	0.283	0.285
Nuclear	0.000	0.000	0.000	0.272	0.272
Net Coke Imports	0.000	(0.001)	0.000	0.000	(0.001)
Other	0.000	0.000	0.000	0.013	0.013
TOTAL PRIMARY ENERGY	**0.830**	**1.584**	**1.582**	**1.968**	**5.971**
Electricity Sales	0.350	0.230	0.001	(0.582)	
Net Energy Consumption	1.180	1.814	1.583		4.584
Electrical Energy Losses	0.835	0.549	0.002	(1.387)	1.387
TOTAL ENERGY CONSUMED	**2.015**	**2.363**	**1.585**		**5.971**

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

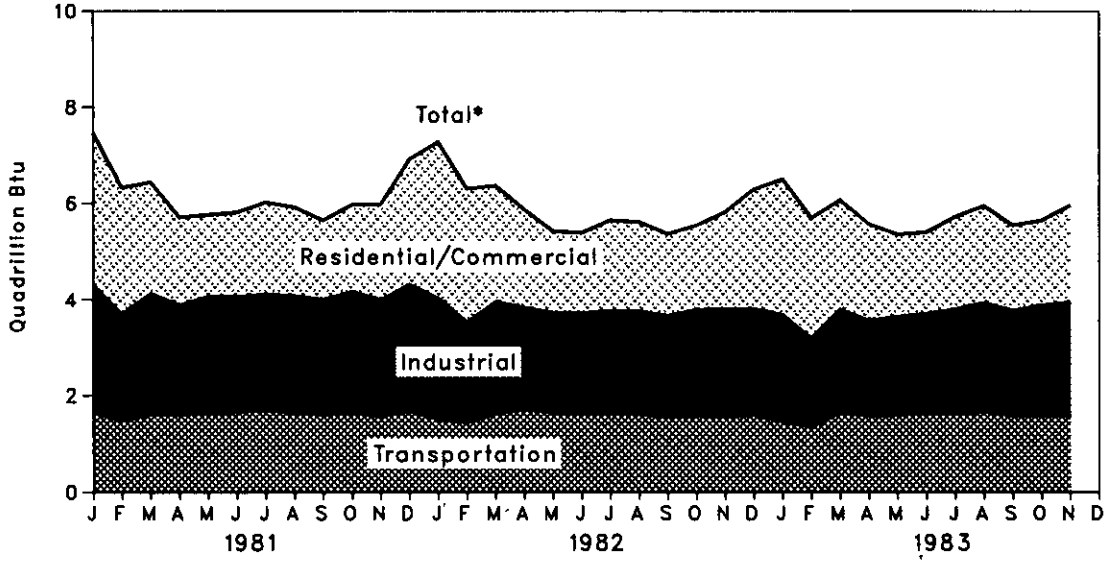
Consumption

Consumption of Energy by End-Use Sector

Yearly



Monthly



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

Consumption

Consumption of Energy by End-Use Sector

		Residential and Commercial	Industrial	Transportation	Total Energy Consumed
			Quadrillion (10^{15}) Btu		
1973	**TOTAL**	**24.179**	**31.846**	**18.577**	**74.609**
1974	**TOTAL**	**23.761**	**30.900**	**18.091**	**72.759**
1975	**TOTAL**	**23.928**	**28.569**	**18.209**	**70.707**
1976	**TOTAL**	**25.041**	**30.393**	**19.068**	**74.510**
1977	**TOTAL**	**25.392**	**31.149**	**19.785**	**76.332**
1978	**TOTAL**	**26.108**	**31.493**	**20.574**	**78.175**
1979	**TOTAL**	**25.796**	**32.652**	**20.457**	**78.910**
1980	**TOTAL**	**25.666**	**30.638**	**19.683**	**75.988**
1981	January	3.154	2.647	1.657	7.459
	February	2.640	2.222	1.471	6.331
	March	2.316	2.510	1.614	6.439
	April	1.833	2.278	1.599	5.708
	May	1.705	2.425	1.633	5.764
	June	1.758	2.392	1.662	5.816
	July	1.900	2.419	1.699	6.022
	August	1.845	2.421	1.654	5.923
	September	1.656	2.392	1.603	5.649
	October	1.809	2.524	1.640	5.972
	November	1.988	2.418	1.571	5.975
	December	2.608	2.633	1.677	6.921
	TOTAL	**25.213**	**29.282**	**19.480**	**73.979**
1982	January	3.252	2.513	1.513	7.284
	February	2.789	2.084	1.437	6.312
	March	2.423	2.330	1.623	6.379
	April	2.039	2.117	1.716	5.873
	May	1.700	2.082	1.647	5.433
	June	1.679	2.108	1.611	5.405
	July	1.886	2.140	1.631	5.669
	August	1.864	2.147	1.610	5.633
	September	1.709	2.097	1.568	5.382
	October	1.757	2.214	1.577	5.553
	November	2.021	2.227	1.572	5.827
	December	2.486	2.213	1.598	6.307
	TOTAL	**25.606**	**26.272**	**19.105**	**71.057**
1983	January	2.829	2.219	1.459	6.517
	February	2.518	1.834	1.346	5.705
	March	2.274	2.142	1.656	6.081
	April	2.017	1.976	1.585	5.581
	May	1.722	2.047	1.599	5.373
	June	1.702	2.076	1.632	5.420
	July	1.924	2.182	1.621	5.741
	August	2.019	2.259	1.672	5.965
	September	1.780	2.190	1.584	5.563
	October	1.769	2.288	1.594	5.659
	November	2.015	2.363	1.585	5.971

Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1981.
Additional Notes and Sources: • See the last four pages of this section.

Consumption

Consumption of Energy by the Residential and Commercial Sector

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
					Quadrillion (10^{15}) Btu			
1973	**TOTAL**	**0.291**	**7.626**	**4.391**	**3.495**	**8.377**	**24.179**	
1974	**TOTAL**	**0.292**	**7.518**	**3.996**	**3.475**	**8.480**	**23.761**	
1975	**TOTAL**	**0.238**	**7.581**	**3.805**	**3.604**	**8.700**	**23.928**	
1976	**TOTAL**	**0.227**	**7.866**	**4.181**	**3.747**	**9.020**	**25.041**	
1977	**TOTAL**	**0.225**	**7.461**	**4.206**	**3.955**	**9.545**	**25.392**	
1978	**TOTAL**	**0.239**	**7.624**	**4.070**	**4.116**	**10.060**	**26.108**	
1979	**TOTAL**	**0.210**	**7.891**	**3.448**	**4.184**	**10.064**	**25.796**	
1980	**TOTAL**	**0.160**	**7.539**	**3.035**	**4.355**	**10.578**	**25.666**	
1981	January	0.022	1.268	0.437	0.425	1.002	3.154	3.154
	February	0.018	1.122	0.293	0.391	0.816	2.640	5.794
	March	0.012	0.911	0.202	0.355	0.836	2.316	8.110
	April	0.014	0.590	0.148	0.325	0.756	1.833	9.943
	May	0.012	0.421	0.155	0.321	0.796	1.705	11.648
	June	0.008	0.291	0.148	0.365	0.947	1.758	13.406
	July	0.011	0.241	0.138	0.429	1.081	1.900	15.306
	August	0.011	0.236	0.149	0.431	1.019	1.845	17.152
	September	0.015	0.246	0.153	0.392	0.850	1.656	18.808
	October	0.016	0.390	0.249	0.348	0.807	1.809	20.617
	November	0.021	0.583	0.257	0.336	0.790	1.988	22.605
	December	0.026	0.942	0.306	0.380	0.954	2.608	25.213
	TOTAL	**0.186**	**7.242**	**2.635**	**4.497**	**10.653**	**25.213**	
1982	January	0.025	1.343	0.367	0.440	1.077	3.252	3.252
	February	0.017	1.221	0.273	0.409	0.869	2.789	6.040
	March	0.014	0.947	0.206	0.373	0.884	2.423	8.464
	April	0.018	0.705	0.173	0.346	0.797	2.039	10.502
	May	0.012	0.381	0.161	0.327	0.819	1.700	12.203
	June	0.009	0.279	0.146	0.358	0.888	1.679	13.882
	July	0.016	0.245	0.131	0.412	1.082	1.886	15.768
	August	0.017	0.234	0.142	0.431	1.042	1.864	17.632
	September	0.016	0.247	0.153	0.403	0.891	1.709	19.342
	October	0.016	0.342	0.232	0.349	0.817	1.757	21.098
	November	0.021	0.605	0.232	0.340	0.824	2.021	23.120
	December	0.025	0.877	0.270	0.381	0.933	2.486	25.606
	TOTAL	**0.206**	**7.426**	**2.486**	**4.566**	**10.922**	**25.606**	
1983	January	0.025	1.080	0.310	0.413	1.001	2.829	2.829
	February	0.016	1.048	0.238	0.390	0.826	2.518	5.348
	March	0.014	0.820	0.192	0.366	0.882	2.274	7.621
	April	0.018	0.697	0.151	0.352	0.799	2.017	9.638
	May	0.012	0.426	0.145	0.327	0.811	1.722	11.360
	June	0.010	0.290	0.142	0.359	0.902	1.702	13.062
	July	0.015	0.233	0.128	0.431	1.118	1.924	14.986
	August	0.014	0.223	0.145	0.470	1.166	2.019	17.005
	September	0.019	0.233	0.149	0.449	0.931	1.780	18.785
	October	0.020	0.333	0.221	0.366	0.829	1.769	20.555
	November	0.022	0.559	0.249	0.350	0.835	2.015	22.570

Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Additional Notes and Sources: • See the last four pages of this section.

Consumption

Consumption of Energy by the Industrial Sector

		Coal	Natural Gas (Dry)	Petro-leum	Hydro-electric	Net Coke Imports	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
						Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**4.349**	**10.388**	**9.132**	**0.035**	**(0.008)**	**2.341**	**5.610**	**31.846**	
1974	**TOTAL**	**4.048**	**10.003**	**8.720**	**0.033**	**0.059**	**2.337**	**5.700**	**30.900**	
1975	**TOTAL**	**3.797**	**8.532**	**8.182**	**0.032**	**0.014**	**2.346**	**5.665**	**28.569**	
1976	**TOTAL**	**3.786**	**8.761**	**9.043**	**0.033**	**0.000**	**2.573**	**6.197**	**30.393**	
1977	**TOTAL**	**3.498**	**8.636**	**9.809**	**0.033**	**0.015**	**2.682**	**6.476**	**31.149**	
1978	**TOTAL**	**3.372**	**8.539**	**9.905**	**0.032**	**0.131**	**2.761**	**6.755**	**31.493**	
1979	**TOTAL**	**3.636**	**8.549**	**10.582**	**0.034**	**0.066**	**2.873**	**6.912**	**32.652**	
1980	**TOTAL**	**3.181**	**8.394**	**9.535**	**0.033**	**(0.037)**	**2.781**	**6.751**	**30.638**	
1981	January	0.299	0.754	0.823	0.003	0.000	0.229	0.539	2.647	2.647
	February	0.277	0.526	0.707	0.003	(0.001)	0.230	0.480	2.222	4.869
	March	0.279	0.690	0.754	0.003	(0.003)	0.234	0.552	2.510	7.379
	April	0.260	0.588	0.654	0.003	(0.001)	0.232	0.542	2.278	9.658
	May	0.239	0.668	0.700	0.003	0.000	0.234	0.580	2.425	12.083
	June	0.232	0.616	0.665	0.003	(0.004)	0.244	0.635	2.392	14.475
	July	0.270	0.641	0.644	0.003	0.000	0.245	0.616	2.419	16.893
	August	0.273	0.667	0.651	0.002	0.000	0.246	0.581	2.421	19.314
	September	0.266	0.675	0.684	0.002	(0.002)	0.242	0.525	2.392	21.706
	October	0.268	0.807	0.666	0.002	(0.003)	0.236	0.548	2.524	24.230
	November	0.270	0.756	0.634	0.002	0.000	0.226	0.530	2.418	26.648
	December	0.271	0.870	0.725	0.002	(0.003)	0.219	0.549	2.633	29.282
	TOTAL	**3.205**	**8.257**	**8.308**	**0.033**	**(0.017)**	**2.817**	**6.677**	**29.282**	
1982	January	0.271	0.793	0.706	0.003	0.000	0.215	0.526	2.513	2.513
	February	0.254	0.520	0.639	0.003	(0.001)	0.214	0.455	2.084	4.597
	March	0.244	0.622	0.721	0.003	(0.002)	0.220	0.522	2.330	6.927
	April	0.227	0.514	0.668	0.003	(0.001)	0.214	0.492	2.117	9.044
	May	0.219	0.480	0.635	0.003	(0.003)	0.213	0.534	2.082	11.125
	June	0.204	0.523	0.625	0.003	(0.004)	0.217	0.539	2.108	13.234
	July	0.198	0.528	0.639	0.003	(0.003)	0.214	0.562	2.140	15.374
	August	0.200	0.537	0.671	0.002	(0.001)	0.216	0.523	2.147	17.521
	September	0.192	0.582	0.667	0.002	(0.003)	0.205	0.453	2.097	19.618
	October	0.201	0.678	0.642	0.002	(0.001)	0.208	0.486	2.214	21.832
	November	0.204	0.708	0.605	0.002	(0.002)	0.207	0.502	2.227	24.059
	December	0.207	0.626	0.690	0.002	(0.001)	0.199	0.489	2.213	26.272
	TOTAL	**2.621**	**7.109**	**7.907**	**0.033**	**(0.023)**	**2.542**	**6.083**	**26.272**	
1983	January	0.219	0.665	0.656	0.003	(0.001)	0.198	0.480	2.219	2.219
	February	0.203	0.406	0.594	0.003	(0.001)	0.202	0.427	1.834	4.053
	March	0.194	0.553	0.691	0.003	(0.001)	0.206	0.496	2.142	6.195
	April	0.211	0.469	0.619	0.003	(0.002)	0.207	0.470	1.976	8.171
	May	0.204	0.490	0.607	0.003	(0.002)	0.214	0.530	2.047	10.218
	June	0.188	0.451	0.642	0.003	(0.001)	0.226	0.567	2.076	12.293
	July	0.216	0.500	0.654	0.003	(0.002)	0.226	0.586	2.182	14.475
	August	0.219	0.549	0.662	0.002	(0.001)	0.237	0.589	2.259	16.734
	September	0.212	0.547	0.700	0.002	(0.001)	0.237	0.492	2.190	18.924
	October	0.214	0.656	0.649	0.002	(0.001)	0.235	0.533	2.288	21.212
	November	0.217	0.706	0.660	0.002	(0.001)	0.230	0.549	2.363	23.575

Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Additional Notes and Sources: • See the last four pages of this section.

Consumption

Consumption of Energy by the Transportation Sector

		Coal	Natural Gas (Dry)	Petroleum	Electricity Sales	Electrical Energy Losses	Total Energy Consumed	Yearly Cumulative Energy Consumed
				Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**0.003**	**0.743**	**17.803**	**0.009**	**0.020**	**18.577**	
1974	**TOTAL**	**0.002**	**0.685**	**17.374**	**0.009**	**0.022**	**18.091**	
1975	**TOTAL**	**0.001**	**0.595**	**17.579**	**0.010**	**0.025**	**18.209**	
1976	**TOTAL**	**[1]**	**0.559**	**18.473**	**0.010**	**0.025**	**19.068**	
1977	**TOTAL**	**[1]**	**0.543**	**19.207**	**0.010**	**0.025**	**19.785**	
1978	**TOTAL**	**[1]**	**0.539**	**20.004**	**0.009**	**0.022**	**20.574**	
1979	**TOTAL**	**[1]**	**0.612**	**19.810**	**0.010**	**0.025**	**20.457**	
1980	**TOTAL**	**[1]**	**0.648**	**18.999**	**0.011**	**0.026**	**19.683**	
1981	January	[1]	0.077	1.577	0.001	0.002	1.657	1.657
	February	[1]	0.065	1.403	0.001	0.002	1.471	3.128
	March	[1]	0.065	1.547	0.001	0.002	1.614	4.742
	April	[1]	0.050	1.546	0.001	0.002	1.599	6.342
	May	[1]	0.048	1.582	0.001	0.002	1.633	7.974
	June	[1]	0.044	1.614	0.001	0.002	1.662	9.636
	July	[1]	0.044	1.652	0.001	0.002	1.699	11.335
	August	[1]	0.044	1.607	0.001	0.002	1.654	12.990
	September	[1]	0.043	1.557	0.001	0.002	1.603	14.592
	October	[1]	0.051	1.586	0.001	0.002	1.640	16.232
	November	[1]	0.055	1.512	0.001	0.002	1.571	17.803
	December	[1]	0.071	1.603	0.001	0.002	1.677	19.480
	TOTAL	**[1]**	**0.657**	**18.786**	**0.011**	**0.026**	**19.480**	
1982	January	[1]	0.081	1.428	0.001	0.003	1.513	1.513
	February	[1]	0.068	1.367	0.001	0.002	1.437	2.950
	March	[1]	0.063	1.558	0.001	0.002	1.623	4.574
	April	[1]	0.050	1.663	0.001	0.002	1.716	6.290
	May	[1]	0.039	1.605	0.001	0.002	1.647	7.937
	June	[1]	0.038	1.570	0.001	0.002	1.611	9.548
	July	[1]	0.039	1.589	0.001	0.002	1.631	11.179
	August	[1]	0.039	1.568	0.001	0.002	1.610	12.790
	September	[1]	0.039	1.526	0.001	0.002	1.568	14.357
	October	[1]	0.044	1.530	0.001	0.002	1.577	15.934
	November	[1]	0.053	1.516	0.001	0.002	1.572	17.506
	December	[1]	0.059	1.536	0.001	0.002	1.598	19.105
	TOTAL	**[1]**	**0.612**	**18.455**	**0.011**	**0.027**	**19.105**	
1983	January	[1]	0.067	1.390	0.001	0.002	1.459	1.459
	February	[1]	0.056	1.287	0.001	0.002	1.346	2.806
	March	[1]	0.054	1.599	0.001	0.002	1.656	4.462
	April	[1]	0.047	1.536	0.001	0.002	1.585	6.047
	May	[1]	0.039	1.558	0.001	0.002	1.599	7.647
	June	[1]	0.034	1.595	0.001	0.002	1.632	9.278
	July	[1]	0.036	1.582	0.001	0.002	1.621	10.899
	August	[1]	0.039	1.630	0.001	0.002	1.672	12.571
	September	[1]	0.037	1.544	0.001	0.002	1.584	14.155
	October	[1]	0.043	1.548	0.001	0.002	1.594	15.749
	November	[1]	0.051	1.530	0.001	0.002	1.585	17.334

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

Consumption

Energy Input at Electric Utilities

		Coal	Natural Gas (Dry)	Petroleum[1]	Hydroelectric power[2]	Nuclear Electric Power	Other[3]	Total Energy Input	Yearly Cumulative Energy Input
					Quadrillion (10^{15}) Btu				
1973	**TOTAL**	**8.658**	**3.748**	**3.515**	**2.975**	**0.910**	**0.046**	**19.852**	
1974	**TOTAL**	**8.535**	**3.519**	**3.365**	**3.276**	**1.272**	**0.056**	**20.023**	
1975	**TOTAL**	**8.786**	**3.240**	**3.166**	**3.187**	**1.900**	**0.072**	**20.350**	
1976	**TOTAL**	**9.720**	**3.152**	**3.477**	**3.032**	**2.111**	**0.081**	**21.573**	
1977	**TOTAL**	**10.243**	**3.284**	**3.901**	**2.482**	**2.702**	**0.082**	**22.694**	
1978	**TOTAL**	**10.236**	**3.297**	**3.987**	**3.110**	**3.024**	**0.068**	**23.722**	
1979	**TOTAL**	**11.264**	**3.609**	**3.283**	**3.107**	**2.715**	**0.089**	**24.068**	
1980	**TOTAL**	**12.122**	**3.807**	**2.634**	**3.085**	**2.739**	**0.114**	**24.501**	
1981	January	1.153	0.239	0.275	0.260	0.259	0.011	2.198	2.198
	February	1.010	0.232	0.188	0.244	0.236	0.010	1.919	4.117
	March	1.020	0.283	0.184	0.241	0.240	0.011	1.979	6.097
	April	0.921	0.299	0.160	0.242	0.225	0.010	1.858	7.955
	May	0.949	0.327	0.156	0.278	0.215	0.010	1.935	9.890
	June	1.056	0.394	0.203	0.301	0.231	0.010	2.194	12.084
	July	1.184	0.425	0.214	0.289	0.252	0.011	2.374	14.458
	August	1.149	0.403	0.171	0.252	0.294	0.011	2.279	16.737
	September	1.022	0.336	0.165	0.212	0.266	0.011	2.012	18.750
	October	1.008	0.312	0.171	0.216	0.224	0.011	1.941	20.691
	November	0.991	0.268	0.146	0.224	0.249	0.010	1.886	22.577
	December	1.120	0.248	0.169	0.276	0.284	0.010	2.105	24.682
	TOTAL	**12.583**	**3.764**	**2.202**	**3.033**	**2.974**	**0.127**	**24.682**	
1982	January	1.198	0.246	0.221	0.307	0.280	0.009	2.261	2.261
	February	1.031	0.228	0.162	0.302	0.220	0.008	1.950	4.211
	March	1.010	0.255	0.144	0.338	0.248	0.007	2.001	6.213
	April	0.917	0.255	0.120	0.317	0.238	0.007	1.853	8.065
	May	0.962	0.267	0.106	0.318	0.236	0.008	1.897	9.962
	June	1.000	0.306	0.111	0.317	0.262	0.010	2.005	11.967
	July	1.165	0.365	0.144	0.311	0.278	0.010	2.273	14.240
	August	1.156	0.374	0.125	0.276	0.273	0.010	2.214	16.453
	September	1.021	0.303	0.110	0.233	0.277	0.010	1.954	18.407
	October	0.977	0.282	0.106	0.233	0.254	0.011	1.862	20.270
	November	1.008	0.234	0.100	0.269	0.253	0.011	1.875	22.145
	December	1.073	0.222	0.120	0.316	0.266	0.009	2.006	24.151
	TOTAL	**12.517**	**3.335**	**1.568**	**3.538**	**3.084**	**0.108**	**24.151**	
1983	January	1.125	0.215	0.137	0.332	0.274	0.011	2.094	2.094
	February	0.965	0.183	0.134	0.315	0.242	0.008	1.848	3.942
	March	0.992	0.215	0.133	0.342	0.261	0.010	1.952	5.895
	April	0.919	0.210	0.110	0.338	0.244	0.009	1.830	7.725
	May	0.963	0.226	0.097	0.352	0.241	0.007	1.885	9.610
	June	1.062	0.256	0.119	0.346	0.264	0.010	2.056	11.666
	July	1.273	0.325	0.155	0.319	0.279	0.012	2.363	14.029
	August	1.353	0.364	0.158	0.296	0.279	0.016	2.466	16.495
	September	1.143	0.309	0.123	0.252	0.271	0.014	2.112	18.607
	October	1.069	0.260	0.106	0.243	0.273	0.015	1.966	20.573
	November	1.079	0.221	0.099	0.283	0.272	0.013	1.968	22.541

[1]Includes petroleum products reported as "oil consumed in steam plants" through 1979 and "heavy oil" from 1980 forward, which are assumed to be residual fuel oil; petroleum products reported as "oil consumed in gas turbine and internal combustion engine plants" through 1979 and "light oil" from 1980 forward, which are assumed to be distillate fuel oil and kerosene; and petroleum coke.
[2]Includes net imports of electricity.
[3]Includes geothermal power and electricity produced from wood and waste.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Additional Notes and Sources: • See the last four pages of this section.

Notes and Sources for the Consumption Section

1. **End-Use Sectors:** Energy use is assigned to the major end-use sectors according to the following guidelines as closely as possible:

- Residential and commercial sector—Energy consumed by private household establishments primarily for space heating, water heating, air conditioning, cooking, and clothes drying; by non-manufacturing business establishments, including motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises; by health, social, and educational institutions; and by Federal, State, and local governments.
- Industrial sector—Energy consumed by manufacturing, construction, mining, agriculture, fishing, and forestry establishments.
- Transportation sector—Energy consumed to move people and commodities in both the public and private sectors, including military, railroad, vessel bunkering, and marine uses, as well as the pipeline transmission of natural gas.
- Electric utility sector—Energy consumed by privately- and publicly-owned establishments that generate electricity primarily for resale.

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

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

Sources:
- 1973 through September 1977: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook* and *Minerals Industry Surveys.*
- Electric Utilities—October 1977 forward: Energy Information Administration (EIA), EIA Form 759 (formerly FPC Form 4), "Monthly Power Plant Report."
- Other Industrial—October 1977 through December 1979: EIA, EIA Form 3, "Monthly Fuel Consumption Report - Manufacturing Plants"; January 1980 forward: EIA, EIA Form 3, "Quarterly Fuel Consumption Report - Manufacturing Plants" and EIA Form 6, "Coal Distribution Report."
- Coke Plants—October 1977 through December 1980: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Monthly/Annual"; January 1981 forward: EIA, EIA Form 5/5A, "Coke and Coal Chemicals - Quarterly/Annual."
- Residential and Commercial—October 1977 through December 1979: EIA, EIA Form 2, "Monthly Coal Report, Retail Dealers and Upper Lake Docks"; January 1980 forward: EIA, EIA Form 6, "Coal Distribution Report."

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

Sources:
- 1973 through 1975: DOI, BOM, *Minerals Yearbook,* "Natural Gas" chapter.
- 1976 through 1978: EIA, *Energy Data Reports,* "Natural Gas, Annual."
- 1979: EIA, *Natural Gas Production and Consumption 1979.*
- 1980 and 1981: EIA, *Natural Gas Annual.*
- 1982 forward: EIA, *Natural Gas Monthly.*
- Electric utilities consumption—1973 through 1976: FPC Form 4, "Monthly Power Plant Report."
  1977 through 1981: Federal Energy Regulatory Commission (FERC), FPC Form 4, "Monthly Power Plant Report."
  1982 forward: EIA, EIA Form 759, "Monthly Power Plant Report."
- American Gas Association, "Monthly Gas Utility Statistical Report."

5. **Petroleum:** Petroleum consumption by end-use is the sum of all individual petroleum products estimated to be consumed in each end-use sector. First, total consumption by product is determined. Petroleum consumption in this section of the *Monthly Energy Review* is the series called "petroleum products supplied" in the Part 3. Petroleum section.

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

Specific petroleum products' end-use allocation procedures follow:

- **Aviation Gasoline**—All product supplied is assigned to the transportation sector.

- **Asphalt**—All product supplied is assigned to the industrial sector.

- **Distillate Fuel**
  - ***Electric Utility Sector, All Periods.***
    Monthly and annual consumption in 1973 through 1979 is assumed to be the amount of oil (minus small amounts of kerosene and kerosene-type jet fuel deliveries) reported as consumed in internal combustion and gas turbine engine plants. From January 1980, electric utility consumption of distillate fuel is assumed to be the petroleum products reported as "light oil" (minus kerosene deliveries) consumed at utilities. Sources: 1973 through September 1977—FPC Form 4, "Monthly Power Plant Report;" October 1977 through 1981—FERC, FPC Form 4, "Monthly Power Plant Report;" 1982 forward—EIA, Form EIA-759, "Monthly Power Plant Report."

— ***Nonutility Sectors, Annual Estimates.***
The aggregate nonutility use of distillate fuel is total distillate fuel supplied minus the electric utility consumption. The nonutility annual totals are allocated into the individual nonutility sectors in proportion to the amount of distillate fuel delivered to end-users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" reports (based primarily on data collected by Form EIA-172) as follows:
- Residential sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
- Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares;
- Industrial sector deliveries for 1979 through 1981 are the sum of deliveries for industrial, farm, oil company, off-highway, diesel, and all other uses. Deliveries for 1981 are used as estimates for 1982. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses; and
- Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, on-highway diesel, and military uses for all years. Deliveries for 1981 are used as estimates for 1982.

— ***Nonutility Sectors, Monthly Estimates Through 1981.***
- Residential and commercial sector monthly consumption is estimated by allocating the annual sector estimates to months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation from 1973 through 1980 and the American Petroleum Institute since January 1981.
- The transportation sector highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.
- Industrial sector monthly estimates are made by subtracting the residential and commercial, transportation, and electric utility sector estimates from each month's total distillate fuel supplied.

— ***Nonutility Sectors, 1982 Forward.***
Each month's nonutility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1981.

- **Jet Fuel**—Small amounts in 1975 through 1977 are used by the industrial sector, and small amounts in all periods are consumed by the electric utility sector. All remaining jet fuel is consumed by the transportation sector.

- **Kerosene**—Total product supplied monthly is allocated to the major end-use sectors in proportion to annual deliveries grouped into end-use sectors from EIA's "Deliveries of Fuel Oil and Kerosene" reports (based primarily on data collected by Form EIA-172) as follows:
  — Residential sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982 forward. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares;
  — Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982 forward. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares; and
  — Industrial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982 forward. Prior to 1979, each year's category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

- **Liquefied Petroleum Gases (LPG)**
  — 1973 through 1981: the annual shares of LPG's total consumption that are estimated to be consumed by each end-use sector are applied to each month's total LPG consumption to create monthly end-use consumption estimates. The annual end-use shares are calculated in the following manner:
    - Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to equal the annual consumption of LPG by the sector;
    - Sixteen percent of LPG sales for internal combustion engine use is estimated to be for transportation end-use; this estimated portion is converted from thousand gallons per year to thousand barrels per year and assumed to equal the annual consumption of LPG by the transportation sector; and
    - LPG consumed annually by the industrial sector is estimated as the difference between LPG's total supplied and the estimated consumption by the sum of the residential and commercial sector and the transportation sector.

    The source of the sales data is EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.
  — 1982 forward: The 1981 annual end-use shares are applied for succeeding periods to estimate the amount of the total LPG supplied that is consumed by each major end-use sector.

- **Lubricants**—Total product supplied is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to those two sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports,* "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

Notes and Sources for the Consumption Section (continued)

- **Motor Gasoline**—Total product supplied monthly is allocated to the major end-use sectors in proportion to aggregations of annual sales categories formed from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics,* Tables MF-21, MF-24, and MF-25, as follows:
  - Commercial sales are the sum of sales for public non-highway use, miscellaneous use, and unclassified use;
  - Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics;* and
  - Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.

- **Petroleum Coke**—The portion consumed by the electric utility sector is from EIA Form 759, "Monthly Power Plant Report" (formerly FPC Form 4). The remaining portion is assigned to the industrial sector.

- **Residual Fuel**
  - ***Electric Utility Sector, All Periods.***
    Monthly and annual consumption 1973 through 1979 is assumed to be the amount of oil reported as consumed in steam electric plants. From January 1980, electric utility consumption of residual fuel is assumed to be the petroleum products reported as "heavy oil" consumed at utilities. Sources: 1973 through September 1977—FPC Form 4, "Monthly Power Plant Report;" October 1977 through 1981—FERC, FPC Form 4, "Monthly Power Plant Report;" 1982 forward—EIA, Form EIA-759, "Monthly Power Plant Report."
  - ***Nonutility Sectors, Annual Estimates.***
    The aggregate nonutility use of residual fuel is total residual fuel supplied minus the electric utility consumption. The nonutility annual totals are allocated into the individual nonutility sectors in proportion to the amount of residual fuel delivered to end-users, grouped into sectors from EIA's "Deliveries of Fuel Oil and Kerosene" reports (based primarily on data collected by Form EIA-172) as follows:
    - Commercial sector deliveries are taken directly from the "Deliveries" report for 1979 through 1981. Deliveries for 1981 are used as estimates for 1982. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into commercial and industrial in proportion to the 1979 shares;
    - Industrial sector deliveries for 1979 through 1981 are the sum of deliveries for industrial, oil company, and all other uses. Deliveries for 1981 are used as estimates for 1982. Prior to 1979, each year's subtotal of the heating plus industrial category deliveries is split into commercial and industrial in proportion to the 1979 shares; and this estimated industrial portion is added to oil company and all other uses; and
    - Transportation sector deliveries are the sum of deliveries for railroad, vessel bunkering, and military uses for all years. Deliveries for 1981 are used as estimates for 1982.
  - ***Nonutility Sectors, Monthly Estimates Through 1981.***
    - Commercial sector monthly consumption is estimated by allocating the annual commercial sector estimates to months in proportion to each month's share of the year's sales of No. 2 heating oil as reported in the "Monthly Report of Heating Oil Sales" by the Ethyl Corporation for 1973 through 1980 and the American Petroleum Institute since January 1981.
    - Transportation sector monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusted for the number of days per month.
    - Industrial sector monthly estimates are made by subtracting the commercial, transportation, and electric utility sector estimates from each month's total residual fuel supplied.
  - ***Nonutility Sectors, 1982 Forward.***
    Each month's nonutility consumption subtotal is disaggregated into the major end-use sectors in proportion to the shares each sector held of the nonutility subtotal in the same month in 1981.

- **Road Oil**—All product supplied is assigned to the industrial sector.

- **All Other Petroleum Products**—The product supplied of all remaining petroleum products is assigned to the industrial sector.

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

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

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

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

Sources for imports and exports of electricity:
- 1973 through 1980 annual: DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico."
- 1981 annual: DOE, Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).
- 1981 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.
- 1982 forward: EIA estimates.

Notes and Sources for the Consumption Section (continued)

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

8. **Net Coke Imports:** This is coke made from coal. Net imports means imports minus exports, and the parentheses indicate that exports are greater than imports.
Sources:
- 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals," chapter.
- 1976 through 1980: EIA, *Energy Data Report*, "Coke and Coal Chemicals," annual.
- 1981 forward: EIA, *Energy Data Report*, "Coke Plant Report," quarterly/annual.

9. **Other Energy:** "Other" is electricity produced from geothermal power and from wood and waste.
Sources: same as Note 7 above, for Nuclear.

10. **Electricity Sales:** From the sources cited below the following sales categories are available: residential, commercial, industrial, and other. For the end-use estimates in this section, the "other" category (which is primarily sales for use in government buildings) is added to the commercial sector except for approximately 4 percent, which represents the transportation sector use of electricity. Sales of electricity are converted into Btu at the rate of 3,412 Btu per kilowatt-hour.
Sources of sales data:
- 1973 through 1976: FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- 1977 through February 1980: EIA, FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income."
- March 1980 through December 1982: EIA, FERC Form 5, "Electric Utility Company Monthly Statement."
- January 1983 forward: EIA, EIA Form 826, "Electric Utility Company Monthly Statement."

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

Crude Oil and Refined Petroleum Products*

Domestic crude oil production during January 1984 was estimated to be 8.7 million barrels per day, 0.5 percent above the rate in December 1983 and 0.3 percent above the rate in January 1983. Average domestic crude oil production in 1983 was 0.1 percent above the average in 1982.

Total petroleum imports averaged 5.1 million barrels per day in January 1984, 3.2 percent more than the December 1983 rate and 17.7 percent more than the January 1983 rate. The total petroleum imports average in 1983 was 2.4 percent below the average in 1982.

In January 1984, 17.1 million barrels per day of petroleum products were supplied for domestic use, 2.4 percent above the level in December 1983 and 15.8 percent above the level in the previous January. Motor gasoline accounted for 37.9 percent of the total; distillate fuel oil, 21.6 percent; and residual fuel oil, 10.4 percent. Average product supplied for 1983 was 0.7 percent below the average for 1982.

Motor gasoline supplied during January 1984 averaged 6.5 million barrels per day, 5.3 percent below the rate in December 1983 but 8.4 percent above the rate in the previous January. Average motor gasoline supplied during 1983 was 1.2 percent above the 1982 average. Stocks of motor gasoline totaled 222 million barrels at the end of January 1984, the same stock level that was reported at the end of December 1983 but 29 million barrels below the January 1983 level.

In January 1984, 3.7 million barrels of distillate fuel oil were supplied per day, 10.0 percent higher than the December 1983 rate and 33.8 percent higher than the January 1983 level. Average distillate fuel oil supplied during 1983 was 0.4 percent above the average in 1982. Distillate fuel oil stocks were 117 million barrels at the end of January 1984, 23 million barrels below the level at the end of the previous month and 51 million barrels below the stock level 1 year earlier.

Residual fuel oil supplied in January 1984 averaged 1.8 million barrels per day, 13.8 percent higher than in December 1983 and 13.5 percent higher than the January 1983 rate. Average residual fuel oil supplied during 1983 was 18.2 percent below the 1982 average. Residual fuel oil stocks measured 41 million barrels at the end of January 1984, 8 million barrels below the level at the end of December 1983, and 20 million barrels below the ending stocks in the month of January 1983.

*Estimates for the most current month are based on Energy Information Administration (EIA) weekly data (except crude production) and will be revised to conform with data from the EIA Petroleum Reporting System as available. For the most recent month, crude production is an EIA estimate based on historical and provisional data through October 1983. The total import data above include imports into the Strategic Petroleum Reserve.

