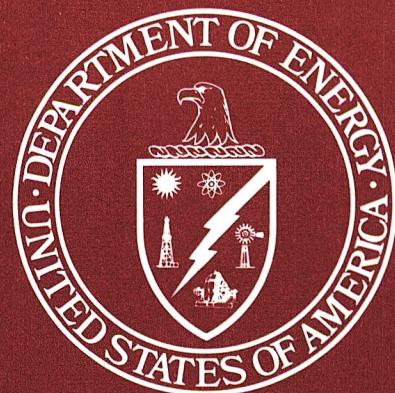


February 1982

# Monthly Energy Review



Preliminary 1981 Estimates  
See Executive Summary

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The *Monthly Energy Review* presents current data and trends for production, consumption, stocks, imports, exports, and prices for the principal energy commodities in the United States. Also included are data on international production of crude oil, consumption of petroleum products, petroleum stocks, and production of electricity from nuclear powered facilities. This report is published to keep the public and other interested parties fully informed with respect to current energy production, consumption, stocks, and prices.

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

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

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

- 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

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# Natural Gas Drilling and Production Under the Natural Gas Policy Act

By

Richard P. O'Neill<sup>1</sup>

Energy Information Administration

## Introduction

This is the third and last in a series of *Monthly Energy Review* articles intended to present background information on the natural gas markets (for previous articles see References [1] and [2]). The purpose of this series is to synthesize and interpret some of the more important data collected, and to present some new information. This article provides information on drilling and production of natural gas under the Natural Gas Policy Act (NGPA) and summarizes the three articles in the series.

Title I of the NGPA governs the price structure under which the supply side of the natural gas market operates today. This intricate incentive price structure and the fulfillment of its intent are the subject of much debate. A highly contested issue, for example, is whether the price ceilings are functioning efficiently for new and high-cost gas. Although the NGPA became law on November 9, 1978, a more important date for determining ceiling prices under Title I is February 19, 1977, since wells started on or after that date can qualify for

new (Sections 102 and 103) and high-cost (Section 107) gas prices (for more detailed discussion see References [2] and [4]). Therefore, the analysis of drilling and production under the NGPA starts in early 1977.

From 1971 through 1980, successful gas exploratory drilling grew at an average annual rate of 18 percent (see Table 1). During this same period, the average annual rates for successful exploratory oil drilling grew at 11 percent, and all exploratory drilling grew at 6 percent, reflecting a proportionate decline in unsuccessful attempts (dry holes). Since 1976, although all types of exploratory drilling have continued to increase, drilling for oil has increased at a faster rate. This shift is attributed for the most part to the rise in oil prices relative to new gas prices, since most new gas prices have ceilings under half the current crude oil price on a heat-value basis. Further, most of the increased growth in drilling was infill development of old fields (drilling within the known boundaries of the field to increase the rate of production) which does not necessarily lead to additional reserves.

<sup>1</sup> Acting Chief, Data Analysis and Forecasting Branch, Natural Gas Division, Office of Oil and Gas.

**Table 1. Annual Average Percentage Growth Rates In the Number of Wells Drilled**

| Type<br>Of<br>Well | 1971 through 1980    |                      | 1976 through 1980    |                      | 1978 through 1980    |                      |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                    | Exploratory<br>Wells | Development<br>Wells | Exploratory<br>Wells | Development<br>Wells | Exploratory<br>Wells | Development<br>Wells |
| Gas                | 18                   | 17                   | 9                    | 16                   | 12                   | 8                    |
| Oil                | 11                   | 9                    | 11                   | 12                   | 20                   | 23                   |
| Dry                | 4                    | 9                    | 5                    | 9                    | 3                    | 8                    |
| All Wells          | 6                    | 11                   | 7                    | 12                   | 6                    | 16                   |

## Drilling for Natural Gas Under Title I of the NGPA

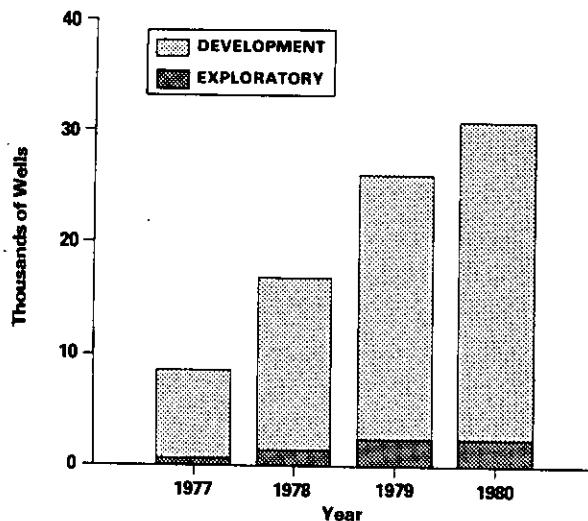
Well completions qualifying for new or high-cost gas prices have increased steadily since 1977 (see Figures 1 and 2). Most well completions in these price categories are from development drilling, but the aggregate drilling statistics under Title I of the NGPA blur some of the important subcategories.

Well completions under Section 103 are essentially the development and extension of onshore reservoirs discovered by wells started before February 19, 1977. Approximately 95 percent is development drilling, with the bulk of the remaining activity being extensions of existing reservoirs. Section 103 well completions, 43 percent of which have been classified as oil wells, have been increasing steadily since 1977 (see Figure 3). This trend is also present in the subcategories of wells completed with depths shallower and deeper than 5,000 feet. Although 56 percent of Section 103 wells are shallower than 5,000 feet, they accounted for only 28 percent of 1980 production, because the average production-per-well for wells shallower than 5,000 feet was only half the average production-per-well for wells deeper than 5,000 feet. An average of approximately 80 million cubic feet (MMcf) per year was produced from wells deeper than 5,000 feet. In the 1980's, it is expected that both drilling and

production under this section will peak and decline due to exhaustion of possible drilling sites in reservoirs discovered prior to early 1977 and due to wells in new reservoirs qualifying for Section 102, which offers a higher price.

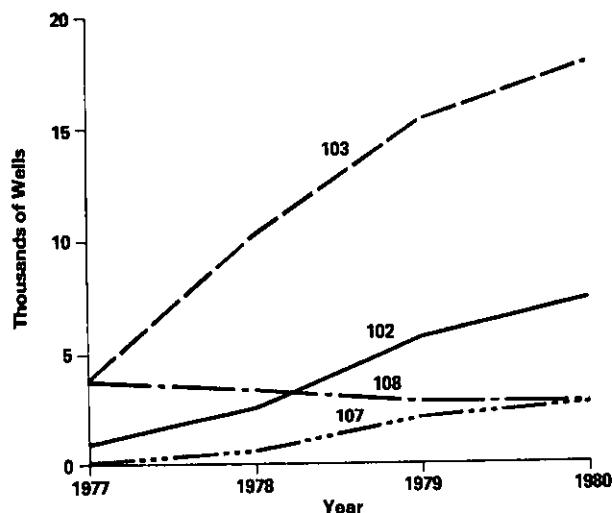
Essentially, onshore wells qualifying under Section 102 produce from reservoirs discovered after 1977. Through 1980, over 15,000 well completions qualified for Section 102 status with about 25 percent of this total classified as exploratory. Even though the Section 102 target price in 1985 for natural gas is the Btu equivalent of \$15-per-barrel oil (in 1978 dollars), well completions in all onshore Section 102 categories—65 percent classified as gas wells—increased steadily from 1977 through 1980 (see Figure 4). Although offshore wells represent only about 10 percent of the total, they contribute almost half the total production of natural gas under Section 102, because the average offshore well produces over 1,000 MMcf per year; and an onshore well under Section 102 averages about 140 MMcf per year. Further, an important distinction exists between two subcategories of Section 102 gas from the Outer Continental Shelf (OCS). Gas from certain reservoirs on old leases (Section 102(d)) is never deregulated under Title I, but gas from new OCS leases (Section 102(c)) is deregulated. Well completions in both categories have increased since 1977 (see Figure 5).

**Figure 1. Completions of New and High-Cost Gas Wells by Year of Completion**



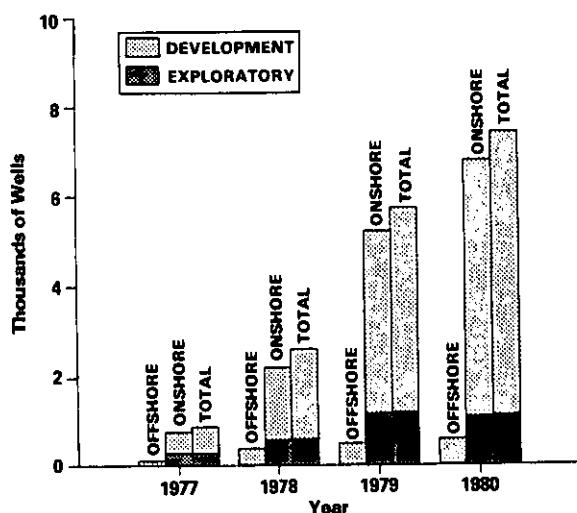
Source: Reference 4.

**Figure 2. Well Completions Under NGPA Title 1 Sections by Year of Completion**



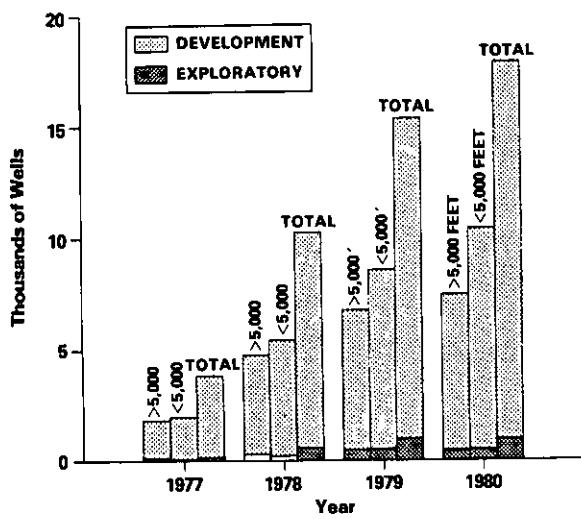
Source: Reference 4.

**Figure 4. Wells Qualifying for Section 102 Status by Year of Completion**



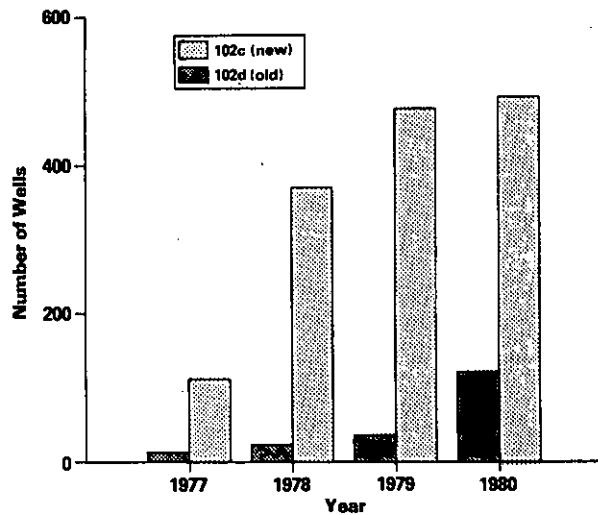
Source: Reference 4.

**Figure 3. Wells Qualifying for Section 103 Status by Year of Completion**



Source: Reference 4.

**Figure 5. Wells in the Outer Continental Shelf Qualifying for Section 102 Status by Year of Completion**



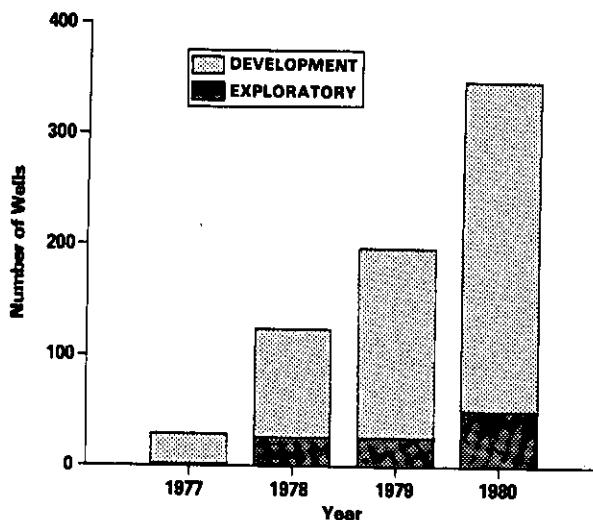
Source: Reference 4.

One of the most controversial parts of Title I is Section 107 because of the high prices being paid for natural gas without a price ceiling (see Reference [2]). Production from wells qualifying under Section 107 is given special treatment as "high-cost gas." Although well completions under Section 107 have been increasing since 1977 (see Figures 6 and 7), aggregate statistics can be very deceptive due to the nature of production from deep drilling (deeper than 15,000 feet), tight formations, and Devonian shale.<sup>1</sup> An order of magnitude separates both the average production-per-well and the drilling costs of deep wells from wells in tight formations and Devonian shale. Currently, total production of deep gas is more than double the other two sources combined.

Wells drilled deeper than 15,000 feet comprise about 1 percent of all wells drilled, but the average production per well (about 800 MMcf per year) is second only to OCS wells. During the last 12 years, deep drilling has increased; gas-well completions have risen significantly since 1977 (see

<sup>1</sup> Deep wells take considerably longer to drill and complete; possible distortions can occur when examining the effects of Title I, because wells do not appear in any of the statistics until after they are completed.

**Figure 6. Wells Qualifying for Deep Gas Status under Section 107 by Year of Completion**



Source: Reference 4.