Petroleum

Crude Oil[1] and Petroleum Products Overview

		Field Production			Stock Withdrawal[2]			Ending Stocks[3]
		Total Domestic[4]	Crude Oil	Natural Gas Plant Production	Crude Oil[5]	Petroleum Products	Petroleum Products Supplied	Crude Oil[5] and Petroleum Products
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**10,975**	**9,208**	**1,738**	**11**	**-146**	**17,308**	**1,008**
1974	**AVERAGE**	**10,498**	**8,774**	**1,688**	**-62**	**-117**	**16,653**	**[6]1,074**
1975	**AVERAGE**	**10,045**	**8,375**	**1,633**	**[6]-17**	**[6]-145**	**16,322**	**1,133**
1976	**AVERAGE**	**9,774**	**8,132**	**1,603**	**-39**	**96**	**17,461**	**1,112**
1977	**AVERAGE**	**9,913**	**8,245**	**1,618**	**-170**	**-378**	**18,431**	**1,312**
1978	**AVERAGE**	**10,328**	**8,707**	**1,567**	**-78**	**172**	**18,847**	**1,278**
1979	**AVERAGE**	**10,179**	**8,552**	**1,584**	**-148**	**-25**	**18,513**	**1,341**
1980	**AVERAGE**	**10,214**	**8,597**	**1,573**	**-98**	**-42**	**17,056**	**[6]1,392**
1981	**AVERAGE**	**10,230**	**8,572**	**1,609**	**[6]-290**	**[6]130**	**16,058**	**1,484**
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428
	March	10,284	8,667	1,572	121	1,047	15,560	1,392
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346
	May	10,244	8,683	1,518	29	-66	14,847	1,347
	June	10,212	8,646	1,511	40	-489	14,998	1,360
	July	10,229	8,658	1,513	-147	-926	14,821	1,393
	August	10,215	8,634	1,524	-440	-44	14,839	1,408
	September	10,279	8,701	1,518	263	-447	15,022	1,414
	October	10,299	8,701	1,530	-548	-47	14,859	1,432
	November	10,359	8,697	1,609	-398	-361	15,009	1,455
	December	10,276	8,598	1,628	128	688	15,487	[6]1,430
	AVERAGE	**10,252**	**8,649**	**1,550**	**-136**	**283**	**15,296**	
1983	January	10,356	8,634	1,668	-567	[6]865	14,765	1,453
	February	10,298	8,660	1,585	-382	1,128	14,772	1,432
	March	10,259	8,677	1,544	56	1,765	15,484	1,375
	April	10,229	8,686	1,502	-438	431	14,779	1,376
	May	10,231	8,682	1,483	68	-759	14,250	1,397
	June	10,262	8,676	1,514	-163	-242	15,281	1,409
	July	10,237	8,647	1,536	118	-922	14,913	1,434
	August	10,257	8,653	1,561	-781	-289	15,366	1,467
	September	10,323	8,666	1,598	-191	-634	15,396	1,492
	October	10,317	8,654	1,604	-180	-456	14,947	1,512
	November	10,310	8,624	1,636	182	-128	15,533	1,510
	December	10,188	8,612	1,533	R-306	R2,150	R16,691	R1,453
	AVERAGE	**10,272**	**8,656**	**1,564**	**R-215**	**R239**	**R15,184**	
1984	January†	NA	*8,659*	NA	*1*	*1,665*	*17,094*	*1,422*

[1]Includes lease condensate.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]Stocks are totals as of end of period.
[4]Includes crude oil, natural gas plant production, other hydrocarbons, and alcohol.
[5]Includes stocks located in the Strategic Petroleum Reserve.
[6]Includes crude oil for storage in the Strategic Petroleum Reserve.
[7]Net imports equals imports minus exports.
[8]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stocks withdrawal calculations. See Note 5 on the last page of this section.
Footnotes continued on following page.

Petroleum

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

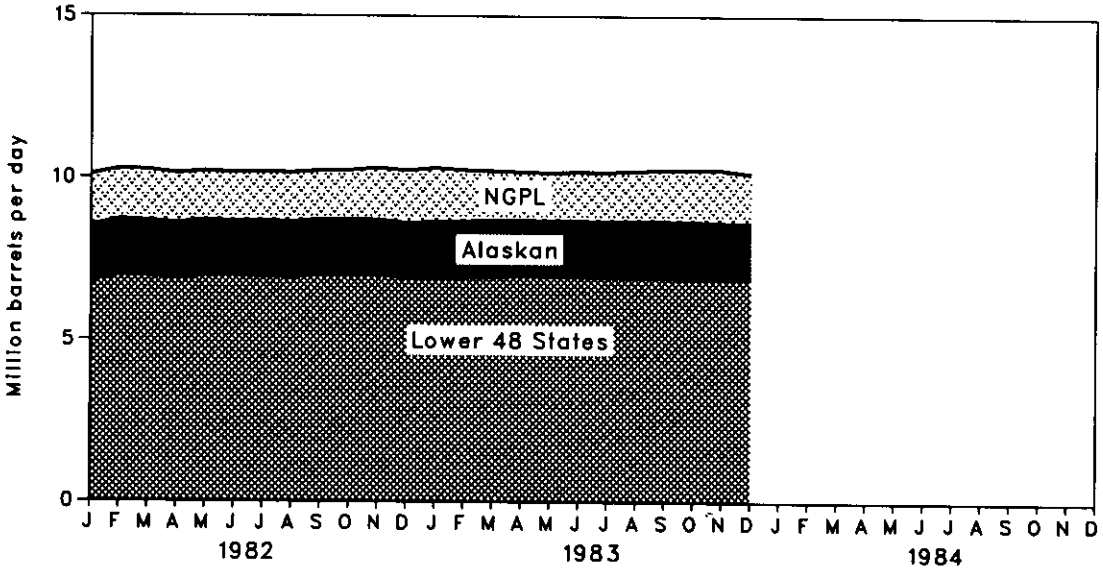
		Imports			Exports			
		Total	Crude Oil[6]	Petroleum Products	Total	Crude Oil	Petroleum Products	Net Imports[7]
		Thousand barrels per day						
1973	**AVERAGE**	**6,256**	**3,244**	**3,012**	**231**	**2**	**229**	**6,025**
1974	**AVERAGE**	**6,112**	**3,477**	**2,635**	**221**	**3**	**218**	**5,892**
1975	**AVERAGE**	**6,056**	**4,105**	**1,951**	**209**	**6**	**204**	**5,846**
1976	**AVERAGE**	**7,313**	**5,287**	**2,026**	**223**	**8**	**215**	**7,090**
1977	**AVERAGE**	**8,807**	**6,615**	**2,193**	**243**	**50**	**193**	**8,565**
1978	**AVERAGE**	**8,363**	**6,356**	**2,008**	**362**	**158**	**204**	**8,002**
1979	**AVERAGE**	**8,456**	**6,519**	**1,937**	**471**	**235**	**236**	**7,985**
1980	**AVERAGE**	**6,909**	**5,263**	**1,646**	**544**	**287**	**258**	**6,365**
1981	**AVERAGE**	**5,996**	**4,396**	**1,599**	**595**	**228**	**367**	**5,401**
1982	January	5,332	3,693	1,639	829	238	591	4,503
	February	4,807	2,990	1,817	804	304	499	4,003
	March	4,484	2,874	1,610	882	321	561	3,602
	April	4,378	2,849	1,529	786	174	611	3,593
	May	4,811	3,309	1,503	803	262	542	4,008
	June	5,327	3,836	1,491	703	94	609	4,624
	July	5,890	4,248	1,642	741	229	512	5,149
	August	5,244	3,851	1,392	858	304	554	4,386
	September	5,414	3,636	1,778	791	184	606	4,624
	October	5,306	3,670	1,636	932	270	662	4,374
	November	5,744	3,862	1,882	786	262	524	4,958
	December	4,606	3,000	1,605	860	193	667	3,746
	AVERAGE	**5,113**	**3,488**	**1,625**	**815**	**236**	**579**	**4,298**
1983	January	4,372	2,938	1,434	973	117	856	3,399
	February	3,691	2,268	1,423	865	262	603	2,825
	March	3,629	2,232	1,398	801	174	627	2,829
	April	4,744	3,154	1,590	809	88	721	3,935
	May	4,898	3,234	1,664	848	280	568	4,049
	June	5,218	3,502	1,716	774	144	630	4,443
	July	5,690	3,868	1,822	571	145	426	5,119
	August	6,036	4,174	1,863	663	172	491	5,373
	September	6,088	4,221	1,867	684	177	507	5,403
	October	5,256	3,446	1,810	576	140	436	4,680
	November	5,168	3,312	1,856	679	186	494	4,489
	December	R4,986	R3,214	R1,772	639	95	544	4,348
	AVERAGE	**R4,988**	**R3,303**	**R1,686**	**739**	**164**	**575**	**4,249**
1984	January†	*5,146*	*3,181*	*1,964*	NA	NA	NA	NA

Footnotes continued.
†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

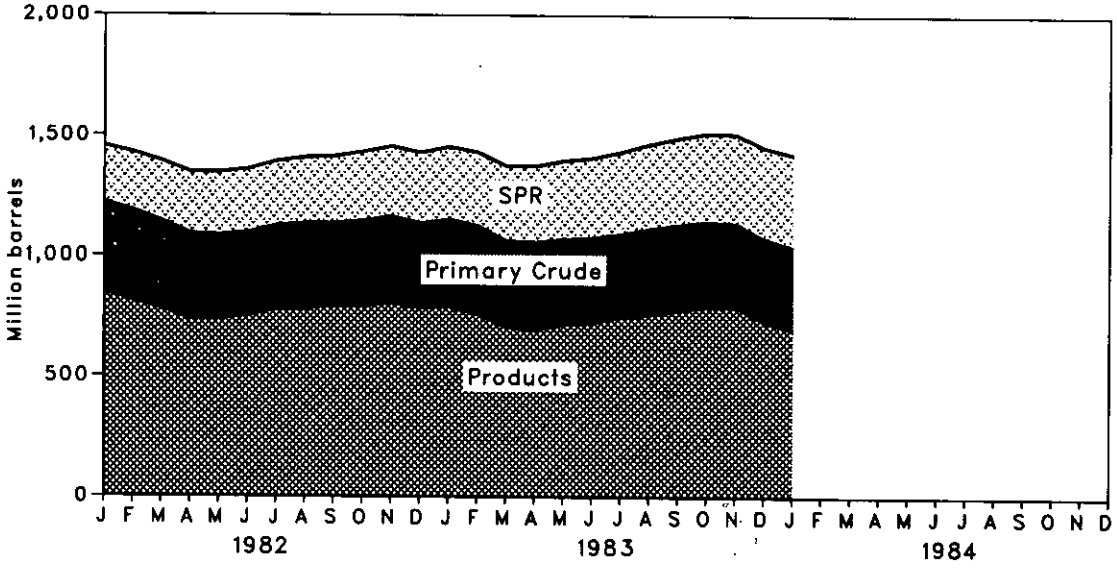
Petroleum

Overview

Production of Crude Oil and Natural Gas Plant Liquids



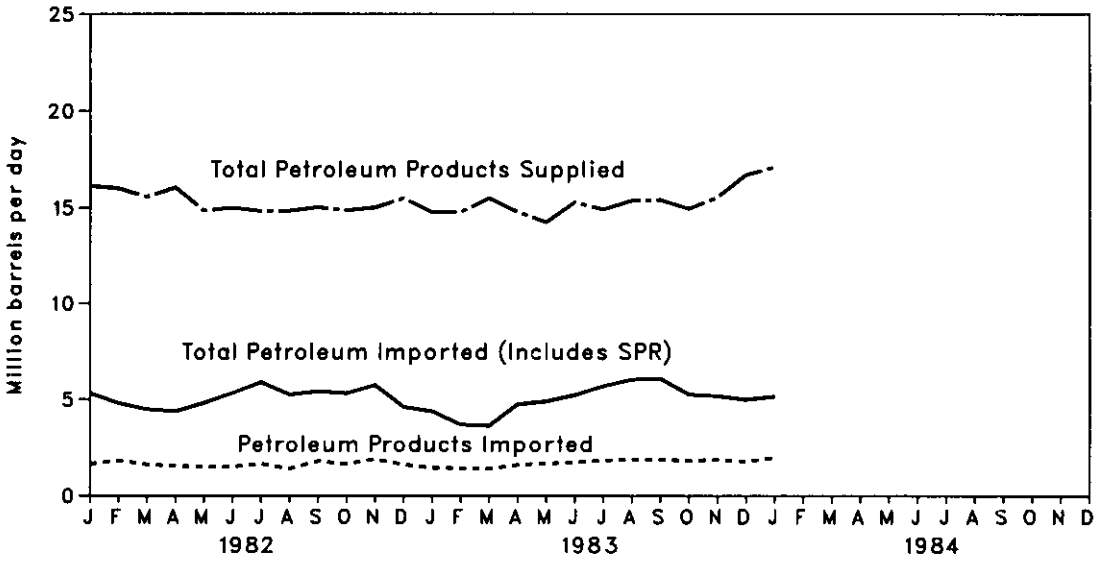
Stocks



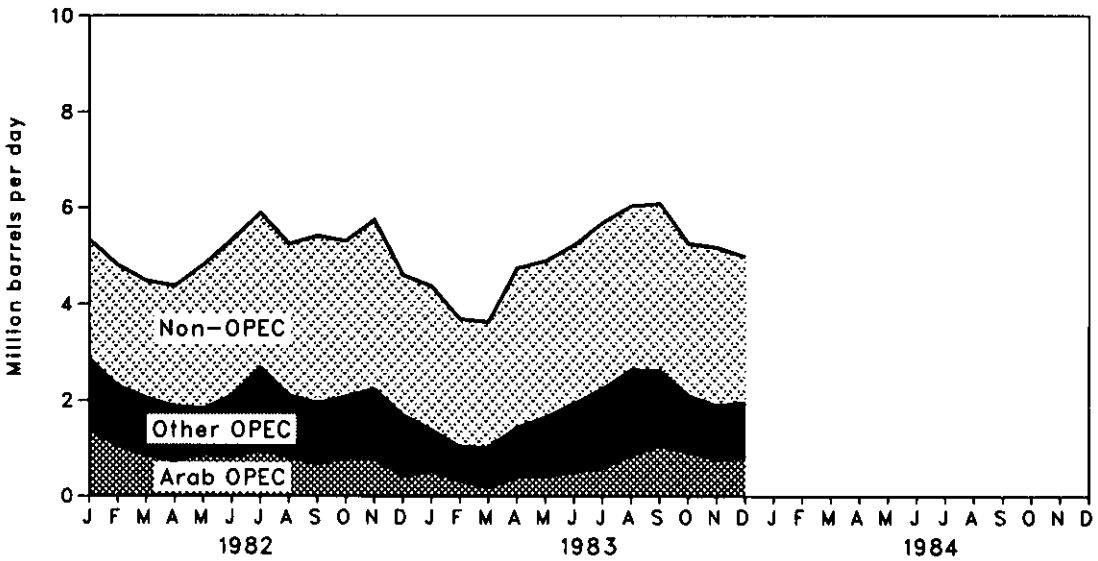
Petroleum

Overview

Products Supplied and Imports



Petroleum Imports by Source



Petroleum

Crude Oil[1] Supply and Disposition

		Supply							
		Field Production		Imports			Stock Withdrawal[3]		Unaccounted for Crude Oil
		Total Domestic	Alaskan	Total	SPR[4]	Other	SPR[4]	Other	
		Thousand barrels per day							
1973	**AVERAGE**	**9,208**	**198**	**3,244**		**3,244**		**11**	**3**
1974	**AVERAGE**	**8,774**	**193**	**3,477**		**3,477**		**-62**	**-25**
1975	**AVERAGE**	**8,375**	**191**	**4,105**		**4,105**		**-17**	**17**
1976	**AVERAGE**	**8,132**	**173**	**5,287**		**5,287**		**-39**	**77**
1977	**AVERAGE**	**8,245**	**464**	**6,615**	**21**	**6,594**	**-20**	**-150**	**-6**
1978	**AVERAGE**	**8,707**	**1,229**	**6,356**	**162**	**6,195**	**-163**	**84**	**-57**
1979	**AVERAGE**	**8,552**	**1,401**	**6,519**	**67**	**6,452**	**-67**	**-81**	**-11**
1980	**AVERAGE**	**8,597**	**1,617**	**5,263**	**44**	**5,219**	**-45**	**-52**	**34**
1981	**AVERAGE**	**8,572**	**1,609**	**4,396**	**256**	**4,141**	**-336**	**[6]46**	**83**
1982	January	8,509	1,705	3,693	170	3,523	-159	-242	101
	February	8,702	1,707	2,990	159	2,830	-213	-29	156
	March	8,667	1,696	2,874	185	2,689	-235	357	2
	April	8,591	1,691	2,849	190	2,659	-233	196	231
	May	8,683	1,707	3,309	204	3,105	-176	205	111
	June	8,646	1,665	3,836	105	3,732	-105	144	133
	July	8,658	1,710	4,248	97	4,150	-97	-50	-20
	August	8,634	1,697	3,851	208	3,643	-208	-232	189
	September	8,701	1,705	3,636	139	3,497	-143	406	-210
	October	8,701	1,706	3,670	216	3,454	-216	-332	249
	November	8,697	1,676	3,862	180	3,683	-179	-219	-124
	December	8,598	1,682	3,000	124	2,877	-125	252	35
	AVERAGE	**8,649**	**1,696**	**3,488**	**165**	**3,323**	**-174**	**38**	**71**
1983	January	8,634	1,698	2,938	219	2,720	-219	-348	238
	February	8,660	1,725	2,268	197	2,071	-197	-185	423
	March	8,677	1,726	2,232	201	2,031	-184	240	134
	April	8,686	1,710	3,154	205	2,949	-197	-241	191
	May	8,682	1,710	3,234	289	2,945	-293	362	148
	June	8,676	1,710	3,502	190	3,312	-188	25	480
	July	8,647	1,705	3,868	274	3,594	-264	382	-74
	August	8,653	1,712	4,174	350	3,823	-358	-423	333
	September	8,666	1,722	4,221	309	3,912	-307	116	-6
	October	8,654	1,731	3,446	202	3,244	-201	21	69
	November	8,624	1,713	3,312	171	3,141	-135	317	137
	December	8,612	1,713	R3,214	R193	R3,021	R-252	R-55	-141
	AVERAGE	**8,656**	**1,715**	**R3,303**	**R234**	**R3,069**	**R-234**	**R19**	**159**
1984	January†	*8,659*	*1,741*	*3,181*	*163*	*3,018*	*-184*	*185*	NA

[1]Includes lease condensate.
[2]Stocks are totals as of end of period.
[3]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[4]Strategic Petroleum Reserve.
[5]Beginning in January 1983, crude oil used directly as fuel is shown as product supplied.
[6]Stocks of Alaskan crude oil in transit were included beginning in January 1981. Stock withdrawals are calculated using new basis stock levels. See Note 6 on the last page of this section.
Footnotes continued on following page.

Petroleum

Crude Oil[1] Supply and Disposition (continued)

		Supply		Disposition			Ending Stocks[2]		
		Crude Used Directly[5]	Crude Losses	Refinery Inputs	Exports	Product Supplied[3]	Total	SPR[4]	Other Primary
		Thousand barrels per day					Million barrels		
1973	**AVERAGE**	**-19**	**13**	**12,431**	**2**	**NA**	**242**		**242**
1974	**AVERAGE**	**-15**	**13**	**12,133**	**3**	**NA**	**265**		**265**
1975	**AVERAGE**	**-17**	**13**	**12,442**	**6**	**NA**	**271**		**271**
1976	**AVERAGE**	**-18**	**15**	**13,416**	**8**	**NA**	**285**		**285**
1977	**AVERAGE**	**-14**	**16**	**14,602**	**50**	**NA**	**348**	**7**	**340**
1978	**AVERAGE**	**-14**	**16**	**14,739**	**158**	**NA**	**376**	**67**	**309**
1979	**AVERAGE**	**-13**	**16**	**14,648**	**235**	**NA**	**430**	**91**	**339**
1980	**AVERAGE**	**-13**	**15**	**13,481**	**287**	**NA**	**[6]466**	**108**	**[6]358**
1981	**AVERAGE**	**-58**	**5**	**12,470**	**228**	**NA**	**594**	**230**	**363**
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	644	294	350
	AVERAGE	**-59**	**3**	**11,774**	**236**	**NA**			
1983	January	NA	2	11,070	117	54	661	301	361
	February	NA	3	10,635	262	69	672	306	366
	March	NA	2	10,854	174	70	670	312	359
	April	NA	2	11,436	88	68	684	318	366
	May	NA	1	11,789	280	63	681	327	355
	June	NA	1	12,287	144	64	686	332	354
	July	NA	2	12,347	145	65	683	341	342
	August	NA	1	12,141	172	64	707	352	355
	September	NA	1	12,445	177	66	713	361	352
	October	NA	1	11,784	140	63	718	367	351
	November	NA	2	12,003	186	64	713	371	341
	December	NA	1	R11,217	95	67	R722	R379	R343
	AVERAGE	**NA**	**1**	**R11,672**	**164**	**65**			
1984	January†	NA	NA	*11,635*	NA	NA	*728*	*385*	*344*

Footnotes continued.
†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

Petroleum

Crude Oil and Petroleum Product Imports

		Imports from OPEC Sources[1]										
		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC[2]	Total OPEC	Total Arab OPEC[3]
		Thousand barrels per day										
1973	**AVERAGE**	**136**	**164**	**486**	**71**	**213**	**223**	**459**	**1,135**	**106**	**2,993**	**915**
1974	**AVERAGE**	**190**	**4**	**461**	**74**	**300**	**469**	**713**	**979**	**88**	**3,280**	**752**
1975	**AVERAGE**	**282**	**232**	**715**	**117**	**390**	**280**	**762**	**702**	**122**	**3,601**	**1,383**
1976	**AVERAGE**	**432**	**453**	**1,230**	**254**	**539**	**298**	**1,025**	**700**	**134**	**5,066**	**2,424**
1977	**AVERAGE**	**559**	**723**	**1,380**	**335**	**541**	**535**	**1,143**	**690**	**287**	**6,193**	**3,185**
1978	**AVERAGE**	**649**	**654**	**1,144**	**385**	**573**	**555**	**919**	**645**	**226**	**5,751**	**2,963**
1979	**AVERAGE**	**636**	**658**	**1,356**	**281**	**420**	**304**	**1,080**	**690**	**212**	**5,637**	**3,056**
1980	**AVERAGE**	**488**	**554**	**1,261**	**172**	**348**	**9**	**857**	**481**	**130**	**4,300**	**2,551**
1981	**AVERAGE**	**311**	**319**	**1,129**	**81**	**366**	**0**	**620**	**406**	**90**	**3,323**	**1,848**
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,096	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	106	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	AVERAGE	**170**	**26**	**552**	**92**	**248**	**35**	**514**	**412**	**97**	**2,146**	**854**
1983	January	204	0	282	47	255	43	186	324	43	1,384	533
	February	104	0	214	9	217	0	92	371	28	1,035	326
	March	63	0	103	0	138	0	121	425	173	1,023	183
	April	228	0	180	(s)	210	0	186	508	125	1,438	409
	May	284	0	122	12	324	37	352	444	69	1,645	419
	June	300	0	175	40	502	38	402	335	146	1,938	515
	July	282	0	182	58	464	112	525	431	187	2,240	599
	August	370	0	426	45	416	213	464	477	230	2,641	866
	September	413	0	587	21	516	86	324	472	208	2,627	1,074
	October	261	0	638	16	368	12	307	337	169	2,108	938
	November	165	0	545	56	318	21	214	435	135	1,891	789
	December	141	0	569	45	291	9	329	408	163	1,957	823
	AVERAGE	**235**	**0**	**336**	**29**	**335**	**48**	**294**	**414**	**140**	**1,832**	**625**

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

Petroleum

Crude Oil and Petroleum Product Imports (continued)

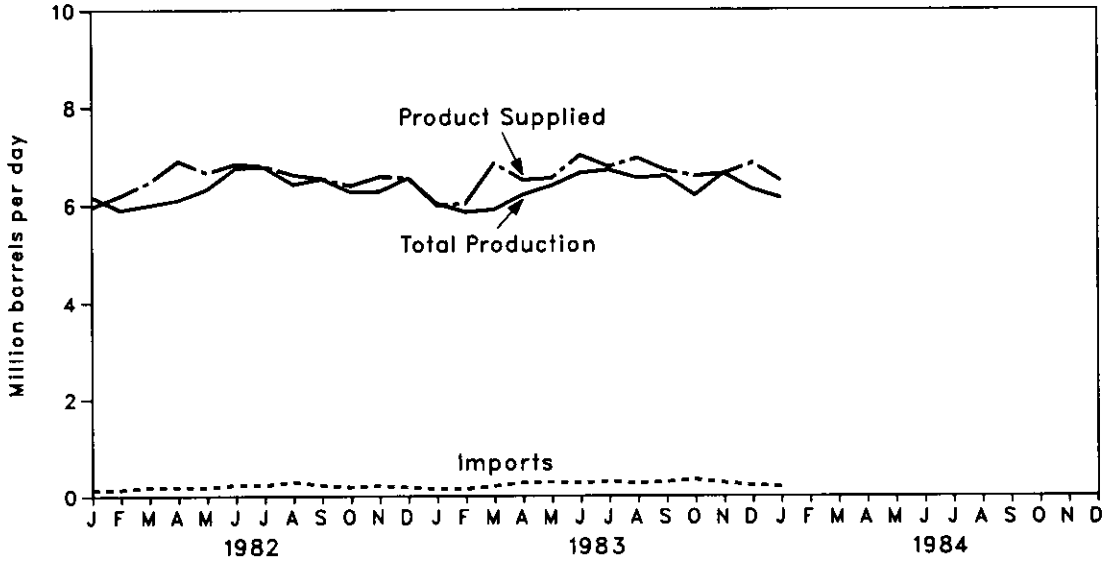
		Imports from Non-OPEC Sources[4]										
		Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico	Virgin Islands	Other Non-OPEC	Total Non-OPEC	Total Imports
		Thousand barrels per day										
1973	**AVERAGE**	**174**	**1,325**	**16**	**585**	**255**	**15**	**99**	**329**	**465**	**3,263**	**6,256**
1974	**AVERAGE**	**164**	**1,070**	**8**	**511**	**251**	**8**	**90**	**391**	**340**	**2,832**	**6,112**
1975	**AVERAGE**	**152**	**846**	**71**	**332**	**242**	**14**	**90**	**406**	**300**	**2,454**	**6,056**
1976	**AVERAGE**	**118**	**599**	**87**	**275**	**274**	**31**	**88**	**422**	**353**	**2,247**	**7,313**
1977	**AVERAGE**	**171**	**517**	**179**	**211**	**289**	**126**	**105**	**466**	**550**	**2,614**	**8,807**
1978	**AVERAGE**	**160**	**467**	**318**	**229**	**253**	**180**	**94**	**429**	**484**	**2,613**	**8,363**
1979	**AVERAGE**	**147**	**538**	**439**	**231**	**190**	**202**	**92**	**431**	**548**	**2,819**	**8,456**
1980	**AVERAGE**	**78**	**455**	**533**	**225**	**176**	**176**	**88**	**388**	**491**	**2,609**	**6,909**
1981	**AVERAGE**	**74**	**447**	**522**	**197**	**133**	**375**	**62**	**327**	**534**	**2,672**	**5,996**
1982	January	58	513	425	179	106	346	62	334	452	2,474	5,332
	February	67	537	476	221	120	181	38	362	508	2,510	4,807
	March	43	437	503	189	118	294	62	307	480	2,433	4,484
	April	82	360	476	184	166	247	36	266	690	2,507	4,378
	May	77	419	766	152	95	516	47	302	607	2,981	4,811
	June	32	481	797	148	129	557	58	322	708	3,231	5,327
	July	64	536	783	158	118	433	38	376	698	3,204	5,890
	August	80	443	853	145	106	520	24	317	650	3,137	5,244
	September	92	493	897	195	89	631	51	278	746	3,472	5,414
	October	45	459	682	148	109	666	52	262	801	3,222	5,306
	November	51	553	860	212	90	623	81	334	706	3,508	5,744
	December	88	561	689	174	102	438	48	336	480	2,916	4,606
	AVERAGE	**65**	**482**	**685**	**175**	**112**	**456**	**50**	**316**	**627**	**2,968**	**5,113**
1983	January	68	536	849	218	73	315	40	299	588	2,988	4,372
	February	92	592	722	179	81	193	50	192	554	2,655	3,691
	March	86	488	760	187	78	240	43	162	563	2,606	3,629
	April	167	452	981	216	85	421	20	183	781	3,306	4,744
	May	135	501	944	153	108	483	42	235	651	3,252	4,898
	June	137	576	831	181	120	424	48	252	712	3,281	5,218
	July	69	633	849	191	103	369	37	364	836	3,450	5,690
	August	142	540	891	194	90	461	40	313	*725	3,395	6,036
	September	137	523	832	251	82	472	33	308	822	3,461	6,088
	October	164	539	771	172	106	414	48	370	565	3,149	5,256
	November	143	542	717	144	110	334	55	440	793	3,278	5,168
	December	119	592	718	153	113	429	22	271	613	3,030	4,986
	AVERAGE	**122**	**542**	**822**	**187**	**96**	**381**	**40**	**283**	**684**	**3,156**	**4,988**

Footnotes continued.
[4]Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products that were refined from crude oil produced in OPEC countries.
(s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• Beginning in October 1977, Strategic Petroleum Reserve imports are included.
Sources: • See the last page of this section.

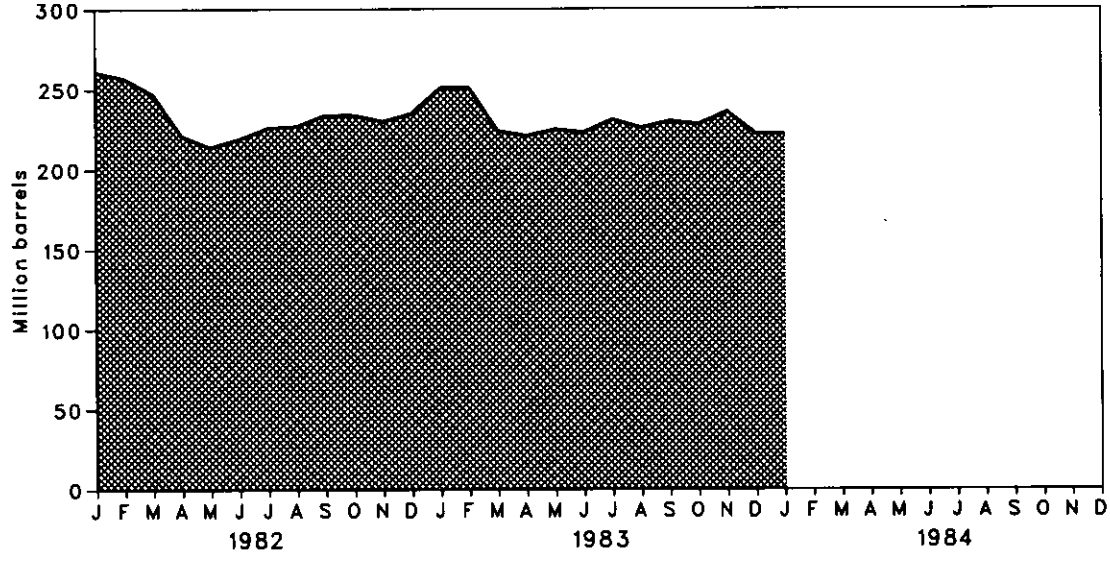
Petroleum

Motor Gasoline

Products Supplied, Total Production, and Imports



Stocks



Petroleum

Finished Motor Gasoline Supply and Disposition

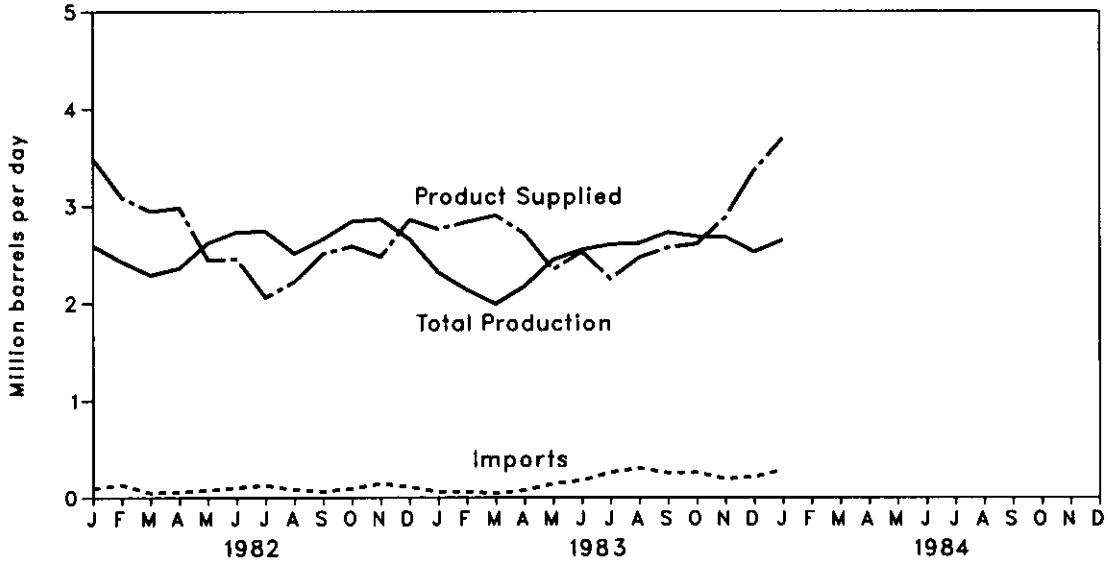
		Supply			Disposition				Ending Stocks[1]	
						Product Supplied				
		Total Production	Imports[2]	Stock Withdrawal[2,3]	Exports	Total	Unleaded[4]	Unleaded Percent of Total	Total Motor Gasoline[5]	Finished Motor Gasoline
		Thousand barrels per day							Million barrels	
1973	**AVERAGE**	**6,535**	**134**	**9**	**4**	**6,674**			**209**	
1974	**AVERAGE**	**6,360**	**204**	**-24**	**2**	**6,537**			**r218**	
1975	**AVERAGE**	**6,520**	**184**	**r-28**	**2**	**6,675**			**235**	
1976	**AVERAGE**	**6,841**	**131**	**10**	**3**	**6,978**			**231**	
1977	**AVERAGE**	**7,033**	**217**	**-72**	**2**	**7,177**	**1,976**	**27.5**	**258**	
1978	**AVERAGE**	**7,169**	**190**	**54**	**1**	**7,412**	**2,521**	**34.0**	**238**	
1979	**AVERAGE**	**6,852**	**181**	**2**	**(s)**	**7,034**	**2,798**	**39.8**	**237**	
1980	**AVERAGE**	**6,506**	**140**	**-66**	**1**	**6,579**	**3,067**	**46.6**	**r261**	
1981	**AVERAGE[7]**	**6,405**	**157**	**r28**	**2**	**6,588**	**3,264**	**49.5**	**253**	
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261	213
	February	5,899	133	172	8	6,196	3,210	51.8	257	208
	March	5,994	183	334	44	6,466	3,358	51.9	247	198
	April	6,095	185	650	33	6,897	3,495	50.7	221	179
	May	6,319	182	177	23	6,655	3,415	51.3	214	173
	June	6,754	230	-134	14	6,835	3,565	52.2	219	177
	July	6,768	225	-178	24	6,790	3,577	52.7	226	183
	August	6,419	291	-81	16	6,614	3,526	53.3	227	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234	191
	October	6,262	185	-42	15	6,391	3,351	52.4	234	192
	November	6,273	211	101	11	6,574	3,451	52.5	230	189
	December	6,542	178	-165	7	6,549	3,485	53.2	r235	r194
	AVERAGE	**6,338**	**197**	**25**	**20**	**6,539**	**3,409**	**52.1**		
1983	January	6,020	148	r-186	(s)	5,981	3,352	56.0	251	208
	February	5,848	142	32	(s)	6,022	3,257	54.1	251	207
	March	5,897	205	765	23	6,843	3,620	52.9	224	184
	April	6,202	273	27	1	6,501	3,505	53.9	221	183
	May	6,386	284	-128	1	6,540	3,547	54.2	225	187
	June	6,646	265	118	22	7,008	3,796	54.2	223	183
	July	6,704	297	-210	18	6,773	3,752	55.4	231	190
	August	6,539	260	159	13	6,946	3,836	55.2	226	185
	September	6,582	285	-160	14	6,693	3,671	54.8	230	190
	October	6,188	335	60	2	6,581	3,698	56.2	228	188
	November	6,636	269	-274	2	6,629	3,714	56.0	236	196
	December	R6,314	R217	R340	25	R6,846	3,967	57.9	R222	R185
	AVERAGE	**6,332**	**R249**	**R47**	**10**	**R6,617**	**3,646**	**55.1**		
1984	January†	*6,129*	*188*	*171*	NA	*6,486*	NA	NA	*222*	*184*

[1]Stocks are totals as of end of period.
[2]Beginning in 1981, excludes blending components.
[3]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[4]Includes gasohol.
[5]Includes motor gasoline blending components.
[6]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.
[7]Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.
†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)= Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

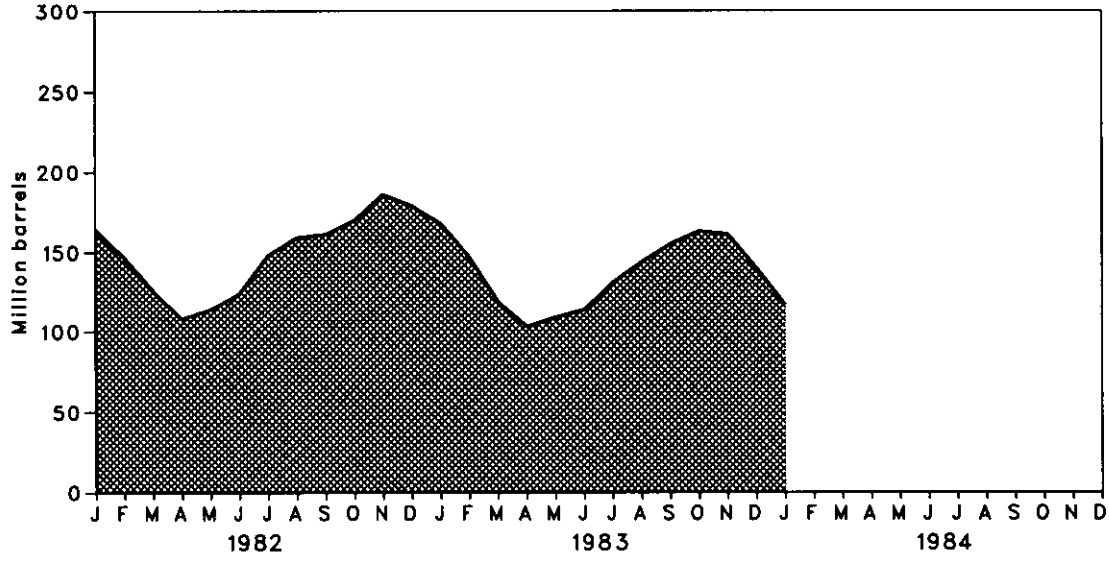
Petroleum

Distillate Fuel Oil

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Distillate Fuel Oil Supply and Disposition

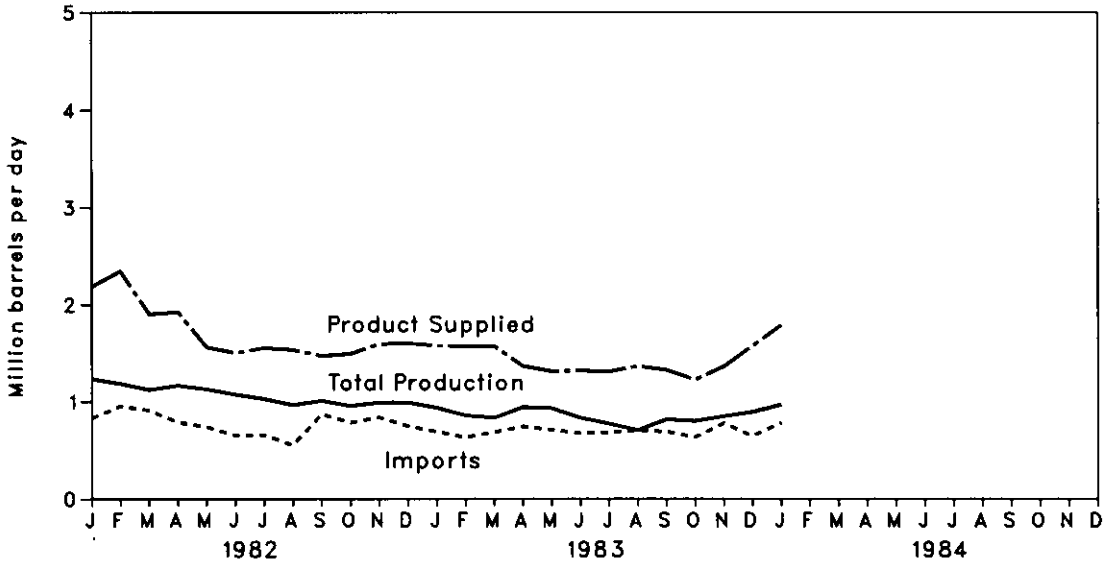
		Supply				Disposition		Ending Stocks[1]
		Total Production	Imports	Stock Withdrawal[2]	Crude Used Directly[3]	Exports	Product Supplied[3]	
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**2,822**	**392**	**-115**	**2**	**9**	**3,092**	**196**
1974	**AVERAGE**	**2,669**	**289**	**-9**	**2**	**2**	**2,948**	**[4]200**
1975	**AVERAGE**	**2,654**	**155**	**[4]40**	**2**	**1**	**2,851**	**209**
1976	**AVERAGE**	**2,924**	**146**	**62**	**1**	**1**	**3,133**	**186**
1977	**AVERAGE**	**3,278**	**250**	**-176**	**1**	**1**	**3,352**	**250**
1978	**AVERAGE**	**3,167**	**173**	**93**	**1**	**3**	**3,432**	**216**
1979	**AVERAGE**	**3,153**	**193**	**-34**	**1**	**3**	**3,311**	**229**
1980	**AVERAGE**	**2,662**	**142**	**64**	**1**	**3**	**2,866**	**[4]205**
1981	**AVERAGE[5]**	**2,613**	**173**	**[4]38**	**10**	**5**	**2,829**	**192**
1982	January	2,591	97	876	10	90	3,484	164
	February	2,427	132	605	11	90	3,085	147
	March	2,288	48	682	10	84	2,945	126
	April	2,358	59	612	13	64	2,978	108
	May	2,618	74	-183	10	75	2,444	114
	June	2,729	102	-335	10	55	2,452	124
	July	2,734	125	-789	11	24	2,058	148
	August	2,507	80	-339	10	40	2,218	159
	September	2,657	61	-85	12	139	2,507	161
	October	2,838	91	-289	8	66	2,581	170
	November	2,860	145	-514	8	24	2,475	186
	December	2,655	109	225	10	143	2,855	[4]179
	AVERAGE	**2,606**	**93**	**35**	**10**	**74**	**2,671**	
1983	January	2,314	58	[4]561	NA	173	2,760	168
	February	2,136	58	742	NA	105	2,832	147
	March	1,991	42	926	NA	59	2,900	119
	April	2,169	73	518	NA	47	2,713	103
	May	2,444	141	-193	NA	50	2,341	109
	June	2,545	175	-154	NA	40	2,526	114
	July	2,600	259	-556	NA	55	2,248	131
	August	2,612	302	-403	NA	43	2,467	144
	September	2,725	253	-374	NA	37	2,568	155
	October	2,682	255	-275	NA	55	2,606	163
	November	2,679	189	65	NA	54	2,879	161
	December	R2,524	R212	R675	NA	54	R3,358	R140
	AVERAGE	**R2,454**	**R169**	**R124**	**NA**	**64**	**R2,682**	
1984	January†	*2,645*	*285*	*819*	NA	NA	*3,694*	*117*

[1]Stocks are totals as of end of period.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.
[4]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.
[5]Beginning January 1981, survey forms were modified. See Note 2 on the last page of this section.
†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

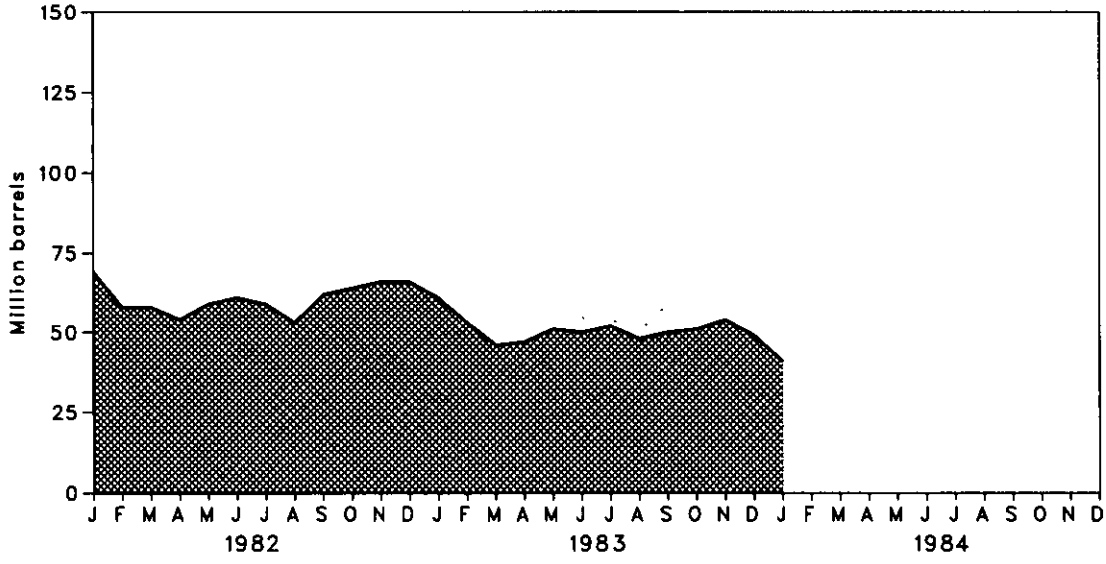
Petroleum

Residual Fuel Oil

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Residual Fuel Oil Supply and Disposition

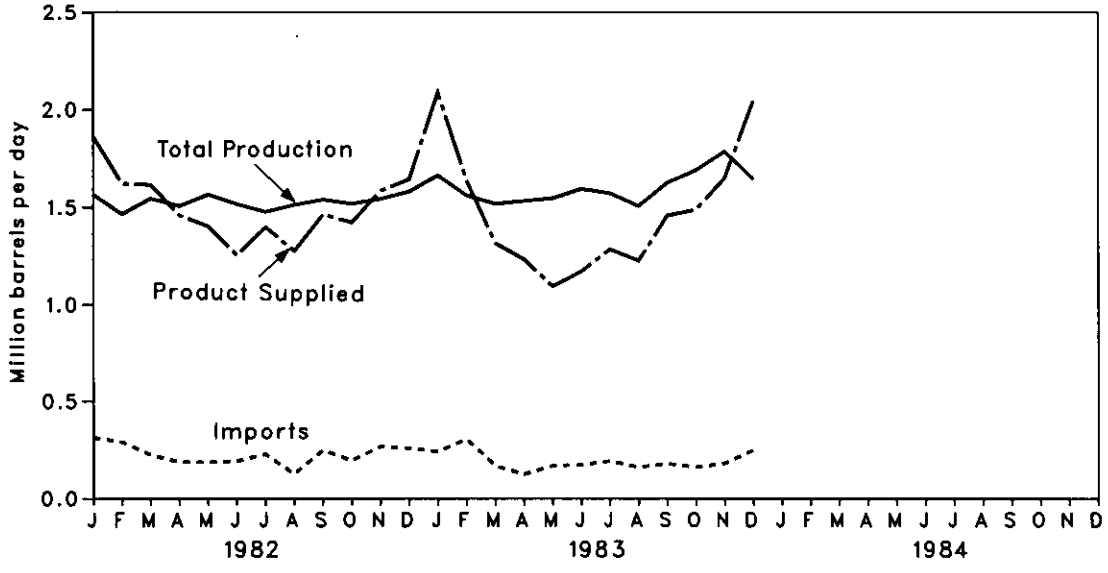
		Supply				Disposition		Ending Stocks[1]
		Total Production	Imports	Stock Withdrawal[2]	Crude Used Directly[3]	Exports	Product Supplied[3]	
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**971**	**1,853**	**5**	**17**	**23**	**2,822**	**53**
1974	**AVERAGE**	**1,070**	**1,587**	**-17**	**13**	**14**	**2,639**	**[4]60**
1975	**AVERAGE**	**1,235**	**1,223**	**[4]2**	**15**	**15**	**2,462**	**74**
1976	**AVERAGE**	**1,377**	**1,413**	**5**	**17**	**12**	**2,801**	**72**
1977	**AVERAGE**	**1,754**	**1,359**	**-48**	**13**	**6**	**3,071**	**90**
1978	**AVERAGE**	**1,667**	**1,355**	**-1**	**13**	**13**	**3,023**	**90**
1979	**AVERAGE**	**1,687**	**1,151**	**-15**	**12**	**9**	**2,826**	**96**
1980	**AVERAGE**	**1,580**	**939**	**10**	**12**	**33**	**2,508**	**[4]92**
1981	**AVERAGE[5]**	**1,321**	**800**	**[4]37**	**48**	**118**	**2,088**	**78**
1982	January	1,235	831	301	53	235	2,185	69
	February	1,186	956	363	53	213	2,344	58
	March	1,123	912	12	53	197	1,903	58
	April	1,166	788	150	52	234	1,923	54
	May	1,128	742	-172	52	191	1,560	59
	June	1,074	652	-57	50	217	1,501	61
	July	1,028	657	56	49	239	1,550	59
	August	965	551	203	47	235	1,531	53
	September	1,008	872	-306	44	148	1,470	62
	October	955	783	-57	43	234	1,490	64
	November	989	837	-94	43	182	1,591	66
	December	989	747	6	43	186	1,598	[4]66
	AVERAGE	**1,070**	**776**	**32**	**48**	**209**	**1,716**	
1983	January	935	691	[4]243	NA	294	1,574	61
	February	857	632	270	NA	191	1,568	53
	March	833	686	220	NA	169	1,569	46
	April	942	743	-10	NA	310	1,364	47
	May	930	709	-139	NA	190	1,310	51
	June	832	676	28	NA	219	1,317	50
	July	771	682	-58	NA	90	1,306	52
	August	706	705	115	NA	165	1,362	48
	September	815	690	-47	NA	134	1,324	50
	October	799	634	-56	NA	153	1,224	51
	November	848	777	-101	NA	167	1,358	54
	December	R893	R646	R173	NA	141	R1,570	R49
	AVERAGE	**846**	**R689**	**R52**	**NA**	**185**	**R1,403**	
1984	January†	*966*	*782*	*196*	NA	NA	*1,786*	*41*

[1]Stocks are totals as of end of period.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Note 4 on the last page of this section.
[4]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.
[5]Beginning in January 1981, survey forms were modified. See Note 2 on the last page of this section.
†Italics denote estimates based upon preliminary data. R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

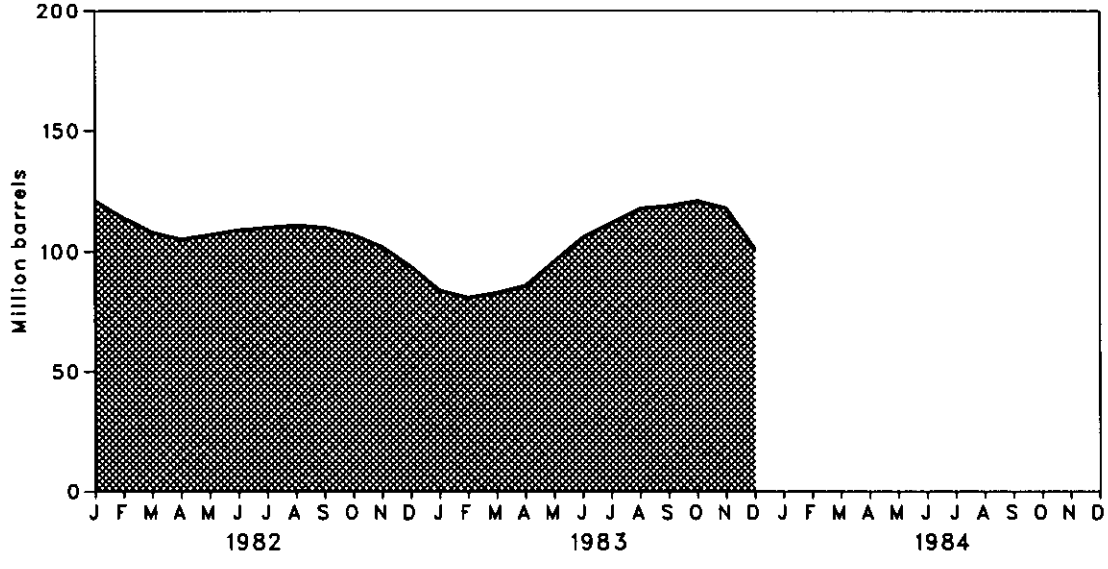
Petroleum

Liquefied Petroleum Gases

Product Supplied, Total Production, and Imports



Stocks



Petroleum

Liquefied Petroleum Gases Supply and Disposition

		Supply			Disposition			Ending Stocks[1]
		Total Production	Imports	Stock Withdrawal[2]	Refinery Inputs	Exports	Product Supplied	
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**1,600**	**132**	**-35**	**220**	**27**	**1,449**	**99**
1974	**AVERAGE**	**1,565**	**123**	**-38**	**220**	**25**	**1,406**	**[3]113**
1975	**AVERAGE**	**1,527**	**112**	**[3]-35**	**246**	**26**	**1,333**	**125**
1976	**AVERAGE**	**1,535**	**130**	**24**	**260**	**25**	**1,404**	**116**
1977	**AVERAGE**	**1,566**	**161**	**-55**	**233**	**18**	**1,422**	**136**
1978	**AVERAGE**	**1,537**	**123**	**12**	**239**	**20**	**1,413**	**132**
1979	**AVERAGE**	**1,556**	**217**	**70**	**236**	**15**	**1,592**	**111**
1980	**AVERAGE**	**1,535**	**216**	**-27**	**233**	**21**	**1,469**	**[3]120**
1981	**AVERAGE**	**1,571**	**244**	**[3]-18**	**289**	**42**	**1,466**	**135**
1982	January	1,565	314	443	391	67	1,863	121
	February	1,466	291	243	327	51	1,621	114
	March	1,544	223	211	289	74	1,615	108
	April	1,506	188	98	257	77	1,458	105
	May	1,565	186	-71	234	43	1,403	107
	June	1,515	192	-86	262	106	1,254	109
	July	1,476	227	-13	253	37	1,399	110
	August	1,511	125	-45	254	61	1,276	111
	September	1,538	247	37	274	85	1,463	110
	October	1,517	194	97	306	81	1,421	107
	November	1,542	267	175	363	37	1,583	102
	December	1,580	258	256	395	56	1,642	[3]94
	AVERAGE	**1,528**	**226**	**111**	**300**	**65**	**1,499**	
1983	January	1,662	240	[3]618	313	118	2,088	84
	February	1,560	305	84	237	76	1,636	81
	March	1,517	166	-51	189	127	1,316	83
	April	1,531	124	-107	198	116	1,232	86
	May	1,545	167	-326	207	84	1,094	96
	June	1,593	172	-333	205	59	1,169	106
	July	1,571	191	-206	217	55	1,284	112
	August	1,505	160	-183	229	29	1,225	118
	September	1,625	178	-23	236	86	1,457	119
	October	1,688	160	-61	268	32	1,487	121
	November	1,784	180	78	361	33	1,648	118
	December	1,644	247	575	358	66	2,043	101
	AVERAGE	**1,602**	**190**	**6**	**252**	**73**	**1,473**	

[1]Stocks are totals as of end of period.
[2]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[3]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
•Liquefied Petroleum Gases includes ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane.
Sources: • See the last page of this section.

Petroleum

Other Petroleum Products[1] Supply and Disposition

		Supply			Disposition			Ending Stocks[2]
		Total Production	Imports	Stock Withdrawal[3]	Refinery Inputs	Exports	Product Supplied	
		Thousand barrels per day						Million barrels
1973	**AVERAGE**	**3,693**	**502**	**-9**	**750**	**166**	**3,270**	**208**
1974	**AVERAGE**	**3,558**	**432**	**-28**	**665**	**174**	**3,123**	**[4]218**
1975	**AVERAGE**	**3,424**	**277**	**[4]-2**	**537**	**160**	**3,002**	**219**
1976	**AVERAGE**	**3,643**	**206**	**-5**	**524**	**175**	**3,145**	**220**
1977	**AVERAGE**	**3,912**	**205**	**-27**	**514**	**165**	**3,410**	**230**
1978	**AVERAGE**	**4,046**	**166**	**14**	**492**	**167**	**3,568**	**225**
1979	**AVERAGE**	**4,153**	**195**	**-37**	**352**	**209**	**3,749**	**238**
1980	**AVERAGE**	**3,956**	**210**	**-23**	**311**	**198**	**3,634**	**[4]247**
1981	**AVERAGE**	**3,739**	**226**	**[4]46**	**723**	**199**	**3,088**	**282**
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	[4]253
	AVERAGE	**3,453**	**334**	**80**	**787**	**211**	**2,869**	
1983	January	3,222	297	[4]-371	570	271	2,307	271
	February	3,270	287	-1	680	232	2,645	271
	March	3,400	298	-94	570	249	2,786	273
	April	3,363	377	3	596	247	2,901	273
	May	3,448	364	26	694	242	2,902	273
	June	3,674	427	99	715	292	3,197	270
	July	3,703	393	106	757	209	3,237	266
	August	3,774	435	23	689	242	3,302	266
	September	3,861	460	-31	768	236	3,287	267
	October	3,579	427	-124	701	195	2,985	270
	November	3,560	442	101	912	238	2,955	267
	December	3,106	450	387	877	257	2,808	255
	AVERAGE	**3,498**	**388**	**10**	**711**	**242**	**2,943**	

[1]Includes natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and ethane.
[2]Stocks are totals as of end of period.
[3]A negative number indicates an increase in stocks and a positive number indicates a decrease.
[4]In January 1975, 1981, and 1983, numerous respondents were added to surveys affecting stocks reported and stock withdrawal calculations. See Note 5 on the last page of this section.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

Notes and Sources for the Petroleum Section

Notes

1. During 1981 the listing (frame) of operators of all facilities required to complete each monthly survey was updated. The refinery frame was found to be complete and accurate, although the frames for bulk terminals, pipelines, and crude oil stocks facilities were found to be outdated. A variety of sources (published directories, listings, and exploratory surveys) were researched for potential new respondents. As a result of this research, a significant number of respondents were added to the frames. The increase in the respondents for the frames affects the stocks of crude oil and petroleum products. For further details, see the Energy Information Administration (EIA), *Petroleum Supply Monthly.*
2. Research conducted by the EIA in the latter half of 1980 indicated changes had taken place in the petroleum industry that were not being adequately reflected in the EIA survey forms. First, the flows of unfinished oils and the redesignation of finished products were not being accurately described on the EIA survey forms. Second, a substantial amount of motor gasoline was being produced at non-refinery "downstream blending stations" but was not being reported. Although empirical information is not available to precisely measure the historical effects, estimates of the magnitude of the differences in the major series affected are shown in the EIA, *Petroleum Supply Monthly.* Beginning in January 1981, the EIA modified its survey forms, changed definitions of gasoline (motor and aviation), and added the non-refinery blenders previously not reported.
3. **Motor Gasoline:** Beginning in January 1981, the EIA expanded its universe to include non-refinery blenders; redefined motor gasoline into two categories (finished leaded and finished unleaded); and separated blending components from finished motor gasoline as a reporting category. Also, survey forms were modified to describe refinery operations more accurately. For further details, see the EIA, *Petroleum Supply Monthly.*
4. **Distillate and Residual Fuel Oils:** The requirement to report crude oil burned on leases and pipelines as either distillate or residual fuel oil has been eliminated. Prior to January 1981, the refinery input of unfinished oils number typically exceeded the number for available supply of unfinished oils. This was assumed to be due to the redesignation of distillate and residual fuel oils received as such, but used as an unfinished oil input by the receiving refinery. This imbalance between supply and disposition of unfinished oils would then be subtracted from the production of distillate and residual fuel oils. Two-thirds of this difference was subtracted from distillate and one-third from residual. Beginning in January 1981, the EIA modified its survey forms to account for redesignated product and discontinued the above-mentioned adjustment. For further details, see the EIA, *Petroleum Supply Monthly.*
5. **New Stock Basis:** In January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys affecting subsequent stocks reported and stock withdrawal calculations. Using the expanded coverage (new basis), the end-of-year stocks, in million barrels, would have been:
•Crude Oil and Petroleum Products: 1974—1,121; 1980—1,420; and 1982—1,462.
•Motor Gasoline: 1974—225; 1980—263; 1982—244 (Total) and 203 (Finished).
•Distillate Fuel Oil: 1974—224; 1980—205; and 1982—186.
•Residual Fuel Oil: 1974—75; 1980—91; and 1982—68.
•Liquefied Petroleum Gases: 1974—113;1980—128; and 1982—103.
•Other Petroleum Products: 1974—220; 1980—249; and 1982—259.
•Stock withdrawal calculations beginning in 1975, 1981, and 1983, were made using new basis stock levels.
6. Stocks of Alaskan crude oil in transit were included for the first time in January 1981. The major impact of this change is on the reporting of stock withdrawal calculations. Using the expanded coverage (new basis), 1980 end-of-year stocks, in million barrels, would have been 488 (Total) and 380 (Other Primary).

Sources

• 1973 through 1976: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual."
• 1977 through 1980: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual" and unleaded gasoline data from *Monthly Petroleum Statistics Report.*
• January 1981 through December 1982: EIA, *Petroleum Supply Annual.*
• January 1983 through December 1983: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly* (except domestic crude oil production)).
• January 1984: Estimates based on EIA weekly data (except domestic crude oil production).
• January 1983 through January 1984: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey.

Natural Gas

Total dry natural gas production in the United States during December 1983 was an estimated 1.5 trillion cubic feet (Tcf). This was 2.3 percent higher than in December 1982. Estimated output during 1983 totaled 15.9 Tcf, 10.5 percent below the 1982 level and the lowest level of output since 1965.

Consumption of natural and supplemental gas in December l983 was an estimated 2.1 Tcf, 22.0 percent higher than in December 1982. Estimated consumption during 1983 totaled 16.9 Tcf, 5.9 percent less than in the previous year.

Deliveries to industrial consumers, the principal end users of natural and supplemental gas, during November 1983 were an estimated 604 billion cubic feet (Bcf). This industrial consumption was 40.3 percent of total November 1983 consumption and was almost the same as deliveries to industrial consumers in November 1982.

Imports of natural gas in December 1983 were an estimated 98 Bcf, 10.9 percent lower than in the previous December. Total imports of natural gas during 1983 were an estimated 936 Bcf, approximately the same as in 1982. Receipts of foreign gas during December 1983 included Algerian liquefied natural gas (LNG) equivalent to approximately 13 Bcf. Total imports of Algerian LNG during 1983 were approximately 136 Bcf, more than double the quantity received in 1982. Exports of natural gas in 1983 totaled an estimated 55 Bcf, 5.8 percent higher than in 1982.

Stocks of working gas* in underground natural gas storage reservoirs at the end of December 1983 totaled 2.6 Tcf. This was 15.5 percent below stocks available a year earlier. Net withdrawals from storage during December 1983 were 569 Bcf, 178.9 percent higher than during the previous December and a record high for the month due to record-breaking cold weather.

*Gas available for withdrawal.

Natural Gas

Production Summary

		Gross Wet Gas Withdrawals[1]	Used for Repressuring[2]	Nonhydrocarbon Gas Removed[3]	Vented and Flared	Marketed Production (Wet)[4]	Extraction Loss[5]	Total Dry Gas Production[5]
		Billion cubic feet						
1973	**TOTAL**	**24,067**	**1,171**	**NA**	**248**	**[6]22,648**	**917**	**[6]21,731**
1974	**TOTAL**	**22,850**	**1,080**	**NA**	**169**	**[6]21,601**	**887**	**[6]20,713**
1975	**TOTAL**	**21,104**	**861**	**NA**	**134**	**[6]20,109**	**872**	**[6]19,236**
1976	**TOTAL**	**20,944**	**859**	**NA**	**132**	**[6]19,952**	**854**	**[6]19,098**
1977	**TOTAL**	**21,097**	**935**	**NA**	**137**	**[6]20,025**	**863**	**[6]19,163**
1978	**TOTAL**	**21,309**	**1,181**	**NA**	**153**	**[6]19,974**	**852**	**[6]19,122**
1979	**TOTAL**	**21,883**	**1,245**	**NA**	**167**	**[6]20,471**	**808**	**[6]19,663**
1980	**TOTAL**	**21,870**	**1,365**	**199**	**125**	**20,180**	**777**	**19,403**
1981	January	1,890	108	20	10	1,752	68	1,684
	February	1,702	101	18	10	1,573	61	1,512
	March	1,871	109	18	9	1,735	67	1,668
	April	1,808	108	18	8	1,674	65	1,609
	May	1,838	115	18	7	1,698	66	1,632
	June	1,770	109	19	8	1,634	63	1,571
	July	1,797	106	20	9	1,663	65	1,598
	August	1,841	108	18	10	1,705	66	1,639
	September	1,716	114	18	7	1,577	61	1,516
	October	1,781	113	18	7	1,643	64	1,579
	November	1,714	108	17	6	1,583	61	1,522
	December	1,860	114	20	8	1,718	67	1,651
	TOTAL	**21,587**	**1,312**	**222**	**98**	**19,956**	**775**	**19,181**
1982	January	1,865	108	19	9	1,728	71	1,657
	February	1,712	101	18	8	1,584	65	1,519
	March	1,816	115	19	7	1,675	69	1,606
	April	1,714	108	18	7	1,581	65	1,516
	May	1,692	117	17	7	1,552	64	1,488
	June	1,643	114	16	7	1,505	62	1,443
	July	1,667	119	15	7	1,526	63	1,463
	August	1,638	120	18	8	1,492	61	1,431
	September	1,570	116	16	6	1,431	59	1,372
	October	1,610	126	16	8	1,460	60	1,400
	November	1,621	119	18	9	1,476	61	1,415
	December	1,663	125	19	10	1,510	62	1,448
	TOTAL	**20,210**	**1,388**	**208**	**93**	**18,520**	**762**	**17,758**
1983	January	1,668	122	19	7	1,520	62	1,458
	February	1,471	108	16	6	1,340	55	1,285
	March	1,534	124	17	7	1,386	57	1,329
	April	1,453	120	16	7	1,310	54	1,256
	May	1,450	111	16	8	1,316	54	1,262
	June	1,399	118	19	7	1,256	52	1,204
	July	1,485	125	18	7	1,335	55	1,280
	August	1,537	124	20	7	1,386	57	1,329
	September	1,492	119	19	7	1,347	55	1,292
	October	R1,559	R122	R18	7	1,412	58	1,354
	November	*R1,579*	*R126*	*19*	*7*	*R1,427*	*R59*	*R1,368*
	December	*1,709*	*136*	*19*	*8*	*1,546*	*64*	*1,482*
	TOTAL	***18,336***	***1,455***	***216***	***85***	***16,581***	***682***	***15,899***

[1]Gas withdrawn from gas and oil wells.
[2]Gas returned to formations for repressuring, pressure maintenance, and cycling.
[3]For definitions and further explanations, see Notes on the last two pages of this section.
[4]Equal to gross withdrawals minus volumes used for repressuring, volumes of nonhydrocarbon gases removed, and volumes vented and flared. See Note 2 on the last two pages of this section for further explanation.
[5]Equal to marketed production (wet) minus extraction loss.
[6]May include unknown quantities of nonhydrocarbon gases.
R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• Italics denote estimated data. Data for 1973 through 1982 are final. All other data are preliminary unless otherwise indicated.
Sources: • See the last page of this section.

Natural Gas

Supply and Disposition of Dry Natural Gas and Supplemental Gaseous Fuels

		Supply					Disposition			
		Total Dry Gas Production	With-drawals from Storage[1]	Supple-mental Gaseous Fuels[2]	Imports[2]	Total Supply/ Disposition[3]	Additions to Storage[1]	Exports[2]	Consump-tion[3]	Un-accounted for[4]
		Billion cubic feet								
1973	**TOTAL**	**[4]21,731**	**1,533**	**NA**	**1,033**	**24,297**	**1,974**	**77**	**22,049**	**196**
1974	**TOTAL**	**[4]20,713**	**1,701**	**NA**	**959**	**23,373**	**1,784**	**77**	**21,223**	**289**
1975	**TOTAL**	**[4]19,236**	**1,760**	**NA**	**953**	**21,949**	**2,104**	**73**	**19,538**	**235**
1976	**TOTAL**	**[4]19,098**	**1,921**	**NA**	**963**	**21,983**	**1,756**	**65**	**19,946**	**216**
1977	**TOTAL**	**[4]19,163**	**1,750**	**NA**	**1,011**	**21,924**	**2,307**	**56**	**19,521**	**41**
1978	**TOTAL**	**[4]19,122**	**2,158**	**NA**	**966**	**22,245**	**2,278**	**53**	**19,627**	**287**
1979	**TOTAL**	**[4]19,663**	**2,047**	**NA**	**1,253**	**22,964**	**2,295**	**56**	**20,241**	**372**
1980	**TOTAL**	**19,403**	**1,972**	**155**	**985**	**22,515**	**1,949**	**49**	**19,877**	**640**
1981	January	1,684	571	20	91	2,366	38	5	2,279	44
	February	1,512	385	17	85	1,999	60	5	1,895	39
	March	1,668	239	17	80	2,004	56	5	1,899	44
	April	1,609	56	14	69	1,748	213	5	1,488	42
	May	1,632	27	13	62	1,734	261	4	1,426	43
	June	1,571	28	12	65	1,676	321	5	1,309	41
	July	1,598	27	12	66	1,703	342	5	1,314	42
	August	1,639	15	12	64	1,730	369	5	1,313	43
	September	1,516	9	12	67	1,604	293	6	1,265	40
	October	1,579	51	14	79	1,723	158	5	1,519	41
	November	1,522	127	15	82	1,746	82	5	1,619	40
	December	1,651	396	19	93	2,159	35	5	2,076	43
	TOTAL	**19,181**	**1,930**	**176**	**904**	**22,191**	**2,228**	**59**	**19,404**	**501**
1982	January	1,657	697	19	98	2,471	24	3	2,400	44
	February	1,519	461	16	85	2,081	51	5	1,984	41
	March	1,606	274	15	82	1,977	91	5	1,838	43
	April	1,516	112	12	72	1,712	185	2	1,485	40
	May	1,488	11	9	65	1,573	394	3	1,136	40
	June	1,443	11	9	61	1,524	364	6	1,115	39
	July	1,463	12	9	67	1,551	362	5	1,145	39
	August	1,431	36	9	61	1,537	342	6	1,151	38
	September	1,372	20	9	66	1,467	285	5	1,140	37
	October	1,400	62	11	77	1,550	197	5	1,311	37
	November	1,415	168	13	91	1,687	85	5	1,559	38
	December	1,448	299	14	110	1,871	88	5	1,739	39
	TOTAL	**17,758**	**2,165**	**145**	**933**	**21,001**	**2,472**	**52**	**18,001**	**475**
1983	January	1,458	450	16	120	2,044	24	5	1,976	39
	February	1,285	324	13	102	1,724	35	5	1,650	34
	March	1,329	266	13	91	1,699	58	5	1,601	35
	April	1,256	162	11	76	1,505	81	4	1,386	34
	May	1,262	41	9	64	1,376	189	3	1,150	34
	June	1,204	22	8	61	1,295	254	5	1,004	32
	July	1,280	25	9	56	1,370	267	5	1,064	34
	August	1,329	35	9	58	1,431	248	4	1,144	35
	September	1,292	27	9	65	1,393	259	5	1,095	34
	October	1,354	35	10	65	1,464	166	4	1,258	36
	November	*R1,368*	152	12	80	R1,612	72	5	R1,498	R37
	December	*1,482*	601	17	98	2,198	32	5	2,121	40
	TOTAL	***15,899***	**2,140**	**136**	**936**	**19,111**	**1,685**	**55**	**16,947**	**424**

[1]Monthly and annual data for 1980 through 1982 include underground storage and liquefied natural gas storage. All other data include underground storage only. Computation procedures are discussed in Note 8 on the last two pages of this section.
[2]For definitions and further explanations see Notes on the last two pages of this section.
[3]Data for 1978 through 1982 do not include intransit receipts and deliveries.
[4]May include unknown quantities of nonhydrocarbon gases.
R = Revised data. NA = Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• Italics denote estimated data. Data for 1973 through 1982 are final. All other data are preliminary unless otherwise indicated.
Sources: • See the last page of this section.

Natural Gas

Natural and Supplemental Gas Consumption

				Delivered to Consumers					
		Lease and Plant Fuel	Pipeline Fuel	Residential	Commercial[1]	Industrial	Electric Utilities	Total	Total Consumption
				Billion cubic feet					
1973	**TOTAL**	**1,496**	**728**	**4,879**	**2,597**	**8,689**	**3,660**	**19,825**	**22,049**
1974	**TOTAL**	**1,477**	**669**	**4,786**	**2,556**	**8,292**	**3,443**	**19,077**	**21,223**
1975	**TOTAL**	**1,396**	**583**	**4,924**	**2,508**	**6,968**	**3,158**	**17,558**	**19,538**
1976	**TOTAL**	**1,634**	**548**	**5,051**	**2,668**	**6,964**	**3,081**	**17,764**	**19,946**
1977	**TOTAL**	**1,659**	**533**	**4,821**	**2,501**	**6,815**	**3,191**	**17,329**	**19,521**
1978	**TOTAL**	**1,648**	**530**	**4,903**	**2,601**	**6,757**	**3,188**	**17,449**	**19,627**
1979	**TOTAL**	**1,499**	**601**	**4,965**	**2,786**	**6,899**	**3,491**	**18,141**	**20,241**
1980	**TOTAL**	**1,026**	**635**	**4,752**	**2,611**	**7,172**	**3,682**	**18,216**	**19,877**
1981	January	81	75	831	406	654	232	2,123	2,279
	February	73	63	740	355	440	224	1,759	1,895
	March	81	63	585	304	593	273	1,755	1,899
	April	78	49	372	204	496	289	1,361	1,488
	May	79	47	260	151	573	316	1,300	1,426
	June	76	43	168	116	525	381	1,190	1,309
	July	77	43	136	99	548	411	1,194	1,314
	August	79	43	123	107	571	390	1,191	1,313
	September	73	42	133	107	585	325	1,150	1,265
	October	76	50	232	148	711	302	1,393	1,519
	November	74	54	364	205	663	259	1,491	1,619
	December	80	69	601	318	769	239	1,927	2,076
	TOTAL	**928**	**642**	**4,546**	**2,520**	**7,128**	**3,640**	**17,834**	**19,404**
1982	January	104	79	866	444	669	238	2,217	2,400
	February	95	66	786	405	412	220	1,823	1,984
	March	100	61	602	322	506	247	1,677	1,838
	April	95	49	451	237	407	246	1,341	1,485
	May	93	38	233	139	375	258	1,005	1,136
	June	90	37	165	107	420	296	988	1,115
	July	91	38	138	101	424	353	1,016	1,145
	August	89	38	123	105	435	361	1,024	1,151
	September	86	38	136	105	482	293	1,016	1,140
	October	87	43	204	130	573	273	1,181	1,311
	November	88	52	372	218	603	226	1,419	1,559
	December	90	58	557	299	520	215	1,591	1,739
	TOTAL	**1,109**	**596**	**4,633**	**2,606**	**5,831**	**3,226**	**16,295**	**18,001**
1983	January	91	65	697	357	558	208	1,820	1,976
	February	80	55	673	349	316	177	1,515	1,650
	March	83	53	525	275	457	208	1,465	1,601
	April	78	46	449	231	379	203	1,262	1,386
	May	79	38	269	147	399	218	1,033	1,150
	June	75	33	176	107	365	248	896	1,004
	July	80	35	130	97	408	314	949	1,064
	August	83	38	119	99	453	352	1,023	1,144
	September	81	36	124	103	452	299	978	1,095
	October	85	42	195	130	555	251	1,131	1,258
	November	85	50	347	198	604	214	1,363	1,498

[1]Includes deliveries to local, State, and Federal agencies engaged in nonmanufacturing activities.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• Data for 1973 through December 1982 are final. All other data are preliminary unless otherwise indicated.
Sources: • See the last page of this section.