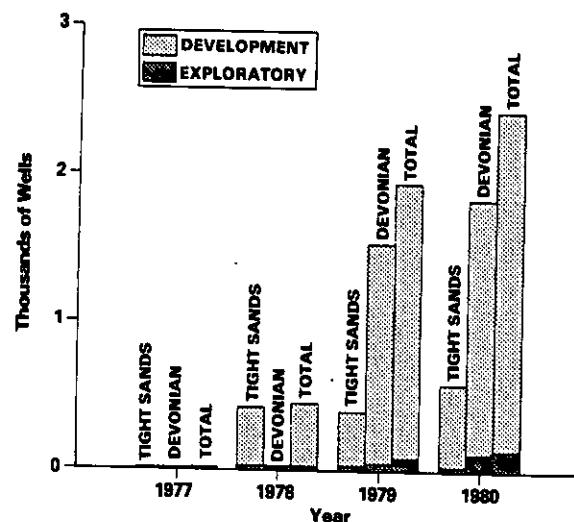
Figure 8). This increase was mostly due to development drilling. The onshore areas of the country where deep drilling is taking place are shown in Figure 9. The number of wells and average depths for deep drilling are shown in Table 2. Currently, most activity is in the Gulf Coast, notably the Tuscaloosa Trend and the OCS; the Anadarko Basin in Oklahoma and Texas; and the Overthrust Belt in the Rocky Mountains.

**Table 2. Deep Gas Wells under Section 107 and Average Depth by State**

| State       | Number of Wells | Average Depth (thousand feet) |
|-------------|-----------------|-------------------------------|
| Alabama     | 33              | 18.0                          |
| Florida     | 20              | 15.8                          |
| Louisiana   | 193             | 17.4                          |
| Mississippi | 98              | 16.9                          |
| New Mexico  | 5               | 16.0                          |
| Oklahoma    | 166             | 16.9                          |
| Texas       | 139             | 17.9                          |
| Utah        | 1               | 17.4                          |
| Wyoming     | 40              | 17.1                          |
| Total       | 695             | 17.3                          |

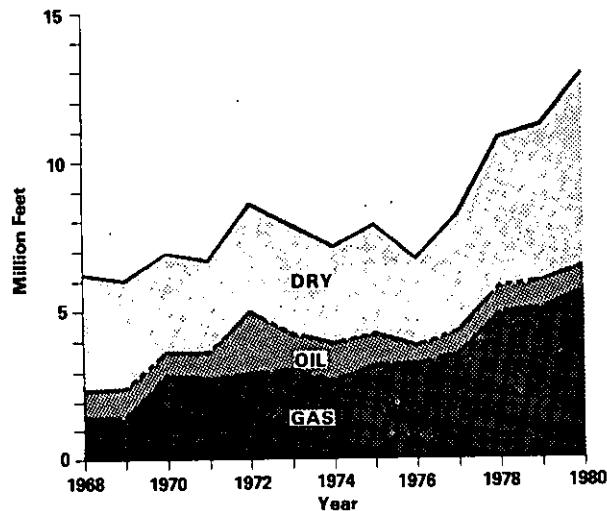
Source: Reference [4].

**Figure 7. Wells Qualifying for Devonian Shale and Tight Sands Status under Section 107 by Year of Completion**



Source: Reference 4.

**Figure 8. Total Footage Drilled Deeper than 15,000 Feet by Year of Completion**



Source: Reference 4.

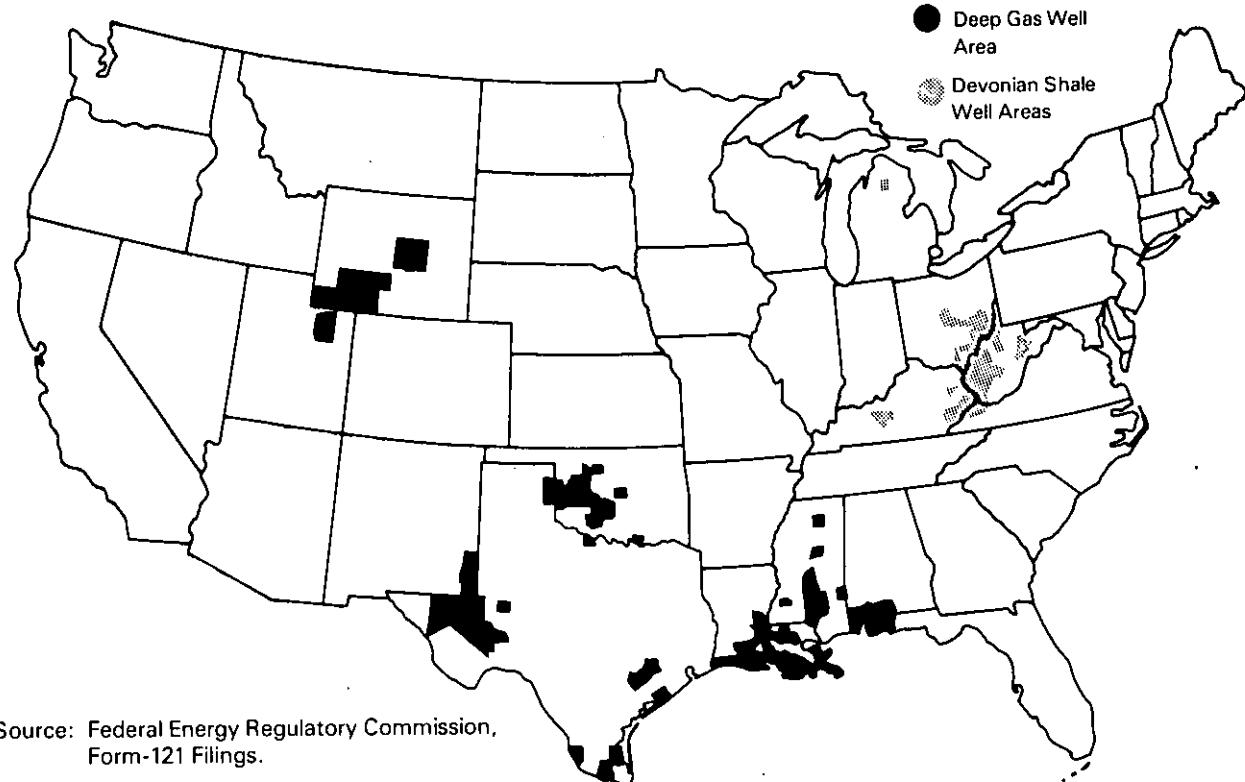
Gas produced from Devonian shale is concentrated in three States—West Virginia, Ohio, and Kentucky (see Figure 9 and Table 3). Wells currently qualifying under Section 107 as Devonian shale wells have an average production of about 20 MMcf per year and an average depth of about 3,500 feet.

**Table 3. Devonian Shale Gas Drilling under Section 107 and Average Depth by State**

| State         | Number of Wells | Average Depth (thousand feet) |
|---------------|-----------------|-------------------------------|
| Kentucky      | 169             | 3.0                           |
| Michigan      | 24              | 1.5                           |
| Ohio          | 505             | 3.1                           |
| Virginia      | 6               | 5.5                           |
| West Virginia | 686             | 4.2                           |
| Total         | 1,390           | 3.5                           |

Source: Reference [4].

**Figure 9. Deep Gas and Devonian Shale Well Areas**



Source: Federal Energy Regulatory Commission, Form-121 Filings.

Although only recently acquiring Section 107 status, well completions qualifying as tight formations increased rapidly during 1980. To date, 46 formations (with another 12 proposed) have been designated by the Federal Energy Regulatory Commission as tight. Most are located in Ohio, Texas and the Rocky Mountain States (see Figure 10). A regional distribution of drilling is shown in Table 4. The average depth is about 5,000 feet, and the average production from these wells is about 60 MMcf per year.

In Section 108, a special price ceiling status is accorded to a stripper gas well (a well producing less than 22 MMcf per year). Almost half of all well determinations under the NGPA have been for stripper status. The special price ceiling is intended to encourage production from wells that may otherwise be shut-in and abandoned. Most wells in this category were drilled prior to 1977, but over 8,000 wells completed since 1977 have

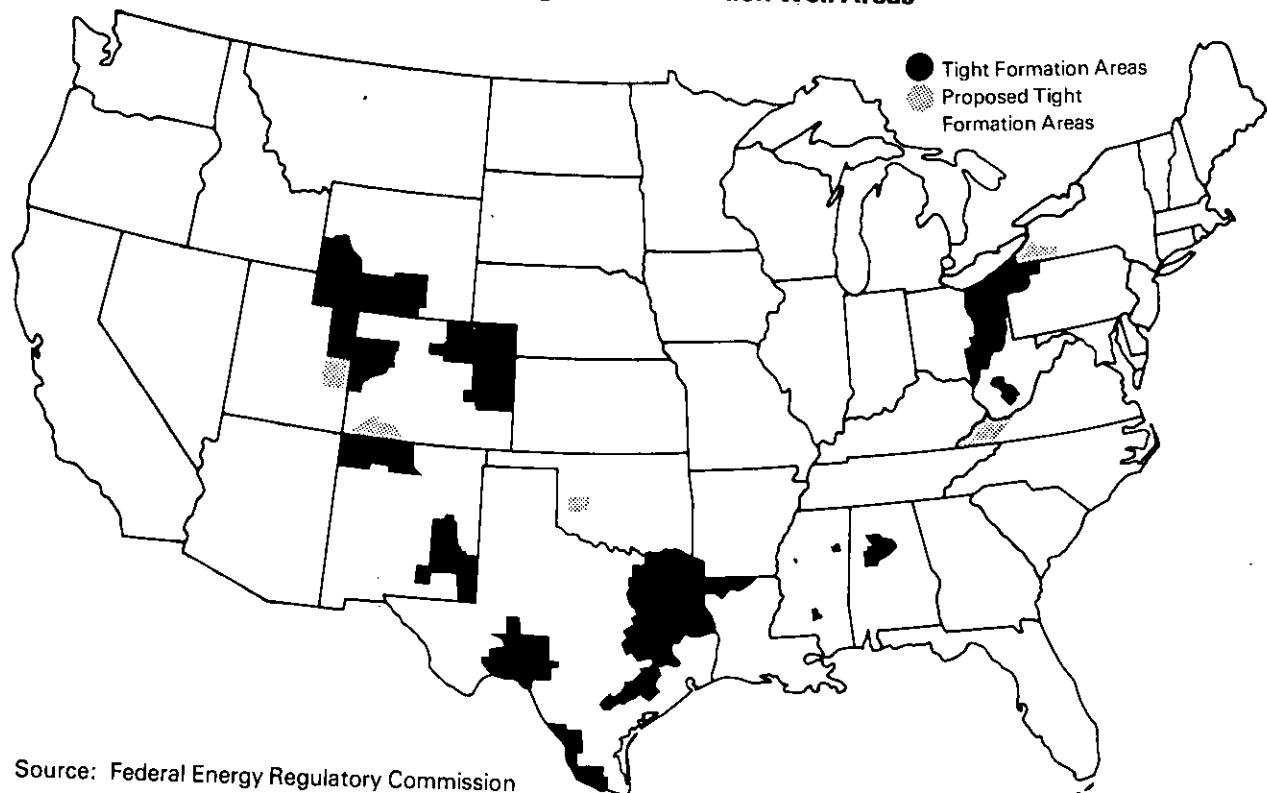
been accorded stripper status (see Figure 11). The average production from these stripper wells is about 10 MMcf per year, and the average depth is about 3,600 feet.

**Table 4. Tight Formation Gas Drilling under Section 107 and Average Depth by State**

| State        | Number of Wells | Average Depth<br>(thousand feet) |
|--------------|-----------------|----------------------------------|
| Colorado     | 66              | 3.35                             |
| Louisiana    | 165             | 2.35                             |
| New Mexico   | 43              | 4.80                             |
| Ohio         | 2,198           | 4.37                             |
| Pennsylvania | 5               | 3.18                             |
| Texas        | 648             | 9.12                             |
| Utah         | 14              | 5.33                             |
| Wyoming      | 58              | 11.09                            |
| Total        | 3,193           | 5.04                             |

Source: Reference [4].

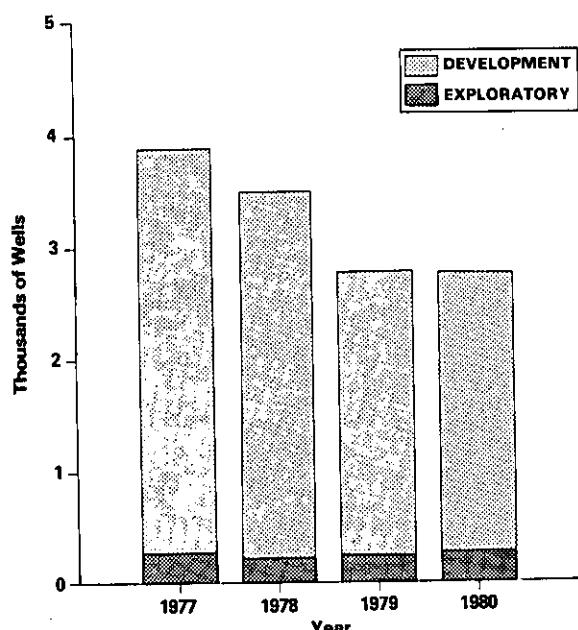
**Figure 10. Tight Gas Formation Well Areas**



Source: Federal Energy Regulatory Commission

## Natural Gas Production By Title I Section

**Figure 11. Wells Qualifying for Stripper Status under Section 108 by Year of Completion**



Source: Reference 4.

To determine the effect of the NGPA, the production and prices under each Title I Section of the NGPA should be examined. From 1976 through 1980, production in the new and high-cost gas categories increased (see Table 5). This response is initially attributable to prices set under the Federal Power Commission Opinions 770 and 770A and later to price ceilings allowed under Title I. Old gas (Sections 104, 105 and 106) production declined over the period because it is production from old wells which has been undergoing normal decline. New gas production (defined in Sections 102 and 103) has been increasing steadily since the NGPA.

The average price for gas under price ceilings appears to be at, or very near, the ceiling price with the possible exception of stripper well gas (Section 108). From 1979 to 1980, estimated production of high-cost gas (Section 107) doubled, almost certainly due to incentives under Title I which have allowed the average price of high-cost gas to be over 2.5 times higher than the national average. In 1980, 73 percent of high-cost gas was produced from deep wells, 23 percent from tight formations, and the remaining 4 percent from Devonian shale. Some high-cost gas without a price ceiling is selling at prices over \$8.00 per million Btu, indicating that the current price ceilings may be restrictive.

**Table 5. Natural Gas Production and Average Wellhead Price by NGPA Title I Section, 1976-1980<sup>a</sup>**

| Year            | 102  | 103  | 104   | 106A | 105  | 106B | 107  | 108  | Total |
|-----------------|------|------|-------|------|------|------|------|------|-------|
| 1976 Production | 0.00 | 0.00 | 10.89 | 0.00 | 8.29 | 0.00 | 0.00 | 0.00 | 19.18 |
| Average Price   | 1.42 | 1.42 | 0.50  | 0.00 | 0.73 | 0.00 | 1.42 | 0.00 | 0.60  |
| 1977 Production | 0.08 | 0.12 | 9.72  | 0.00 | 7.37 | 0.00 | 0.01 | 0.83 | 18.13 |
| Average Price   | 1.46 | 1.46 | 0.60  | 0.00 | 1.00 | 0.00 | 1.46 | 0.70 | 0.78  |
| 1978 Production | 0.69 | 0.79 | 8.69  | 0.00 | 6.57 | 0.00 | 0.09 | 0.85 | 17.68 |
| Average Price   | 1.50 | 1.50 | 0.70  | 0.00 | 1.15 | 0.00 | 1.50 | 0.80 | 0.94  |
| 1979 Production | 1.88 | 1.85 | 7.70  | 0.08 | 5.62 | 0.24 | 0.31 | 0.86 | 18.53 |
| Average Price   | 2.06 | 1.87 | 0.75  | 0.65 | 1.20 | 1.28 | 2.29 | 1.84 | 1.21  |
| 1980 Production | 3.42 | 2.71 | 6.47  | 0.49 | 4.80 | 0.42 | 0.66 | 0.83 | 19.80 |
| Average Price   | 2.33 | 2.05 | 0.50  | 0.80 | 1.25 | 1.35 | 4.14 | 2.08 | 1.55  |

<sup>a</sup> Production is in trillion cubic feet; price is in current dollars per million Btu. Total production and average price differ from other values reported in this issue due to the use of different data sources with different data definitions and estimation processes used to construct the data. Pre-NGPA volumes are classified according to the Section under which they will eventually qualify. Section 109 is treated as a transient category (except for gas from Prudhoe Bay in North Alaska which will not be available until the late 1980's) and therefore is not reported.

Source: Reference 4.

## **Summary and Conclusions**

This is the last of a three article series on natural gas markets in three consecutive issues of the *Monthly Energy Review*. In this series, the development of natural gas markets has been traced from the turn-of-the century, when gas was confined to local markets by lack of transportation technology, through a growth period ending in the early 1970's when seamless welded pipes facilitated the transportation of gas, to today's market, when production has become relatively stable during the past 5 or 6 years.

The use of natural gas has also changed over the years. The residential and commercial share of consumption has increased from 28 percent in 1950 to 38 percent in 1980 with 55 percent of all households heated with natural gas. Industrial consumption has dropped 20 percent between 1973 and 1980 due mostly to conservation and inability to obtain assured supplies.

Two major pieces of legislation—the Natural Gas Act of 1938 and the Natural Gas Policy Act of 1978—and the Phillips decision by the Supreme Court in 1954 have dominated the regulation of natural gas from the well to the user. Due to the Federal regulation of natural gas in interstate commerce, the interstate and intrastate markets have had different average prices at the well. The NGPA partially corrected this imbalance by setting ceiling prices that apply to all purchasers, but market differences still remain due to price controls on old gas, decontrol schedules and access to new gas.

Under the NGPA, drilling and production for new and high-cost natural gas have increased, offsetting the decline of production from old wells. Especially noteworthy is the increase in the price of high-cost gas, the only category of gas without price ceilings.

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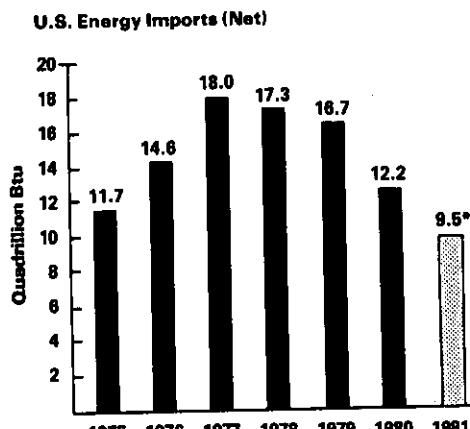
## Energy Highlights in 1981

Energy highlights in the United States in 1981 included declines in total energy production, consumption, and imports and an increase in energy exports. Well-drilling activities reached an all-time high and energy prices attained new highs, although growth rates diminished.

Energy production decreased 0.3 percent\*, due in part to a decrease in coal production. A 72-day coal strike in the first half of 1981 contributed to a 2.6 percent decrease in production to 807.7 million short tons for the year, down from 829.7 million short tons the previous year (see page 60). Following the strike, coal production reached record levels for the last 6 months of the year.

Energy consumption dropped 2.2 percent (see page 8) due primarily to a reduction in petroleum consumption of 6.1 percent to an average of 16.0 million barrels per day (see page 34).

\* All percentage increases or decreases in volumes have been computed on a daily rate basis to remove impact of the 1980 leap year.



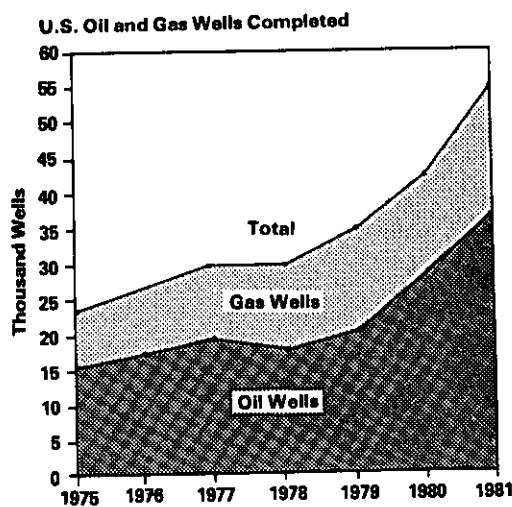
\*Preliminary data.

U.S. energy imports (net) declined 22.0 percent from the 1980 level, due primarily to a 15.4 percent decline in petroleum net imports, a 12.3 percent decline in natural gas net imports (see page 10), and a 20.8 percent increase in net exports of coal. The value of energy imports (net) decreased 5.1 percent to \$71.1 billion (see page 12).

Energy exports reached 4.4 quadrillion Btu, up 15.7 percent from the previous year (see page 4).

Exploration for petroleum and natural gas in the United States increased to record levels in 1981 (see page 56):

- The yearly average number of rotary rigs in operation in 1981 reached an all-time high of 3,970, 36.5 percent above the 1980 level.
- The number of oil well completions increased 39.3 percent to a total of 37,639 for the year.
- The number of gas well completions increased 13.6 percent to a total of 17,870 for the year.



Prices of energy continued to climb in 1981, but at a slower rate of increase than in 1980. Of the following fuels, only natural gas showed a greater rate of increase in 1981 than in 1980:

- The price of natural gas sold to residential customers rose from \$4.07 per thousand cubic feet (Mcf) in January to \$4.87 per Mcf in October (see page 87).
- The average retail price per gallon of motor gasoline climbed from \$1.27 in January to \$1.35 in December (see page 82).
- Heating oil climbed from \$1.14 per gallon at the beginning of the year to \$1.21 per gallon in October (see page 84).
- Diesel oil rose from \$1.01 per gallon in January to \$1.05 per gallon in October (see page 79).

### Production

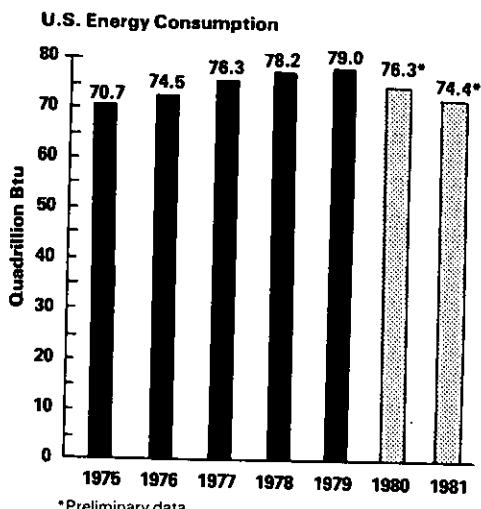
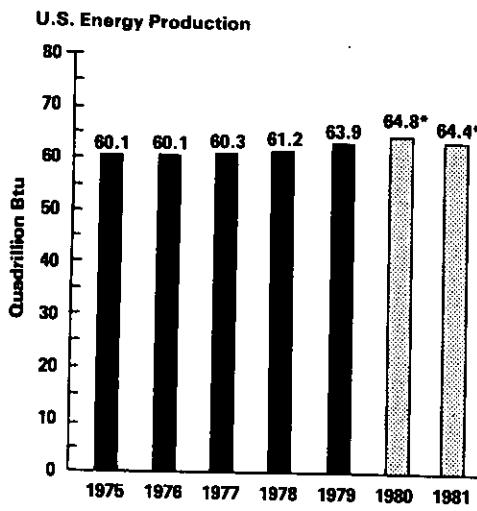
In 1981, total domestic energy production decreased to 64.4 quadrillion Btu, 0.3 percent below the all-time high of the previous year. Declines in coal and petroleum production of 2.4 and 0.3 percent, respectively, contributed to the decrease in total production. These declines more than offset increases in natural gas production of

1.4 percent and increases in energy production from all other sources combined, which rose 0.8 percent.

World crude oil production declined for the second year in a row from a record of 62.7 million barrels per day in 1979 (see page 91). That drop was due in part to production declines in the major oil-producing countries of Algeria, Iraq, Kuwait, Libya, Iran, Nigeria, and Canada. Preliminary reports suggest that world crude oil production averaged approximately 55.9 million barrels per day in 1981.

### Consumption

Total U.S. consumption of energy declined, for the second consecutive year, to 74.4 quadrillion Btu, a 2.2 percent decrease from the 1980 level. Petroleum consumption dropped to 32.1 quadrillion Btu, 6.1 percent less than the daily rate in 1980. Natural gas use decreased to 20.2 quadrillion Btu, 1.1 percent below the 1980 daily rate. Hydroelectric power use decreased to 2.9 quadrillion Btu, 5.8 percent lower than the 1980 daily rate. Coal consumption totaled 16.1 quadrillion Btu, 3.6 percent higher than the previous year's daily rate. Energy from nuclear electric power, coal coke, and other sources totaled 3.0 quadrillion Btu, 9.0 percent more than the 1980 daily average.



## Imports

U.S. energy net imports (total imports less exports) declined to 9.5 quadrillion Btu, a decrease of 22.0 percent. Net imports of all types of energy decreased except electricity, which remained constant, and coal coke, which increased. The largest change was in crude oil and refined petroleum products, which fell 15.4 percent to 11.4 quadrillion Btu. Natural gas imports fell 12.3 percent to 0.8 quadrillion Btu. Net exports of coal rose 20.8 percent to 2.9 quadrillion Btu.

Crude oil and petroleum products imports (excluding the Strategic Petroleum Reserve) averaged 5.7 million barrels per day. This was 16.6 percent below the 1980 level and the lowest level since 1972.

## Stocks of Selected Commodities

Primary crude oil stocks totaled 378.2 mil-

lion barrels at the end of 1981, 5.6 percent above the previous year's total and 11.5 percent above the 1979 level (see page 32).

Motor gasoline stocks totaled 250.0 million barrels at the end of 1981, 4.4 percent below the 1980 level (see page 38). Distillate stocks totaled 188.7 million barrels on December 31, 1981, 8.0 percent below the level one year earlier (see page 42). Stocks of residual fuel oil totaled 77.3 million barrels at the end of 1981, 15.8 percent lower than the level at the end of the previous year (see page 44). Working gas (gas available for withdrawal) in underground storage on December 31, 1981, totaled 2.8 trillion cubic feet, 6.4 percent more than the level one year earlier (see page 54). Coal stocks as of September 30, 1981, (the latest month for which data are available) totaled 164.2 million short tons, 15.6 percent lower than the September 30, 1980, level (see page 63).