Natural Gas

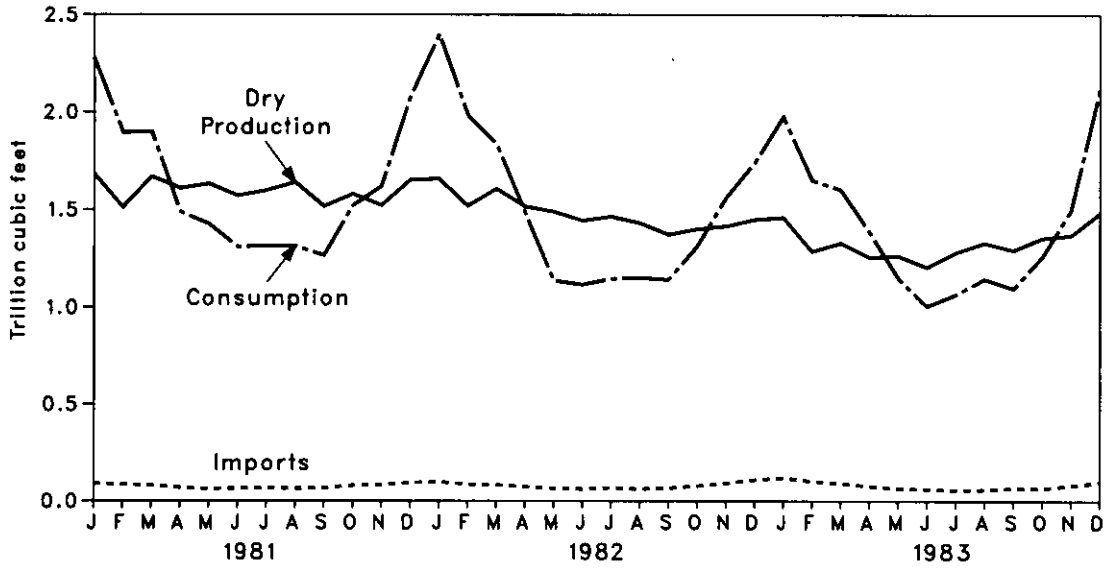
Underground Natural Gas Storage—All Operators

		Natural Gas in Underground Storage at End of Period			Change in Working Gas from Same Period Previous Year		Storage Activity		
		Base Gas	Working Gas	Total[1]	Volume	Percent	Injections	Withdrawals	Net[2]
		Volumes in Billion cubic feet							
1973	**TOTAL**	**2,864**	**2,034**	**4,898**	**305**	**17.6**	**1,974**	**1,533**	**441**
1974	**TOTAL**	**2,912**	**2,050**	**4,962**	**16**	**0.8**	**1,784**	**1,701**	**83**
1975	**TOTAL**	**3,162**	**2,212**	**5,374**	**162**	**7.9**	**2,104**	**1,760**	**344**
1976	**TOTAL**	**3,323**	**1,926**	**5,250**	**-286**	**-12.9**	**1,756**	**1,921**	**-165**
1977	**TOTAL**	**3,391**	**2,475**	**5,866**	**549**	**28.5**	**2,307**	**1,750**	**557**
1978	**TOTAL**	**3,473**	**2,547**	**6,020**	**72**	**2.9**	**2,278**	**2,158**	**120**
1979	**TOTAL**	**3,553**	**2,753**	**6,306**	**207**	**8.1**	**2,295**	**2,047**	**248**
1980	**TOTAL**	**3,642**	**2,655**	**6,297**	**-99**	**-3.6**	**1,896**	**1,910**	**-14**
1981	January	3,642	2,152	5,795	-172	-7.4	37	558	-521
	February	3,648	1,824	5,472	-28	-1.5	59	376	-317
	March	3,654	1,631	5,285	37	2.3	55	234	-179
	April	3,670	1,764	5,434	73	4.3	208	55	153
	May	3,684	1,977	5,660	-22	-1.1	255	26	228
	June	3,681	2,252	5,933	-46	-2.0	314	27	287
	July	3,699	2,558	6,257	-29	-1.1	335	26	309
	August	3,713	2,882	6,595	28	1.0	361	15	346
	September	3,720	3,152	6,872	53	1.7	287	9	277
	October	3,726	3,248	6,974	61	1.9	155	50	104
	November	3,731	3,201	6,932	175	5.8	80	124	-44
	December	3,752	2,817	6,569	162	6.1	34	387	-353
	TOTAL						**2,180**	**1,887**	**293**
1982	January	3,751	2,182	5,932	29	1.4	24	673	-649
	February	3,750	1,787	5,536	-37	-2.0	50	446	-396
	March	3,766	1,604	5,370	-26	-1.6	88	265	-176
	April	3,778	1,676	5,454	-88	-5.0	180	108	73
	May	3,780	2,034	5,814	57	2.9	382	11	371
	June	3,778	2,369	6,147	117	5.2	353	11	342
	July	3,780	2,704	6,484	146	5.7	351	12	339
	August	3,781	2,998	6,778	116	4.0	332	35	298
	September	3,782	3,251	7,033	99	3.1	277	20	257
	October	3,785	3,364	7,149	116	3.6	191	60	131
	November	3,772	3,309	7,081	108	3.4	83	163	-80
	December	3,808	3,071	6,879	255	9.0	86	289	-204
	TOTAL						**2,399**	**2,094**	**306**
1983	January	3,813	2,644	6,457	462	21.2	24	450	-425
	February	3,811	2,356	6,167	569	31.9	35	324	-288
	March	3,812	2,148	5,959	544	33.9	58	266	-208
	April	3,818	2,074	5,893	398	23.8	81	162	-81
	May	3,818	2,222	6,041	188	9.3	189	41	148
	June	3,819	2,454	6,272	85	3.6	254	22	232
	July	3,826	2,696	6,522	-8	-0.3	267	25	242
	August	3,823	2,908	6,732	-89	-3.0	248	35	214
	September	3,823	3,140	6,964	-110	-3.4	259	27	232
	October	3,825	3,269	7,094	-95	-2.8	166	35	130
	November	3,838	3,174	7,013	-135	-4.1	72	152	-80
	December	3,895	2,596	6,441	-475	-15.5	32	601	-569
	TOTAL						**1,685**	**2,140**	**-455**

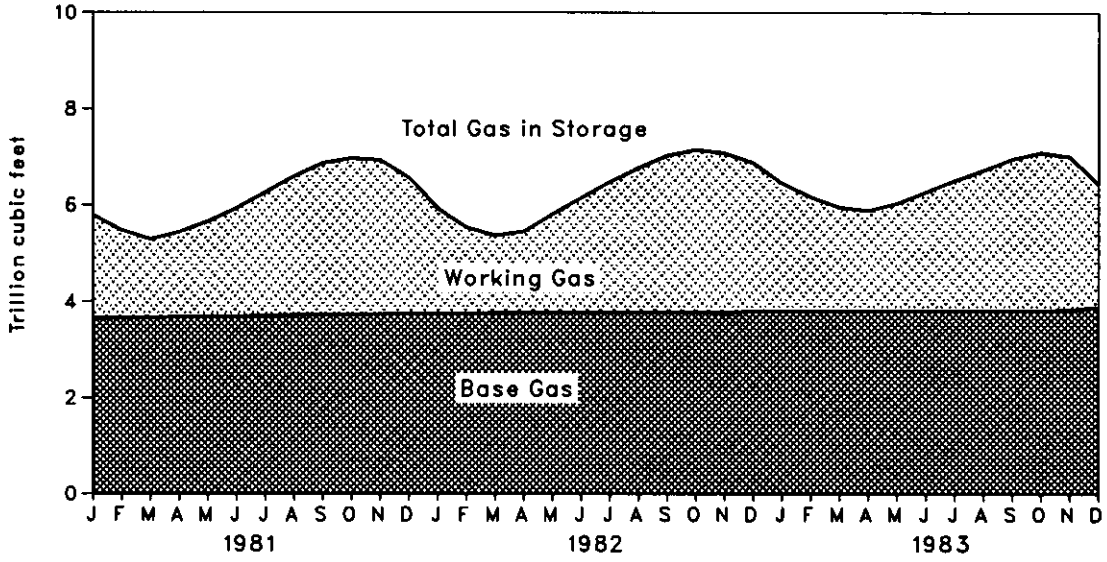
[1]Total underground storage capacity at the end of each calendar year (in billion cubic feet): 1978—6,890; 1979—6,929; 1980—7,434; 1981—7,805; and 1982—7,915. Current total capacity is 7,965.
[2]Positive numbers indicate injections are greater than withdrawals. Negative numbers indicate withdrawals are greater than injections. Net injections or withdrawals may not equal the difference between applicable ending stocks. See Note 8 on the last two pages of this section.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• Data for 1978 through 1982 are final. All other data are preliminary unless otherwise noted.
Sources: • See the last page of this section.

Natural Gas

Consumption, Dry Production, and Imports



Gas in Storage



Notes and Sources for the Natural Gas Section

Notes

1. **Nonhydrocarbon Gases Removed:** Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the EIA *Natural Gas Annual, 1982*. These data are not available for periods prior to 1980. For 1982, of the 31 producing States, 18 reported data on nonhydrocarbon gases removed. These 18 States accounted for 53 percent of total 1982 gross withdrawals. In addition, gross withdrawals data from two States, which together accounted for 40 percent of the 1982 total production, did not include all or most of the nonhydrocarbon gases removed on leases. No estimates are made for the two States not reporting nonhydrocarbon gases removed. For further information, see the Energy Information Administration (EIA) *Natural Gas Monthly*.

Monthly data are reported by two States and computed for four States. All monthly data are considered preliminary until after publication of the EIA *Natural Gas Annual* for the year in which the report month falls. Three States report monthly data on nonhydrocarbon gases removed; the rest of the data is estimated. For further informaton on methods of estimating preliminary monthly data, see the EIA *Natural Gas Monthly*.

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

2. **Production:** Annual data. Final annual data are from the Energy Information Administration (EIA) *Natural Gas Annual, 1982*.

Estimated Monthly Data. All data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *Natural Gas Monthly*.

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

Final monthly data. The difference between annual production data published in the EIA *Natural Gas Annual, 1982* and the sum of preliminary monthly data (January-December) is allocated proportionally to the preliminary monthly data.

3. **Extraction Loss:** Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

Annual data for extraction loss are from the EIA *Natural Gas Annual* for which they have been estimated based on the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the EIA *Natural Gas Annual*.

Preliminary monthly data are estimated based on extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

Monthly data are revised and considered final after the publication of the EIA *Natural Gas Annual*. Final monthly data are estimated by allocating annual extraction loss data to each month based on its total natural gas disposition.

4. **Supplemental Fuels:** Supplemental gaseous fuels are mainly synthetic natural gas, propane-air, and refinery gas. Other gases may also be included. During 1982, coke oven gas, biomass gas, manufactured gas, and air injected for Btu stabilization were reported in this category.

Annual data beginning with 1980 are from the EIA *Natural Gas Annual, 1982*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

All monthly data are considered preliminary until after the publication of the EIA *Natural Gas Annual* for the year in which the report month falls. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. This ratio is applied to the monthly sum of these three elements to compute a monthy supplemental gaseous fuels figure.

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

Annual and final monthly data are published from the annual Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA *Natural Gas Monthly*. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas* for the calendar year in which the report month falls.

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

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

7. **Unaccounted For:** The "unaccounted for" category represents quantities lost, the net result of flow data metered at varying temperature and pressure conditions and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; and imbalances from EIA's merger of data reporting systems which vary in scope, format, definitions, and type of respondents. For additional explanatory information, see the EIA *Natural Gas Monthly*.

8. **Natural Gas Storage:** Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. This difference is due to changes in the quantity of native gas included in the base gas and/or losses in base gas due to migration from storage reservoirs.

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

The final monthly and annual storage and withdrawal data for 1980 through 1982 include both underground and liquified natural gas (LNG) storage. Underground storage data are taken from the FPC-8/EIA-191 survey in the following manner. Annual data on LNG additions and withdrawals are taken from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying it to annual LNG data.

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

Notes and Sources for the Natural Gas Section (continued)

Sources

Production: 1973 through 1982: Energy Information Administration (EIA), *Natural Gas Annual, 1982,* Appendix B; January 1983 forward: State reports to the Interstate Oil Compact Commission, data from the U.S. Minerals Management Service, and EIA estimates for States that do not report monthly data on a regular or timely basis.
Extraction Loss, Consumption, and Unaccounted For: 1973 through 1982: EIA, *Natural Gas Annual, 1982,* Appendix B; January 1983 forward: EIA computations.
Withdrawals from and Additions to Storage: 1973 through 1982: EIA, *Natural Gas Annual, 1982,* Appendix B; January 1983 forward: Form FPC-8 and Form EIA-191, "Underground Gas Storage Report".
Supplemental Gaseous Fuels: 1980 through 1982: EIA, *Natural Gas Annual, 1982,* Appendix B; January 1983 forward: EIA computations.
Imports and Exports: 1973 through 1982: Form FPC-14, "Imports and Exports of Natural Gas"; January 1983 forward: EIA computations.
End-Use Consumption: •All data except electric utility—1973 through 1982: EIA, *Natural Gas Annual, 1982,* Appendix B; January 1983 forward: EIA computations. •Electric utility data—EIA, Form 759, "Monthly Power Plant Report" (formerly Form FPC-4).
Underground Storage: 1973 and 1974: American Gas Association, *Gas Facts;* 1975 through 1979: EIA, Form FPC-8 and Form EIA-191, and the *Natural Gas Annual;* 1980 forward: EIA, From FPC-8, Form EIA-191, and Form 176, "Annual Report of Natural and Supplemental Gas Supply and Disposition".

Oil and Gas Resource Development

The December data for wells drilled showed the typical year-end increase over the November figures. Although both rotary rig and seismic exploration numbers generally showed an increase during the last 6 months of 1983, well drilling does not appear to reveal any such trend. This may be due to the usual time lag shown by these figures.

The December 1983 rotary rig count of 2,780 was 3.1 percent higher than the December 1982 count of 2,696. The 210 rigs operating offshore were 2.0 percent fewer than those working in December 1982.

In December 1983, the reported total wells drilled were 7,370, a 12.5-percent decrease from the 8,420 reported for December 1982. Oil well completions reported during December 1983 were 3,470, a 15.1-percent decrease from the comparable 1982 figure of 4,087. Gas well completions of 1,699 were reported for December 1983, 13.8 percent less than 1982's December figure of 1,970. Total reported footage drilled for December 1983 of 30.9 million feet decreased 10.7 percent from the December 1982 figure of 34.6 million feet.

The 496 crews engaged in seismic exploration in December 1983 were 4.0 percent more than in December 1982. The 445 land crews working were 4.0 percent more than those in December 1982. The 51 marine vessels working during December 1983 were 4.1 percent more than those in December 1982.

Oil and Gas Resource Development

		Rotary Rigs in Operation[1]		Exploratory and Development Wells Drilled[2]				Total Footage of Wells Drilled[2]
		Monthly average		Oil	Gas	Dry	Total	Thousand feet
1973	**AVERAGE**	**1,194**	**TOTAL**	**9,902**	**6,385**	**10,305**	**26,592**	**136,391**
1974	**AVERAGE**	**1,472**	**TOTAL**	**12,784**	**7,240**	**11,674**	**31,698**	**150,551**
1975	**AVERAGE**	**1,660**	**TOTAL**	**16,408**	**7,580**	**13,247**	**37,235**	**174,434**
1976	**AVERAGE**	**1,658**	**TOTAL**	**17,059**	**9,085**	**13,621**	**39,765**	**181,780**
1977	**AVERAGE**	**2,001**	**TOTAL**	**18,912**	**11,378**	**14,692**	**44,982**	**210,848**
1978	**AVERAGE**	**2,259**	**TOTAL**	**17,775**	**13,064**	**16,218**	**47,057**	**227,110**
1979	**AVERAGE**	**2,177**	**TOTAL**	**19,383**	**14,681**	**15,752**	**49,816**	**238,659**
1980	**AVERAGE**	**2,909**	**TOTAL**	**27,026**	**15,730**	**18,089**	**60,845**	**284,461**
1981	January	3,386		1,794	964	1,339	4,097	19,907
	February	3,502		2,459	1,046	1,610	5,115	22,726
	March	3,595		3,099	1,423	1,883	6,405	30,166
	April	3,728		2,905	1,600	1,546	6,051	27,836
	May	3,816		2,604	1,159	1,675	5,438	24,842
	June	3,926		3,497	1,320	2,105	6,922	31,689
	July	3,998		2,790	1,116	1,698	5,604	25,542
	August	4,131		3,140	1,260	1,874	6,274	28,933
	September	4,242		3,414	1,978	2,014	7,406	33,630
	October	4,352		3,772	1,879	2,099	7,750	35,520
	November	4,436		3,591	1,584	2,069	7,244	32,263
	December	4,520		4,619	2,586	3,078	10,283	48,594
	AVERAGE	**3,970**	**TOTAL**	**37,671**	**17,894**	**22,973**	**78,538**	**361,407**
1982	January	4,436		2,798	954	2,132	5,884	28,167
	February	4,160		3,036	1,430	2,234	6,700	31,985
	March	3,816		3,736	1,480	2,479	7,695	37,896
	April	3,460		3,674	1,530	2,287	7,491	36,439
	May	3,178		3,451	1,940	2,205	7,596	36,987
	June	2,908		3,888	1,891	2,521	8,300	38,962
	July	2,746		3,290	1,703	1,931	6,924	31,111
	August	2,620		2,865	1,588	1,917	6,370	28,836
	September	2,482		3,363	1,599	2,330	7,292	32,611
	October	2,402		2,833	1,210	2,125	6,168	27,274
	November	2,500		3,279	1,658	2,025	6,962	31,130
	December	2,696		R4,087	R1,970	R2,363	R8,420	R34,648
	AVERAGE	**3,105**	**TOTAL**	**40,298**	**18,953**	**26,549**	**85,800**	**396,017**
1983	January	2,622		2,381	892	1,651	4,924	20,998
	February	2,192		2,899	1,190	2,223	6,312	27,758
	March	2,003		3,462	1,606	2,644	7,712	34,360
	April	1,846		3,028	1,401	1,985	6,414	27,459
	May	1,926		3,186	1,745	1,827	6,758	28,544
	June	1,979		3,514	1,237	2,105	6,856	28,050
	July	2,039		2,683	1,132	1,640	5,455	22,953
	August	2,156		2,641	1,075	1,533	5,249	22,582
	September	2,252		3,733	1,271	2,019	7,023	30,325
	October	2,382		2,970	1,211	1,699	5,880	24,887
	November	2,572		3,237	1,140	1,991	6,368	26,811
	December	2,780		3,470	1,699	2,201	7,370	30,942
	AVERAGE	**2,232**						

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

Oil and Gas Resource Development

		Crews Engaged In Seismic Exploration			Line-Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore[1]	Onshore[1]	Total[1]
		Monthly average			Annual total		
1973	**AVERAGE**	**23**	**227**	**250**	**258,944**	**127,160**	**386,104**
1974	**AVERAGE**	**31**	**274**	**305**	**341,784**	**158,629**	**500,413**
1975	**AVERAGE**	**30**	**254**	**284**	**309,283**	**150,694**	**459,977**
1976	**AVERAGE**	**25**	**237**	**262**	**226,303**	**142,926**	**369,229**
1977	**AVERAGE**	**27**	**281**	**308**	**124,676**	**120,072**	**244,748**
1978	**AVERAGE**	**25**	**327**	**352**	**174,607**	**135,899**	**310,506**
1979	**AVERAGE**	**30**	**370**	**400**	**193,212**	**163,929**	**357,141**
1980	**AVERAGE**	**37**	**493**	**530**	**202,694**	**184,088**	**386,782**
1981	January	38	553	591			
	February	41	561	602			
	March	40	570	610			
	April	40	605	645			
	May	42	619	661			
	June	44	652	696			
	July	43	668	711			
	August	46	689	735			
	September	47	697	744			
	October	52	689	741			
	November	52	681	733			
	December	47	656	703			
	AVERAGE	**44**	**637**	**681**	**338,201**	**256,201**	**594,402**
1982	January	53	642	695			
	February	53	625	678			
	March	52	597	649			
	April	55	571	626			
	May	61	551	612			
	June	69	546	615			
	July	66	527	593			
	August	62	500	562			
	September	59	476	535			
	October	51	465	516			
	November	50	452	502			
	December	49	428	477			
	AVERAGE	**57**	**531**	**588**	**558,464**	**248,483**	**806,947**
1983	January	49	407	456			
	February	47	404	451			
	March	45	402	447			
	April	39	410	449			
	May	39	410	449			
	June	43	428	471			
	July	46	437	483			
	August	49	435	484			
	September	57	444	501			
	October	50	448	498			
	November	49	446	495			
	December	51	445	496			
	AVERAGE	**47**	**426**	**473**			

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

Coal

Coal production in December 1983 was 65.5 million short tons, 3.7 percent more than the 63.1 million short tons produced in December 1982. Coal production in calendar year 1983 was 784.9 million short tons, 6.4 percent less than the record-high 838.1 million short tons produced in 1982.

Electric utility coal consumption in November 1983 totaled 51.2 million short tons, 7.1 percent more than consumption in November 1982.

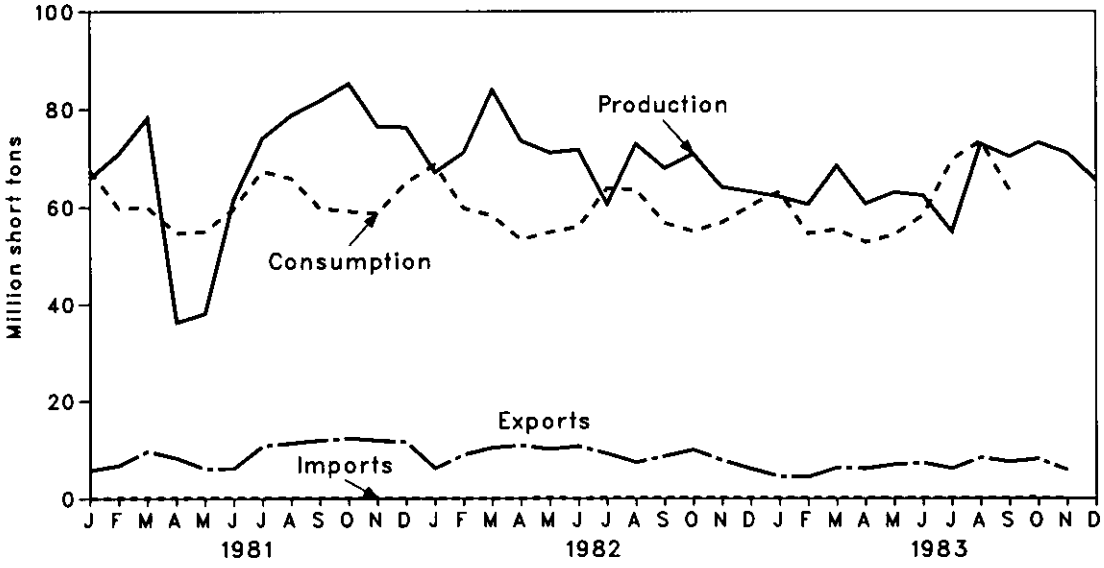
Electric utility coal stocks of 165.8 million short tons at the end of November 1983 were 16.6 million short tons (9.1 percent) below the level 1 year earlier.

Imports of coal in November 1983 totaled 32 thousand short tons, 55 thousand short tons less than the amount imported in November 1982. Exports of coal in November 1983 totaled 5.8 million short tons, 25.2 percent less than the amount exported during November 1982. Coal exports in November 1983 were principally to Canada (34.2 percent), Europe (32.8 percent), and Japan (19.2 percent).

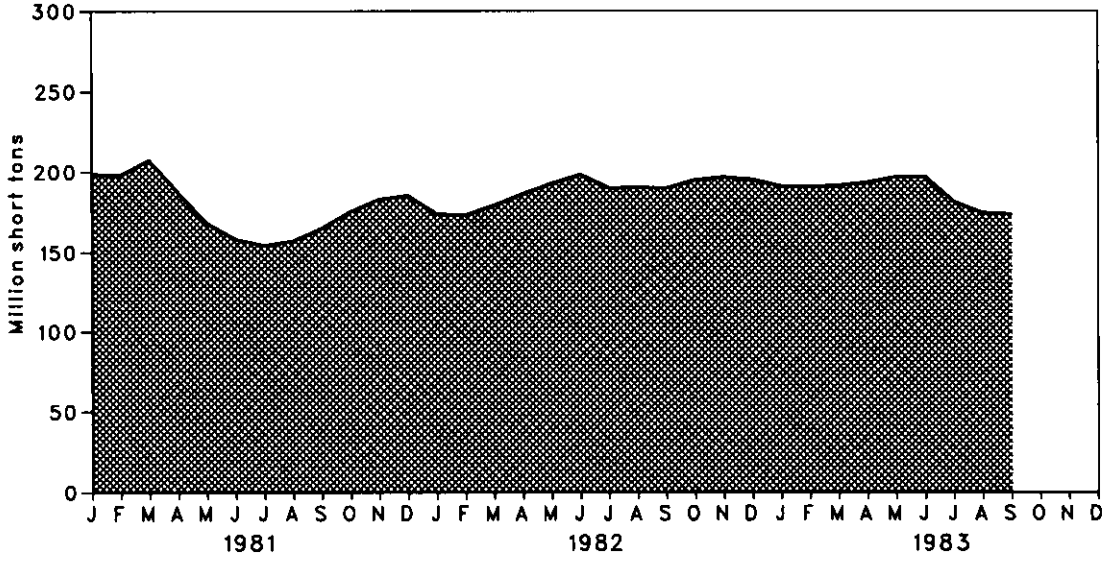
Coal

Bituminous Coal, Lignite, and Anthracite

Production, Consumption, Imports, and Exports



Stocks



Coal

Bituminous Coal, Lignite, and Anthracite

		Production	Domestic Consumption	Imports[1]	Exports[2]	Stocks[3]
				Thousand short tons		
1973	**TOTAL**	**598,568**	**562,584**	**127**	**53,587**	**104,335**
1974	**TOTAL**	**610,023**	**558,402**	**2,080**	**60,661**	**96,323**
1975	**TOTAL**	**654,641**	**562,641**	**940**	**66,309**	**128,050**
1976	**TOTAL**	**684,913**	**603,790**	**1,203**	**60,021**	**134,438**
1977	**TOTAL**	**697,205**	**625,291**	**1,647**	**54,312**	**157,098**
1978	**TOTAL**	**670,164**	**625,225**	**2,953**	**40,714**	**145,551**
1979	**TOTAL**	**781,134**	**680,524**	**2,059**	**66,042**	**181,646**
1980	**TOTAL**	**829,700**	**702,729**	**1,194**	**91,742**	**204,028**
1981	January	65,927	67,580	35	5,795	198,603
	February	70,918	59,735	104	6,771	197,962
	March	78,266	60,069	77	9,710	207,340
	April	36,253	54,649	63	8,271	187,143
	May	38,100	55,025	96	6,086	168,126
	June	61,555	59,685	138	6,158	158,274
	July	74,076	67,394	13	10,762	154,423
	August	78,782	65,896	150	11,315	157,141
	September	81,720	59,722	69	11,900	164,970
	October	85,241	59,161	94	12,360	175,384
	November	76,577	58,695	76	11,849	183,044
	December	76,360	65,017	127	11,564	185,274
	TOTAL	**823,775**	**732,627**	**1,043**	**112,541**	
1982	January	67,138	68,692	71	6,177	173,931
	February	71,169	59,746	30	8,964	173,193
	March	83,943	58,236	12	10,423	179,484
	April	73,587	53,274	10	10,831	186,458
	May	71,127	54,844	109	10,110	192,926
	June	71,720	55,950	9	10,680	198,377
	July	60,535	63,828	69	9,182	189,997
	August	72,898	63,528	131	7,385	190,310
	September	67,951	56,734	71	8,683	189,967
	October	70,852	55,034	66	9,972	195,107
	November	64,055	56,831	87	7,807	196,700
	December	63,136	60,214	76	6,064	195,254
	TOTAL	**838,112**	**706,911**	**742**	**106,277**	
1983	January†	62,103	63,118	78	4,471	191,130
	February†	60,487	54,573	71	4,382	190,782
	March†	68,462	55,364	120	6,291	191,530
	April†	60,630	52,765	144	6,115	193,402
	May†	62,980	54,323	102	6,952	196,982
	June†	62,323	58,274	133	7,279	197,037
	July†	54,917	69,632	87	6,140	R181,232
	August†	72,949	73,507	115	8,380	174,598
	September†	70,281	63,466	97	7,525	173,733
	October†	73,201	NA	190	8,131	NA
	November†	71,039	NA	32	5,838	NA
	December†	65,494	NA	NA	NA	NA
	TOTAL	**784,865**	**NA**	**NA**	**NA**	**NA**

[1]Bituminous coal was the only type of coal imported during the years shown above.
[2]Excludes shipments of anthracite to U.S. Armed Forces overseas (335,000 short tons in 1982).
[3]Stocks held by electric utilities, coke plants, and general industry at the end of period. Excludes stocks at retail dealers that are consumed by the residential and commercial sector.
†Preliminary data. R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
• See Note on the last page of this section for methodology used to calculate production, consumption, and stocks.
Sources: • See the last page of this section.

Coal

Consumption—Bituminous Coal, Lignite, and Anthracite

			Industrial			
		Electric Utilities	Coke Plants[1]	Other Industrial[2] Including Transportation	Residential and Commercial	Total
			Thousand short tons			
1973	**TOTAL**	**389,212**	**94,101**	**68,154**	**11,117**	**562,584**
1974	**TOTAL**	**391,811**	**90,191**	**64,983**	**11,417**	**558,402**
1975	**TOTAL**	**405,962**	**83,598**	**63,670**	**9,410**	**562,641**
1976	**TOTAL**	**448,371**	**84,704**	**61,799**	**8,916**	**603,790**
1977	**TOTAL**	**477,126**	**77,739**	**61,472**	**8,954**	**625,291**
1978	**TOTAL**	**481,235**	**71,394**	**63,085**	**9,511**	**625,225**
1979	**TOTAL**	**527,051**	**77,368**	**67,717**	**8,388**	**680,524**
1980	**TOTAL**	**569,274**	**66,657**	**60,347**	**6,451**	**702,729**
1981	January	54,688	5,465	6,532	895	67,580
	February	47,914	5,177	5,932	712	59,735
	March	48,398	5,532	5,665	474	60,069
	April	43,677	4,862	5,548	562	54,649
	May	44,999	4,259	5,297	470	55,025
	June	50,080	4,460	4,845	300	59,685
	July	56,144	5,449	5,371	430	67,394
	August	54,483	5,434	5,520	459	65,896
	September	48,483	5,340	5,312	587	59,722
	October	47,800	5,158	5,577	626	59,161
	November	47,014	5,037	5,793	851	58,695
	December	53,116	4,842	6,003	1,056	65,017
	TOTAL	**596,797**	**61,014**	**67,395**	**7,421**	**732,627**
1982	January	56,825	4,444	6,430	993	68,692
	February	48,878	4,340	5,835	693	59,746
	March	47,884	4,173	5,616	563	58,236
	April	43,490	3,708	5,373	703	53,274
	May	45,622	3,622	5,133	467	54,844
	June	47,424	3,481	4,681	364	55,950
	July	55,248	3,121	4,831	628	63,828
	August	54,838	3,058	4,962	670	63,528
	September	48,414	2,924	4,759	637	56,734
	October	46,330	2,757	5,287	660	55,034
	November	47,799	2,693	5,494	845	56,831
	December	50,914	2,587	5,695	1,018	60,214
	TOTAL	**593,666**	**40,908**	**64,097**	**8,240**	**706,911**
1983	January†	53,351	2,813	5,963	990	63,118
	February†	45,772	2,742	5,399	660	54,573
	March†	47,039	2,567	5,200	557	55,364
	April†	43,589	3,206	5,252	718	52,765
	May†	45,691	3,151	5,012	469	54,323
	June†	50,362	2,734	4,787	391	58,274
	July†	60,390	3,269	5,374	599	69,632
	August†	64,170	3,252	5,520	565	73,507
	September†	54,212	3,196	5,307	751	63,466
	October†	50,689	NA	NA	NA	NA
	November†	51,185	NA	NA	NA	NA

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

Coal

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

		Electric Utilities	Industrial		Total[3]
			Coke Plants[2]	Other Industrial	
		Thousand short tons			
1973		**86,967**	**6,998**	**10,370**	**104,335**
1974		**83,509**	**6,209**	**6,605**	**96,323**
1975		**110,724**	**8,797**	**8,529**	**128,050**
1976		**117,436**	**9,902**	**7,100**	**134,438**
1977		**133,219**	**12,816**	**11,063**	**157,098**
1978		**128,225**	**8,278**	**9,048**	**145,551**
1979		**159,714**	**10,155**	**11,777**	**181,646**
1980		**183,010**	**9,067**	**11,951**	**204,028**
1981	January	176,975	9,634	11,994	198,603
	February	175,715	10,211	12,036	197,962
	March	183,983	10,788	12,569	207,340
	April	169,221	6,952	10,970	187,143
	May	153,415	4,850	9,861	168,126
	June	144,520	4,500	9,254	158,274
	July	140,124	5,074	9,225	154,423
	August	142,318	5,648	9,175	157,141
	September	149,526	6,163	9,281	164,970
	October	159,676	6,308	9,400	175,384
	November	167,002	6,392	9,650	183,044
	December	168,893	6,475	9,906	185,274
1982	January	158,469	6,207	9,255	173,931
	February	158,136	5,909	9,148	173,193
	March	164,518	5,612	9,354	179,484
	April	171,390	5,931	9,137	186,458
	May	177,461	6,231	9,234	192,926
	June	182,513	6,532	9,331	198,377
	July	174,503	6,166	9,328	189,997
	August	175,194	5,800	9,316	190,310
	September	175,225	5,434	9,308	189,967
	October	180,571	5,171	9,365	195,107
	November	182,368	4,908	9,424	196,700
	December	181,132	4,642	9,479	195,254
1983	January†	177,832	4,338	8,960	191,130
	February†	178,310	4,034	8,439	190,782
	March†	179,883	3,728	7,919	191,530
	April†	181,371	4,089	7,942	193,402
	May†	184,567	4,450	7,965	196,982
	June†	184,236	4,812	7,989	197,037
	July†	168,576	4,489	8,167	R181,232
	August†	162,088	4,165	8,345	174,598
	September†	161,368	3,842	8,523	173,733
	October†	166,574	NA	NA	NA
	November†	165,807	NA	NA	NA

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

Notes and Sources for the Coal Section

Note

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sources

Production: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Energy Information Administration (EIA), "Weekly Coal Production Report" from selected State agencies and EIA Form 6, "Coal Distribution Report."

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

Imports/Exports: 1973 through September 1977: Bureau of Mines, *Minerals Yearbook* and *Mineral Industry Surveys;* October 1977 forward: Bureau of the Census, Monthly Reports IM-145 (Imports) and EM-522 (Exports).

Electric Utilities

November 1983 production of electricity by utilities was 182.9 billion kilowatt-hours, 5.5 percent above the November 1982 production level. Coal-fired production totaled 103.2 billion kilowatt-hours, 8.0 percent above the November 1982 level. Nuclear production totaled 24.9 billion kilowatt-hours, 7.3 percent above the November 1982 level. Hydroelectric production was 24.7 billion kilowatt-hours in November 1983, 5.9 percent above the November 1982 level. Gas-fired production was 20.2 billion kilowatt-hours, 6.0 percent below the level 1 year earlier. Petroleum-fired production totaled 9.2 billion kilowatt-hours, 0.9 percent below the November 1982 level.

Sales of electricity to all ultimate consumers in the United States in November 1983 were 170.5 billion kilowatt-hours, 6.2 percent above November 1982 sales. Sales to residential consumers during November 1983 were 53.7 billion kilowatt-hours, 3.0 percent above the level of sales during the same month in 1982. Commercial sales were 42.7 billion kilowatt-hours, 5.2 percent more than the amount sold to commercial consumers in November 1982. Sales to industrial consumers totaled 67.5 billion kilowatt-hours in November 1983, 11.4 percent more than the 1982 figure. In November 1983, other sales totaled 6.6 billion kilowatt-hours, 7.9 percent below the November 1982 sales.

Electric utility petroleum consumption (excluding petroleum coke) during November 1983 was 15.8 million barrels, 0.9 percent below the November 1982 level. Coal consumption for November 1983 was 51.2 million short tons, 7.1 percent above the November 1982 level. During November 1983, consumption of natural gas by electric utilities was 214.2 billion cubic feet, 5.4 percent below the November 1982 level.

On November 30, 1983, utility stocks of anthracite, bituminous coal, and lignite totaled 165.8 million short tons. Stockpiles were 9.1 percent below the level of November 1982. Petroleum stocks (excluding petroleum coke) on November 30, 1983, totaled 96.2 million barrels, 19.9 percent below the level on the same date in 1982.

Electric Utilities

Net Electricity Generation by Primary Energy Source

		Coal[1]	Petroleum[2]	Natural Gas	Nuclear	Hydro	Other[3]	Total
				Million kilowatt-hours				
1973	**TOTAL**	**847,651**	**314,343**	**340,858**	**83,479**	**272,083**	**2,294**	**1,860,710**
1974	**TOTAL**	**828,433**	**300,931**	**320,065**	**113,976**	**301,032**	**2,703**	**1,867,140**
1975	**TOTAL**	**852,786**	**289,095**	**299,778**	**172,505**	**300,047**	**3,437**	**1,917,649**
1976	**TOTAL**	**944,391**	**319,988**	**294,624**	**191,104**	**283,707**	**3,883**	**2,037,696**
1977	**TOTAL**	**985,219**	**358,179**	**305,505**	**250,883**	**220,475**	**4,063**	**2,124,323**
1978	**TOTAL**	**975,742**	**365,060**	**305,391**	**276,403**	**280,419**	**3,315**	**2,206,331**
1979	**TOTAL**	**1,075,037**	**303,525**	**329,485**	**255,155**	**279,783**	**4,387**	**2,247,372**
1980	**TOTAL**	**1,161,562**	**245,994**	**346,240**	**251,116**	**276,021**	**5,506**	**2,286,439**
1981	January	111,765	25,963	22,081	23,779	22,338	540	206,467
	February	97,653	17,444	21,339	21,595	21,099	483	179,613
	March	99,482	16,957	25,997	22,004	20,572	541	185,553
	April	88,109	15,106	27,460	20,646	20,723	500	172,545
	May	88,941	14,508	30,070	19,723	24,081	483	177,806
	June	99,837	18,972	35,885	21,166	26,370	473	202,702
	July	112,854	20,072	38,712	23,080	25,133	523	220,373
	August	108,403	16,001	36,918	26,946	21,615	520	210,403
	September	97,664	15,566	30,850	24,398	17,822	538	186,838
	October	97,046	16,213	28,917	20,556	18,088	531	181,352
	November	94,841	13,847	24,670	22,783	18,963	465	175,570
	December	106,608	15,772	22,877	25,997	23,879	457	195,590
	TOTAL	**1,203,203**	**206,421**	**345,777**	**272,674**	**260,684**	**6,054**	**2,294,812**
1982	January	113,124	20,674	22,621	25,678	26,896	411	209,403
	February	96,906	15,217	20,920	20,188	26,690	380	180,299
	March	97,625	13,495	23,598	22,755	29,885	330	187,687
	April	88,116	11,192	23,231	21,785	27,928	328	172,580
	May	92,997	9,868	24,291	21,639	27,971	381	177,147
	June	95,314	10,419	27,959	24,026	27,953	458	186,128
	July	110,617	13,380	33,340	25,467	27,294	485	210,584
	August	110,124	11,753	34,418	24,986	23,894	480	205,656
	September	96,896	10,363	27,649	25,391	19,896	468	180,662
	October	93,769	9,885	25,804	23,248	19,750	509	172,966
	November	95,547	9,313	21,466	23,235	23,297	520	173,377
	December	100,970	11,238	19,963	24,376	27,760	415	184,722
	TOTAL	**1,192,004**	**146,797**	**305,260**	**282,773**	**309,213**	**5,164**	**2,241,211**
1983	January	108,164	12,881	19,720	25,090	29,318	506	195,680
	February	92,692	12,586	16,659	22,204	27,950	395	172,485
	March	95,598	12,557	19,686	23,897	30,302	455	182,494
	April	88,114	10,337	19,174	22,352	29,988	424	170,389
	May	91,296	9,050	20,444	22,064	31,193	356	174,403
	June	101,512	11,130	23,091	24,158	30,692	462	191,046
	July	121,633	14,636	29,605	25,602	28,033	565	220,074
	August	129,313	14,870	33,147	25,581	25,824	738	229,472
	September	108,868	11,299	28,040	24,830	21,711	678	195,426
	October	101,951	9,941	23,783	25,060	20,726	711	182,172
	November	103,228	9,230	20,169	24,922	24,677	637	182,864

[1]Includes bituminous coal, lignite, and anthracite.
[2]Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.
[3]Includes geothermal and wood and waste.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

Electric Utilities

Electricity Sales[1]

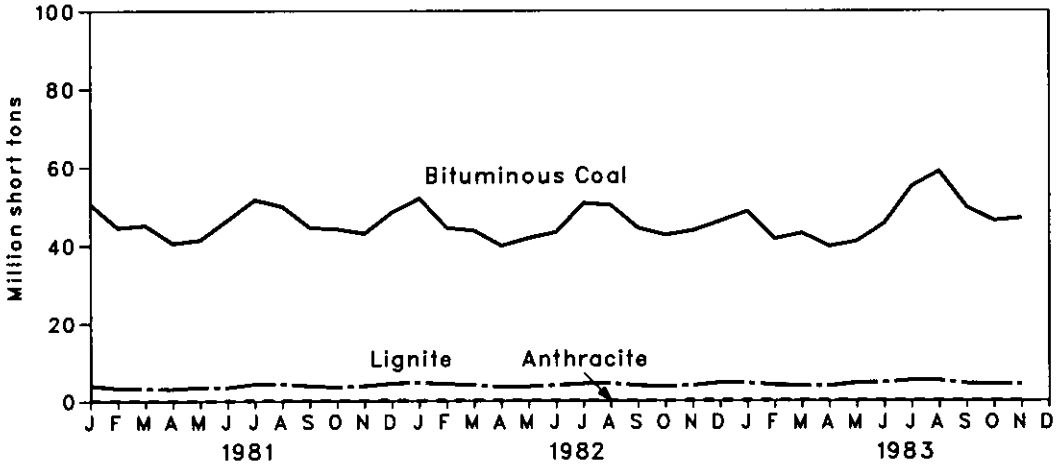
		Residential	Commercial	Industrial	Other[2]	Total
			Million kilowatt-hours			
1973	**TOTAL**	**579,231**	**388,266**	**686,085**	**59,328**	**1,712,910**
1974	**TOTAL**	**578,184**	**384,826**	**684,875**	**58,039**	**1,705,924**
1975	**TOTAL**	**588,140**	**403,049**	**687,680**	**68,222**	**1,747,091**
1976	**TOTAL**	**606,452**	**425,094**	**754,069**	**69,631**	**1,855,246**
1977	**TOTAL**	**645,239**	**446,514**	**786,037**	**70,571**	**1,948,361**
1978	**TOTAL**	**674,466**	**461,163**	**809,078**	**73,215**	**2,017,922**
1979	**TOTAL**	**682,819**	**473,307**	**841,903**	**73,070**	**2,071,099**
1980	**TOTAL**	**717,495**	**488,156**	**815,067**	**73,732**	**2,094,449**
1981	January	74,087	43,229	67,076	7,557	191,949
	February	66,359	41,345	67,411	7,092	182,207
	March	57,660	39,541	68,590	7,035	172,826
	April	50,914	37,910	68,138	6,562	163,525
	May	48,348	39,331	68,714	6,780	163,173
	June	56,165	44,244	71,641	6,777	178,827
	July	69,990	48,989	71,712	7,124	197,814
	August	70,299	49,003	72,010	7,147	198,459
	September	61,098	46,977	71,011	7,164	186,250
	October	52,989	42,183	69,154	7,024	171,350
	November	51,965	39,747	66,161	7,143	165,016
	December	62,391	41,839	64,124	7,351	175,705
	TOTAL	**722,265**	**514,338**	**825,742**	**84,756**	**2,147,101**
1982	January	76,264	44,947	62,939	7,929	192,079
	February	69,128	43,459	62,778	7,441	182,805
	March	60,498	41,710	64,496	7,255	173,959
	April	54,918	40,036	62,723	6,836	164,512
	May	49,092	40,021	62,480	6,976	158,569
	June	54,083	44,206	63,684	6,766	168,739
	July	65,704	48,211	62,617	7,035	183,567
	August	69,906	49,720	63,306	6,808	189,740
	September	63,053	48,068	59,980	7,194	178,296
	October	52,638	42,864	60,830	7,084	163,416
	November	52,136	40,572	60,651	7,122	160,479
	December	62,102	42,584	58,464	7,128	170,278
	TOTAL	**729,519**	**526,397**	**744,949**	**85,575**	**2,086,440**
1983	January	69,929	44,011	57,931	7,251	179,122
	February	65,094	42,495	59,085	6,922	173,596
	March	59,003	41,589	60,267	6,902	167,761
	April	56,314	40,689	60,565	6,297	163,865
	May	49,648	40,273	62,697	6,214	158,832
	June	54,101	45,080	66,111	6,228	171,519
	July	68,923	50,818	66,094	6,759	192,594
	August	78,074	53,138	69,598	6,884	207,695
	September	72,885	52,131	69,603	6,962	201,581
	October	55,374	45,517	68,924	6,492	176,307
	November†	53,704	42,666	67,544	6,560	170,474

[1]Electricity sales to all ultimate consumers.
[2]Includes street lighting and transportation uses.
†Initial estimates.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • EIA, 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; January 1983 forward: EIA Form 826, "Electric Utility Company Monthly Statement."

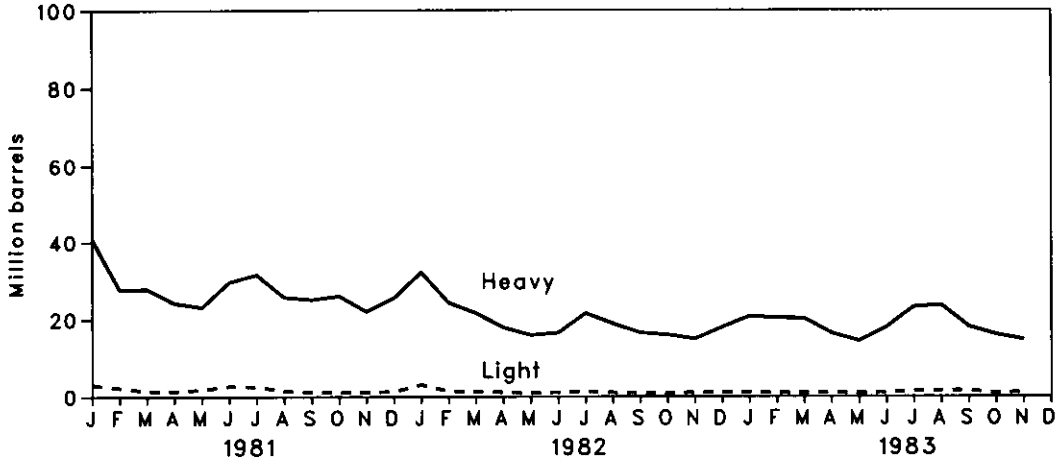
Electric Utilities

Primary Energy Consumed to Produce Electricity

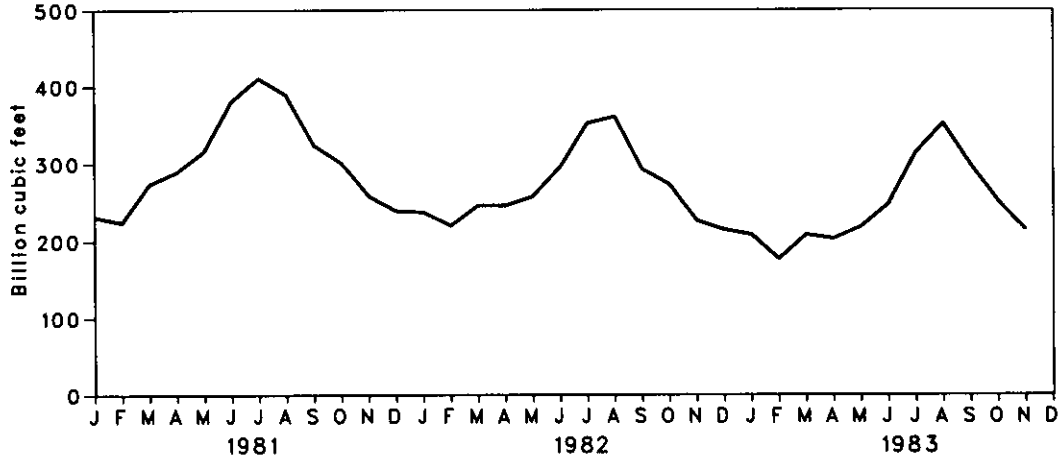
Coal Consumption



Petroleum Consumption



Natural Gas Consumption



Electric Utilities

Primary Energy Consumed to Produce Electricity

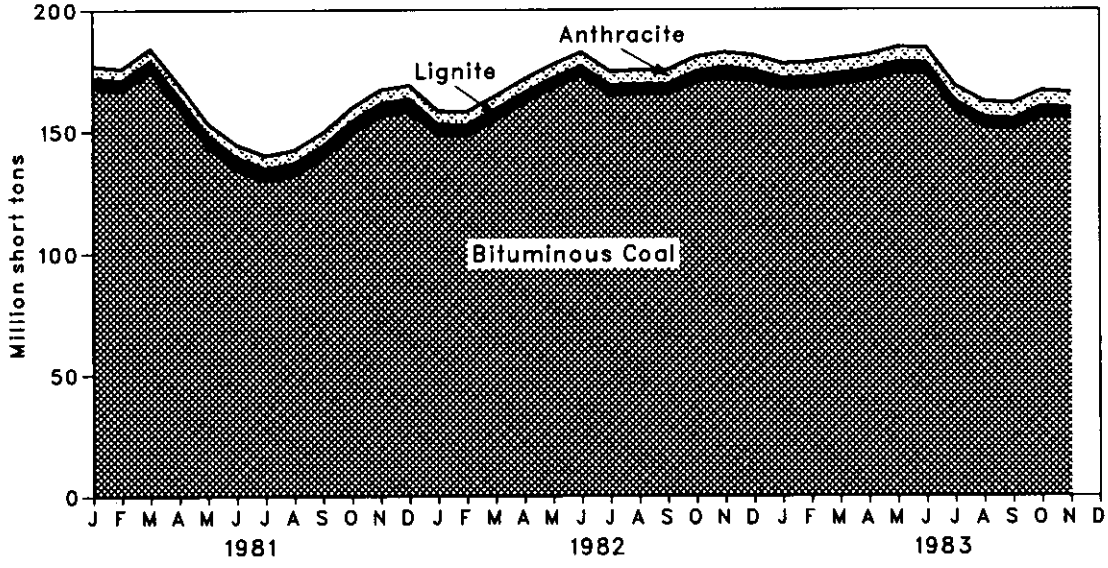
		Coal				Petroleum				Natural Gas
		Anthracite	Bituminous Coal	Lignite	Total	Heavy[1]	Light[2]	Total Liquids	Petroleum Coke	
		Thousand short tons				Thousand barrels			Thousand short tons	Million cubic feet
1973	**TOTAL**	**1,443**	**376,975**	**10,794**	**389,212**	**([3])**	**([3])**	**560,248**	**507**	**3,660,172**
1974	**TOTAL**	**1,498**	**378,643**	**11,670**	**391,811**	**([3])**	**([3])**	**536,274**	**625**	**3,443,428**
1975	**TOTAL**	**1,480**	**388,523**	**15,960**	**405,962**	**([3])**	**([3])**	**506,128**	**70**	**3,157,669**
1976	**TOTAL**	**1,350**	**425,205**	**21,817**	**448,371**	**([3])**	**([3])**	**555,920**	**68**	**3,080,868**
1977	**TOTAL**	**1,425**	**451,051**	**24,650**	**477,126**	**([3])**	**([3])**	**623,705**	**98**	**3,191,200**
1978	**TOTAL**	**1,064**	**448,763**	**31,407**	**481,235**	**([3])**	**([3])**	**635,839**	**398**	**3,188,363**
1979	**TOTAL**	**1,046**	**488,129**	**37,876**	**527,051**	**([3])**	**([3])**	**523,297**	**268**	**3,490,523**
1980	**TOTAL**	**951**	**526,680**	**41,642**	**569,274**	**391,163**	**29,051**	**420,214**	**179**	**3,681,595**
1981	January	81	50,635	3,972	54,688	40,885	3,047	43,931	10	231,606
	February	58	44,583	3,272	47,914	27,755	2,242	29,997	9	224,003
	March	75	45,168	3,155	48,398	27,862	1,405	29,267	9	273,431
	April	73	40,535	3,069	43,677	24,229	1,356	25,585	7	289,053
	May	91	41,405	3,503	44,999	23,130	1,795	24,925	14	316,310
	June	105	46,503	3,471	50,080	29,699	2,705	32,404	13	380,775
	July	102	51,705	4,337	56,144	31,628	2,615	34,243	11	410,666
	August	133	50,010	4,339	54,483	25,760	1,422	27,182	13	389,564
	September	98	44,557	3,828	48,483	25,137	1,145	26,282	13	324,828
	October	115	44,161	3,524	47,800	26,078	1,123	27,201	15	301,670
	November	141	43,032	3,841	47,014	22,042	1,139	23,181	12	258,811
	December	148	48,487	4,481	53,116	25,593	1,319	26,912	12	239,436
	TOTAL	**1,221**	**550,784**	**44,792**	**596,797**	**329,798**	**21,313**	**351,111**	**139**	**3,640,154**
1982	January	89	52,014	4,723	56,825	32,269	3,131	35,399	10	237,675
	February	83	44,478	4,317	48,878	24,351	1,421	25,772	9	220,032
	March	73	43,751	4,060	47,884	21,617	1,304	22,921	4	246,550
	April	88	39,888	3,515	43,490	17,913	1,132	19,045	11	246,344
	May	98	41,845	3,678	45,622	15,939	991	16,930	12	257,848
	June	94	43,340	3,990	47,424	16,539	1,053	17,592	13	295,557
	July	108	50,769	4,371	55,248	21,550	1,360	22,910	11	352,818
	August	95	50,283	4,460	54,838	18,873	1,053	19,926	13	361,351
	September	67	44,431	3,916	48,414	16,544	921	17,464	9	293,232
	October	81	42,598	3,650	46,330	15,990	870	16,860	17	273,003
	November	100	43,756	3,943	47,799	14,908	1,007	15,916	18	226,477
	December	99	46,192	4,622	50,914	17,940	1,094	19,035	22	214,630
	TOTAL	**1,075**	**543,346**	**49,245**	**593,666**	**234,434**	**15,337**	**249,771**	**149**	**3,225,518**
1983	January	73	48,695	4,583	53,351	20,728	1,122	21,850	17	208,337
	February	73	41,668	4,032	45,772	20,305	996	21,301	19	176,965
	March	75	43,095	3,870	47,039	20,174	957	21,131	16	208,010
	April	92	39,716	3,781	43,589	16,374	1,066	17,440	24	202,919
	May	104	41,002	4,585	45,691	14,360	949	15,309	30	218,186
	June	88	45,584	4,690	50,362	17,879	1,034	18,913	23	247,858
	July	89	55,082	5,219	60,390	23,144	1,472	24,616	25	314,373
	August	92	58,879	5,200	64,170	23,610	1,542	25,152	24	352,170
	September	86	49,745	4,381	54,212	18,021	1,507	19,529	25	298,540
	October	91	46,263	4,335	50,689	15,993	870	16,863	22	251,120
	November	86	46,883	4,216	51,185	14,688	1,077	15,766	17	214,195

[1]Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[2]Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[3]Prior to 1980, petroleum consumption data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

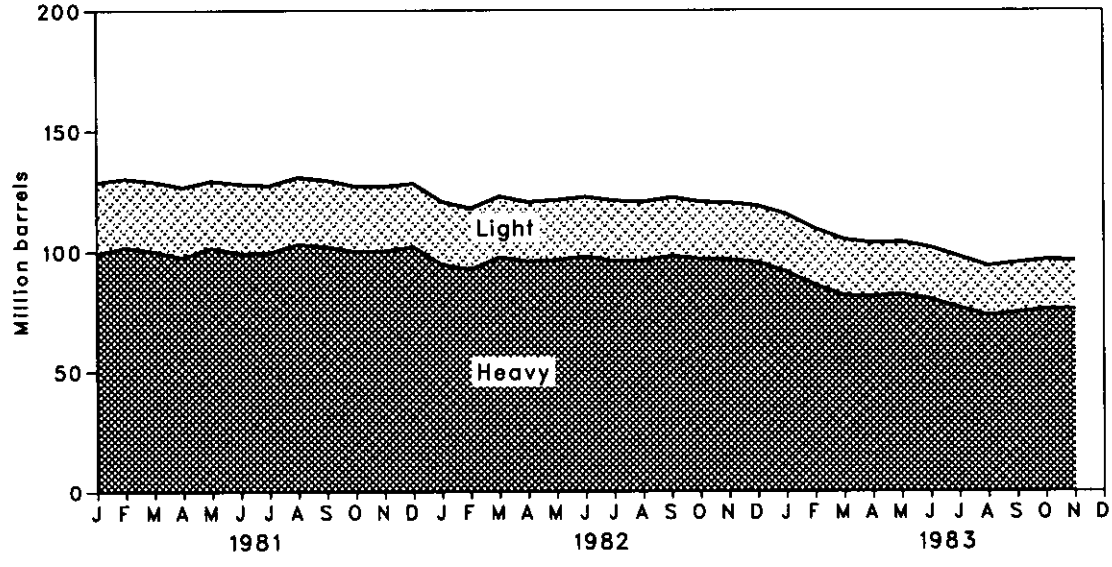
Electric Utilities

Coal and Petroleum Stocks at End of Period

Coal Stocks (Bituminous Coal, Lignite, and Anthracite)



Petroleum Stocks



Electric Utilities

Coal and Petroleum Stocks at End of Period

		Coal				Petroleum			
		Anthracite	Bituminous Coal	Lignite	Total	Heavy[1]	Light[2]	Total Liquids	Petroleum Coke
		Thousand short tons				Thousand barrels			Thousand short tons
1973		**1,066**	**84,941**	**961**	**86,967**	**([3])**	**([3])**	**89,216**	**312**
1974		**930**	**81,712**	**867**	**83,509**	**([3])**	**([3])**	**112,917**	**35**
1975		**982**	**107,927**	**1,815**	**110,724**	**([3])**	**([3])**	**125,257**	**31**
1976		**1,000**	**114,130**	**2,306**	**117,436**	**([3])**	**([3])**	**121,696**	**32**
1977		**2,321**	**128,210**	**2,688**	**133,219**	**([3])**	**([3])**	**144,031**	**44**
1978		**2,178**	**123,020**	**3,027**	**128,225**	**([3])**	**([3])**	**118,788**	**198**
1979		**3,274**	**152,981**	**3,459**	**159,714**	**([3])**	**([3])**	**131,422**	**183**
1980		**4,741**	**174,154**	**4,115**	**183,010**	**105,351**	**30,023**	**135,374**	**52**
1981	January	4,824	167,884	4,267	176,975	99,196	29,535	128,732	51
	February	4,859	166,552	4,304	175,715	101,867	28,328	130,195	52
	March	4,951	174,554	4,478	183,983	100,178	28,732	128,911	52
	April	5,035	159,645	4,541	169,221	97,629	29,024	126,652	51
	May	5,008	143,500	4,907	153,415	101,574	27,671	129,245	52
	June	5,081	134,321	5,119	144,520	99,398	28,547	127,945	49
	July	5,269	129,684	5,171	140,124	99,603	27,729	127,332	48
	August	5,337	132,072	4,909	142,318	103,104	27,714	130,817	47
	September	5,428	138,808	5,290	149,526	102,104	27,403	129,506	46
	October	5,512	148,952	5,213	159,676	100,008	27,055	127,063	44
	November	5,548	156,360	5,094	167,002	100,301	26,715	127,016	43
	December	5,537	158,258	5,098	168,893	102,042	26,094	128,136	42
1982	January	5,437	148,404	4,628	158,469	94,609	26,162	120,771	39
	February	5,401	148,118	4,617	158,136	92,622	25,418	118,040	40
	March	5,488	154,724	4,305	164,518	97,706	25,136	122,842	43
	April	5,542	161,720	4,128	171,390	95,984	24,636	120,620	42
	May	5,569	167,805	4,088	177,461	96,607	24,796	121,403	41
	June	5,603	172,819	4,092	182,513	97,959	24,647	122,606	43
	July	5,658	164,688	4,157	174,503	96,085	25,008	121,093	43
	August	5,791	165,182	4,221	175,194	96,345	24,193	120,538	42
	September	5,896	165,065	4,264	175,225	98,160	24,225	122,385	47
	October	5,992	170,281	4,298	180,571	96,920	23,595	120,515	36
	November	6,060	171,832	4,476	182,368	96,618	23,553	120,171	42
	December	6,080	170,480	4,573	181,132	95,515	23,369	118,884	41
1983	January	6,107	167,515	4,210	177,832	91,474	23,942	115,416	54
	February	6,104	167,843	4,362	178,310	85,847	23,438	109,284	53
	March	6,143	169,538	4,201	179,883	81,632	23,199	104,831	54
	April	6,120	170,815	4,436	181,371	81,243	22,084	103,327	47
	May	6,145	173,969	4,453	184,567	82,007	21,742	103,749	44
	June	6,230	173,483	4,524	184,236	80,092	21,435	101,527	52
	July	6,299	158,711	3,566	168,576	76,543	21,130	97,673	50
	August	6,380	151,671	4,038	162,088	73,257	20,649	93,906	45
	September	6,435	150,762	4,171	161,368	74,560	20,688	95,248	47
	October	6,506	156,012	4,056	166,574	75,874	20,554	96,428	53
	November	6,531	155,281	3,995	165,807	75,915	20,284	96,199	63

[1]Heavy oil includes Grade Nos. 4, 5, and 6, and residual fuel oils.
[2]Light oil includes Grade No. 2 heating oil, kerosene, and jet fuel.
[3]Prior to 1980, petroleum stock data were not disaggregated by type of fuel. Disaggregation by prime mover type is provided in the last table of this section.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

Electric Utilities

Petroleum Consumption and Stocks by Prime Mover Type

		Petroleum Consumption			Petroleum Stocks at End of Period		
		Steam Plants	GT/IC[1]	Total Liquids	Steam Plants	GT/IC[1]	Total Liquids
		Thousand barrels					
1973	**TOTAL**	**513,190**	**47,058**	**560,248**	**79,121**	**10,095**	**89,216**
1974	**TOTAL**	**483,146**	**53,128**	**536,274**	**97,718**	**15,199**	**112,917**
1975	**TOTAL**	**467,221**	**38,907**	**506,128**	**108,825**	**16,432**	**125,257**
1976	**TOTAL**	**514,077**	**41,843**	**555,920**	**106,993**	**14,703**	**121,696**
1977	**TOTAL**	**574,869**	**48,837**	**623,705**	**124,750**	**19,281**	**144,031**
1978	**TOTAL**	**588,319**	**47,520**	**635,839**	**102,402**	**16,386**	**118,788**
1979	**TOTAL**	**492,606**	**30,691**	**523,297**	**111,121**	**20,301**	**131,422**
1980	**TOTAL**	**401,863**	**18,351**	**420,214**	**117,227**	**18,147**	**135,374**
1981	January	41,904	2,027	43,931	110,533	18,199	128,732
	February	28,948	1,049	29,997	112,879	17,315	130,195
	March	28,492	775	29,267	111,490	17,421	128,911
	April	25,028	557	25,585	109,455	17,197	126,652
	May	23,958	967	24,925	112,172	17,073	129,245
	June	30,673	1,731	32,404	109,988	17,957	127,945
	July	32,577	1,666	34,243	110,476	16,856	127,332
	August	26,598	584	27,182	114,016	16,801	130,817
	September	25,762	520	26,282	112,992	16,515	129,506
	October	26,646	556	27,201	110,900	16,164	127,063
	November	22,749	432	23,181	110,939	16,077	127,016
	December	26,345	567	26,912	112,380	15,756	128,136
	TOTAL	**339,680**	**11,431**	**351,111**			
1982	January	33,832	1,567	35,399	105,475	15,296	120,771
	February	25,249	524	25,772	102,883	15,157	118,040
	March	22,371	550	22,921	108,142	14,699	122,842
	April	18,553	492	19,045	106,143	14,477	120,620
	May	16,614	316	16,930	106,701	14,702	121,403
	June	17,241	351	17,592	108,189	14,417	122,606
	July	22,192	718	22,910	106,170	14,923	121,093
	August	19,508	418	19,926	106,438	14,100	120,538
	September	17,146	318	17,464	108,177	14,208	122,385
	October	16,547	313	16,860	106,701	13,813	120,515
	November	15,591	325	15,916	106,361	13,809	120,171
	December	18,694	341	19,035	105,287	13,597	118,884
	TOTAL	**243,537**	**6,234**	**249,771**			
1983	January	21,373	477	21,850	101,246	14,170	115,416
	February	20,885	416	21,301	95,459	13,825	109,284
	March	20,728	403	21,131	91,288	13,543	104,831
	April	16,997	444	17,440	90,796	12,531	103,327
	May	14,968	341	15,309	91,276	12,473	103,749
	June	18,436	477	18,913	89,199	12,328	101,527
	July	23,745	871	24,616	85,599	12,074	97,673
	August	24,167	985	25,152	82,192	11,714	93,906
	September	18,532	996	19,529	83,509	11,740	95,248
	October	16,518	345	16,863	84,779	11,649	96,428
	November	15,336	430	15,766	84,774	11,425	96,199

[1]GT/IC=Gas turbine and internal combustion plants.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • 1973 through September 1977: Federal Power Commission, Form 4, "Monthly Power Plant Report"; October 1977 through 1981: Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report"; 1982 forward: Energy Information Administration Form 759, "Monthly Power Plant Report."

Nuclear

During November 1983, U.S. nuclear powerplants generated a total of 24.9 billion net kilowatt-hours (kWh) of electricity, equivalent to an average hourly output of 34.6 million net kWh. This was 2.9 percent above the average hourly generation for October 1983, and 7.3 percent above the comparable output for November 1982. Nuclear power supplied 13.6 percent of the electricity generated by domestic utilities in November 1983.

As of November 30, 1983, there were 81 licensed U.S. power reactors with a total capacity of 64.1 thousand net megawatts electric (MWe). Of these 81 units, 1 was in low-power testing (Grand Gulf-1), 4 were in power ascension (LaSalle-1, McGuire-2, San Onofre-3, and Summer-1), and 24 units generated no electricity or operated substantially below capacity in November (Arkansas Nuclear I-2, Browns Ferry-1, Browns Ferry-3, Brunswick-2, Calvert Cliffs-1, Cook-2, Dresden-3, Hatch-1, Indian Point-3, La Crosse, Millstone-2, Oconee-2, Oyster Creek, Palisades, Peach Bottom-2, Point Beach-1, Quad Cities-2, Robinson-2, Salem-2, San Onofre-1, St. Lucie-1, Three Mile Island-1, Turkey Point-3, and Zion-1).

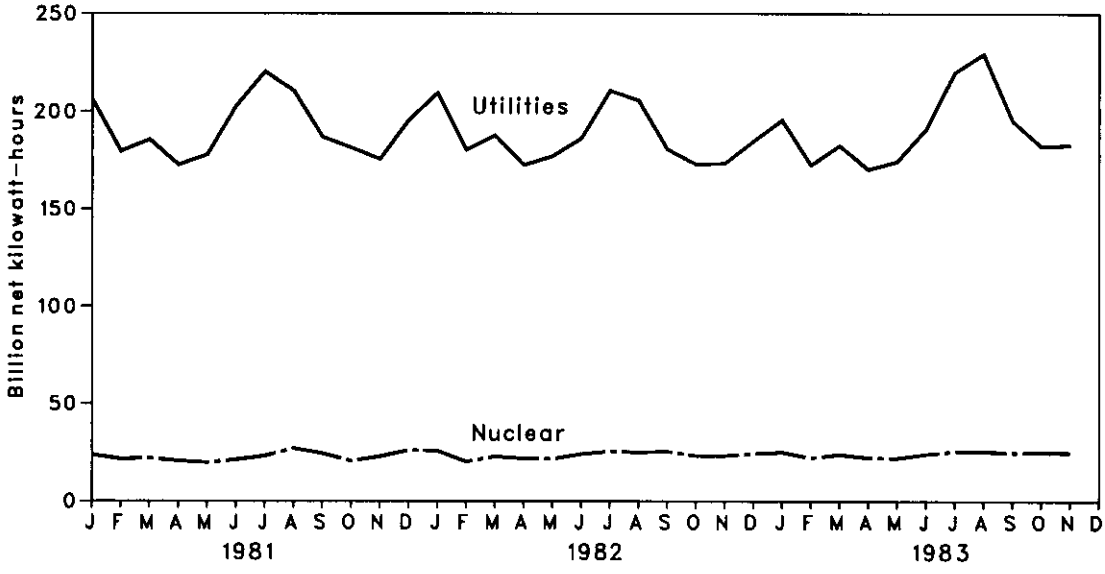
On November 23, 1983, the Puget Sound Power and Light Co. and three partner utilities formally withdrew their application from the Nuclear Regulatory Commission for construction permits for Skagit-Hanford Units 1 and 2. The cancellation of these two 1,275-MWe boiling water reactors reduced the number of units with construction permits pending to zero. With these cancellations, the number of domestic nuclear powerplants in all stages of planning, construction, or operation as of November 30, 1983, totaled 139, with an aggregate design capacity of 131 thousand net MWe.

On November 8, 1983, Diablo Canyon-1, a 1,084-net MWe pressurized water reactor operated by Pacific Gas and Electric, was issued a limited Low Power License by the Nuclear Regulatory Commission, allowing it only to load fuel. The plant had previously been granted a Low Power License that was suspended in November 1981 due to deficiencies in seismic safety design. Because the current license does not allow Diablo Canyon to begin low-power testing, it was not added to the list of 'Reactors Licensed for Operation.'

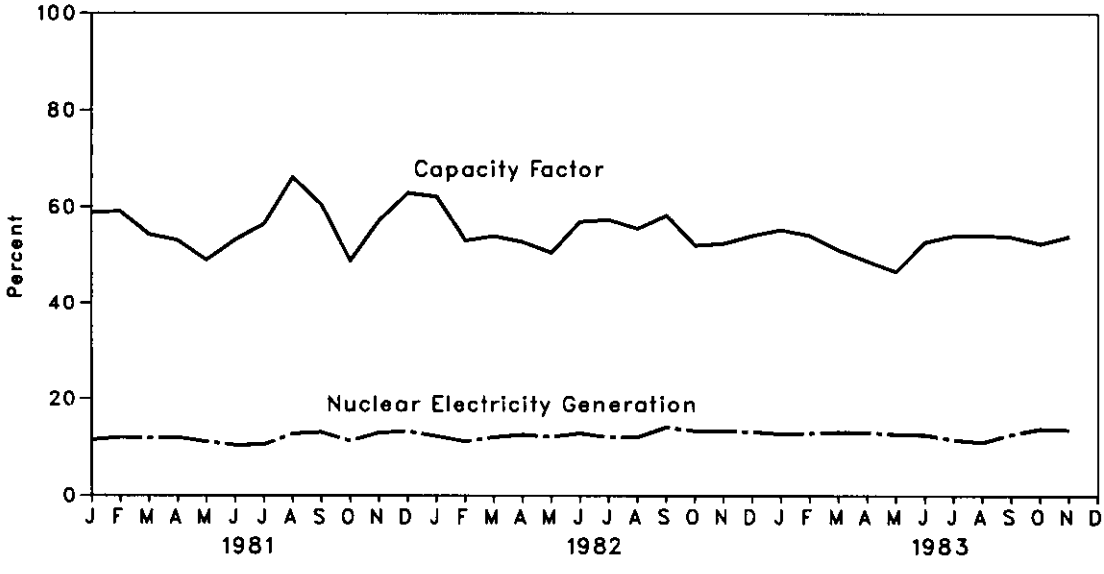
Nuclear

Nuclear Powerplant Operations

Electricity Generated by Utilities and by Nuclear Powerplants



Nuclear Portion of Electricity Generation and Capacity Factor*



*Percentage of Maximum Dependable Capacity utilized.

Nuclear

Nuclear Powerplant Operations[1]

		Reactors Licensed For Operation[2]	Nuclear-Based Electricity Generation	Nuclear Portion of Domestic Electricity Generation	Maximum Dependable Capacity[3]	Capacity Factor[4]
			Million net kilowatt-hours	Percent	Thousand net megawatts	Percent
1973		**40**	**83,479**	**4.5**	**19.843**	**63.2**
1974		**55**	**113,976**	**6.1**	**35.732**	**43.5**
1975		**58**	**172,505**	**9.0**	**35.794**	**55.2**
1976		**65**	**191,104**	**9.4**	**44.609**	**53.5**
1977		**68**	**250,883**	**11.8**	**47.155**	**62.9**
1978		**72**	**276,403**	**12.5**	**50.824**	**63.9**
1979		**71**	**255,155**	**11.4**	**50.944**	**57.6**
1980		**72**	**251,116**	**11.0**	**52.597**	**55.1**
1981	January	73	23,779	11.5	54.374	58.8
	February	73	21,595	12.0	54.372	59.1
	March	73	22,004	11.9	54.429	54.3
	April	73	20,646	12.0	54.095	53.1
	May	73	19,723	11.1	54.074	49.0
	June	74	21,166	10.4	55.214	53.2
	July	74	23,080	10.5	54.998	56.4
	August	74	26,946	12.8	54.820	66.1
	September	75	24,398	13.1	56.037	60.5
	October	75	20,556	11.3	56.412	48.9
	November	74	22,783	13.0	55.328	57.2
	December	74	25,997	13.3	55.524	62.9
	YEAR	**74**	**272,674**	**11.9**	**55.524**	**56.6**
1982	January	74	25,678	12.3	55.471	62.2
	February	75	20,188	11.2	56.608	53.1
	March	75	22,755	12.1	56.609	54.0
	April	76	21,785	12.6	57.424	52.8
	May	76	21,639	12.2	57.415	50.6
	June	77	24,026	12.9	58.560	57.0
	July	78	25,467	12.1	59.601	57.4
	August	79	24,986	12.1	60.521	55.5
	September	79	25,391	14.1	60.501	58.3
	October	78	23,248	13.4	59.921	52.1
	November	79	23,235	13.4	61.523	52.5
	December	79	24,376	13.2	60.528	54.1
	YEAR	**79**	**282,773**	**12.6**	**60.528**	**55.0**
1983	January	79	25,090	12.8	61.030	55.3
	February	79	22,204	12.9	61.117	54.1
	March	80	23,897	13.1	62.697	51.2
	April	81	22,352	13.1	63.515	48.9
	May	81	22,064	12.7	63.495	46.7
	June	81	24,158	12.6	63.553	52.8
	July	81	25,602	11.6	63.552	54.1
	August	81	25,581	11.1	63.492	54.2
	September	81	24,830	12.7	63.924	53.9
	October	81	25,060	13.8	64.064	52.5
	November	81	24,922	13.6	64.058	54.0

[1]Monthly data are the status as of the last day of the month. Yearly data are the status as of December 31 of each year.
[2]See Note 1 on the last page of this section.
[3]In this table, when possible, net maximum dependable capacity (MDC) is used. When a reactor has not been operating long enough to permit determination of an MDC, the net design electrical rating (DER) is used. The capacities for some units have been reduced by the imposition of a "power limit" by the Nuclear Regulatory Commission or by the operating utility. Beginning in January 1980, the reduced capacities are used for these units. For the definitions of MDC and DER, see Note 2 on the last page of this section.
[4]The monthly capacity factors are computed as the actual monthly generation divided by the maximum possible generation for that month, where the maximum possible generation is the number of hours in the month multiplied by the monthly maximum dependable capacity (MDC). This fraction is then multiplied by 100 to obtain a percentage. Monthly capacity factors are averaged to obtain annual values. For the definition of MDC, see Note 2 on the last page of this section.
Note: • Geographic coverage is the 50 States and the District of Columbia.
Sources: • See the last page of this section.