## ENERGY SUMMARY (Quadrillion ( $10^{16}$ ) Btu)

|                          | December     |              |                | Cumulative January through December |              |               |              |                 |
|--------------------------|--------------|--------------|----------------|-------------------------------------|--------------|---------------|--------------|-----------------|
|                          | 1981         | 1980         | Percent Change | 1981                                | Daily Rate   | 1980          | Daily Rate   | Percent Change* |
| <b>Total Production</b>  | <b>5.519</b> | <b>5.611</b> | <b>-1.6</b>    | <b>64.407</b>                       | <b>0.176</b> | <b>64.761</b> | <b>0.177</b> | <b>-0.3</b>     |
| Petroleum <sup>1</sup>   | 1.747        | 1.739        | +0.5           | 20.417                              | 0.056        | 20.526        | 0.056        | -0.3            |
| Natural Gas              | 1.756        | 1.759        | -0.2           | 19.978                              | 0.055        | 19.754        | 0.054        | +1.4            |
| Coal                     | 1.529        | 1.630        | -6.2           | 18.253                              | 0.050        | 18.749        | 0.051        | -2.4            |
| Other <sup>2</sup>       | 0.487        | 0.484        | +0.7           | 5.760                               | 0.016        | 5.732         | 0.016        | +0.8            |
| <b>Total Consumption</b> | <b>6.942</b> | <b>7.244</b> | <b>-4.2</b>    | <b>74.417</b>                       | <b>0.204</b> | <b>76.300</b> | <b>0.208</b> | <b>-2.2</b>     |
| Petroleum <sup>3</sup>   | 2.872        | 3.136        | -8.4           | 32.122                              | 0.088        | 34.296        | 0.094        | -6.1            |
| Natural Gas              | 2.175        | 2.201        | -1.2           | 20.215                              | 0.055        | 20.495        | 0.056        | -1.1            |
| Coal                     | 1.390        | 1.407        | -1.2           | 16.122                              | 0.044        | 15.603        | 0.043        | +3.6            |
| Other <sup>4</sup>       | 0.505        | 0.501        | +0.9           | 5.958                               | 0.016        | 5.907         | 0.016        | +1.1            |
| <b>Net Imports</b>       | <b>0.810</b> | <b>1.022</b> | <b>-20.8</b>   | <b>9.514</b>                        | <b>0.026</b> | <b>12.234</b> | <b>0.033</b> | <b>-22.0</b>    |
| Petroleum <sup>5</sup>   | 0.953        | 1.129        | -15.7          | 11.409                              | 0.031        | 13.531        | 0.037        | -15.4           |
| Natural Gas              | 0.083        | 0.097        | -14.0          | 0.849                               | 0.002        | 0.972         | 0.003        | -12.3           |
| Coal                     | (0.244)      | (0.220)      | (+10.6)        | (2.944)                             | (0.008)      | (2.444)       | (0.007)      | (+20.8)         |
| Other <sup>6</sup>       | 0.018        | 0.017        | +7.1           | 0.199                               | 0.001        | 0.175         | 0.000        | +13.5           |

Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors.

Parentheses indicate exports are greater than imports.

\* Based on daily rates in order to remove the influence of leap year.

<sup>1</sup> Includes crude oil, lease condensate, and natural gas plant liquids.

<sup>2</sup> Includes hydroelectric, nuclear, and geothermal power and electricity produced from wood and waste.

<sup>3</sup> Includes refined petroleum products and natural gas plant liquids.

<sup>4</sup> Includes hydroelectric, nuclear, and geothermal power, electricity produced from wood and waste, and net imports of electricity and coal coke.

<sup>5</sup> Includes crude oil, lease condensate, refined petroleum products, unfinished oils, natural gasoline, plant condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>6</sup> Includes net imports of electricity and coal coke.

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## Executive Summary

### Energy Summary

|              | Energy Production <sup>1</sup>      | Energy Consumption <sup>2</sup> | Energy Imports <sup>3</sup> | Energy Exports <sup>4</sup> |
|--------------|-------------------------------------|---------------------------------|-----------------------------|-----------------------------|
|              | Quadrillion (10 <sup>12</sup> ) 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   | R 61.204 <sup>R</sup>               | R 78.150 <sup>R</sup>           | R 19.262 <sup>R</sup>       | R 1.952 <sup>R</sup>        |
| 1979 TOTAL   | R 63.907 <sup>R</sup>               | R 78.968 <sup>R</sup>           | R 19.622 <sup>R</sup>       | 2.900                       |
| 1980 January | R5.603                              | R7.457                          | R1.699                      | R0.229                      |
| February     | R5.248                              | 7.018                           | R1.475                      | R0.212                      |
| March        | R5.631                              | R6.905                          | R1.479                      | R0.267                      |
| April        | 5.396                               | R6.031                          | R1.341                      | R0.291                      |
| May          | R5.528                              | R5.847                          | R1.283                      | R0.349                      |
| June         | R5.336                              | R5.705                          | 1.288                       | 0.365                       |
| July         | 5.185                               | R5.964                          | R1.212                      | 0.328                       |
| August       | R5.275                              | R5.852                          | R1.205                      | 0.319                       |
| September    | 5.240                               | R5.806                          | R1.170                      | 0.335                       |
| October      | R5.432                              | R6.182                          | R1.250                      | 0.376                       |
| November     | 5.275                               | R6.289                          | R1.229                      | 0.347                       |
| December     | R5.611                              | R7.244                          | R1.365                      | 0.343                       |
| TOTAL        | R64.761 <sup>R</sup>                | R76.300 <sup>R</sup>            | R15.996 <sup>R</sup>        | R3.762 <sup>R</sup>         |
| 1981 January | 5.446                               | 7.426                           | 1.339                       | 0.267                       |
| February     | 5.195                               | 6.346                           | 1.205                       | 0.282                       |
| March        | R5.677                              | 6.458                           | 1.184                       | 0.377                       |
| April        | R4.609                              | 5.737                           | 1.098                       | 0.331                       |
| May          | R4.730                              | 5.786                           | 1.115                       | 0.281                       |
| June         | R5.246                              | 5.847                           | 1.034                       | 0.252                       |
| July         | R5.563                              | R6.104                          | 1.135                       | 0.400                       |
| August       | R5.758                              | R5.990                          | 1.123                       | 0.429                       |
| September    | R5.539                              | R5.696                          | R1.194                      | 0.420                       |
| October      | R5.682                              | R6.027                          | R1.173                      | 0.477                       |
| November     | 5.442                               | 6.058                           | 1.068                       | 0.450                       |
| December     | 5.519                               | 6.942                           | 1.198                       | 0.388                       |
| TOTAL        | 64.407 <sup>R</sup>                 | 74.417 <sup>R</sup>             | 13.866 <sup>R</sup>         | 4.352 <sup>R</sup>          |

Geographic coverage: the 50 United States and District of Columbia.

Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1979.

<sup>1</sup>See Explanatory Note 1.

<sup>2</sup>See Explanatory Note 2.

<sup>3</sup>See Explanatory Note 3.

<sup>4</sup>See Explanatory Note 4.

R = Revised data.

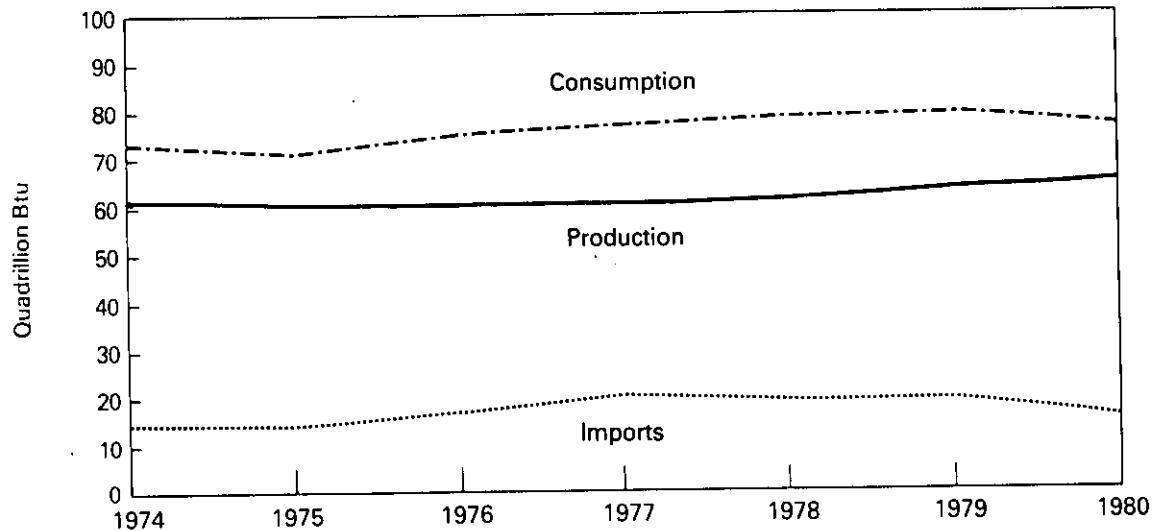
Note: The sum of domestic energy production and net imports of energy does not equal domestic energy consumption. The difference is attributed to stock changes; losses and gains in conversion, transportation, and distribution; the addition of blending compounds;

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

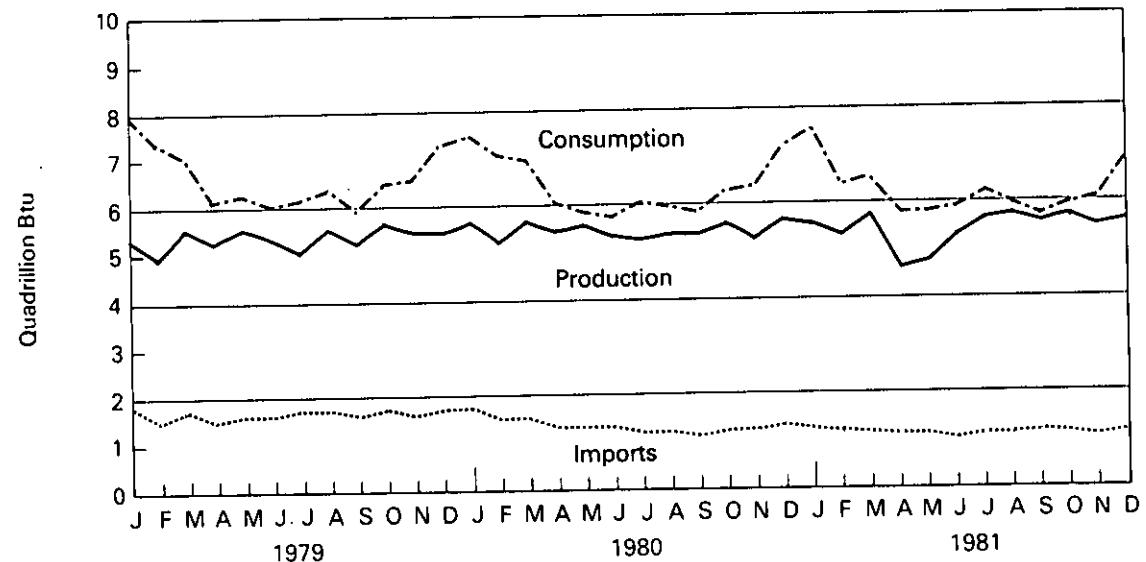
# Executive Summary

## Energy Summary

Yearly



Monthly



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## Executive Summary

### Production of Energy by Type

|                                     |           | Crude<br>Oil <sup>1</sup> | Natural<br>Gas<br>(Dry) <sup>2</sup> | Hydro-<br>electric<br>Power <sup>3</sup> | Nuclear<br>Electric<br>Power | Other <sup>4</sup> | Total<br>Energy<br>Produced | Yearly<br>Cumulative<br>Energy<br>Produced |
|-------------------------------------|-----------|---------------------------|--------------------------------------|--|------------------------------|--------------------|-----------------------------|--|
| Quadrillion (10 <sup>16</sup> ) Btu |           |                           |                                      |  |                              |                    |                             |  |
| 1973                                | TOTAL     | 14.366                    | 19.493                               | 2.569                                    | 22.187                       | 2.861              | 0.910                       | 0.046                                      |
| 1974                                | TOTAL     | 14.468                    | 18.575                               | 2.471                                    | 21.210                       | 3.177              | 1.272                       | 0.056                                      |
| 1975                                | TOTAL     | 15.189                    | 17.729                               | 2.374                                    | 19.640                       | 3.155              | 1.900                       | 0.072                                      |
| 1976                                | TOTAL     | 15.853                    | 17.262                               | 2.327                                    | 19.480                       | 2.976              | 2.111                       | 0.081                                      |
| 1977                                | TOTAL     | 15.829                    | 17.454                               | 2.327                                    | 19.565                       | 2.333              | 2.702                       | 0.082                                      |
| 1978                                | TOTAL     | 15.037                    | 18.434                               | 2.245                                    | 19.485                       | 2.958 <sup>R</sup> | 2.977 <sup>R</sup>          | 0.068                                      |
| 1979                                | TOTAL     | 17.651                    | 18.104                               | 2.286                                    | 20.076                       | 2.954 <sup>R</sup> | 2.748 <sup>R</sup>          | 0.089                                      |
| 1980                                | January   | 1.573                     | R1.560                               | 0.202                                    | 1.782                        | 0.267              | 0.213                       | 0.008                                      |
|                                     | February  | 1.481                     | R1.464                               | R0.190                                   | 1.672                        | 0.226              | 0.208                       | 0.008                                      |
|                                     | March     | 1.603                     | R1.564                               | 0.192                                    | 1.791                        | 0.257              | 0.216                       | 0.008                                      |
|                                     | April     | 1.574                     | R1.511                               | 0.193                                    | 1.635                        | 0.272              | 0.202                       | 0.008                                      |
|                                     | May       | 1.605                     | 1.553                                | R0.198                                   | 1.659                        | 0.305              | 0.198                       | 0.010                                      |
|                                     | June      | 1.612                     | R1.488                               | 0.185                                    | 1.552                        | 0.292              | 0.197                       | 0.009                                      |
|                                     | July      | 1.385                     | R1.537                               | R0.187                                   | 1.582                        | 0.258              | 0.226                       | 0.010                                      |
|                                     | August    | 1.546                     | R1.513                               | 0.186                                    | 1.542                        | 0.216              | 0.262                       | 0.011                                      |
|                                     | September | 1.555                     | 1.500                                | R0.180                                   | 1.547                        | 0.195              | 0.254                       | 0.010                                      |
|                                     | October   | 1.634                     | R1.534                               | R0.186                                   | 1.615                        | 0.189              | 0.264                       | 0.011                                      |
|                                     | November  | 1.551                     | R1.478                               | 0.186                                    | 1.619                        | 0.203              | 0.226                       | 0.011                                      |
|                                     | December  | 1.630                     | R1.547                               | 0.191                                    | 1.759                        | 0.235              | 0.238                       | 0.011                                      |
|                                     | TOTAL     | 18.749 <sup>R</sup>       | R18.249                              | R2.277 <sup>R</sup>                      | 19.754 <sup>R</sup>          | 2.913 <sup>R</sup> | 2.704 <sup>R</sup>          | 0.114 <sup>R</sup>                         |
|                                     |           |                           |                                      |  |                              |                    |                             | R64.761 <sup>R</sup>                       |
| 1981                                | January   | 1.482                     | 1.534                                | 0.196                                    | 1.735                        | 0.236              | 0.252                       | 0.011                                      |
|                                     | February  | 1.593                     | 1.396                                | 0.179                                    | 1.561                        | 0.223              | 0.233                       | 0.010                                      |
|                                     | March     | R1.760                    | 1.546                                | 0.194                                    | 1.711                        | 0.218              | 0.237                       | 0.011                                      |
|                                     | April     | R0.844                    | 1.486                                | 0.184                                    | 1.643                        | 0.219              | 0.222                       | 0.010                                      |
|                                     | May       | R0.848                    | 1.528                                | 0.190                                    | 1.687                        | 0.255              | 0.212                       | 0.010                                      |
|                                     | June      | R1.410                    | 1.499                                | 0.187                                    | 1.634                        | 0.278              | 0.228                       | 0.010                                      |
|                                     | July      | R1.670                    | 1.514                                | 0.190                                    | 1.664                        | 0.265              | 0.249                       | 0.011                                      |
|                                     | August    | R1.779                    | 1.542                                | 0.194                                    | 1.713                        | 0.228              | 0.290                       | 0.011                                      |
|                                     | September | R1.813                    | R1.494                               | R0.193                                   | R1.576                       | 0.188              | 0.263                       | 0.011                                      |
|                                     | October   | 1.883                     | R1.536                               | R0.196                                   | 1.644                        | 0.191              | 0.221                       | 0.011                                      |
|                                     | November  | 1.642                     | 1.498                                | 0.192                                    | 1.654                        | 0.201              | 0.245                       | 0.010                                      |
|                                     | December  | 1.529                     | 1.550                                | 0.196                                    | 1.756                        | 0.221              | 0.256                       | 0.011                                      |
|                                     | TOTAL     | R18.253 <sup>R</sup>      | 18.125 <sup>R</sup>                  | R2.291 <sup>R</sup>                      | 19.978 <sup>R</sup>          | 2.724 <sup>R</sup> | 2.908 <sup>R</sup>          | 0.128 <sup>R</sup>                         |
|                                     |           |                           |                                      |  |                              |                    |                             | 64.407 <sup>R</sup>                        |