Nuclear

Status of Nuclear Reactor Units[1]

		Reactors Licensed For Operation[2]	Construction Permits Granted	Construction Permits Pending	Reactor Units on Order	Reactor Units Announced	Total Reactor Units	Total Design Capacity[3] (Million Net Kilowatts)
1973		**40**	**51**	**58**	**48**	**20**	**217**	**212**
1974		**55**	**58**	**80**	**28**	**16**	**235**	**234**
1975		**58**	**69**	**73**	**19**	**19**	**236**	**236**
1976		**65**	**72**	**66**	**16**	**19**	**235**	**236**
1977		**68**	**80**	**52**	**13**	**9**	**221**	**220**
1978		**72**	**90**	**32**	**9**	**4**	**206**	**204**
1979		**71**	**91**	**21**	**3**	**0**	**186**	**180**
1980		**72**	**82**	**12**	**3**	**0**	**169**	**163**
1981	January	73	81	12	3	0	169	163
	February	73	81	12	3	0	169	163
	March	73	81	12	3	0	169	163
	April	73	81	12	3	0	169	163
	May	73	81	12	3	0	169	163
	June	74	80	12	3	0	169	163
	July	74	80	12	3	0	169	163
	August	74	79	12	3	0	168	162
	September	75	78	11	3	0	167	161
	October	75	77	11	3	0	166	160
	November	74	78	11	3	0	166	160
	December	74	75	11	3	0	163	157
1982	January	74	73	11	3	0	161	154
	February	75	72	6	2	0	155	147
	March	75	72	6	2	0	155	147
	April	76	71	6	2	0	155	147
	May	76	71	6	2	0	155	147
	June	77	70	6	2	0	155	147
	July	78	67	6	2	0	153	145
	August	79	64	5	2	0	150	141
	September	79	64	3	2	0	148	138
	October	78	64	3	2	0	147	138
	November	79	60	3	2	0	144	135
	December	79	60	3	2	0	144	135
1983	January	79	60	3	2	0	144	135
	February	79	60	3	2	0	144	135
	March	80	59	3	2	0	144	135
	April	81	57	3	2	0	143	134
	May	81	57	3	2	0	143	134
	June	81	57	3	2	0	143	134
	July	81	57	3	2	0	143	134
	August	81	57	3	2	0	143	134
	September	81	57	3	2	0	143	134
	October	81	56	2	2	0	141	133
	November	81	56	0	2	0	139	131

[1]Monthly data are the status as of the last day of the month. Annual data are the status as of December 31 of each year.
[2]See Note 1 on the last page of this section.
[3]Net design electrical rating is used because many of the units in this table have not been operating long enough for a maximum dependable capacity to be determined. See Note 2 on the last page of this section.
Note: • Geographic coverage is the 50 States and the District of Columbia.
Sources: • See the last page of this section.

Notes and Sources for the Nuclear Section

Notes

1. **Reactors Licensed for Operation:** This column includes units that have received Full Power and/or Low Power Licenses from the Nuclear Regulatory Commission with two exceptions. Hanford, an 850-net megawatt (MWe) reactor operated by the Department of Energy, is included, although it is not licensed by the NRC, because it distributes commercial electricity. The Experimental Breeder Reactor-2 is not included, although it generates electricity, because it does not distribute the electricity commercially. Three units that had been inoperative for at least 9 months prior to January 1980 are deleted from subsequent entries in the tables: Humboldt Bay (capacity=65 MWe), which requires major seismic modifications; Dresden-1 (capacity=200 MWe), which also needs major modifications; and Three Mile Island-2 (capacity=906 MWe), whose core was severely damaged by a loss-of-coolant accident in March 1979. Shippingport (capacity=60 MWe), which was a second reactor operated by the Department of Energy, was officially retired from service on October 1, 1982, and is deleted from subsequent entries in the tables.
2. **Capacity:** Nuclear powerplants may have more than one type of capacity rating, including:
   (a) Gross Maximum Dependable Capacity (MDC)—The gross electrical output measured at the output terminals of the turbine generator(s) during the most restrictive seasonal conditions (usually summer).
   (b) Net Maximum Dependable Capacity (MDC)—The gross MDC less the station service load. The typical station service load for a nuclear plant is about 5 percent of its gross generation.
   (c) Net Design Capacity or Net Design Electrical Rating (DER) —The nominal net electrical output of the unit, specified by the utility and used for plant design.

Sources

Reactors Licensed for Operation: •Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."
Electricity Generation: •1973 through September 1977—Federal Power Commission, Form 4, "Monthly Power Plant Report." •October 1977 through 1981—Federal Energy Regulatory Commission, FPC Form 4, "Monthly Power Plant Report." •1982 forward—Energy Information Administration, Form EIA-759, "Monthly Power Plant Report."
Maximum Dependable Capacity: •Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors."
Capacity Factor: •Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels.
Reactor Construction and Planning Data: •1973 through June 1982—Compiled from various sources, primarily the Department of Energy, Office of Nuclear Reactor Programs, "U.S. Central Station Nuclear Electric Generating Units: Significant Milestones," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and from the Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternate Fuels. •July 1982 forward—Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report," Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors," and various trade journals.
Total Design Capacity: •Nuclear Regulatory Commission Report NUREG-0020, "Licensed Operating Reactors" and Nuclear Regulatory Commission Report NUREG-0871, "Summary Information Report."

Price

Crude Oil

The average price of domestic crude oil purchased at the wellhead was $26.09 per barrel in November 1983. This was 0.2 percent above the previous month's level but 9.1 percent below the level in November 1982.

During November 1983, the composite refiner acquisition cost of crude oil was $28.85 per barrel, $0.29 per barrel (1.0 percent) below the previous month's price of $29.14. The price of imported crude oil decreased $0.58 per barrel from the October 1983 level to $29.09 per barrel in November. This price was 12.1 percent below the November 1982 level. The price of domestic crude oil in November 1983 was $28.76, a decrease of $0.12 per barrel from the October 1983 average.

Motor Gasoline

The national average retail price of all grades and all types of motor gasoline was $1.22 per gallon in December 1983. Leaded regular gasoline at all types of stations sold for an average of $1.15 per gallon in December, 0.9 percent lower than the price in November 1983. The price of unleaded regular gasoline at all types of stations was $1.23 per gallon in December, 0.8 percent lower than the price in November.

Natural Gas

The average wellhead price of marketed natural gas production in October 1983 was $2.57 per thousand cubic feet (Mcf), $0.09 per Mcf (3.4 percent) less than in September 1983 and $0.03 per Mcf (1.2 percent) less than the October 1982 price. The average price of natural gas delivered to electric utility plants was $3.60 per Mcf in October, down $0.10 per Mcf (2.7 percent) from the September 1983 price and $0.08 (2.2 percent) from the October 1982 price. The average price of natural gas used by residential consumers in December 1983 was $6.03 per Mcf, $0.01 more than in November 1983 and $0.29 per Mcf (5.1 percent) more than the December 1982 price.

Electricity

The average retail price of electricity sold by selected privately owned utilities to all types of consumers in November 1983 was 6.23 cents per kilowatt-hour (kWh), a 2.8-percent decrease from the October 1983 price but 1.5 percent more than the November 1982 price of 6.14 cents per kWh. The average price of electricity sold to residential consumers in November 1983 was 7.25 cents per kWh, a decrease of 3.3 percent from the previous month's average price but 4.5 percent above the November 1982 price. The average price of electricity sold to commercial consumers was 7.13 cents per kWh in November 1983, a 0.8-percent decrease compared to the October 1983 price but up 1.3 percent from the November 1982 price. The average electricity price to industrial users during November 1983 was 4.83 cents per kWh, a 3.6-percent decrease from the price during the previous month and 1.0 percent less than during November 1982.

Price

Petroleum Price Summary

		Actual Domestic Average Wellhead Price[1]	Refiner Acquisition Cost of Crude Oil[2]			No. 6 Residual Oil Price Average[3]	
			Domestic	Imported	Composite	Wholesale[4]	Retail[4]
		Dollars per barrel					
1976	**AVERAGE**	**8.19**	**8.84**	**13.48**	**10.89**	**10.72**	**11.49**
1977	**AVERAGE**	**8.57**	**9.55**	**14.53**	**11.96**	**11.96**	**13.23**
1978	**AVERAGE**	**9.00**	**10.61**	**14.57**	**12.46**	**11.51**	**12.75**
1979	**AVERAGE**	**12.64**	**14.27**	**21.67**	**17.72**	**17.66**	**18.67**
1980	**AVERAGE**	**21.59**	**24.23**	**33.89**	**28.07**	**23.14**	**26.09**
1981	January	28.85	32.71	38.85	34.86	31.14	33.65
	February	34.14	36.27	39.00	37.28	31.81	36.04
	March	34.70	36.97	38.31	37.48	31.78	36.11
	April	34.05	35.58	38.41	36.58	30.56	34.70
	May	32.71	35.21	37.84	36.11	30.41	34.11
	June	31.71	34.20	37.03	35.03	25.95	31.03
	July	31.13	33.76	36.58	34.70	26.52	30.57
	August	31.13	33.79	35.82	34.46	27.01	30.52
	September	31.13	33.47	35.44	34.11	26.20	30.33
	October	31.00	33.48	35.43	34.07	26.78	30.32
	November	30.98	33.49	36.21	34.33	27.99	30.16
	December	30.72	33.51	35.95	34.33	27.26	30.90
	AVERAGE	**31.77**	**34.33**	**37.05**	**35.24**	**28.86**	**32.50**
1982	January	30.87	33.39	35.54	33.95	27.07	29.83
	February	29.76	32.71	35.48	33.40	26.29	30.02
	March	28.31	31.08	34.07	31.81	25.73	29.50
	April	27.65	30.27	32.82	30.83	25.46	28.21
	May	27.67	30.37	32.78	31.02	26.52	28.93
	June	28.11	30.79	33.79	31.74	26.62	29.59
	July	28.33	30.92	33.44	31.74	25.97	29.33
	August	28.18	30.85	32.95	31.45	26.34	28.44
	September	27.99	30.76	33.03	31.40	26.49	28.43
	October	28.74	31.38	33.28	31.98	27.52	29.28
	November	28.70	31.57	33.09	32.07	28.31	29.84
	December	28.12	30.80	32.85	31.29	26.81	28.47
	AVERAGE	**28.52**	**31.22**	**33.55**	**31.87**	**26.55**	**29.08**
1983	January	27.22	30.55	31.40	30.73	NA	NA
	February	26.41	29.16	30.76	29.49	NA	NA
	March	26.08	28.69	28.43	28.64	NA	NA
	April	25.85	28.45	27.95	28.33	NA	NA
	May	26.08	28.68	28.53	28.64	NA	NA
	June	25.98	28.67	29.23	28.85	NA	NA
	July	25.86	28.74	28.76	28.75	NA	NA
	August	26.03	28.58	29.50	28.88	NA	NA
	September	26.08	28.69	29.54	28.97	NA	NA
	October	26.04	28.88	29.67	29.14	NA	NA
	November	†26.09	28.76	29.09	28.85	NA	NA
	December	NA	NA	NA	NA	NA	NA
	AVERAGE	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

[1]See Note 1 on the last two pages of this section.
[2]See Note 2 on the last two pages of this section.
[3]Wholesale refers to the price of residual fuel oil 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.
[5]Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded and unbranded jobbers and commercial accounts. Retail refers to the price at which company-owned and -operated retail dealers sell to customers.
Footnotes continued on following page.

Price

Petroleum Price Summary (continued)

		No. 2 Diesel Price Average[5]		No. 2 Heating Oil Price Average		Gasoline Price Average All Types[6]	Propane Price Average[7]	Butane Price Average[7]
		Wholesale[4]	Retail[4]	Wholesale	Retail	Retail	Wholesale[4]	Wholesale[4]
		Cents per gallon						
1976	**AVERAGE**	**31.9**	**34.7**	**32.6**	**40.6**	**NA**	**20.6**	**21.9**
1977	**AVERAGE**	**36.1**	**39.3**	**36.9**	**46.0**	**NA**	**25.0**	**25.4**
1978	**AVERAGE**	**37.1**	**40.2**	**38.7**	**49.4**	**65.2**	**24.0**	**23.0**
1979	**AVERAGE**	**58.2**	**62.4**	**53.0**	**65.6**	**88.2**	**29.5**	**45.8**
1980	**AVERAGE**	**81.2**	**87.3**	**82.2**	**97.8**	**122.1**	**42.4**	**62.9**
1981	January	92.5	100.9	98.6	114.4	126.9	46.5	66.1
	February	99.5	106.1	106.0	123.4	135.3	48.2	63.0
	March	101.7	108.8	106.3	125.5	138.8	48.3	62.1
	April	101.3	107.7	105.2	123.9	138.1	49.3	60.1
	May	100.8	106.8	104.0	122.7	137.0	48.6	56.8
	June	99.5	106.6	103.0	120.9	136.2	46.0	52.7
	July	98.8	103.8	102.7	121.0	135.3	46.0	56.5
	August	97.8	105.9	102.2	119.4	134.8	47.2	60.6
	September	97.6	104.8	101.6	119.7	135.8	47.7	64.6
	October	97.4	105.3	101.1	118.8	135.3	47.3	64.7
	November	98.3	105.2	102.3	120.8	135.1	47.5	61.6
	December	98.3	105.1	102.6	122.0	134.8	45.5	55.4
	AVERAGE	**98.5**	**106.2**	**102.6**	**120.5**	**135.3**	**47.2**	**60.4**
1982	January	98.0	105.3	101.5	122.0	134.1	43.1	51.8
	February	94.8	103.2	98.3	120.7	131.8	38.3	48.9
	March	90.2	98.0	91.3	115.3	126.8	35.7	49.6
	April	86.6	96.1	90.0	113.2	121.0	34.9	56.1
	May	89.1	97.6	95.1	114.3	122.4	35.4	65.6
	June	93.5	102.2	98.5	116.2	129.6	36.9	67.9
	July	93.4	101.1	98.6	115.8	131.8	39.7	69.7
	August	92.3	99.3	96.7	115.9	131.0	43.8	72.2
	September	92.4	99.8	97.7	115.2	129.5	49.5	77.4
	October	95.7	102.1	102.0	119.6	128.0	51.0	75.7
	November	97.3	104.5	101.5	121.6	126.8	53.2	76.1
	December	91.2	100.3	95.9	119.6	124.4	49.5	72.6
	AVERAGE	**92.7**	**100.5**	**97.4**	**118.6**	**128.1**	**43.3**	**64.8**
1983	January	NA	NA	NA	NA	121.3	NA	NA
	February	NA	NA	NA	NA	117.0	NA	NA
	March	NA	NA	NA	NA	113.5	NA	NA
	April	NA	NA	NA	NA	119.8	NA	NA
	May	NA	NA	NA	NA	124.3	NA	NA
	June	NA	NA	NA	NA	126.1	NA	NA
	July	NA	NA	NA	NA	127.2	NA	NA
	August	NA	NA	NA	NA	126.9	NA	NA
	September	NA	NA	NA	NA	125.7	NA	NA
	October	NA	NA	NA	NA	123.9	NA	NA
	November	NA	NA	NA	NA	122.4	NA	NA
	December	NA	NA	NA	NA	121.5	NA	NA
	AVERAGE	**NA**	**NA**	**NA**	**NA**	**122.5**	**NA**	**NA**

Footnotes continued.
[6]Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily. See Note 5 on the last two pages of this section for additional information on motor gasoline prices.
[7]Wholesale refers to the price at which refiners, resellers, retailers, and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.
†Preliminary data. NA=Not available.
Note: • Geographic coverage is the 50 States and the District of Columbia, except for the refiner acquisition cost of crude oil, which is the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.
Sources: • See the last two pages of this section.

Price

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

		Algeria	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
						Dollars per barrel					
1976	**AVERAGE**	**13.05**	**12.76**	**11.61**	**12.55**	**NA**	**13.08**	**11.69**	**11.94**	**NA**	**11.32**
1977	**AVERAGE**	**14.36**	**13.57**	**12.67**	**13.90**	**13.42**	**14.44**	**12.37**	**12.83**	**NA**	**12.68**
1978	**AVERAGE**	**14.10**	**13.64**	**12.65**	**13.75**	**13.24**	**14.04**	**12.70**	**13.24**	**13.82**	**12.45**
1979	**AVERAGE**	**20.65**	**19.35**	**23.71**	**22.43**	**20.29**	**21.80**	**17.63**	**19.58**	**21.20**	**17.37**
1980	**AVERAGE**	**36.57**	**32.37**	(2)	**36.41**	**31.11**	**35.82**	**28.53**	**NA**	**34.58**	**24.78**
1981	January	39.37	36.54	(2)	40.52	35.88	40.11	32.39	NA	38.34	32.87
	February	40.13	36.13	(2)	40.73	36.57	40.03	32.60	NA	39.41	30.36
	March	40.30	36.40	(2)	40.25	35.60	39.85	32.73	NA	39.50	31.24
	April	39.70	36.38	(2)	40.04	33.81	39.92	32.41	NA	38.85	29.93
	May	39.57	36.09	(2)	38.91	34.45	39.11	32.13	NA	37.16	28.39
	June	39.20	36.95	(2)	39.85	30.30	38.44	32.42	NA	35.84	30.50
	July	38.06	35.47	(2)	38.70	32.72	39.25	32.07	NA	34.89	29.25
	August	39.34	35.61	(2)	39.45	31.23	39.55	31.95	NA	34.38	27.08
	September	39.60	35.82	(2)	36.74	30.37	36.04	32.09	NA	34.44	28.14
	October	36.90	35.08	(2)	36.36	30.83	35.45	33.56	NA	34.87	27.27
	November	36.55	35.53	(2)	37.15	31.80	36.41	33.49	NA	35.97	28.39
	December	37.35	36.08	(2)	36.78	31.29	36.49	33.70	NA	36.46	28.02
	AVERAGE	**39.09**	**35.93**	(2)	**39.44**	**33.13**	**38.53**	**32.48**	**NA**	**36.08**	**28.86**
1982	January	36.96	35.53	(2)	35.69	29.67	36.23	33.40	NA	36.20	29.07
	February	35.56	35.59	(2)	34.64	30.92	35.92	33.50	NA	34.00	28.94
	March	31.50	35.74	(2)	34.21	27.86	34.94	33.77	NA	30.78	22.89
	April	30.54	35.69	(2)	(2)	26.96	33.80	33.49	NA	32.49	21.89
	May	33.32	34.82	31.11	(2)	28.53	35.22	32.97	NA	32.43	22.31
	June	34.72	35.95	W	(2)	28.18	35.18	33.80	NA	33.67	22.25
	July	34.35	35.22	31.44	(2)	28.32	35.15	33.26	NA	33.66	23.50
	August	33.03	35.63	31.17	(2)	27.67	35.13	32.63	NA	33.17	20.71
	September	34.20	35.24	W	(2)	27.95	34.70	32.98	NA	33.30	23.58
	October	34.26	35.25	W	(2)	27.82	35.05	33.54	NA	33.93	22.93
	November	34.44	34.99	29.80	(2)	27.63	35.02	33.59	NA	34.08	23.74
	December	34.86	34.73	29.09	(2)	27.63	33.18	34.04	NA	33.21	26.21
	AVERAGE	**34.23**	**35.27**	**30.93**	**35.12**	**28.07**	**35.13**	**33.50**	**NA**	**33.46**	**23.77**
1983	January	W	34.71	W	(2)	26.90	W	W	NA	32.77	21.58
	February	W	33.74	W	(2)	25.69	W	W	NA	30.95	21.82
	March	31.07	29.69	W	(2)	24.53	29.52	30.03	NA	29.16	20.04
	April	29.37	29.57	W	(2)	24.18	29.63	W	NA	30.07	20.05
	May	29.54	29.31	W	(2)	24.60	29.72	W	NA	29.61	19.88
	June	29.80	29.59	W	(2)	24.13	29.57	W	NA	28.92	20.80
	July	30.15	29.73	28.41	(2)	24.92	29.81	27.91	NA	30.00	19.89
	August	30.32	29.60	28.19	(2)	25.15	29.92	27.83	NA	29.88	21.56
	September	30.33	29.77	28.03	(2)	25.10	29.59	27.73	NA	30.33	21.81
	October	R29.98	R29.81	R28.29	(2)	R25.72	R30.23	28.24	NA	R29.73	R23.58
	November†	29.71	30.34	W	(2)	25.74	30.22	28.42	NA	29.47	23.37

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

Price

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

		Algeria	Canada	Indonesia	Iran	Libya	Mexico	Nigeria	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela
							Dollars per barrel					
1975	**AVERAGE**	**12.72**	**12.72**	**13.79**	**12.21**	**12.35**	**NA**	**12.62**	**12.30**	**12.87**	**NA**	**11.65**
1976	**AVERAGE**	**13.81**	**13.57**	**13.82**	**12.82**	**13.58**	**NA**	**13.80**	**13.04**	**13.30**	**NA**	**11.80**
1977	**AVERAGE**	**15.20**	**14.21**	**14.63**	**13.80**	**14.87**	**13.75**	**15.25**	**13.61**	**14.04**	**NA**	**13.13**
1978	**AVERAGE**	**14.91**	**14.50**	**14.64**	**13.88**	**14.72**	**13.54**	**14.86**	**13.92**	**14.39**	**NA**	**12.83**
1979	**AVERAGE**	**21.90**	**20.43**	**20.69**	**25.02**	**23.68**	**20.86**	**22.96**	**19.15**	**21.90**	**22.16**	**18.18**
1980	**AVERAGE**	**37.90**	**30.47**	**33.92**	**(2)**	**37.72**	**31.80**	**37.05**	**30.02**	**NA**	**35.88**	**25.86**
1981	January	41.25	34.26	38.08	(2)	41.81	36.81	41.55	34.06	NA	39.90	33.80
	February	41.90	33.73	37.86	(2)	42.19	37.23	41.46	34.38	NA	40.69	31.20
	March	41.62	33.88	38.11	(2)	41.60	36.42	40.98	34.42	NA	40.72	32.09
	April	40.96	33.74	37.95	(2)	41.58	34.42	41.04	34.16	NA	40.02	30.97
	May	40.81	32.70	37.72	(2)	40.46	34.83	40.10	33.73	NA	38.31	29.39
	June	40.31	32.67	38.73	(2)	41.44	31.03	39.60	34.29	NA	37.04	31.46
	July	39.59	31.19	37.20	(2)	40.27	33.18	40.05	33.72	NA	35.87	29.22
	August	40.65	30.44	37.07	(2)	40.30	31.77	40.85	33.23	NA	35.40	28.11
	September	41.62	30.83	37.52	(2)	37.73	30.84	37.20	33.66	NA	35.26	29.12
	October	37.52	31.17	36.39	(2)	38.15	31.34	36.64	34.88	NA	36.00	28.27
	November	37.43	31.04	36.84	(2)	38.50	32.42	37.59	34.91	NA	36.87	29.27
	December	38.14	31.37	37.31	(2)	38.89	31.85	37.52	35.37	NA	37.44	29.00
	AVERAGE	**40.49**	**32.16**	**37.57**	**(2)**	**40.92**	**33.78**	**39.70**	**34.19**	**NA**	**37.24**	**29.87**
1982	January	38.19	31.05	36.88	(2)	36.91	30.21	37.37	34.44	NA	36.78	29.82
	February	37.09	28.80	36.81	(2)	35.28	31.47	37.06	34.51	NA	35.04	30.09
	March	32.25	26.71	37.17	(2)	34.80	28.69	35.81	34.92	NA	31.35	23.92
	April	31.66	24.86	36.87	(2)	(2)	27.58	34.82	34.80	NA	33.19	23.09
	May	34.24	24.90	36.50	32.01	(2)	29.18	36.06	34.28	NA	33.22	23.44
	June	35.41	24.63	37.35	W	(2)	28.76	36.15	35.20	NA	34.41	23.43
	July	35.26	26.62	37.04	32.08	(2)	28.95	36.19	35.04	NA	34.67	24.61
	August	33.87	26.40	36.81	31.84	(2)	28.19	36.16	34.28	NA	33.88	21.90
	September	34.88	26.52	36.65	W	(2)	28.50	35.56	34.45	NA	34.01	24.53
	October	35.41	26.91	36.83	33.28	(2)	28.22	35.98	35.21	NA	34.56	23.90
	November	35.82	26.78	36.49	32.66	(2)	28.17	36.04	35.41	NA	34.74	24.91
	December	35.70	27.35	36.19	32.73	(2)	28.19	34.54	36.43	NA	34.05	27.09
	AVERAGE	**35.28**	**26.92**	**36.75**	**32.40**	**36.05**	**28.64**	**36.17**	**35.00**	**NA**	**34.28**	**24.82**
1983	January	33.20	27.62	36.12	W	(2)	27.50	W	W	NA	33.48	23.20
	February	32.17	26.19	35.07	W	(2)	26.15	32.24	W	NA	33.33	23.36
	March	31.24	24.78	31.17	W	(2)	25.06	30.49	31.63	NA	29.92	21.48
	April	30.55	24.35	31.14	W	(2)	24.65	30.63	W	NA	30.84	21.45
	May	30.48	24.32	30.82	W	(2)	25.17	30.75	W	NA	30.60	21.24
	June	30.88	24.88	31.40	29.10	(2)	24.81	30.56	W	NA	30.02	22.07
	July	31.36	25.45	31.46	30.06	(2)	25.34	30.91	29.53	NA	30.86	21.30
	August	31.85	25.45	31.65	29.57	(2)	25.80	31.21	29.39	NA	30.83	22.82
	September	31.78	25.71	31.27	29.31	(2)	25.66	30.70	29.53	NA	31.39	23.12
	October	R30.97	R26.01	R31.14	R29.73	(2)	R26.44	R31.16	29.98	NA	R30.79	R24.75
	November†	30.95	25.83	31.79	W	(2)	26.31	31.26	30.15	NA	30.31	24.80

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

Price

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

		Leaded Regular	Unleaded Regular	Leaded Premium	Average for All Types
		Cents per gallon, including tax			
1974	**AVERAGE**	**53.2**	**NA**	**56.9**	**NA**
1975	**AVERAGE**	**56.7**	**NA**	**60.9**	**NA**
1976	**AVERAGE**	**59.0**	**61.4**	**63.6**	**NA**
1977	**AVERAGE**	**62.2**	**65.6**	**67.4**	**NA**
1978	**AVERAGE**	**62.6**	**67.0**	**69.4**	**65.2**
1979	**AVERAGE**	**85.7**	**90.3**	**92.2**	**88.2**
1980	**AVERAGE**	**119.1**	**124.5**	**128.1**	**122.1**
1981	January	123.8	129.8	133.8	126.9
	February	132.1	138.2	141.0	135.3
	March	135.2	141.7	144.9	138.8
	April	134.4	141.2	145.1	138.1
	May	133.3	140.0	144.7	137.0
	June	132.4	139.1	144.6	136.2
	July	131.5	138.2	144.6	135.3
	August	131.0	137.6	144.4	134.8
	September[2]	130.5	137.6	145.6	135.8
	October	129.9	137.1	145.7	135.3
	November	129.7	136.9	146.2	135.1
	December	129.3	136.5	146.0	134.8
	AVERAGE	**131.1**	**137.8**	**143.9**	**135.3**
1982	January	128.5	135.8	145.6	134.1
	February	126.0	133.4	143.8	131.8
	March	120.6	128.4	140.7	126.8
	April	114.8	122.5	136.8	121.0
	May	116.6	123.7	137.9	122.4
	June	124.2	130.9	140.8	129.6
	July	126.3	133.1	145.0	131.8
	August	125.4	132.3	145.8	131.0
	September	123.6	130.8	144.1	129.5
	October	121.9	129.5	141.3	128.0
	November	120.7	128.3	141.2	126.8
	December	118.1	126.0	137.1	124.4
	AVERAGE	**122.2**	**129.6**	**141.7**	**128.1**
1983	January	114.6	122.8	135.3	121.3
	February	109.9	118.7	131.8	117.0
	March	106.4	115.1	127.4	113.5
	April	113.1	121.5	132.1	119.8
	May	117.7	125.9	137.6	124.3
	June	119.7	127.7	142.9	126.1
	July	120.7	128.8	144.6	127.2
	August	120.3	128.5	143.7	126.9
	September	118.9	127.4	140.5	125.7
	October	117.2	125.5	137.2	123.9
	November	115.6	124.1	135.6	122.4
	December	114.6	123.1	138.1	121.5
	AVERAGE	**115.7**	**124.1**	**137.2**	**122.5**

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

Price

Aviation Fuel

		Aviation Gasoline		Naphtha-Type[1]	Kerosene-Type	
		Wholesale[2]	Retail[2]	Retail[2]	Wholesale[2]	Retail[2]
		Cents per gallon, excluding tax				
1976	**AVERAGE**	**42.4**	**43.1**	**31.5**	**32.5**	**31.2**
1977	**AVERAGE**	**46.7**	**47.7**	**35.0**	**36.7**	**35.8**
1978	**AVERAGE**	**51.0**	**52.1**	**37.5**	**38.9**	**38.9**
1979	**AVERAGE**	**68.5**	**69.5**	**52.3**	**66.5**	**55.1**
1980	**AVERAGE**	**107.2**	**109.4**	**88.2**	**87.5**	**87.4**
1981	January	118.9	121.6	99.2	97.1	95.7
	February	121.3	128.1	102.7	103.6	101.6
	March	127.2	131.1	106.9	104.8	106.3
	April	117.5	131.3	109.0	103.8	106.4
	May	120.7	133.5	109.1	104.4	106.2
	June	116.5	132.1	107.6	102.3	104.8
	July	120.1	133.4	106.3	100.5	103.8
	August	120.0	132.5	105.7	101.4	103.3
	September	121.0	133.5	105.6	103.0	103.3
	October	117.2	134.5	104.8	99.9	101.1
	November	114.4	133.2	104.5	101.9	102.6
	December	116.8	131.9	103.8	101.9	102.2
	AVERAGE	**118.8**	**131.5**	**105.7**	**102.0**	**103.1**
1982	January	122.4	133.2	101.7	101.3	101.6
	February	122.0	134.0	101.3	100.0	101.0
	March	117.0	134.8	98.4	97.6	99.6
	April	113.4	132.7	96.0	93.0	96.8
	May	109.6	132.7	94.1	91.7	95.5
	June	114.7	132.5	98.4	94.1	95.3
	July	120.4	134.4	98.7	94.3	95.3
	August	117.7	132.6	97.3	95.0	95.4
	September	115.7	130.0	98.2	95.5	95.1
	October	116.6	131.5	98.5	98.4	95.8
	November	118.4	131.7	96.4	98.2	96.4
	December	119.6	130.3	94.0	93.7	95.6
	AVERAGE	**116.7**	**132.4**	**97.7**	**96.1**	**96.9**

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

Price

National Average Heating Oil Prices[1]

		Refiners' Average Selling Price to Resellers and Retailers	Average Purchase Price Paid by Distributors for Heating Oil[2]	Average Distributor Margin on Residential Heating Oil[2]	Average Selling Price to Residential Customers[2]
		Cents per gallon			
1976	**AVERAGE**	**31.4**	**32.6**	**NA**	**40.6**
1977	**AVERAGE**	**35.7**	**36.9**	**NA**	**46.0**
1978	**AVERAGE**	**37.2**	**38.7**	**11.0**	**49.4**
1979	**AVERAGE**	**55.9**	**53.0**	**12.8**	**65.6**
1980	**AVERAGE**	**80.0**	**82.2**	**15.8**	**97.8**
1981	January	94.9	98.6	15.1	114.4
	February	102.5	106.0	16.1	123.4
	March	102.8	106.3	17.6	125.5
	April	100.9	105.2	17.7	123.9
	May	100.7	104.0	17.6	122.7
	June	99.3	103.0	16.9	120.9
	July	98.5	102.7	17.1	121.0
	August	98.2	102.2	16.2	119.4
	September	97.8	101.6	17.2	119.7
	October	98.0	101.1	16.6	118.8
	November	100.0	102.3	17.6	120.8
	December	100.6	102.6	18.3	122.0
	AVERAGE	**99.3**	**102.6**	**16.8**	**120.5**
1982	January	99.1	101.5	19.3	122.0
	February	94.7	98.3	21.3	120.7
	March	87.4	91.3	22.6	115.3
	April	86.0	90.0	22.0	113.2
	May	91.2	95.1	18.4	114.3
	June	95.4	98.5	16.9	116.2
	July	93.8	98.6	16.3	115.8
	August	92.5	96.7	18.2	115.9
	September	93.3	97.7	16.3	115.2
	October	98.8	102.0	16.7	119.6
	November	99.2	101.5	19.0	121.6
	December	89.9	95.9	22.9	119.6
	AVERAGE	**93.2**	**97.4**	**20.2**	**118.6**

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

Price

Residential Heating Oil Prices by Region

		Standard Federal Region[1]									
		Cents per gallon									
		1	2	3	4	5	6	7	8	9	10
1980	January	91.8	91.0	90.2	88.6	90.4	W	90.0	90.2	89.6	91.0
	February	96.7	95.3	94.7	93.0	93.5	W	93.6	93.5	95.8	95.7
	March	98.7	97.2	96.5	94.8	94.3	W	95.1	95.9	93.9	97.6
	April	99.2	97.3	96.6	94.1	94.5	W	95.3	99.5	94.7	99.0
	May	98.7	97.3	96.4	94.2	95.8	W	95.2	97.7	95.5	98.6
	June	99.8	97.9	96.8	95.1	95.8	W	95.3	98.4	96.0	99.8
	July	100.3	98.1	96.6	94.2	96.2	W	93.1	97.0	96.7	100.2
	August	100.2	97.9	96.8	94.8	95.7	W	95.4	92.1	99.7	100.4
	September	100.5	98.2	97.0	94.7	95.7	W	93.7	93.0	97.2	100.6
	October	101.1	98.8	97.4	95.6	95.9	W	94.7	94.1	98.6	100.4
	November	102.5	103.0	99.9	101.5	98.8	W	95.2	98.5	101.0	103.1
	December	108.2	108.5	105.3	106.6	103.4	W	99.6	101.8	W	105.6
1981	January	116.2	117.1	113.2	114.0	110.4	W	106.3	108.6	W	107.5
	February	125.8	126.6	123.0	124.4	117.8	W	114.2	113.1	W	113.7
	March	127.6	128.4	125.0	125.3	119.3	W	115.4	119.3	111.5	116.5
	April	126.8	126.6	122.7	124.8	118.3	W	114.7	118.4	W	117.5
	May	125.5	125.6	122.1	118.8	117.3	W	114.5	115.1	114.1	115.6
	June	124.1	123.6	121.1	115.9	116.5	W	112.5	116.0	W	117.1
	July	123.3	122.9	120.6	120.2	116.0	W	115.9	116.2	W	118.3
	August	122.7	122.2	117.9	117.4	115.1	W	112.1	116.9	W	117.7
	September	122.7	121.4	118.5	120.5	116.2	W	111.6	116.8	W	117.8
	October	122.5	122.0	115.3	117.6	116.3	W	112.0	115.8	W	118.2
	November	123.3	123.2	119.5	118.2	116.7	W	114.1	115.8	W	118.8
	December	124.8	124.7	120.7	119.0	117.4	W	112.4	117.1	W	120.0
1982	January	125.3	124.7	120.6	118.7	117.1	W	112.7	116.1	W	119.7
	February	123.2	123.7	119.3	115.3	116.0	W	110.9	114.9	W	119.5
	March	117.4	119.0	112.3	112.9	111.0	W	106.4	109.7	W	118.1
	April	113.9	116.6	112.2	109.4	108.7	W	100.8	106.3	W	116.0
	May	115.9	117.1	113.2	111.7	110.8	W	108.7	108.4	W	116.6
	June	117.5	118.5	115.2	113.5	114.4	W	111.8	112.3	W	116.0
	July	117.7	118.5	113.4	115.2	113.6	W	111.7	W	W	115.9
	August	118.6	118.8	113.9	112.4	111.9	W	W	W	W	116.3
	September	119.4	119.3	W	115.0	112.4	W	W	114.2	W	116.2
	October	122.3	122.4	118.5	117.3	114.8	W	110.5	113.1	W	117.4
	November	124.2	124.7	120.1	118.4	115.9	W	110.2	114.7	W	118.9
	December	122.2	122.9	117.8	114.1	113.0	W	107.3	112.0	W	118.6

[1]Standard Federal Regions are defined in Note 7 on the last two pages of this section.
W = Value withheld to avoid disclosure of company data.
Sources: • See the last two pages of this section.

Price

Average No. 6 Residual Fuel Oil Prices

		0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Average	
		Wholesale	Retail	Wholesale	Retail	Wholesale	Retail	Wholesale	Retail
		Dollars per barrel, excluding taxes							
1976	**AVERAGE**	**12.20**	**12.54**	**10.83**	**11.79**	**9.98**	**10.43**	**10.72**	**11.49**
1977	**AVERAGE**	**13.45**	**14.36**	**12.09**	**13.45**	**11.31**	**12.27**	**11.96**	**13.23**
1978	**AVERAGE**	**12.77**	**14.47**	**11.95**	**12.78**	**10.73**	**11.70**	**11.51**	**12.75**
1979	**AVERAGE**	**19.87**	**21.21**	**18.33**	**19.33**	**15.89**	**16.44**	**17.66**	**18.67**
1980	**AVERAGE**	**26.41**	**31.13**	**24.91**	**27.59**	**20.77**	**22.11**	**23.14**	**26.09**
1981	January	34.27	37.23	32.12	33.96	29.12	31.35	31.14	33.65
	February	38.04	41.60	34.96	37.32	28.96	32.02	31.81	36.04
	March	37.78	41.19	34.47	38.01	29.55	31.95	31.78	36.11
	April	35.66	41.71	33.10	35.94	28.35	30.56	30.56	34.70
	May	33.61	41.09	32.53	35.94	28.77	30.64	30.41	34.11
	June	28.01	38.30	26.71	32.38	25.33	27.16	25.95	31.03
	July	29.56	39.02	27.38	31.93	25.62	25.96	26.52	30.57
	August	30.48	36.57	27.77	32.04	26.03	26.20	27.01	30.52
	September	29.91	39.17	27.46	32.08	24.80	26.26	26.20	30.33
	October	30.26	39.90	28.64	31.88	24.96	26.18	26.78	30.32
	November	31.71	39.48	29.63	31.02	26.09	26.45	27.99	30.16
	December	31.40	37.65	28.29	32.19	25.39	26.53	27.26	30.90
	AVERAGE	**32.97**	**39.31**	**30.56**	**33.69**	**27.07**	**28.57**	**28.86**	**32.50**
1982	January	33.03	37.56	28.90	31.13	24.60	25.94	27.07	29.83
	February	31.67	38.41	29.30	30.95	23.60	24.70	26.29	30.02
	March	30.95	38.96	27.60	30.57	23.45	24.21	25.73	29.50
	April	30.11	36.77	27.08	30.00	23.57	24.40	25.46	28.21
	May	30.38	37.97	27.89	30.05	25.15	25.94	26.52	28.93
	June	27.98	38.93	28.26	30.89	25.35	26.56	26.62	29.59
	July	30.05	37.46	27.39	29.84	24.19	26.49	25.97	29.33
	August	28.86	31.82	27.50	30.37	25.40	26.02	26.34	28.44
	September	30.22	32.41	27.73	30.45	25.21	25.93	26.49	28.43
	October	31.98	33.51	29.51	32.24	25.72	26.59	27.52	29.28
	November	32.28	34.14	29.44	32.24	26.30	26.99	28.31	29.84
	December	31.31	32.59	28.19	30.25	25.16	26.22	26.81	28.47
	AVERAGE	**30.92**	**36.34**	**28.27**	**30.71**	**24.76**	**25.82**	**26.55**	**29.08**

Notes: • Geographic coverage is the 50 States and the District of Columbia.
• 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.
Sources: • See the last two pages of this section.

Price

National Average Natural Gas Prices

		Wellhead Price	Imports by Major Interstate Pipeline Companies	Purchased from Producers by Major Interstate Pipeline Companies	Industrial Sales by Major Interstate Pipeline Companies	Purchased by Electric Plants[1]	Residential Price[2]
		Dollars per thousand cubic feet					
1973	**AVERAGE**	**0.22**	**NA**	**NA**	**NA**	**0.35**	**1.29**
1974	**AVERAGE**	**0.30**	**NA**	**NA**	**NA**	**0.49**	**1.43**
1975	**AVERAGE**	**0.45**	**NA**	**NA**	**NA**	**0.77**	**1.71**
1976	**AVERAGE**	**0.58**	**NA**	**NA**	**NA**	**1.06**	**1.98**
1977	**AVERAGE**	**0.79**	**NA**	**NA**	**NA**	**1.33**	**2.35**
1978	**AVERAGE**	**0.91**	**2.21**	**0.83**	**1.54**	**1.48**	**2.56**
1979	**AVERAGE**	**1.18**	**2.60**	**1.22**	**2.01**	**1.80**	**2.98**
1980	**AVERAGE**	**1.59**	**4.42**	**1.63**	**2.54**	**2.28**	**3.68**
1981	January	1.77	4.33	1.83	2.94	2.51	3.94
	February	1.81	4.51	1.89	3.00	2.67	3.99
	March	1.86	4.61	1.91	3.01	2.71	4.06
	April	1.93	4.88	2.07	2.96	2.81	4.11
	May	1.95	4.82	2.15	3.00	2.92	4.29
	June	1.95	4.83	2.16	3.06	2.95	4.30
	July	2.01	4.86	2.20	3.08	2.97	4.32
	August	2.02	4.89	2.27	3.24	2.99	4.30
	September	2.08	4.88	2.26	3.22	2.95	4.47
	October	2.11	5.00	2.31	3.34	3.07	4.50
	November	2.15	5.01	2.38	3.38	3.07	4.53
	December	2.16	4.97	2.36	3.35	2.97	4.55
	AVERAGE	**1.98**	**4.80**	**2.15**	**3.13**	**2.91**	**4.29**
1982	January	2.23	4.86	2.38	3.59	3.07	4.65
	February	2.30	4.92	2.46	3.58	3.18	4.69
	March	2.35	4.89	2.38	3.61	3.25	4.78
	April	2.40	5.06	2.44	3.61	3.32	4.86
	May	2.45	4.93	2.63	3.62	3.42	5.17
	June	2.45	4.86	3.06	3.66	3.57	5.20
	July	2.47	5.00	2.79	3.71	3.69	5.23
	August	2.53	5.07	2.84	3.75	3.67	5.23
	September	2.56	5.05	2.80	3.88	3.67	5.41
	October	2.60	5.02	2.97	3.91	3.68	5.66
	November	2.62	5.01	3.02	3.98	3.61	5.68
	December	2.62	4.97	3.19	4.00	3.64	5.74
	AVERAGE	**2.46**	**4.97**	**2.75**	**3.72**	**3.49**	**5.17**
1983	January	2.63	5.03	3.27	4.32	[1]3.57	5.84
	February	2.64	5.09	3.15	4.33	3.41	5.85
	March	2.61	5.01	3.06	4.23	3.44	5.94
	April	2.57	4.66	2.90	4.37	3.34	6.04
	May	2.56	4.40	3.03	4.24	3.54	6.20
	June	R2.62	4.41	2.93	4.22	3.58	6.18
	July	2.56	4.31	2.96	4.24	3.72	R6.19
	August	2.61	3.93	2.90	4.23	3.75	6.16
	September	2.66	4.02	2.87	4.07	3.70	R6.16
	October	2.57	4.03	2.86	4.22	3.60	R6.08
	November	NA	NA	NA	NA	NA	R6.02
	December	NA	NA	NA	NA	NA	6.03

The Bureau of Labor Statistics residential price series has been replaced with Energy Information Administration data and estimates. See Notes and Sources on pages 95 through 97.

[1]Includes all steam and gas turbine engine electric utility generating plants with a combined capacity of 25 megawatts or greater through December 1982. Beginning with January 1983 data, coverage is of steam electric utility generating plants with a combined capacity of 50 megawatts or greater. Small quantities of coke oven gas, refinery gas, and blast furnace gas are included.
[2]This is a new data series. See Note 9 and the special box on the last three pages of this section.
R=Revised data. NA=Not available.
Notes: • Geographic coverage is the 50 States and the District of Columbia.
• Data for 1973 through December 1982 are final. All other data are preliminary unless otherwise indicated.
Sources: • See the last page of this section.

Price

Electricity

		Cost of Fossil Fuels Delivered to Steam-Electric Utility Plants[1]				Average Retail Electricity Prices for Privately Owned Utilities[2]				
		Coal	Residual Oil[3]	Gas[4]	All Fossil Fuels[3]	Residential	Commercial	Industrial	Other	Total[5]
		Cents per million Btu				Cents per kilowatt-hour				
1973	**AVERAGE**	**40.5**	**78.8**	**33.8**	**47.5**	**2.54**	**2.41**	**1.25**	**2.10**	**1.96**
1974	**AVERAGE**	**71.0**	**191.0**	**48.1**	**90.9**	**3.10**	**3.04**	**1.69**	**2.75**	**2.49**
1975	**AVERAGE**	**81.4**	**201.4**	**75.4**	**103.0**	**3.51**	**3.45**	**2.07**	**3.08**	**2.92**
1976	**AVERAGE**	**84.8**	**195.9**	**103.4**	**110.4**	**3.73**	**3.69**	**2.21**	**3.27**	**3.09**
1977	**AVERAGE**	**94.7**	**220.4**	**130.0**	**127.7**	**4.05**	**4.09**	**2.50**	**3.51**	**3.42**
1978	**AVERAGE**	**111.6**	**212.3**	**143.8**	**139.3**	**4.31**	**4.36**	**2.79**	**3.62**	**3.69**
1979	**AVERAGE**	**122.4**	**299.7**	**175.4**	**162.1**	**4.64**	**4.68**	**3.05**	**3.96**	**3.99**
1980	**AVERAGE**	**135.1**	**427.9**	**221.4**	**190.4**	**5.36**	**5.48**	**3.69**	**4.76**	**4.73**
1981	January	142.7	540.2	245.9	219.2	5.43	5.72	3.94	4.92	4.96
	February	146.3	572.9	260.5	218.2	5.52	5.83	3.95	5.01	4.99
	March	148.3	583.9	264.0	215.0	5.76	6.01	4.04	5.33	5.12
	April	146.9	568.3	273.5	241.9	5.99	6.14	4.07	5.20	5.20
	May	146.7	552.8	282.7	250.6	6.26	6.29	4.16	5.47	5.36
	June	152.7	506.1	286.3	234.6	6.49	6.48	4.36	5.37	5.59
	July	156.5	496.3	288.6	227.5	6.58	6.47	4.48	5.61	5.76
	August	157.0	494.4	291.1	220.2	6.62	6.49	4.49	5.52	5.78
	September	157.2	501.0	286.5	212.3	6.63	6.48	4.49	5.65	5.74
	October	160.2	511.9	300.7	217.7	6.57	6.52	4.40	5.31	5.64
	November	159.1	521.0	300.0	215.1	6.42	6.48	4.46	5.43	5.61
	December	156.7	505.0	291.4	215.5	6.32	6.46	4.56	[6]4.60	5.65
	AVERAGE	**153.2**	**529.4**	**282.5**	**222.5**	**6.20**	**6.29**	**4.29**	**5.28**	**5.46**
1982	January	160.9	484.6	301.0	226.4	6.22	6.49	4.66	5.44	5.74
	February	164.1	487.6	310.4	220.7	6.35	6.68	4.70	5.83	5.84
	March	165.7	470.9	315.8	219.8	6.58	6.79	4.83	6.38	5.97
	April	164.6	478.0	323.4	214.3	6.72	6.81	4.84	5.77	5.99
	May	165.1	485.7	331.6	215.7	6.94	6.86	4.95	5.91	6.09
	June	167.0	479.6	345.8	224.7	7.08	6.94	4.92	6.01	6.18
	July	164.5	468.8	335.9	237.6	7.18	6.98	5.12	6.13	6.38
	August	164.7	458.8	355.7	227.6	7.22	6.91	5.15	6.09	6.40
	September	165.9	464.4	358.5	226.9	7.18	6.97	5.25	6.07	6.41
	October	164.9	479.3	360.4	220.1	7.21	7.09	5.09	5.81	6.33
	November	165.3	493.4	351.5	218.2	6.94	7.04	4.88	5.69	6.14
	December	162.9	456.3	355.4	216.8	6.71	6.78	5.01	5.85	6.11
	AVERAGE	**164.7**	**475.5**	**340.6**	**222.5**	**6.86**	**6.86**	**4.95**	**5.92**	**6.13**
1983	January	166.7	444.0	346.9	214.6	6.65	6.78	5.03	5.91	6.13
	February	167.7	439.7	331.9	212.1	6.73	6.86	4.96	5.97	6.12
	March	168.1	421.0	334.9	213.9	6.93	6.93	5.07	6.16	6.23
	April	168.1	435.5	325.5	215.2	6.91	6.86	4.92	6.15	6.12
	May	165.1	443.7	343.5	215.0	7.20	7.04	4.89	6.60	6.21
	June	167.3	450.2	346.7	219.8	7.41	7.13	4.96	6.62	6.35
	July	165.5	464.7	361.1	236.6	7.50	7.13	5.11	6.24	6.53
	August	164.4	464.8	363.1	229.6	7.52	7.06	5.01	6.37	6.51
	September	164.1	480.1	358.1	226.1	7.55	7.15	5.00	6.58	6.52
	October	164.7	479.6	350.1	219.9	7.50	7.19	5.01	6.66	6.41
	November†	NA	NA	NA	NA	7.25	7.13	4.83	6.63	6.23

[1]Includes all steam-electric utility generating plants with a capacity of 25 megawatts or greater through December 1982. Beginning with January 1983 data, coverage is for steam-electric plants with a capacity of 50 megawatts or greater.
[2]The 1973 through 1979 data are for Classes A and B privately owned electric utilities only. The 1980 and forward data are for selected Class A utilities whose electric operating revenues were $100 million or more during the previous year.
[3]See Note 8 on the last two pages of this section.
[4]Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.
[5]Average price for total sales to ultimate consumers.
[6]Includes a major adjustment by one utility.
†Initial estimates. NA=Not available.
Note: • Geographic coverage for fossil fuels is the lower 48 States and the District of Columbia. For electricity it is the 50 States and the District of Columbia.
Sources: • See the last two pages of this section.

Notes and Sources for the Price Section

Notes

1. The actual domestic average price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.
2. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on EIA Form 14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on ERA Form 49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The ERA Form 49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for EIA Form 14 in accordance with conventions used for ERA Form 49. Also, the respondents for the two forms are essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken in comparing the data collected on the two forms.

The costs previously published for January 1981, viz., $30.87 per barrel for domestic crude, $37.59 per barrel for imported, and $33.40 per barrel for the composite, were from data collected on ERA Form 49. The revised costs are from data collected on EIA Form 14. The January prices are being replaced because the EIA Form 49 data were based on only the 27 days of controlled activity, and because there was considerable recertification of oil, which occurred in January.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on ERA Form 51, the "Transfer Pricing Report," or any crude oil that is not domestic oil.

Crude oil costs and volumes reported on ERA Form 49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 included unfinished oils but excluded SPR. Imported averages derived from ERA Form 49 exclude oil purchased for SPR, whereas the composite averages derived from ERA Form 49 include SPR. None of the prices derived from EIA Form 14 include either unfinished oils or SPR.
3. FOB literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.
4. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.
5. The motor gasoline prices are calculated monthly by the Bureau of Labor Statistics in conjunction with the construction of the Consumer Price Index (CPI). For the period 1974 through 1978, prices were collected in 56 urban areas. For the period 1978 forward, prices were collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).
6. The survey and method used to derive data for March 1976 forward differ from those used for prior months. Data for January 1974 through February 1976 are derived from a survey of distributors, and prices and margins are computed as unweighted averages. The average distributor purchase price and average dealer margin for March 1976 forward are for distributors only, whereas the average selling price includes both refiners and distributors. Data for March 1976 forward are computed as sales weighted averages.
7. Standard Federal Regions are defined as follows:
Region 1 —Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island;
Region 2 —New York, New Jersey, Puerto Rico, Virgin Islands;
Region 3 —Pennsylvania, Maryland, West Virginia, Virginia, the District of Columbia, Delaware;
Region 4 —Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, Canal Zone;
Region 5 —Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio;
Region 6 —Texas, New Mexico, Oklahoma, Arkansas, Louisiana;
Region 7 —Kansas, Missouri, Iowa, Nebraska;
Region 8 —Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado;
Region 9 —California, Nevada, Arizona, Hawaii, Trust Territory of the Pacific Islands, American Samoa, Guam;
Region 10 —Washington, Oregon, Idaho, Alaska.
8. Residual fuel oil prices include fuel oils No. 4, No. 5, and No. 6, and topped crude fuel oil prices. The weighted average for all fossil fuels includes both residual fuel oil prices and light oil (No. 2 fuel oil, kerosene, and jet fuel) prices but does not include petroleum coke prices.
9. The monthly national average price of residential natural gas is based on data from the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) for natural gas (piped) and on data from Form EIA-176. Initial monthly estimates are obtained by multiplying the annual average price of residential natural gas collected on Form EIA-176 by the ratio of monthly values of the natural gas CPI-U for consecutive months. When a subsequent year's annual average price becomes available, the initial monthly estimates are adjusted to this annual average.

Sources

Petroleum and Petroleum Products: • Actual domestic average wellhead prices—Economic Regulatory Administration (ERA), January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 through September 1979: FEA Form P124, "Domestic Crude Oil Purchaser's (Monthly) Report"; October 1979 through December 1982: ERA Form 182, "Domestic Crude Oil First Purchase Report."; January 1983 forward: EIA Form 182, "Domestic Crude Oil First Purchase Report."
• Refiner acquisition costs—Energy Information Administration (EIA), January 1976: FEO Form 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: EIA Form 14, "Refiners' Monthly Cost Report."
• No. 6 residual oil prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
• No. 2 diesel prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

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

Notes and Sources for the Price Section (continued)

Petroleum and Petroleum Products (continued):
• No. 2 heating oil (residential heating oil) prices-EIA, 1976 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA Form 9A, "No. 2 Distillate Price Monitoring Report"; November 1980 forward: EIA Form 9A, "No. 2 Distillate Price Monitoring Report."
• Motor gasoline prices—Bureau of Labor Statistics.
• Propane and butane prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
• Crude oil imports costs—Environmental Protection, Safety and Emergency Preparedness, 1975 through January 1979: FEA Form F701-M-0, "Transfer Pricing Report"; February 1979 through September 1982: ERA Form 51, "Transfer Pricing Report"; October 1982 forward: EP Form 51, "Monthly Foreign Crude Oil Transaction Report."
• Aviation fuel prices—EIA, FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."
Natural Gas: • Average wellhead price—annual data from EIA, *Natural Gas Annual,* 1973 through 1982. Monthly data are estimated primarily on the basis of values reported by State agencies in New Mexico, Oklahoma, and Texas. These States together account for almost 50 percent of total U.S. marketed production. Monthly data are adjusted to conform with final reported annual data.
• Imports, Purchased from Producers, and Industrial Sales by Major Interstate Pipeline Companies—FERC Form 11, "Interstate Pipeline Company Purchases, and Industrial Sales".
• Electric plant data—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
• Residential Price—Annual data from EIA, *Natural Gas Annual,* 1973 through 1982. Monthly data are EIA estimates based on the Bureau of Labor Statistics Urban Consumer Price Index (CPI-U) for natural gas and are adjusted to conform with final reported annual data. See Note 9 on the previous page for estimation procedures.
Electricity: • Cost of fossil fuels—EIA, FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."
• Retail prices—EIA, January 1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 through December 1982: FERC Form 5, "Electric Utility Company Monthly Statement"; January 1983 forward: EIA Form 826, "Electric Utility Company Monthly Statement."

Explanation of New Residential Natural Gas Price Series

The Energy Information Administration (EIA) has developed a new monthly residential natural gas price series based on annual data collected on Form EIA-176. These data give total annual sales and revenues for each class of service and thereby permit direct calculation of the average annual residential natural gas price for all consumers in the Nation. Initial monthly estimates are obtained by multiplying the annual average by the ratio of monthly values of the Bureau of Labor Statistics (BLS) Consumer Price Index for All Urban Consumers (CPI-U) for natural gas (piped) for consecutive months. When a subsequent year's annual average price becomes available, the initial monthly estimates are adjusted to that annual average.

The series previously published had been used because it is the only monthly residential natural gas price regularly collected by the Federal Government. These data give BLS residential natural gas prices based on surveys of first "100 therm" block sales in major cities and regions throughout the Nation. The series is referred to as the "U.S. City Average" and does not strictly represent the average residential gas price. Since natural gas usage depends on locale, climate, weather, and equipment, typical customers may use more or less than 100 therms during a month. For comparison, the two data series are shown below:

		Average Residential Natural Gas Price	
		Previous Series[1]	New Series[2]
		Dollars per thousand cubic feet	
1973	**AVERAGE**	**1.08**	**1.29**
1974	**AVERAGE**	**1.25**	**1.43**
1975	**AVERAGE**	**1.54**	**1.71**
1976	**AVERAGE**	**1.85**	**1.98**
1977	**AVERAGE**	**2.26**	**2.35**
1978	**AVERAGE**	**2.63**	**2.56**
1979	**AVERAGE**	**3.23**	**2.98**
1980	**AVERAGE**	**3.95**	**3.68**
1981	January	4.10	3.94
	February	4.13	3.99
	March	4.21	4.06
	April	4.25	4.11
	May	4.61	4.29
	June	4.61	4.30
	July	4.64	4.32
	August	4.70	4.30
	September	4.90	4.47
	October	4.91	4.50
	November	4.88	4.53
	December	4.75	4.55
	AVERAGE	**4.56**	**4.29**
1982	January	4.86	4.65
	February	4.87	4.69
	March	5.06	4.78
	April	5.18	4.86
	May	5.63	5.17
	June	5.62	5.20
	July	5.60	5.23
	August	5.56	5.23
	September	5.82	5.41
	October	6.11	5.66
	November	5.94	5.68
	December	6.06	5.74
	AVERAGE	**5.53**	**5.17**
1983	January	6.15	5.84
	February	6.15	5.85
	March	6.17	5.94
	April	6.37	6.04
	May	6.63	6.20
	June	6.63	6.18
	July	6.62	R6.19
	August	6.59	6.16
	September	6.66	R6.16
	October	6.57	R6.08
	November	6.40	R6.02
	December	6.42	6.03
	AVERAGE	**6.45**	**NA**

[1]Monthly data from BLS surveys of first "100 therm" block sales in major cities and regions throughout the Nation.
[2]Annual data from EIA, *Natural Gas Annual*, 1973 through 1982. Monthly data are EIA estimates based on the BLS CPI-U for natural gas and are adjusted to conform with final reported annual data.
R=Revised data.

International

Crude Oil Production

World crude oil production during November 1983 was 53.9 million barrels per day, down 0.2 million barrels per day (0.3 percent) from the October 1983 level.

Organization of Petroleum Exporting Countries (OPEC) output during November 1983 averaged 18.4 million barrels per day, down 0.3 million barrels per day from the level during the previous month. Average production by Arab members of OPEC was 11.3 million barrels per day, down 0.2 million barrels per day from the October 1983 level. Production levels remained the same as during the previous month in Algeria, Iraq, and Libya, while Qatar and the United Arab Emirates showed increases in production of 40 and 25 thousand barrels per day, respectively. Saudi Arabia and Kuwait experienced decreases of 190 and 90 thousand barrels per day, respectively, during the month. Among non-Arab OPEC countries, production in Venezuela increased by 30 thousand barrels per day, while production in Iran and Nigeria decreased by 100 and 45 thousand barrels per day, respectively. Production in Indonesia during November 1983 remained the same as during the previous month.

Of the non-OPEC nations, production in the United Kingdom, Mexico, and Canada increased by 135, 70, and 25 thousand barrels per day, respectively. The United States reported a 30-thousand-barrel-per-day decrease in production during the month.

Petroleum Consumption

Preliminary petroleum consumption data for November 1983 were available for France, Italy, and the United States. In comparison to November 1982, consumption levels in each country increased. During November 1983, consumption in the United States, Italy, and France increased by 524, 145, and 30 thousand barrels per day, respectively.

Petroleum Stocks

Preliminary data for November 1983 indicate that petroleum stock levels were down compared to November 1982 levels in every country reporting except the United States. Petroleum stocks in Canada, Italy, and Japan were down compared to the November 30, 1982, level by 23.9, 13.8, and 6.8 percent, respectively. The United Kingdom and West Germany each showed a decline of 4.6 percent. In contrast, the United States reported a 3.8-percent increase in stocks compared to the level at the end of November 1982.

Petroleum stocks for all Organization for Economic Cooperation and Development members stood at 3,286 million barrels on September 30, 1983 (latest data available), a decrease of 87 million barrels (2.6 percent) compared to stocks held on September 30, 1982.

Nuclear Electricity Production

In November 1983, the 19 non-Communist nations with significant nuclear power capacity generated 78.1 gross terawatt-hours (billion kilowatt-hours) of nuclear-based electricity. On a per-hour basis, this output was up 1.2 percent from October 1983 generation and up 19.8 percent compared to generation in November 1982.

On November 29, 1983, Chinon B-2, a 924-gross megawatt pressurized water reactor in France, operated by Electricite de France, generated its first electricity. With the addition of Chinon B-2, the number of operational power reactors in the non-Communist countries, as of November 30, 1983, totaled 248 with a collective generating capacity of 171.6 gross gigawatts (million kilowatts). The 81 U.S. units accounted for 68.6 gross gigawatts (40.0 percent) of this capacity.

International

Crude Oil Production for Major Petroleum Producing Countries

		Algeria	Iraq	Kuwait[1]	Libya	Qatar	Saudi Arabia[1]	United Arab Emirates	Arab Members of OPEC[2]	Indonesia	Iran
						Thousand barrels per day					
1973	**AVERAGE**	**1,097**	**2,018**	**3,020**	**2,175**	**570**	**7,596**	**1,533**	**18,009**	**1,339**	**5,861**
1974	**AVERAGE**	**1,009**	**1,971**	**2,546**	**1,521**	**518**	**8,480**	**1,679**	**17,724**	**1,375**	**6,022**
1975	**AVERAGE**	**983**	**2,262**	**2,084**	**1,480**	**438**	**7,075**	**1,664**	**15,986**	**1,307**	**5,350**
1976	**AVERAGE**	**1,075**	**2,415**	**2,145**	**1,933**	**497**	**8,577**	**1,936**	**18,578**	**1,504**	**5,883**
1977	**AVERAGE**	**1,152**	**2,348**	**1,969**	**2,063**	**445**	**9,245**	**1,999**	**19,221**	**1,686**	**5,663**
1978	**AVERAGE**	**1,161**	**2,563**	**2,131**	**1,983**	**487**	**8,301**	**1,831**	**18,457**	**1,635**	**5,242**
1979	**AVERAGE**	**1,154**	**3,477**	**2,500**	**2,092**	**508**	**9,532**	**1,831**	**21,094**	**1,591**	**3,168**
1980	**AVERAGE**	**1,012**	**2,514**	**1,656**	**1,787**	**472**	**9,900**	**1,709**	**19,050**	**1,577**	**1,662**
1981	January	950	600	1,765	1,600	505	10,265	1,620	17,305	1,630	1,600
	February	950	700	1,565	1,650	480	10,265	1,605	17,215	1,620	1,700
	March	950	1,000	1,560	1,600	505	10,110	1,610	17,335	1,635	1,700
	April	900	1,000	995	1,600	515	10,195	1,570	16,775	1,630	1,600
	May	900	1,000	990	1,400	435	10,140	1,550	16,415	1,600	1,500
	June	800	1,000	1,080	1,200	340	10,180	1,435	16,035	1,600	1,600
	July	725	1,100	1,200	750	380	10,170	1,415	15,740	1,600	1,400
	August	600	1,100	830	700	295	10,330	1,480	15,335	1,600	1,100
	September	550	1,100	855	700	365	9,155	1,465	14,190	1,600	1,100
	October	700	1,100	985	700	360	9,685	1,480	15,010	1,600	920
	November	750	1,100	890	900	340	8,640	1,365	13,985	1,600	930
	December	800	1,100	895	1,000	340	8,645	1,430	14,210	1,580	1,200
	AVERAGE	**805**	**1,000**	**1,125**	**1,140**	**405**	**9,815**	**1,474**	**15,764**	**1,605**	**1,380**
1982	January	800	1,500	805	1,000	405	8,655	1,450	14,615	1,490	1,100
	February	700	1,500	840	600	375	8,440	1,375	13,830	1,450	1,200
	March	600	1,500	745	600	300	7,145	1,365	12,255	1,400	1,800
	April	600	900	680	700	230	6,630	1,215	10,955	1,245	1,800
	May	620	750	720	800	320	5,870	1,125	10,205	1,240	2,500
	June	650	750	840	1,000	410	6,670	1,210	11,530	1,305	2,500
	July	650	800	870	1,300	275	6,170	1,160	11,225	1,305	2,500
	August	700	800	920	1,300	340	5,920	1,155	11,135	1,240	2,200
	September	800	800	885	1,400	285	5,685	1,155	11,010	1,300	2,700
	October	800	800	860	1,700	380	5,660	1,155	11,355	1,370	2,700
	November	800	800	915	1,700	310	5,615	1,155	11,295	1,400	2,700
	December	800	800	850	1,750	305	5,250	1,155	10,910	1,360	2,800
	AVERAGE	**710**	**972**	**827**	**1,158**	**329**	**6,470**	**1,214**	**11,680**	**1,339**	**2,214**
1983	January	700	800	780	1,100	255	4,750	1,030	9,415	1,155	2,500
	February	600	800	895	900	200	3,710	1,030	8,135	945	2,500
	March	600	800	960	900	170	3,610	1,010	8,050	1,100	2,500
	April	700	800	900	1,000	260	4,100	1,120	8,880	1,200	2,300
	May	600	900	1,030	1,100	275	4,530	1,150	9,585	1,300	2,400
	June	700	900	1,035	1,100	300	4,735	1,150	9,920	1,400	2,500
	July	700	1,000	1,085	1,100	300	5,535	1,150	10,870	1,300	2,800
	August	700	1,000	1,180	1,100	265	R5,930	1,160	R11,335	1,350	2,500
	September	700	950	1,375	1,150	310	R6,025	1,160	R11,670	1,400	2,700
	October	700	1,000	R1,305	1,150	R350	R5,905	1,140	R11,550	1,400	2,400
	November	700	1,000	1,215	1,150	390	5,715	1,165	11,335	1,400	2,300

[1]Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In November 1983, total production in this region amounted to approximately 432,000 barrels per day.
[2]Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.
[3]OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.
Footnotes continued on following page.

International

Crude Oil Production for Major Petroleum Producing Countries (continued)

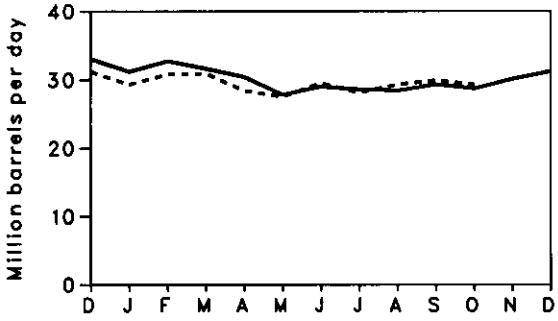
		Nigeria	Vene-zuela	Total OPEC[3]	Canada	Mexico	United Kingdom	United States	China	USSR	Other[4]	World
						Thousand barrels per day						
1973	**AVERAGE**	**2,054**	**3,366**	**30,989**	**1,800**	**465**	**2**	**9,208**	**1,090**	**8,465**	**3,655**	**55,674**
1974	**AVERAGE**	**2,255**	**2,976**	**30,729**	**1,684**	**571**	**2**	**8,774**	**1,315**	**9,000**	**3,777**	**55,852**
1975	**AVERAGE**	**1,783**	**2,346**	**27,155**	**1,439**	**705**	**12**	**8,375**	**1,490**	**9,625**	**4,079**	**52,880**
1976	**AVERAGE**	**2,067**	**2,294**	**30,738**	**1,295**	**831**	**245**	**8,132**	**1,670**	**10,143**	**4,258**	**57,312**
1977	**AVERAGE**	**2,085**	**2,238**	**31,298**	**1,320**	**981**	**768**	**8,245**	**1,874**	**10,682**	**4,517**	**59,685**
1978	**AVERAGE**	**1,897**	**2,166**	**29,805**	**1,313**	**1,209**	**1,082**	**8,707**	**2,082**	**11,185**	**4,674**	**60,057**
1979	**AVERAGE**	**2,302**	**2,356**	**30,928**	**1,496**	**1,461**	**1,568**	**8,552**	**2,122**	**11,460**	**4,948**	**62,535**
1980	**AVERAGE**	**2,055**	**2,168**	**26,891**	**1,435**	**1,936**	**1,622**	**8,597**	**2,114**	**11,773**	**5,170**	**59,538**
1981	January	1,900	2,220	25,025	1,390	2,220	1,765	8,540	2,024	11,900	5,111	57,975
	February	1,960	2,195	25,075	1,390	2,120	1,820	8,604	2,025	11,900	5,161	58,095
	March	1,875	2,240	25,190	1,280	2,365	1,885	8,613	2,025	11,900	5,152	58,410
	April	1,625	2,200	24,215	1,330	2,540	1,750	8,557	2,011	11,900	5,122	57,425
	May	1,295	2,200	23,380	1,250	2,545	1,770	8,501	2,025	11,900	5,264	56,635
	June	1,350	1,990	22,945	1,235	2,300	1,765	8,629	2,025	11,900	5,066	55,865
	July	770	1,760	21,620	1,270	2,095	1,750	8,500	2,010	11,900	5,215	54,360
	August	710	1,960	21,050	1,235	2,260	1,760	8,583	2,020	11,900	4,962	53,770
	September	1,065	2,080	20,385	1,265	2,480	1,830	8,604	1,990	11,900	5,166	53,620
	October	1,250	1,970	21,200	1,120	2,490	1,845	8,563	2,020	11,900	5,247	54,385
	November	1,590	2,230	20,575	1,280	2,090	1,840	8,586	2,020	11,900	5,109	53,400
	December	1,820	2,260	21,230	1,380	1,980	1,870	8,585	2,020	11,900	5,135	54,100
	AVERAGE	**1,433**	**2,102**	**22,646**	**1,285**	**2,313**	**1,811**	**8,572**	**2,012**	**11,909**	**5,352**	**55,900**
1982	January	1,765	1,985	21,285	1,218	2,315	1,905	8,509	2,020	11,900	5,488	54,640
	February	1,395	1,730	19,950	1,275	2,550	1,955	8,702	2,020	11,900	5,558	53,910
	March	945	1,870	18,615	1,182	2,545	2,000	8,667	2,020	11,900	5,341	52,270
	April	890	1,490	16,725	928	2,780	2,110	8,591	2,025	11,900	5,481	50,540
	May	1,310	1,480	17,075	1,114	2,715	2,085	8,683	2,025	11,900	5,528	51,125
	June	1,645	1,500	18,845	1,330	2,790	2,140	8,646	2,025	11,900	5,489	53,165
	July	1,280	1,800	18,450	1,235	2,790	2,120	8,658	2,025	12,000	5,507	52,785
	August	1,105	2,000	18,045	1,300	2,795	2,125	8,634	2,025	12,000	5,551	52,475
	September	1,170	1,990	18,515	1,300	2,830	2,175	8,701	2,025	12,000	5,499	53,045
	October	1,480	2,160	19,430	1,310	2,900	2,165	8,701	2,040	12,410	5,489	54,445
	November	1,355	2,300	19,415	1,420	2,940	2,220	8,697	2,040	12,410	5,683	54,825
	December	1,215	2,325	18,985	1,300	3,025	2,315	8,598	2,040	12,410	5,732	54,405
	AVERAGE	**1,295**	**1,891**	**18,784**	**1,241**	**2,749**	**2,117**	**8,649**	**2,029**	**12,000**	**5,593**	**53,162**
1983	January	880	2,085	16,415	1,230	2,980	2,135	8,634	2,085	12,410	5,853	51,742
	February	675	1,780	14,370	1,360	2,295	2,315	8,660	2,085	12,410	5,958	49,453
	March	905	2,080	15,000	1,395	2,415	2,265	8,677	2,085	12,410	5,916	50,163
	April	1,150	1,715	15,620	1,260	2,670	2,170	8,686	2,085	12,410	5,994	50,895
	May	1,625	1,685	16,945	R1,320	2,795	2,235	8,682	2,085	11,900	R6,028	R51,990
	June	1,535	1,690	17,435	R1,505	2,775	2,045	8,676	2,085	11,900	R6,127	R52,550
	July	1,710	1,695	18,770	1,480	2,685	2,280	8,647	2,105	12,365	R6,118	R54,450
	August	1,300	1,730	R18,630	1,420	2,775	2,290	8,653	2,105	12,385	R6,007	R54,265
	September	1,220	1,725	R19,100	1,435	2,735	2,385	8,666	2,105	11,900	R6,074	R54,400
	October	1,290	1,740	R18,780	1,390	2,660	2,355	8,654	2,105	11,900	R6,231	R54,075
	November	1,245	1,770	18,435	1,415	2,730	2,490	8,624	2,085	11,900	6,241	53,920

Footnotes continued.
[4]Other is a calculated total derived from the difference between world production and the nations represented above.
R=Revised data.
Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.
• Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.
Sources: • See the last page of this section.