Geographic coverage: the 50 United States and District of Columbia.

Totals may not equal sum of components due to independent rounding and the use of preliminary conversion factors after 1979.

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

<sup>2</sup>Includes lease condensate.

<sup>3</sup>Natural gas plant liquids.

<sup>4</sup>Includes industrial and utility production of hydropower.

<sup>5</sup>Includes geothermal power and electricity produced from wood and waste.

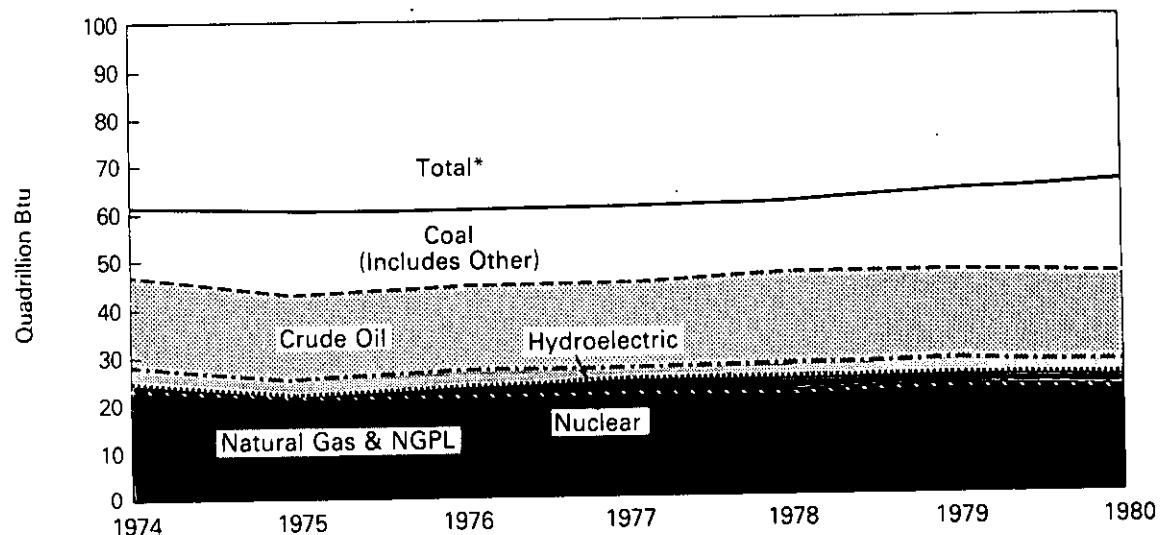
R=Revised data.

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

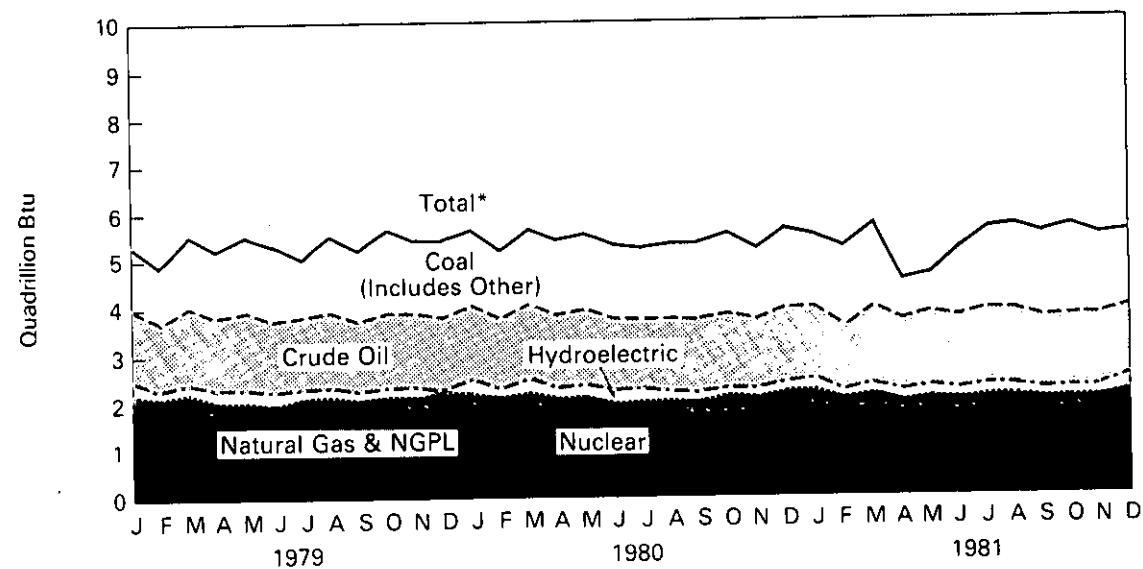
## Executive Summary

### Production of Energy by Type

Yearly



Monthly



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

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## Executive Summary

### Consumption of Energy by Type

|                                     |           | Coal <sup>1</sup>   | Natural Gas (Dry)   | Petro-<br>leum       | Hydro-<br>electric<br>Power <sup>2</sup> | Nuclear<br>Electric<br>Power | Net<br>Imports<br>of<br>Coal<br>Coke <sup>3</sup> | Other <sup>4</sup> | Total<br>Energy<br>Con-<br>sumed | Yearly<br>Cumulative<br>Energy<br>Consumed |
|-------------------------------------|-----------|---------------------|---------------------|----------------------|--|------------------------------|---|--------------------|----------------------------------|--|
| Quadrillion (10 <sup>12</sup> ) Btu |           |                     |                     |                      |  |                              |   |                    |                                  |  |
| 1973                                | TOTAL     | 13.300              | 22.512              | 34.840               | 3.010                                    | 0.910                        | (0.008)   | 0.046              | 74.609                           |  |
| 1974                                | TOTAL     | 12.876              | 21.732              | 33.455               | 3.309                                    | 1.272                        | 0.059   | 0.056              | 72.759                           |  |
| 1975                                | TOTAL     | 12.823              | 19.948              | 32.731               | 3.219                                    | 1.900                        | 0.014   | 0.072              | 70.707                           |  |
| 1976                                | TOTAL     | 13.733              | 20.345              | 35.175               | 3.066                                    | 2.111                        | 0.000   | 0.081              | 74.510                           |  |
| 1977                                | TOTAL     | 13.965              | 19.931              | 37.122               | 2.515                                    | 2.702                        | 0.015   | 0.082              | 76.332                           |  |
| 1978                                | TOTAL     | 13.846              | 20.000              | 37.965               | 3.164 <sup>R</sup>                       | 2.977 <sup>R</sup>           | 0.131   | 0.068              | 78.150 <sup>R</sup>              |  |
| 1979                                | TOTAL     | 15.109              | 20.666              | 37.123               | 3.166 <sup>R</sup>                       | 2.748 <sup>R</sup>           | 0.066   | 0.089              | 78.968 <sup>R</sup>              |  |
| 1980                                | January   | 1.410               | 2.327               | R3.211               | 0.285                                    | 0.213                        | 0.003   | 0.008              | R7.457                           | R7.457                                     |
|                                     | February  | 1.325               | 2.238               | 2.998                | 0.242                                    | 0.208                        | (0.001)   | 0.008              | 7.018                            | R14.475                                    |
|                                     | March     | 1.307               | 2.143               | R2.960               | 0.275                                    | 0.216                        | (0.003)   | 0.008              | R6.905                           | R21.379                                    |
|                                     | April     | 1.169               | 1.601               | R2.766               | 0.289                                    | 0.202                        | (0.005)   | 0.008              | R6.031                           | R27.410                                    |
|                                     | May       | 1.173               | 1.383               | R2.766               | 0.323                                    | 0.198                        | (0.006)   | 0.010              | R5.847                           | R33.257                                    |
|                                     | June      | 1.245               | 1.279               | R2.668               | 0.309                                    | 0.197                        | (0.004)   | 0.009              | R5.705                           | R38.962                                    |
|                                     | July      | 1.401               | 1.328               | R2.726               | 0.276                                    | 0.226                        | (0.004)   | 0.010              | R5.964                           | R44.926                                    |
|                                     | August    | 1.393               | 1.272               | R2.683               | 0.234                                    | 0.262                        | (0.003)   | 0.011              | R5.852                           | R50.778                                    |
|                                     | September | 1.272               | 1.326               | R2.736               | 0.213                                    | 0.254                        | (0.004)   | 0.010              | R5.806                           | R56.584                                    |
|                                     | October   | 1.238               | 1.574               | R2.894               | 0.207                                    | 0.264                        | (0.006)   | 0.011              | R6.182                           | R62.767                                    |
|                                     | November  | 1.261               | 1.820               | R2.753               | 0.220                                    | 0.226                        | (0.002)   | 0.011              | R6.289                           | R69.056                                    |
|                                     | December  | 1.407               | 2.201               | R3.136               | 0.253                                    | 0.238                        | (0.001)   | 0.011              | R7.244                           | R76.300                                    |
|                                     | TOTAL     | 15.603 <sup>R</sup> | 20.495 <sup>R</sup> | R34.296 <sup>R</sup> | 3.125 <sup>R</sup>                       | 2.704 <sup>R</sup>           | (0.037)   | 0.114              | R76.300 <sup>R</sup>             |  |
| 1981                                | January   | 1.491               | 2.303               | 3.115                | 0.254                                    | 0.252                        | 0.000   | 0.011              | 7.426                            | 7.426                                      |
|                                     | February  | 1.322               | 1.939               | 2.604                | 0.239                                    | 0.233                        | (0.001)   | 0.010              | 6.346                            | 13.772                                     |
|                                     | March     | 1.333               | 1.946               | 2.697                | 0.236                                    | 0.237                        | (0.003)   | 0.011              | 6.458                            | 20.230                                     |
|                                     | April     | 1.207               | 1.544               | 2.518                | 0.237                                    | 0.222                        | (0.001)   | 0.010              | 5.737                            | 25.967                                     |
|                                     | May       | 1.213               | 1.490               | 2.588                | 0.273                                    | 0.212                        | 0.000   | 0.010              | 5.786                            | 31.753                                     |
|                                     | June      | 1.317               | 1.364               | 2.636                | 0.296                                    | 0.228                        | (0.004)   | 0.010              | 5.847                            | 37.600                                     |
|                                     | July      | R1.490              | 1.395               | 2.676                | 0.283                                    | 0.249                        | 0.000   | 0.011              | R6.104                           | R43.704                                    |
|                                     | August    | R1.452              | 1.396               | 2.595                | 0.246                                    | 0.290                        | 0.000   | 0.011              | R5.990                           | R49.694                                    |
|                                     | September | R1.318              | R1.325              | R2.574               | 0.206                                    | 0.263                        | (0.002)   | 0.011              | R5.696                           | R55.389                                    |
|                                     | October   | 1.297               | 1.593               | R2.698               | 0.209                                    | 0.221                        | (0.003)   | 0.011              | R6.027                           | R61.416                                    |
|                                     | November  | 1.292               | 1.746               | 2.547                | 0.218                                    | 0.245                        | 0.000   | 0.010              | 6.058                            | 67.474                                     |
|                                     | December  | 1.390               | 2.175               | 2.872                | 0.239                                    | 0.256                        | 0.000   | 0.011              | 6.942                            | 74.417                                     |
|                                     | TOTAL     | 16.122 <sup>R</sup> | 20.215 <sup>R</sup> | 32.122 <sup>R</sup>  | 2.937 <sup>R</sup>                       | 2.908 <sup>R</sup>           | (0.014) <sup>R</sup>                              | 0.128 <sup>R</sup> | 74.417 <sup>R</sup>              |  |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

<sup>2</sup>Includes industrial and utility production, and net imports of electricity.