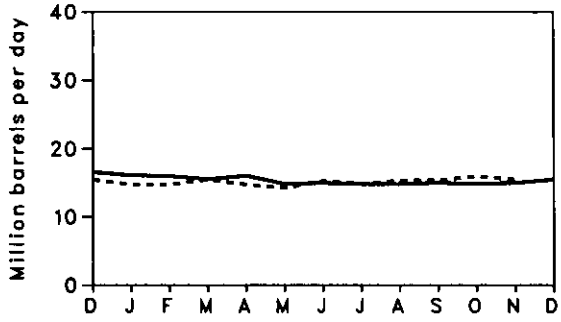
International

Petroleum Consumption

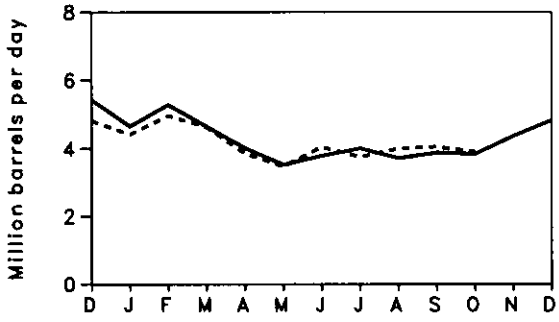
Total IEA



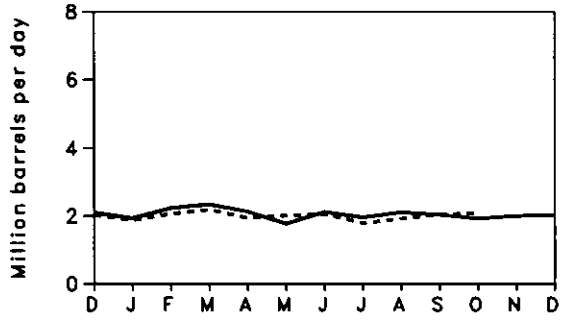
United States



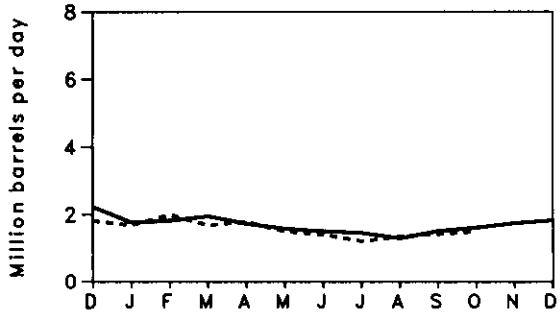
Japan*



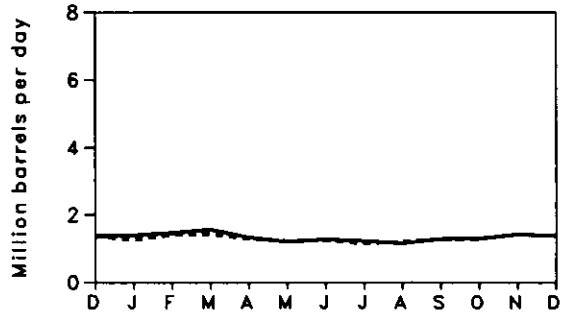
West Germany



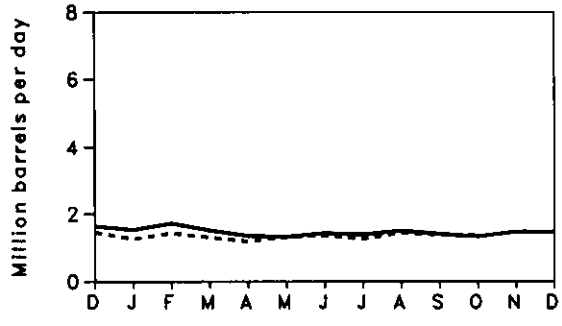
France**



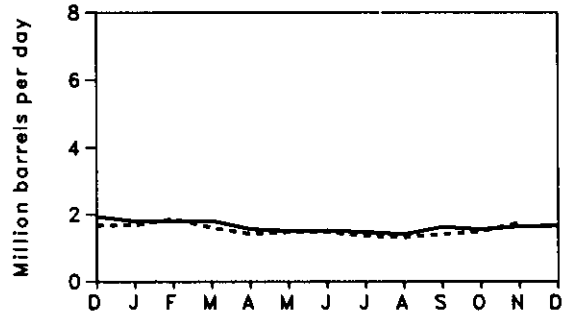
United Kingdom



Canada



Italy***



*Excludes liquefied petroleum gases and condensates.
**Not a member of IEA.
***Principal products only.
—— 1982 ----- 1983

International

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

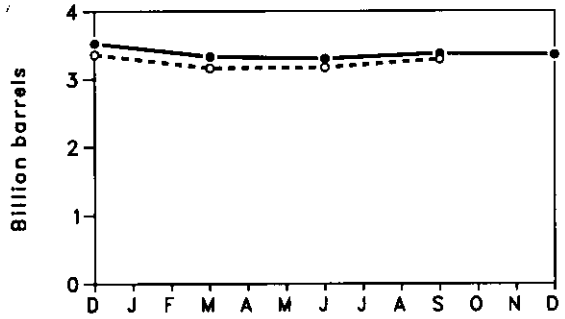
		Canada	France[2]	Italy	Japan	United Kingdom	United States	West Germany	Other IEA[3]	Total IEA[4]
						Thousand barrels per day				
1973	**AVERAGE**	**1,597**	**2,219**	**1,525**	**5,000**	**1,958**	**17,308**	**2,693**	**4,069**	**34,150**
1974	**AVERAGE**	**1,630**	**2,094**	**1,521**	**4,872**	**1,829**	**16,653**	**2,408**	**4,047**	**32,960**
1975	**AVERAGE**	**1,595**	**1,925**	**1,468**	**4,568**	**1,633**	**16,322**	**2,319**	**3,905**	**31,810**
1976	**AVERAGE**	**1,647**	**2,075**	**1,503**	**4,786**	**1,601**	**17,461**	**2,507**	**4,265**	**33,770**
1977	**AVERAGE**	**1,661**	**1,973**	**1,476**	**5,015**	**1,655**	**18,431**	**2,478**	**4,214**	**34,930**
1978	**AVERAGE**	**1,701**	**2,077**	**1,551**	**5,115**	**1,683**	**18,847**	**2,596**	**4,387**	**35,880**
1979	**AVERAGE**	**1,766**	**2,107**	**1,607**	**5,173**	**1,690**	**18,513**	**2,664**	**4,487**	**35,900**
1980	**AVERAGE**	**1,730**	**1,965**	**1,602**	**4,680**	**1,420**	**17,056**	**2,360**	**4,152**	**33,000**
1981	January	1,760	2,310	1,880	4,980	1,400	18,430	2,230	4,420	35,100
	February	1,770	2,170	2,195	5,350	1,460	16,989	2,510	4,126	34,400
	March	1,550	1,790	1,895	5,020	1,430	15,907	2,100	3,598	31,500
	April	1,600	1,500	1,785	4,140	1,290	15,350	1,810	3,925	29,900
	May	1,490	1,670	1,410	3,600	1,190	15,353	1,880	3,977	28,900
	June	1,635	1,600	1,510	3,915	1,210	16,095	2,155	3,880	30,400
	July	1,620	1,450	1,580	4,160	1,170	15,682	2,150	4,138	30,500
	August	1,630	1,160	1,360	4,100	1,125	15,263	2,111	3,711	29,300
	September	1,595	1,425	1,715	4,060	1,285	15,655	2,085	3,905	30,300
	October	1,585	1,655	1,600	4,085	1,390	15,822	2,305	4,013	30,800
	November	1,595	2,010	1,650	4,610	1,470	15,593	2,030	4,052	31,000
	December	1,635	2,215	1,930	5,425	1,380	16,596	2,100	3,934	33,000
	AVERAGE	**1,615**	**1,745**	**1,705**	**4,445**	**1,325**	**16,058**	**2,120**	**4,032**	**31,300**
1982	January	1,530	1,770	1,800	4,645	1,400	16,124	1,935	3,766	31,200
	February	1,715	1,815	1,795	5,275	1,465	16,001	2,230	4,219	32,700
	March	1,510	1,940	1,805	4,640	1,560	15,560	2,340	4,185	31,600
	April	1,350	1,730	1,560	4,015	1,340	16,046	2,125	3,964	30,400
	May	1,325	1,580	1,510	3,515	1,210	14,847	1,770	3,623	27,800
	June	1,430	1,505	1,520	3,780	1,280	14,998	2,115	3,877	29,000
	July	1,390	1,455	1,475	3,995	1,235	14,821	1,955	3,729	28,600
	August	1,500	1,295	1,410	3,705	1,170	14,839	2,105	3,671	28,400
	September	1,410	1,510	1,630	3,865	1,295	15,022	2,035	4,043	29,300
	October	1,335	1,605	1,555	3,830	1,305	14,859	1,922	3,894	28,700
	November	1,470	1,735	1,650	4,355	1,415	15,009	2,005	4,196	30,100
	December	1,460	1,815	1,670	4,810	1,380	15,487	2,025	4,368	31,200
	AVERAGE	**1,450**	**1,645**	**1,614**	**4,196**	**1,337**	**15,296**	**2,045**	**3,962**	**29,900**
1983	January	1,260	1,685	1,675	4,410	1,260	14,765	1,875	4,055	29,300
	February	1,430	1,985	1,865	4,950	1,415	14,772	2,060	4,308	30,800
	March	1,305	1,685	1,605	4,625	1,430	15,484	2,180	4,271	30,900
	April	1,190	1,785	1,415	3,850	1,300	14,779	1,940	3,926	28,400
	May	1,320	1,500	1,470	3,460	1,230	14,250	2,010	3,760	27,500
	June	1,360	1,405	1,475	4,040	1,255	15,281	2,060	4,029	29,500
	July	1,265	1,210	1,365	3,745	1,160	14,913	1,785	3,867	28,100
	August	1,440	1,350	1,315	3,990	1,220	15,366	1,920	4,049	29,300
	September	1,380	1,415	1,590	R4,040	1,300	15,396	2,040	R4,154	R29,900
	October	1,360	1,495	1,625	3,900	1,280	14,947	2,090	4,098	29,300
	November	NA	1,765	1,795	NA	NA	15,533	NA	NA	NA

[1]These data represent inland consumption, i.e., sales of petroleum products excluding refinery fuel, refinery losses, and ocean bunkers except for the United States, where it represents domestic products supplied.
[2]Not a member of the International Energy Agency (IEA).
[3]Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above.
[4]The 21 signatory nations of the IEA are listed in Note 1 on the last page of this section.
R=Revised data. NA=Not available.
Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.
• Data for 1981 through 1983 are preliminary.
Sources: • See the last page of this section.

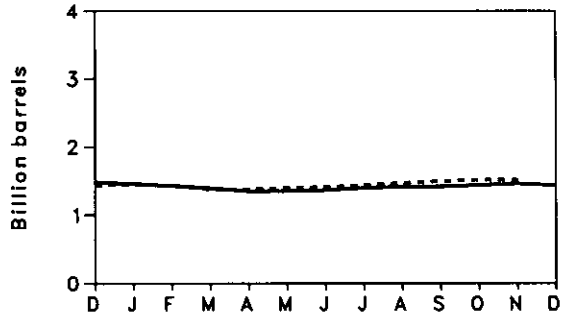
International

Petroleum Stocks

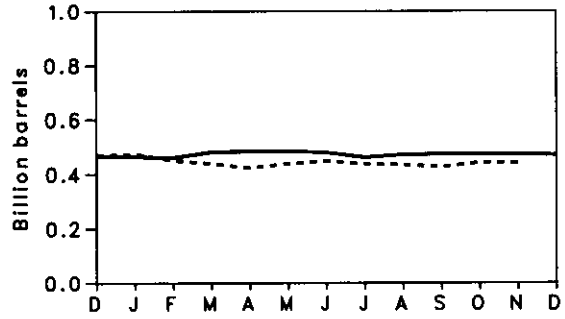
Total OECD



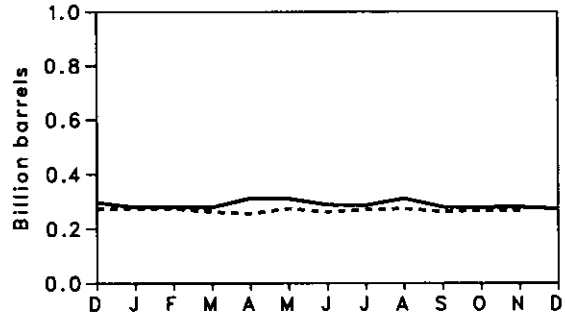
United States



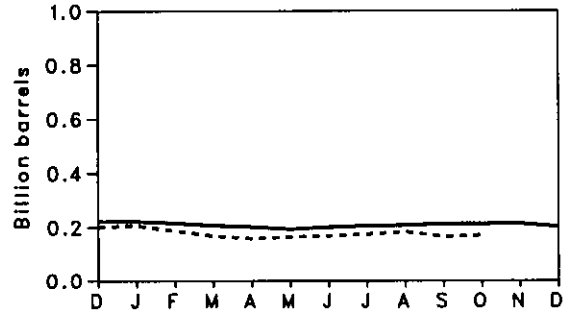
Japan



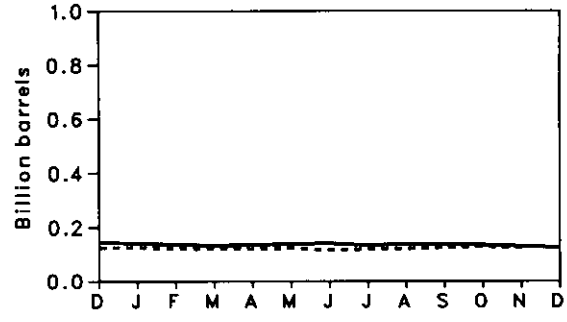
West Germany



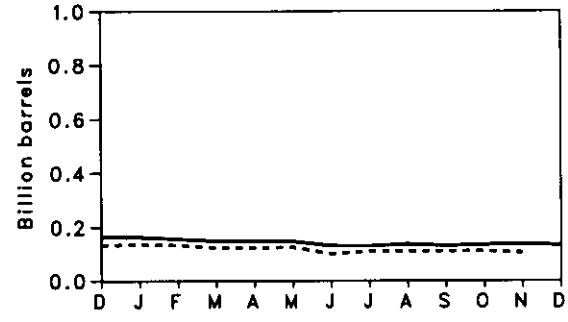
France



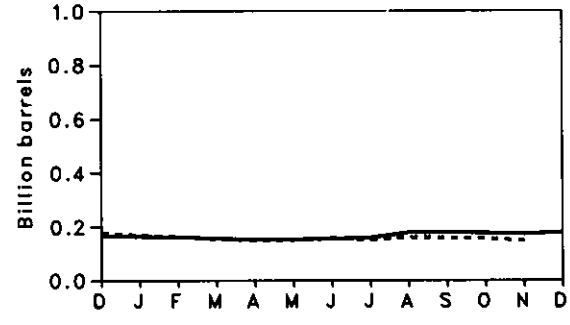
United Kingdom



Canada



Italy



●——● 1982 ○- - -○ 1983

International

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

		Canada	France	Italy	Japan	United Kingdom	United States	West Germany	Other OECD[2]	Total OECD[3]
						Million barrels				
1973		**149**	**203**	**NA**	**303**	**156**	**1,008**	**NA**	**NA**	**NA**
1974		**164**	**240**	**169**	**370**	**191**	**1,074**	**215**	**NA**	**NA**
1975		**167**	**239**	**143**	**375**	**164**	**1,133**	**190**	**NA**	**NA**
1976		**156**	**231**	**142**	**394**	**165**	**1,112**	**214**	**NA**	**NA**
1977		**170**	**241**	**162**	**399**	**147**	**1,312**	**236**	**485**	**3,152**
1978		**148**	**214**	**153**	**422**	**147**	**1,278**	**239**	**487**	**3,089**
1979		**156**	**231**	**163**	**457**	**163**	**1,341**	**273**	**574**	**3,358**
1980		**171**	**254**	**173**	**481**	**169**	**1,392**	**323**	**610**	**3,573**
1981	January	169	234	155	479	168	1,388	319	NA	NA
	February	162	235	184	457	170	1,389	312	NA	NA
	March	165	227	158	452	164	1,401	317	581	3,465
	April	174	235	169	484	165	1,415	322	NA	NA
	May	176	229	173	496	162	1,438	321	NA	NA
	June	179	225	171	484	158	1,430	312	598	3,557
	July	179	228	177	476	153	1,439	305	NA	NA
	August	184	233	189	483	151	1,457	308	NA	NA
	September	181	241	187	493	151	1,476	307	591	3,627
	October	172	238	188	500	149	1,485	303	NA	NA
	November	163	230	178	483	147	1,501	300	NA	NA
	December	164	222	167	466	145	1,484	297	575	3,520
1982	January	163	222	165	464	NA	1,456	280	NA	NA
	February	156	215	162	460	NA	1,428	280	NA	NA
	March	149	207	158	480	133	1,392	279	524	3,322
	April	148	201	154	483	NA	1,346	312	NA	NA
	May	147	193	154	484	NA	1,347	310	NA	NA
	June	131	200	156	478	141	1,360	288	541	3,295
	July	130	205	160	460	134	1,393	286	NA	NA
	August	137	207	179	470	139	1,408	311	NA	NA
	September	131	212	179	472	137	1,414	280	548	3,373
	October	135	212	177	471	135	1,432	279	NA	NA
	November	138	213	174	472	130	1,455	280	NA	NA
	December	133	201	179	469	125	1,430	273	542	3,352
1983	January	136	206	170	473	125	1,453	274	NA	NA
	February	133	187	163	450	121	1,432	274	NA	NA
	March	123	168	155	438	120	1,375	262	520	3,161
	April	123	158	151	422	120	1,376	255	NA	NA
	May	125	164	152	437	123	1,397	274	NA	NA
	June	100	168	159	447	116	1,409	262	508	3,169
	July	110	174	151	436	119	1,434	270	NA	NA
	August	110	R183	161	433	121	1,467	274	NA	NA
	September	110	165	160	R425	R125	1,492	R263	546	R3,286
	October	111	170	157	441	129	1,512	267	NA	NA
	November	105	NA	150	440	124	1,510	267	NA	NA

[1]Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all nonmilitary petroleum held for storage, regardless of ownership, within each country in bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. Data exclude oil held in pipelines (except for the United States), rail and truck cars, sea-going ships' bunkers, service stations, retail stores, and tankers at sea.
[2]"Other OECD" includes Organization for Economic Cooperation and Development (OECD) members not shown.
[3]The members of OECD are listed in Note 2 on the last page of this section.
R=Revised data. NA=Not available.
Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

International

Nuclear Electricity Generation by Non-Communist Countries[1]

		Argentina	Belgium	Brazil	Canada	Finland	France	India	Italy	Japan	Netherlands	Pakistan
						Billion gross kilowatt-hours						
1973	**TOTAL**	**0**	**0**	**0**	**18.3**	**0**	**11.6**	**1.9**	**3.1**	**9.4**	**1.1**	**0.5**
1974	**TOTAL**	**1.0**	**0.1**	**0**	**15.4**	**0**	**14.7**	**2.5**	**3.4**	**18.1**	**3.3**	**0.6**
1975	**TOTAL**	**2.5**	**6.8**	**0**	**13.2**	**0**	**18.3**	**2.5**	**3.8**	**22.2**	**3.3**	**0.5**
1976	**TOTAL**	**2.6**	**10.0**	**0**	**18.0**	**0**	**15.8**	**3.2**	**3.8**	**36.7**	**3.9**	**0.5**
1977	**TOTAL**	**1.6**	**11.9**	**0**	**26.8**	**2.7**	**17.9**	**2.8**	**3.4**	**28.1**	**3.7**	**0.3**
1978	**TOTAL**	**2.9**	**12.5**	**0**	**32.9**	**3.3**	**30.5**	**2.3**	**4.4**	**53.2**	**4.1**	**0.2**
1979	**TOTAL**	**2.7**	**11.4**	**0**	**38.4**	**6.7**	**39.9**	**3.2**	**2.6**	**62.0**	**3.5**	**(s)**
1980	**TOTAL**	**2.3**	**12.5**	**0**	**40.4**	**7.0**	**61.2**	**2.9**	**2.2**	**82.8**	**4.2**	**0.1**
1981	January	0.3	1.2	0	3.2	1.3	9.3	0.2	0.2	8.2	0.1	(s)
	February	0.2	1.0	0	3.5	0.9	8.6	0.2	0.3	7.1	(s)	(s)
	March	0.3	0.6	0	3.9	1.4	8.8	0.3	0.1	7.8	0.3	0
	April	0.2	0.7	0	3.3	1.5	8.3	0.3	0.6	7.9	0.4	0
	May	0.2	1.2	0	3.4	1.0	8.9	0.4	0.3	8.0	0.4	(s)
	June	0.2	1.2	0	3.6	0.7	8.3	0.3	0.1	6.7	0.4	(s)
	July	0.3	1.3	0	4.0	0.8	8.4	0.3	0.3	8.3	0.4	(s)
	August	0.2	1.2	0	4.0	1.4	7.7	0.2	0.1	8.5	0.4	(s)
	September	0.3	0.9	0	3.3	1.5	8.5	0.2	0.1	6.4	0.4	(s)
	October	0.2	1.0	0	3.4	1.4	8.1	0.2	0.1	5.6	0.4	(s)
	November	0.2	1.3	0	3.5	1.3	9.3	0.2	0.1	5.3	0.4	(s)
	December	0.2	1.3	0	4.1	1.2	11.0	0.3	0.4	6.1	0.3	(s)
	TOTAL	**2.8**	**12.8**	**0**	**43.3**	**14.5**	**105.2**	**3.1**	**2.7**	**86.0**	**3.7**	**0.2**
1982	January	0.3	1.3	0	4.1	1.5	11.0	0.2	0.6	8.1	0.4	(s)
	February	0.2	0.8	0	3.2	1.5	10.0	0.2	0.7	7.7	0.1	(s)
	March	0.3	0.5	0	3.5	1.7	10.6	0.2	0.7	9.2	(s)	0
	April	0.3	1.0	(s)	3.7	1.6	10.1	0.2	0.5	9.7	0.3	0
	May	0.3	1.3	(s)	3.1	1.3	9.0	0.2	0.7	9.5	0.4	0
	June	0.3	1.2	(s)	3.3	0.9	7.8	0.1	0.6	9.5	0.4	0
	July	0.2	1.3	0	3.6	1.2	8.3	0.1	0.6	9.8	0.4	0
	August	0	1.2	0	3.9	1.5	7.0	0.2	0.4	9.7	0.4	(s)
	September	(s)	0.7	0	3.2	1.5	7.2	0.1	0.6	8.0	0.4	(s)
	October	0	1.7	0	4.0	1.4	6.6	0.2	0.6	7.5	0.4	(s)
	November	(s)	1.8	0	3.3	1.3	8.3	0.3	0.3	7.8	0.4	0
	December	0.2	1.8	0	3.8	1.3	13.0	0.2	0.5	8.1	0.4	(s)
	TOTAL	**1.9**	**15.6**	**0.1**	**42.6**	**16.5**	**108.9**	**2.2**	**6.8**	**104.5**	**3.9**	**0.1**
1983	January	0.2	1.9	0	4.3	1.7	13.8	0.2	0.2	8.0	0.4	(s)
	February	0.2	1.4	0	4.5	1.5	10.9	0.1	0.1	6.8	(s)	(s)
	March	0.2	0.7	(s)	4.6	1.6	11.3	0.2	0.1	7.9	(s)	(s)
	April	0.2	1.6	(s)	4.3	1.5	10.5	0.2	0.1	8.4	0.2	(s)
	May	0.2	2.5	0	3.9	1.2	9.6	0.3	0.7	9.2	0.3	(s)
	June	0.2	2.5	0	4.4	1.0	9.3	0.3	0.7	9.1	0.4	(s)
	July	0.3	2.5	0	4.8	1.3	11.0	0.2	0.7	9.5	0.4	0
	August	0.1	2.4	0	3.8	1.6	12.1	0.3	0.5	10.4	0.4	(s)
	September	0.2	2.1	0	4.4	1.5	12.4	0.3	0.6	9.8	0.4	(s)
	October	0.2	2.2	0	4.7	1.4	13.0	0.3	0.6	9.8	0.4	(s)
	November	0.2	2.0	(s)	4.2	1.5	13.4	0.2	0.7	8.5	0.4	(s)

[1]Figures are for gross electricity generation, as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, which represents the energy consumed by the generating plants themselves.
[2]The United Kingdom assesses generation at 4-, 5- or 6-week intervals, rather than by calendar month.
(s)=Less than 0.05 billion gross kilowatt-hours.
Footnotes continued on the following page.

International

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

		South Korea	Spain	Sweden	Switzer-land	Taiwan	United Kingdom[2]	West Germany	Non-Communist World Excluding U.S.	United States	Total Non-Communist World
						Billion gross kilowatt-hours					
1973	**TOTAL**	**0**	**6.5**	**2.1**	**6.2**	**0**	**28.0**	**11.9**	**100.7**	**88.0**	**188.7**
1974	**TOTAL**	**0**	**7.2**	**1.6**	**7.0**	**0**	**34.0**	**12.0**	**121.1**	**104.5**	**225.6**
1975	**TOTAL**	**0**	**7.5**	**12.0**	**7.7**	**0**	**30.5**	**21.7**	**152.7**	**181.7**	**334.4**
1976	**TOTAL**	**0**	**7.6**	**16.0**	**7.9**	**0**	**36.8**	**24.5**	**187.3**	**201.8**	**389.1**
1977	**TOTAL**	**0.1**	**6.5**	**19.9**	**8.1**	**0.1**	**38.1**	**35.8**	**207.8**	**263.3**	**471.0**
1978	**TOTAL**	**2.3**	**7.6**	**23.8**	**8.3**	**2.7**	**36.7**	**35.9**	**263.6**	**292.7**	**556.3**
1979	**TOTAL**	**3.2**	**6.7**	**21.0**	**11.8**	**6.3**	**38.5**	**42.2**	**300.1**	**270.6**	**570.7**
1980	**TOTAL**	**3.5**	**5.2**	**26.7**	**14.3**	**8.2**	**37.2**	**43.7**	**354.4**	**265.4**	**619.8**
1981	January	0.3	0.8	3.5	1.5	0.8	3.8	5.0	39.7	25.7	65.4
	February	0	0.6	3.6	1.4	0.7	3.4	4.6	36.2	22.6	58.8
	March	0	0.7	3.7	1.5	0.8	4.2	4.9	39.1	23.1	62.2
	April	0	0.6	3.3	1.4	0.8	2.8	4.4	36.5	21.7	58.2
	May	0.2	0.8	2.8	1.4	0.8	2.5	4.3	36.6	20.9	57.4
	June	0.4	0.8	2.8	0.7	0.8	3.3	4.1	34.5	22.6	57.1
	July	0.4	1.1	1.4	0.6	0.8	2.5	5.2	36.1	24.8	61.0
	August	0.4	1.0	2.6	1.0	0.8	2.5	3.9	36.0	28.3	64.2
	September	0.3	0.6	3.0	1.3	0.8	3.1	3.3	33.9	25.7	59.6
	October	0.3	1.2	3.3	1.5	1.2	2.7	4.0	34.7	21.6	56.3
	November	0.3	0.6	3.6	1.4	1.0	3.1	4.3	36.0	24.0	60.1
	December	0.4	0.7	4.1	1.5	1.1	4.9	5.4	43.1	27.5	70.6
	TOTAL	**2.9**	**9.4**	**37.7**	**15.2**	**10.7**	**38.9**	**53.4**	**442.4**	**288.5**	**730.9**
1982	January	0.4	1.0	4.0	1.5	0.8	3.4	5.9	44.5	27.1	71.6
	February	0.4	0.9	3.3	1.3	1.0	3.5	5.4	40.0	21.3	61.3
	March	0.4	0.5	3.8	1.5	1.0	4.1	5.3	43.2	24.0	67.1
	April	0.2	0.4	3.8	1.4	0.8	3.3	5.3	42.5	22.8	65.3
	May	0	0.5	2.5	1.2	0.8	2.6	5.6	39.0	22.8	61.8
	June	(s)	0.7	1.9	0.6	1.0	3.3	4.2	35.6	25.3	60.9
	July	0.3	0.6	1.2	0.9	1.2	3.3	4.5	37.6	26.8	64.4
	August	0.4	0.7	2.0	1.0	1.2	3.7	4.5	37.7	26.4	64.1
	September	0.4	0.7	3.7	1.2	1.3	4.2	5.4	38.6	26.7	65.3
	October	0.4	1.0	4.2	1.5	1.4	3.7	5.2	39.8	25.4	65.3
	November	0.4	0.9	4.0	1.4	1.1	3.8	5.8	41.0	24.2	65.3
	December	0.4	0.9	4.2	1.5	1.4	5.1	6.5	49.2	25.8	75.0
	TOTAL	**3.8**	**8.8**	**38.8**	**15.0**	**13.1**	**44.1**	**63.4**	**489.9**	**298.6**	**788.5**
1983	January	0.5	1.0	4.2	1.5	1.5	4.8	6.5	49.9	27.4	77.3
	February	0.4	0.9	3.7	1.4	0.8	4.3	5.6	42.5	23.8	66.5
	March	0.6	0.9	4.1	1.5	1.8	4.9	6.0	46.7	25.0	71.7
	April	0.4	0.8	3.3	1.5	1.7	4.3	4.0	43.0	23.4	66.4
	May	0.2	0.4	2.4	1.2	2.0	3.4	2.9	40.5	23.9	64.4
	June	0.7	0.6	2.4	0.5	2.0	3.9	4.2	42.0	25.7	67.8
	July	0.7	0.6	1.6	1.2	1.6	3.3	5.1	44.8	27.3	72.1
	August	0.9	1.0	2.7	1.0	1.4	3.7	4.6	46.9	27.9	74.8
	September	1.1	1.0	3.0	1.4	1.2	4.4	6.0	49.8	26.2	76.0
	October	0.8	1.1	3.6	1.5	1.6	3.7	7.4	52.4	27.6	79.9
	November	1.2	1.1	4.4	1.4	1.6	3.9	6.7	51.6	26.6	78.1

Footnotes continued.
Notes: • U.S. geographic coverage is the 50 States and the District of Columbia.
• Totals may not equal sum of components due to independent rounding.
Sources: • See the last page of this section.

Notes and Sources for the International Section

Notes

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

Sources

Crude Oil Production: • 1973-1982 annual data: Energy Information Administration, *1982 International Energy Annual.*
• U.S. annual and monthly data: Energy Information Administration, *Petroleum Supply Monthly.*
• 1981-1983 monthly data (except U.S. and World): Central Intelligence Agency, "International Energy Statistical Review," and other industry sources.
• 1981-1983 monthly data for World: Sum of data for all countries using above sources.
Petroleum Consumption: • Central Intelligence Agency, "International Energy Statistical Review" (except the United States).
• United States data: Energy Information Administration, *Petroleum Supply Monthly.*
• IEA totals for latest months are Energy Information Administration estimates.
Petroleum Stocks: • United States data: Energy Information Administration, *Petroleum Supply Monthly.* • Other OECD data: OECD, *Quarterly Oil Statistics;* Comite Professionnel du Petrole, *Bulletin Mensuel;* International Energy Agency, Questionnaire C. • Total OECD: Sum of data for all OECD member countries using above sources.
Nuclear Electricity Generation: • *Nucleonics Week.*

Definitions

Anthracite

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

Bituminous Coal

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

British Thermal Unit (Btu)

The amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit at or near 39.2 degrees Fahrenheit. One Btu is equivalent to about 252 calories. An average Btu content of fuel is a heat value per unit quantity of fuel as determined from tests of fuel samples.

Coke (Coal)

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

Crude Oil

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

Crude Oil Refinery Input

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

Crude Oil Stocks

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

Distillate Fuel Oil

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

Electricity Production

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

Ethane

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

Exports

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

Full-Serve Station

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

Imports

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

Landed Cost of Imported Crude Oil

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

imports. Coverage includes the United States and its territories.

Lease Condensate

A natural gas liquid recovered from gas-well gas in lease separators and field facilities. It consists primarily of pentanes and heavier hydrocarbons. Generally, it is blended with crude oil for refining.

Lignite

A brownish-black coal of low rank with high inherent moisture and volatile matter. It is also referred to as brown coal. It conforms to ASTM Specification D388 for lignite and is used almost exclusively for electric power generation.

Liquefied Petroleum Gases

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

Line Miles of Seismic Exploration

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

Maximum Dependable Capacity, Net

Represents the dependable main-unit net capacity of domestic nuclear powerplant reactors and generally varies throughout the year because the unit efficiency varies with seasonal cooling water temperature variations. Usually maximum dependable capacity is the highest net dependable output of the turbine generator during the most restrictive seasonal conditions (usually summer).

Motor Gasoline

See Motor Gasoline, Finished, and Motor Gasoline, Total.

Motor Gasoline, Average Retail Selling Price

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

Motor Gasoline, Finished

Beginning in January 1981, "Motor Gasoline" was redefined as "Finished Motor Gasoline," which is a complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives that have been blended to form a fuel suitable for use in spark ignition engines. Included are premium and regular grade, both leaded and unleaded, gasohol, and all other refinery products listed in ASTM Specification D439. Excludes any blendstock until blending has been completed and the blendstock is incorporated in the finished gasoline and no longer separately identified. Also excludes any alcohol to be used in the blending of gasohol.

Motor Gasoline, Premium Grade

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

Motor Gasoline, Regular Grade

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

Motor Gasoline, Total

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

Natural Gas

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

Natural Gas Plant Liquids

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

Petroleum

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

Petroleum Coke

A solid residue; the final product of the condensation process in cracking. It consists of aromatic hydrocarbons very poor in hydrogen. Calcination of petroleum coke can yield almost pure carbon or artificial graphite suitable for production of carbon or graphite electrodes, structural graphite, motor brushes, dry cells, and similar products. This product is reported as marketable or catalyst coke.

Petroleum Products

Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, ethane, liquefied petroleum gases, aviation gasoline, motor gasoline,

naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400°F end-point, other oils over 400°F end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Propane

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

Refined Petroleum Product Supplied

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

Refiner Acquisition Cost

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

Residual Fuel Oil

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

Rotary Rig

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

Self-Serve Station

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

Startup Test Phase of Nuclear Powerplant

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

Stocks (Refined Petroleum Product)

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

Strategic Petroleum Reserve

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

Synthetic Natural Gas (SNG)

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

Unaccounted for Crude Oil

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

Wells, Exploratory and Development

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

DOE F 1340.1
(2-80)

Energy Information Administration

GPO SUBSCRIPTION ORDER FORM

A

(For use in ordering EIA Publications only – Read Ordering Information Section before completing form.)

SEND ORDER FORM TO: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402

Enclosed is $ _____ ☐ Check

☐ Money order, or charge to my Deposit Account No.

☐☐☐☐☐☐☐ – ☐

Order No. _____

VISA

MasterCard

Credit Card Orders Only

Total charges $ _____ Fill in the boxes below

Credit Card No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Expiration Date Month/Year ☐☐☐☐ ☐ VISA ☐ Master Card

PLEASE PRINT OR TYPE

NAME AND ADDRESS

NAME – FIRST, LAST

COMPANY NAME OR ADDITIONAL ADDRESS LINE

STREET ADDRESS

CITY STATE ZIP CODE

(OR COUNTRY)

PRINT OR TYPE TITLES OF ITEMS YOU WISH TO RECEIVE ON A SUBSCRIPTION BASIS:

FOR OFFICE USE ONLY		
	QUANTITY	CHARGES
ENCLOSED		
TO BE MAILED		
SUBSCRIPTIONS		
POSTAGE		
FOREIGN HANDLING		
MMOB		
OPNR		
UPNS		
DISCOUNT		
REFUND		

Conversion Factors

Approximate Heat Content of Various Fuels	Units	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982-83‡
Anthracite											
Production	Million Btu/short ton	23.17	22.56	23.39	22.77	23.18	23.52	23.59	23.35	23.69	23.69
Imports and exports	Million Btu/short ton	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40	25.40
Consumption, average	Million Btu/short ton	22.71	21.95	21.74	22.15	22.69	22.97	22.70	22.16	22.10	22.10
Electric utility consumption*	Million Btu/short ton	17.92	17.20	17.06	17.53	17.24	17.10	17.45	17.65	18.17	18.17
Non-utility consumption	Million Btu/short ton	24.34	23.75	23.65	23.84	24.99	25.17	25.20	23.74	25.12	25.12
Bituminous coal and lignite											
Production	Million Btu/short ton	24.01	23.73	23.20	23.15	22.70	22.43	22.59	22.46	22.38	22.38
Imports	Million Btu/short ton	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Exports	Million Btu/short ton	27.00	27.00	27.00	27.00	27.00	27.00	27.00	26.40	26.18	26.18
Consumption, average	Million Btu/short ton	23.65	23.07	22.80	22.75	22.33	22.14	22.20	22.00	21.80	21.80
Electric utility consumption*	Million Btu/short ton	22.26	21.80	21.66	21.69	21.48	21.28	21.38	21.30	21.09	21.09
Non-utility consumption	Million Btu/short ton	26.84	26.12	25.81	25.87	25.13	25.07	25.06	25.06	24.96	24.96
Coal coke	Million Btu/short ton	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00
Crude petroleum[1]											
Production	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Imports	Million Btu/barrel	5.817	5.827	5.821	5.808	5.810	5.802	5.810	5.812	5.818	5.818
Exports	Million Btu/barrel	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800	5.800
Crude petroleum and products											
Imports, average	Million Btu/barrel	5.897	5.884	5.858	5.856	5.834	5.839	5.810	5.796	5.795	5.775
Exports, average	Million Btu/barrel	5.752	5.774	5.748	5.745	5.797	5.808	5.832	5.820	5.821	5.821
Petroleum products											
Consumption, average	Million Btu/barrel	5.515	5.504	5.494	5.504	5.518	5.519	5.494	5.479	5.448	5.448
Residential and commercial	Million Btu/barrel	5.387	5.377	5.358	5.383	5.389	5.382	5.471	5.468	5.408	5.354
Industrial	Million Btu/barrel	5.559	5.530	5.520	5.529	5.546	5.542	5.415	5.373	5.306	5.383
Transportation	Million Btu/barrel	5.399	5.397	5.395	5.399	5.405	5.409	5.430	5.442	5.436	5.429
Electric utility	Million Btu/barrel	6.245	6.238	6.250	6.251	6.249	6.251	6.258	6.254	6.258	6.258
Imports	Million Btu/barrel	5.983	5.959	5.935	5.980	5.908	5.955	5.811	5.748	5.659	5.659
Exports	Million Btu/barrel	5.752	5.773	5.747	5.743	5.796	5.814	5.864	5.841	5.837	5.837
LPG consumption average[2]	Million Btu/barrel	3.746	3.730	3.715	3.711	3.677	3.669	3.680	3.674	3.643	3.643
Natural gas plant liquid production	Million Btu/barrel	4.049	4.011	3.984	3.984	3.941	3.925	3.955	3.914	3.930	3.930
Natural gas, dry											
Production	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,016	1,015	1,015
Consumption*	Btu/cubic foot	1,021	1,024	1,021	1,020	1,021	1,019	1,021	1,026	1,027	1,027
Electric utility consumption*	Btu/cubic foot	1,024	1,022	1,026	1,023	1,029	1,034	1,034	1,034	1,034	1,034
Non-utility consumption	Btu/cubic foot	1,020	1,024	1,020	1,019	1,019	1,016	1,018	1,024	1,025	1,025
Imports*	Btu/cubic foot	1,026	1,027	1,026	1,025	1,028	1,030	1,037	1,022	1,014	1,014
Exports*	Btu/cubic foot	1,023	1,016	1,014	1,013	1,013	1,013	1,013	1,013	1,011	1,011
Wet natural gas production	Btu/cubic foot	1,093	1,097	1,095	1,093	1,093	1,088	1,092	1,088	1,091	1,091
Hydropower[3]	Btu/kWh	10,389	10,442	10,406	10,373	10,435	10,361	10,353	10,388	10,388	10,388
Nuclear power[3]	Btu/kWh	10,903	11,161	11,013	11,047	10,769	10,941	10,640	10,908	10,908	10,908
Geothermal power[3]	Btu/kWh	21,674	21,674	21,611	21,611	21,611	21,611	21,545	21,637	21,594	21,594
Electricity consumption	Btu/kWh	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412	3,412

Approximate Heat Content of Refined Petroleum Products	Million Btu/barrel
Asphalt	6.636
Aviation gasoline	5.048
Butane	4.326
Butane-propane mixture[4]	4.130
Distillate fuel oil	5.825
Ethane	3.082
Ethane-propane mixture[5]	3.308
Isobutane	3.974
Jet fuel—kerosene type	5.670
Jet fuel—naphtha type	5.355
Kerosene	5.670
Lubricants	6.065
Motor gasoline	5.253
Natural gasoline	4.620
Petrochemical feedstocks	
Naphtha 400° F or less	5.248
Other oils over 400° F	5.825
Still gas	6.000
Petroleum coke	6.024
Plant condensate	5.418
Propane	3.836
Residual fuel oil	6.287
Road oil	6.636
Special naphtha	5.248
Still gas	6.000
Unfinished oils	5.825
Unfractionated stream	5.418
Wax	5.537
Miscellaneous	5.796

Units of Measure

Weight

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

Conversion Factors for Crude Oil (Average Gravity)

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

Conversion Factors for Uranium

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

[1] Includes lease condensate.

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

[3] There is no generally accepted practice for measuring hydropower thermal conversion rates. The hydropower factors on this page are the prevailing 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.

[4] 60 percent butane and 40 percent propane.

[5] 70 percent ethane and 30 percent propane.

* Based on data reported in Energy Information Administration (and predecessor) surveys.

‡ Preliminary data.

Note: For a listing of sources for the approximate heat content values, see pages 241-246, *1982 Annual Energy Review*, DOE/EIA-0384(82).

Energy Information Administration
Forrestal Building
Washington, D.C. 20585

FIRST CLASS MAIL

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300