<sup>3</sup>Parentheses indicate exports are greater than imports.

<sup>4</sup>Includes geothermal power and electricity produced from wood and waste.

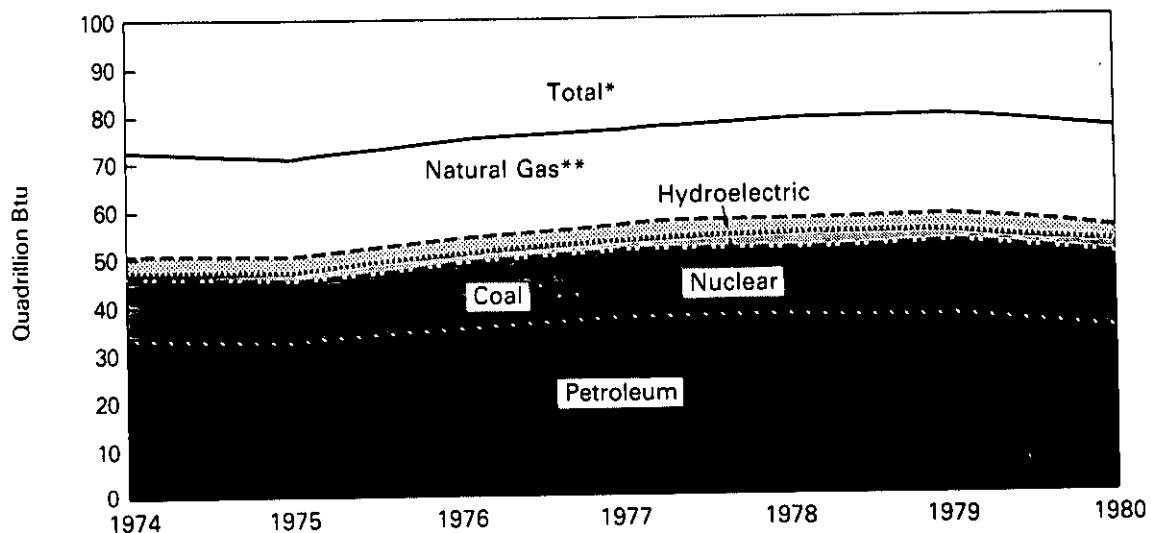
R = Revised data.

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

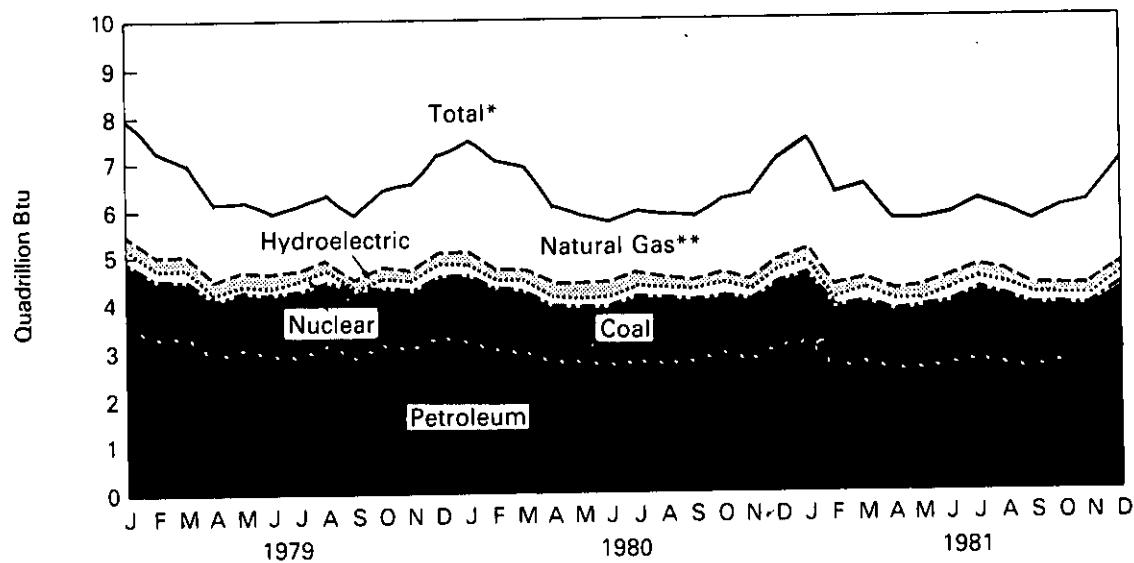
## Executive Summary

### Consumption of Energy by Type

Yearly



Monthly



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

\*\*Includes net imports of coal coke and other.

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## Executive Summary

### Net Imports of Energy by Type<sup>1</sup>

|                                     |              | Crude<br>Oil <sup>2</sup>  | Refined<br>Petrol-<br>eum<br>Products <sup>4</sup> | Natural<br>Gas<br>(Dry)   | Electri-<br>city <sup>5</sup> | Coal<br>Coke             | Net<br>Imports | Yearly<br>Cumulative<br>Net Imports<br>of Energy |
|-------------------------------------|--------------|----------------------------|--|---------------------------|-------------------------------|--------------------------|----------------|--|
| Quadrillion (10 <sup>15</sup> ) Btu |              |                            |  |                           |                               |                          |                |  |
| 1973                                | TOTAL        | (1.443)                    | 6.883  | 6.097                     | 0.981                         | 0.148                    | (0.008)        | 12.659   |
| 1974                                | TOTAL        | (1.585)                    | 7.389  | 5.273                     | 0.907                         | 0.133                    | 0.059          | 12.175   |
| 1975                                | TOTAL        | (1.766)                    | 8.708  | 3.800                     | 0.904                         | 0.064                    | 0.014          | 11.725   |
| 1976                                | TOTAL        | (1.590)                    | 11.221   | 3.982                     | 0.922                         | 0.089                    | 0.000          | 14.625   |
| 1977                                | TOTAL        | (1.424)                    | 13.921   | 4.321                     | 0.981                         | 0.182                    | 0.015          | 17.995   |
| 1978                                | TOTAL        | (1.024)                    | 13.125   | 3.932                     | 0.941                         | 0.206 <sup>R</sup>       | 0.131          | 17.310 <sup>R</sup>                              |
| 1979                                | TOTAL        | (1.730)                    | 13.328   | 3.603                     | 1.243                         | 0.212 <sup>R</sup>       | 0.066          | 16.722 <sup>R</sup>                              |
| 1980                                | January      | (0.117)                    | R1.096   | R0.353                    | 0.116                         | 0.018                    | 0.003          | R1.470   |
|                                     | February     | (0.104)                    | R0.957   | R0.287                    | 0.107                         | 0.017                    | (0.001)        | R1.263   |
|                                     | March        | (0.150)                    | R0.967   | R0.272                    | 0.108                         | 0.018                    | (0.003)        | R1.212   |
|                                     | April        | (0.202)                    | R0.942   | R0.220                    | 0.077                         | 0.017                    | (0.005)        | R1.050   |
|                                     | May          | (0.227)                    | R0.861   | R0.217                    | 0.070                         | 0.018                    | (0.006)        | R0.933   |
|                                     | June         | (0.237)                    | 0.892  | 0.196                     | 0.060                         | 0.017                    | (0.004)        | R5.928   |
|                                     | July         | (0.221)                    | R0.830   | R0.201                    | 0.060                         | 0.018                    | (0.004)        | R6.851   |
|                                     | August       | (0.246)                    | R0.851   | R0.206                    | 0.059                         | 0.018                    | (0.003)        | R0.883   |
|                                     | September    | (0.226)                    | 0.765  | R0.226                    | 0.057                         | 0.017                    | (0.004)        | R0.886   |
|                                     | October      | (0.251)                    | R0.803   | R0.238                    | 0.073                         | 0.018                    | (0.006)        | R0.835   |
|                                     | November     | (0.242)                    | R0.765   | R0.255                    | 0.088                         | 0.017                    | (0.002)        | R0.874   |
|                                     | December     | (0.220)                    | R0.854   | 0.276                     | 0.097                         | 0.018                    | (0.001)        | R1.022   |
|                                     | <b>TOTAL</b> | <b>(2.444)<sup>R</sup></b> | <b>R10.582<sup>R</sup></b>                         | <b>R2.948<sup>R</sup></b> | <b>0.972<sup>R</sup></b>      | <b>0.212<sup>R</sup></b> | <b>(0.037)</b> | <b>R12.234<sup>R</sup></b>                       |
| 1981                                | January      | (0.155)                    | 0.826  | 0.301                     | 0.084                         | 0.018                    | 0.000          | 1.073  |
|                                     | February     | (0.180)                    | 0.761  | 0.249                     | 0.079                         | 0.016                    | (0.001)        | 0.923  |
|                                     | March        | (0.260)                    | 0.776  | 0.203                     | 0.072                         | 0.018                    | (0.003)        | 1.996  |
|                                     | April        | (0.221)                    | 0.742  | 0.163                     | 0.067                         | 0.017                    | (0.001)        | 0.806  |
|                                     | May          | (0.162)                    | 0.712  | 0.207                     | 0.058                         | 0.018                    | 0.000          | 3.570  |
|                                     | June         | (0.162)                    | 0.690  | 0.181                     | 0.060                         | 0.017                    | (0.004)        | 0.834  |
|                                     | July         | (0.290)                    | 0.735  | 0.208                     | 0.063                         | 0.018                    | 0.000          | 5.187  |
|                                     | August       | (0.301)                    | 0.713  | 0.203                     | 0.060                         | 0.018                    | 0.000          | 5.922  |
|                                     | September    | (0.319)                    | 0.788  | R0.224                    | 0.065                         | 0.017                    | (0.002)        | 6.616  |
|                                     | October      | (0.331)                    | R0.749   | R0.187                    | 0.076                         | 0.018                    | (0.003)        | R7.389   |
|                                     | November     | (0.318)                    | 0.645  | 0.193                     | 0.081                         | 0.017                    | 0.000          | R0.696   |
|                                     | December     | (0.244)                    | 0.736  | 0.217                     | 0.083                         | 0.018                    | 0.000          | R8.085   |
|                                     | <b>TOTAL</b> | <b>(2.944)<sup>R</sup></b> | <b>8.873<sup>R</sup></b>                           | <b>2.536<sup>R</sup></b>  | <b>0.849<sup>R</sup></b>      | <b>0.212<sup>R</sup></b> | <b>(0.014)</b> | <b>9.514<sup>R</sup></b>                         |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Net imports = imports minus exports. Parentheses indicate exports are greater than imports.

<sup>2</sup>Includes bituminous coal, lignite, and anthracite.

<sup>3</sup>Includes crude oil, lease condensate, and imports of crude oil for the Strategic Petroleum Reserve.

<sup>4</sup>Includes refined petroleum products, unfinished oils, natural gasoline, and plant condensate.

<sup>5</sup>Only yearly totals are available for electricity import and export data. Figures shown are estimates derived by dividing the yearly net import total by the number of days in the year and multiplying by the number of days in the month. Annual data for 1979 are used in estimating 1980 and 1981 data until actual annual data become available for those years.

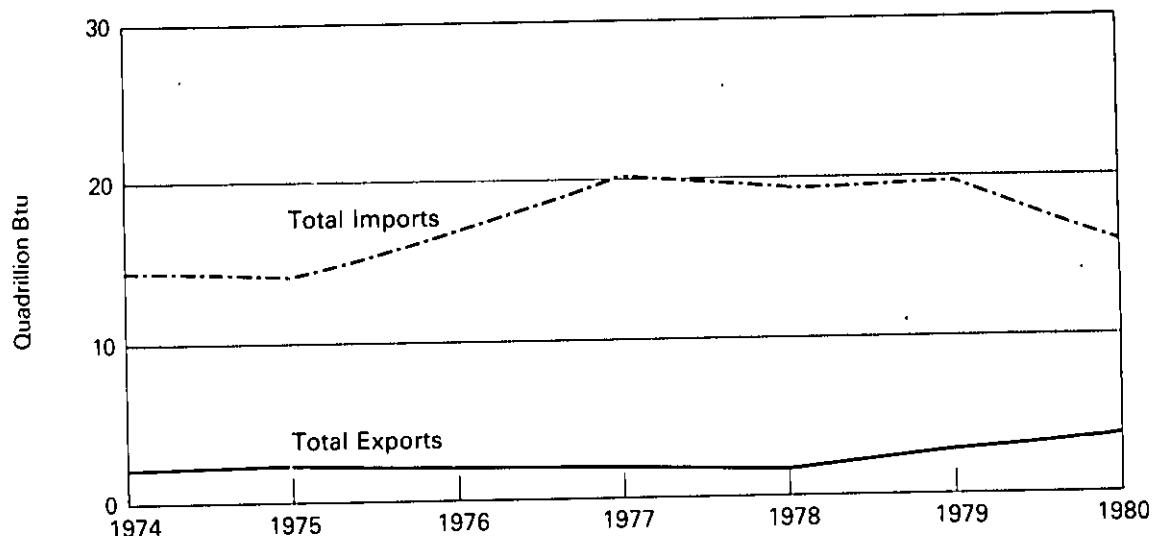
R = Revised data.

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

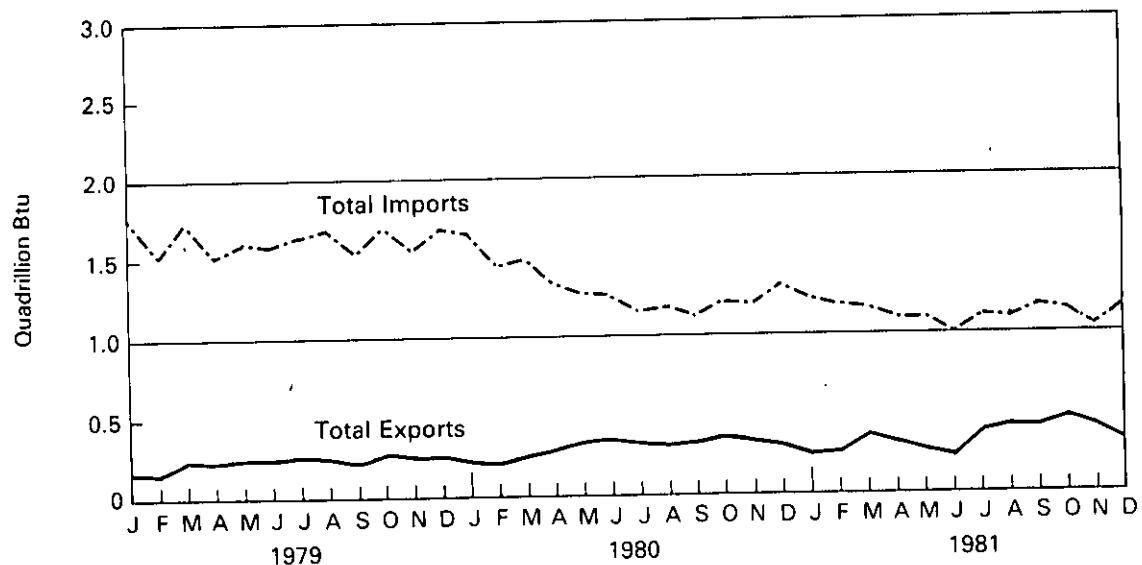
## Executive Summary

### Energy Imports and Exports

Yearly



Monthly



0105

## Executive Summary

### Merchandise Trade Value

|              | Exports         |           |         | Imports |           |         | Trade Balance |           |         |
|--------------|-----------------|-----------|---------|---------|-----------|---------|---------------|-----------|---------|
|              | Energy          | All Other | Total   | Energy  | All Other | Total   | Energy        | All Other | Total   |
|              |                 |           |         |         |           |         |               |           |         |
|              | Million dollars |           |         |         |           |         |               |           |         |
| 1973 TOTAL   | 1,671           | 69,202    | 70,873  | 8,173   | 61,659    | 69,832  | -6,502        | +7,543    | +1,041  |
| 1974 TOTAL   | 3,444           | 94,553    | 97,997  | 25,454  | 75,194    | 100,648 | -22,010       | +19,360   | -2,650  |
| 1975 TOTAL   | 4,470           | 103,119   | 107,589 | 26,476  | 70,094    | 96,570  | -22,006       | +33,025   | +11,019 |
| 1976 TOTAL   | 4,226           | 110,924   | 115,150 | 33,996  | 87,013    | 121,009 | -29,770       | +23,911   | -5,859  |
| 1977 TOTAL   | 4,184           | 116,966   | 121,150 | 44,537  | 103,148   | 147,685 | -40,353       | +13,818   | -26,535 |
| 1978 TOTAL   | 3,881           | 139,696   | 143,577 | 42,096  | 129,882   | 171,978 | -38,215       | +9,814    | -28,401 |
| 1979 TOTAL   | 5,621           | 176,030   | 181,651 | 59,998  | 146,258   | 206,256 | -54,377       | +29,772   | -24,605 |
| 1980 January | 619             | 16,801    | 17,419  | 7,118   | 14,024    | 21,142  | -6,499        | +2,776    | -3,723  |
| February     | 584             | 16,400    | 16,984  | 8,152   | 13,626    | 21,779  | -7,568        | +2,774    | -4,794  |
| March        | 636             | 17,629    | 18,265  | 7,564   | 13,384    | 20,947  | -6,928        | +4,246    | -2,682  |
| April        | 607             | 17,960    | 18,567  | 6,797   | 12,969    | 19,766  | -6,190        | +4,992    | -1,198  |
| May          | 660             | 16,987    | 17,647  | 7,150   | 13,437    | 20,587  | -6,490        | +3,549    | -2,941  |
| June         | 656             | 17,784    | 18,440  | 7,276   | 13,077    | 20,353  | -6,620        | +4,708    | -1,912  |
| July         | 695             | 17,572    | 18,267  | 5,986   | 13,153    | 19,139  | -5,291        | +4,419    | -872    |
| August       | 702             | 18,385    | 19,087  | 6,461   | 13,252    | 19,713  | -5,759        | +5,133    | -626    |
| September    | 710             | 18,119    | 18,828  | 6,278   | 13,662    | 19,941  | -5,568        | +4,456    | -1,112  |
| October      | 662             | 18,552    | 19,214  | 6,601   | 13,747    | 20,347  | -5,939        | +4,805    | -1,134  |
| November     | 709             | 18,006    | 18,715  | 6,128   | 13,732    | 19,860  | -5,419        | +4,274    | -1,145  |
| December     | 706             | 18,545    | 19,251  | 7,413   | 14,023    | 21,436  | -6,707        | +4,522    | -2,185  |
| TOTAL        | 7,982           | 212,644   | 220,626 | 82,924  | 161,947   | 244,871 | -74,942       | +50,698   | -24,244 |
| 1981 January | 806             | 18,019    | 18,825  | 8,014   | 15,180    | 23,194  | -7,208        | +2,838    | -4,370  |
| February     | 977             | 18,787    | 19,764  | 7,943   | 13,978    | 21,922  | -6,966        | +4,808    | -2,158  |
| March        | 951             | 20,484    | 21,434  | 6,476   | 14,473    | 20,949  | -5,525        | +6,010    | +485    |
| April        | 691             | 19,127    | 19,818  | 7,836   | 14,454    | 22,289  | -7,145        | +4,674    | -2,471  |
| May          | 566             | 18,304    | 18,869  | 6,078   | 15,232    | 21,310  | -5,512        | +3,071    | -2,441  |
| June         | 575             | 19,295    | 19,870  | 7,256   | 14,719    | 21,975  | -6,681        | +4,576    | -2,105  |
| July         | 869             | 18,395    | 19,264  | 5,692   | 14,115    | 19,807  | -4,823        | +4,281    | -542    |
| August       | 894             | 18,156    | 19,050  | 6,881   | 16,648    | 23,528  | -5,987        | +1,509    | -4,478  |
| September    | 947             | 18,708    | 19,655  | 6,558   | 14,671    | 21,229  | -5,611        | +4,037    | -1,574  |
| October      | 989             | 18,055    | 19,044  | 6,644   | 16,590    | 23,234  | -5,655        | +1,464    | -4,191  |
| November     | 960             | 18,158    | 19,118  | 6,613   | 15,909    | 22,522  | -5,653        | +2,249    | -3,404  |
| December     | 1,074           | 17,747    | 18,821  | 5,427   | 14,089    | 19,516  | -4,353        | +3,658    | -695    |
| TOTAL        | 10,299          | 223,233   | 233,532 | 81,418  | 180,057   | 261,475 | -71,119       | +43,175   | -27,945 |

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

Note: The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory which includes the 50 United States, the District of Columbia, and Puerto Rico. See Note at the end of this section.

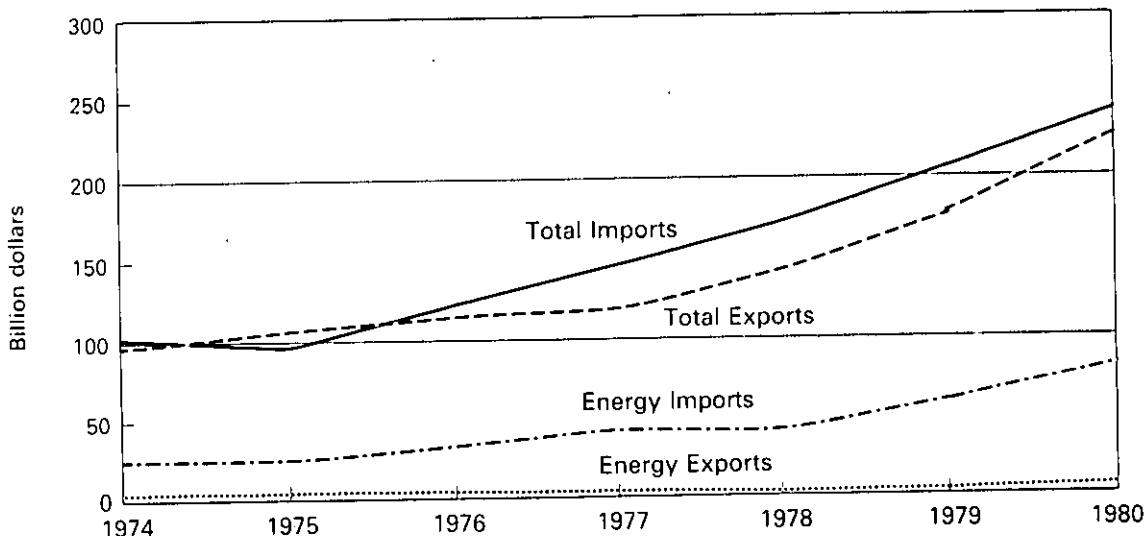
Sources: • 1973 through 1978: U.S. Department of Commerce, International Trade Administration, *Overseas Business Reports*, "United States Foreign Trade Annual", 1973-1979;

• 1979 forward: U.S. Department of Commerce, Bureau of the Census, "Summary of U.S. Export and Import Merchandise Trade," December 1980 issue for 1979 data and most recent monthly issue for 1980 and 1981.

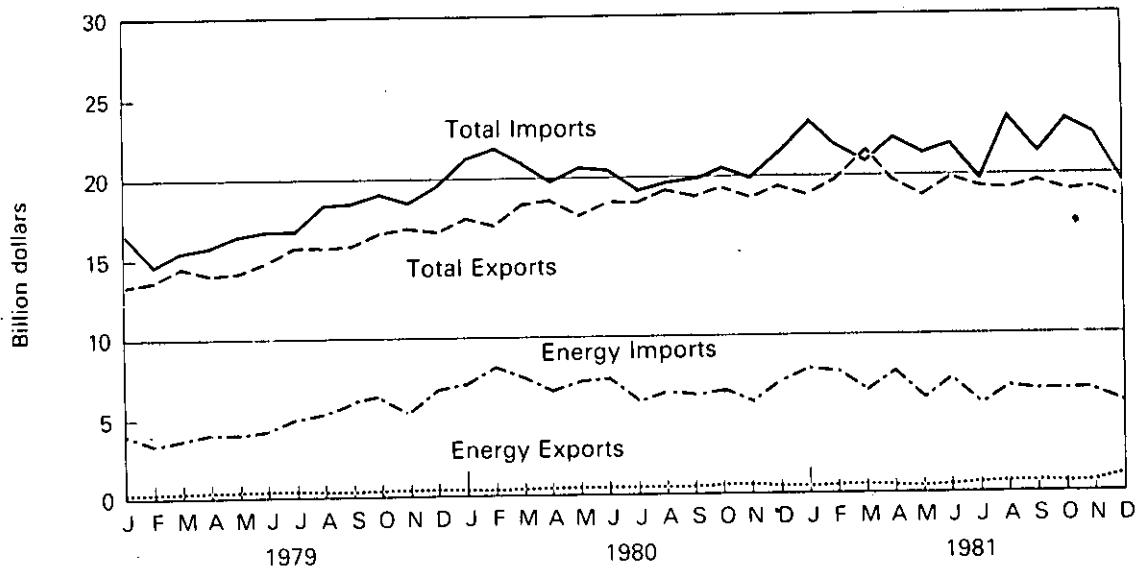
## Executive Summary

### Merchandise Trade Value

Yearly



Monthly



# Executive Summary

## Heating Degree-Days<sup>1</sup>

| Petroleum<br>Administration<br>For Defense (PAD)<br>Districts  | December 28 through January 31 |                      |                               |                |                      | Cumulative<br>July 1 through January 31 |                |                    |                |                 |
|--|--------------------------------|----------------------|-------------------------------|----------------|----------------------|---|----------------|--------------------|----------------|-----------------|
|  | 1981-82                        | 1980-81 <sup>2</sup> | Normal (1941-70) <sup>2</sup> | 1981-82        | 1980-81 <sup>2</sup> | Normal (1941-70) <sup>2</sup>           |                |                    |                |                 |
| PAD District I<br>New England<br>Conn., Maine, Mass.,<br>N.H., R.I., Vt.   | 1,219<br>1,537                 | 1,250<br>1,582       | (- 2.5)<br>(- 2.8)            | 1,047<br>1,344 | (16.4)<br>(14.4)     | 2,897<br>3,724                          | 2,982<br>3,942 | (- 2.9)<br>(- 5.5) | 2,595<br>3,412 | (11.6)<br>(9.1) |
| Middle Atlantic<br>Del., Md., N.J., N.Y.,<br>Pa.   | 1,427                          | 1,432                | (- 0.3)                       | 1,222          | (16.8)               | 3,388                                   | 3,482          | (- 2.7)            | 3,037          | (11.6)          |
| Lower Atlantic<br>Fla., Ga., N.C., S.C.,<br>Va., W. Va.  | 765                            | 830                  | (- 7.8)                       | 652            | (17.3)               | 1,795                                   | 1,809          | (- 0.8)            | 1,571          | (14.2)          |
| PAD District II<br>Ill., Ind., Iowa, Kans.,<br>Ky., Mich., Minn.,<br>Mo., Nebr., N. Dak.,<br>Ohio, Okla., S. Dak.,<br>Tenn., Wisc. | 1,627                          | 1,382                | (17.7)                        | 1,375          | (18.3)               | 3,803                                   | 3,616          | (5.2)              | 3,497          | (8.7)           |
| PAD District III<br>Ala., Ark., La., Miss.,<br>N. Mex., Tex.   | 650                            | 674                  | (- 3.6)                       | 644            | (1.0)                | 1,411                                   | 1,557          | (- 9.4)            | 1,446          | (- 2.4)         |
| PAD District IV<br>Colo., Idaho, Mont.,<br>Utah, Wyo.  | 1,380                          | 1,045                | (32.1)                        | 1,334          | (3.4)                | 3,386                                   | 3,149          | (7.5)              | 3,679          | (- 7.9)         |
| PAD District V<br>Ariz., Calif., Nev.,<br>Oreg., Wash.   | 590                            | 405                  | (45.7)                        | 597            | (- 1.2)              | 1,404                                   | 1,225          | (14.6)             | 1,608          | (- 12.7)        |
| <b>U.S. AVERAGE<sup>3</sup></b>  | <b>1,199</b>                   | <b>1,100</b>         | <b>(9.0)</b>                  | <b>1,050</b>   | <b>(14.3)</b>        | <b>2,817</b>                            | <b>2,776</b>   | <b>(1.5)</b>       | <b>2,641</b>   | <b>(6.7)</b>    |

<sup>1</sup> See Explanatory Note 6 for explanation of degree-days.

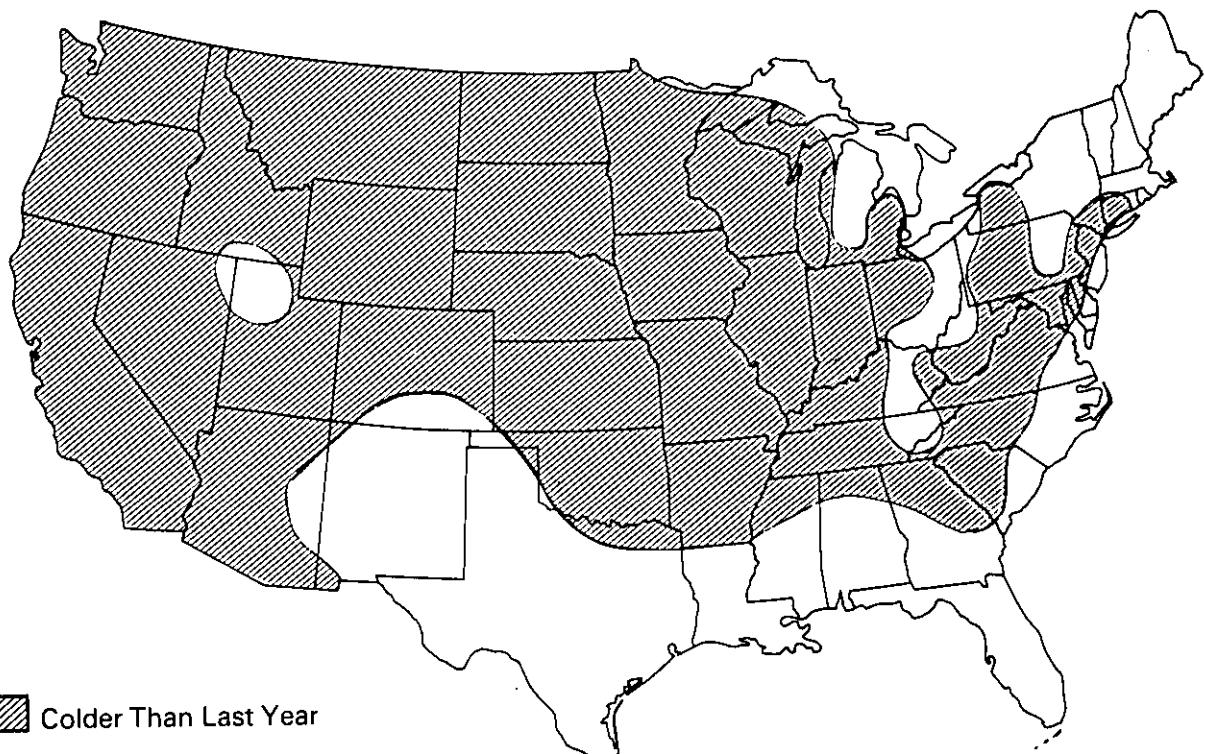
<sup>2</sup> Percentage change in parentheses.

<sup>3</sup> Excludes Alaska and Hawaii.

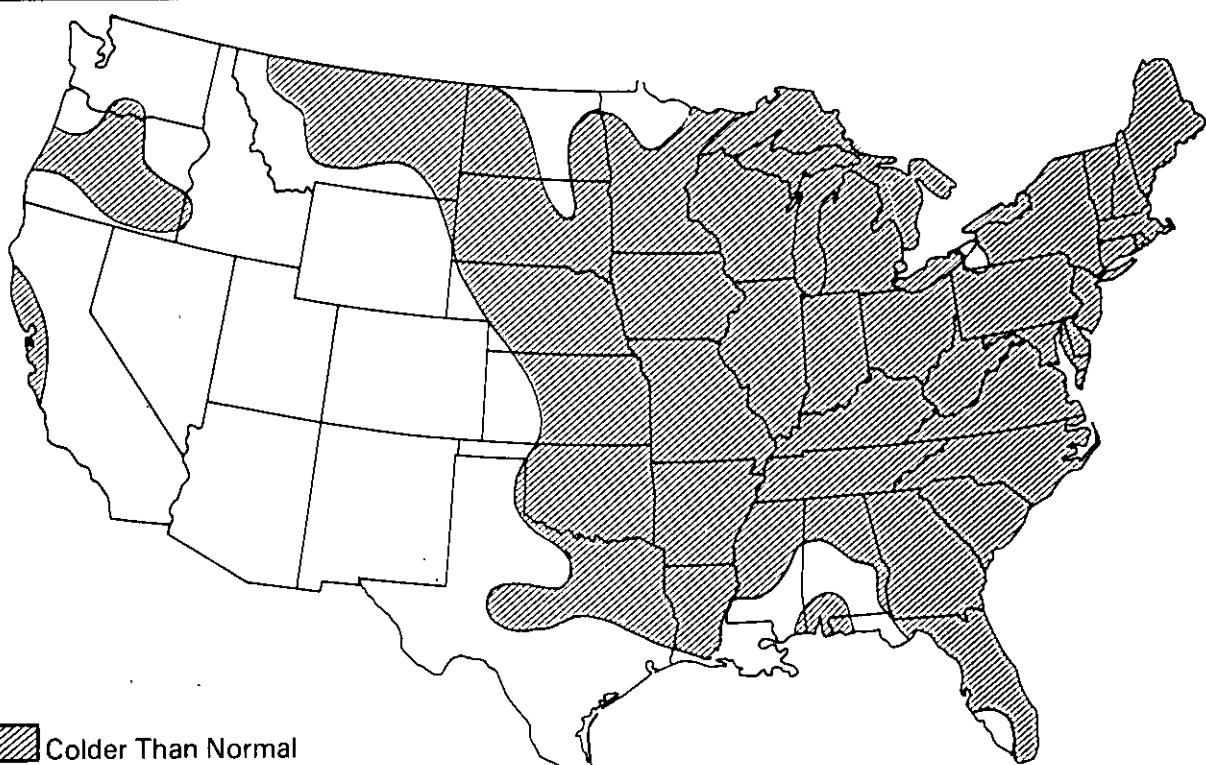
## **Executive Summary**

**Heating Degree-Days Accumulated from July 1 through January 31**

Departure from Last Year



Departure from Normal



**Colder Than Normal**

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

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## Executive Summary

### Energy Indicators—

| Energy Consumption per GNP Dollar |  |                                   |                                      |                           |                          | U.S. Dependence on Petroleum Imports <sup>1</sup> |                     |                                      |       |
|-----------------------------------|--|-----------------------------------|--------------------------------------|---------------------------|--------------------------|---|---------------------|--------------------------------------|-------|
|                                   | Energy Consumption per GNP Dollar <sup>2</sup> | Yearly Rate of Energy Consumption | Gross National Product (Annual rate) |                           | Direct Imports           |   |                     |                                      |       |
|                                   |  |                                   | Current Dollars                      | 1972 Dollars <sup>3</sup> | From Arab/OPEC Countries | From OPEC Countries                               | Total All Countries | Domestic Petroleum Products Supplied |       |
| <b>ANNUAL RATE</b>                |  | Quadrillion Btu                   | Trillion Dollars                     |                           | Million barrels per day  |   |                     |                                      |       |
| 1973                              | AVERAGE  | 59.4                              | 74.609                               | 1.326                     | 1.255                    | 0.92  | 2.99                | 6.26                                 | 17.31 |
| 1974                              | AVERAGE  | 58.3                              | 72.759                               | 1.434                     | 1.248                    | 0.75  | 3.28                | 6.11                                 | 16.65 |
| 1975                              | AVERAGE  | 57.3                              | 70.707                               | 1.549                     | 1.234                    | 1.38  | 3.60                | 6.06                                 | 16.32 |
| 1976                              | AVERAGE  | 57.3                              | 74.510                               | 1.718                     | 1.300                    | 2.42  | 5.07                | 7.31                                 | 17.46 |
| 1977                              | AVERAGE  | 55.6                              | 76.332                               | 1.918                     | 1.372                    | 3.19  | 6.19                | 8.81                                 | 18.43 |
| 1978                              | AVERAGE  | 54.4                              | 78.150                               | 2.156                     | 1.437                    | 2.96  | 5.75                | 8.36                                 | 18.85 |
| 1979                              | AVERAGE  | 53.2                              | 78.968                               | 2.414                     | 1.483                    | 3.06  | 5.64                | 8.46                                 | 18.51 |
| 1980                              | 1st Qtr  | 57.2                              | 85.857                               | 2.572                     | 1.502                    | 3.00  | 4.97                | 7.90                                 | 18.27 |
|                                   | 2nd Qtr  | 48.3                              | 70.630                               | 2.565                     | 1.463                    | 2.59  | 4.28                | 6.81                                 | 16.36 |
|                                   | 3rd Qtr  | 47.6                              | 70.025                               | 2.637                     | 1.472                    | 2.26  | 3.74                | 6.11                                 | 16.07 |
|                                   | 4th Qtr  | 52.7                              | 78.336                               | 2.731                     | 1.486                    | 2.33  | 4.03                | 6.52                                 | 17.33 |
|                                   | AVERAGE  | 51.5                              | 76.201                               | 2.626                     | 1.481                    | 2.54  | 4.25                | 6.83                                 | 17.01 |
| 1981                              | 1st Qtr  | 54.1                              | 82.044                               | 2.853                     | 1.516                    | 2.06  | 3.81                | 6.53                                 | 17.02 |
|                                   | 2nd Qtr  | 46.1                              | 69.651                               | 2.886                     | 1.510                    | 1.81  | 3.12                | 5.58                                 | 15.48 |
|                                   | 3rd Qtr  | 46.7                              | 70.604                               | 2.957                     | 1.513                    | 1.84  | 3.14                | 5.84                                 | 15.61 |

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Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Beginning in October 1977 Strategic Petroleum Reserve imports are included.

<sup>2</sup>Thousand Btu per 1972 constant dollar.

<sup>3</sup>Current dollars are converted to 1972 constant dollars by the formula:

Constant 1972 dollars = 100(Current dollars in year N/GNP implicit price deflator in year N).

The Gross National Product deflators (1972=100) were determined by the Department of Commerce, Bureau of Economic Analysis.

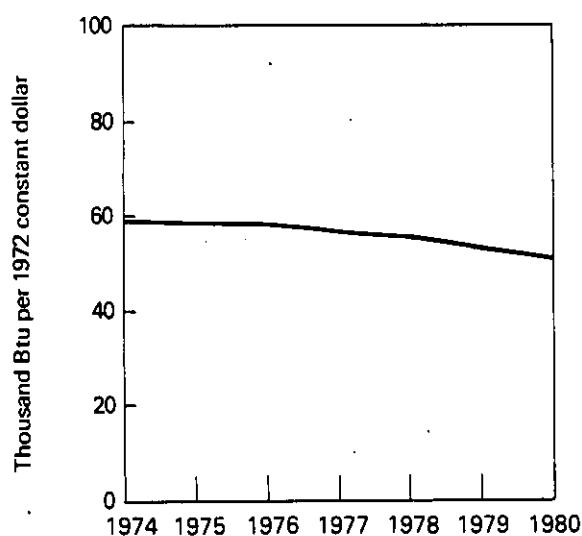
GNP rates are from the *Business Conditions Digest* published by the Bureau of Economic Analysis.

Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.

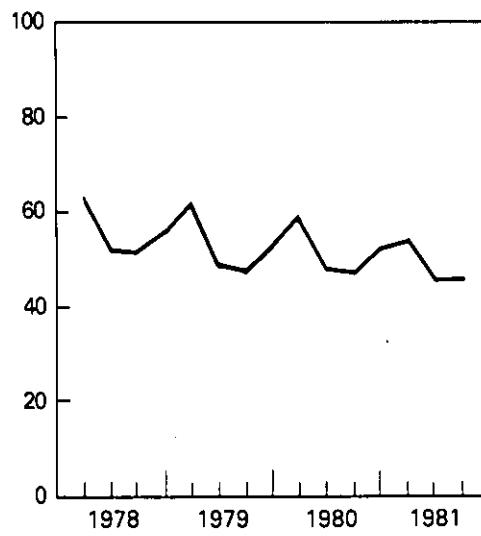
## Executive Summary

### Energy Consumption per GNP Dollar

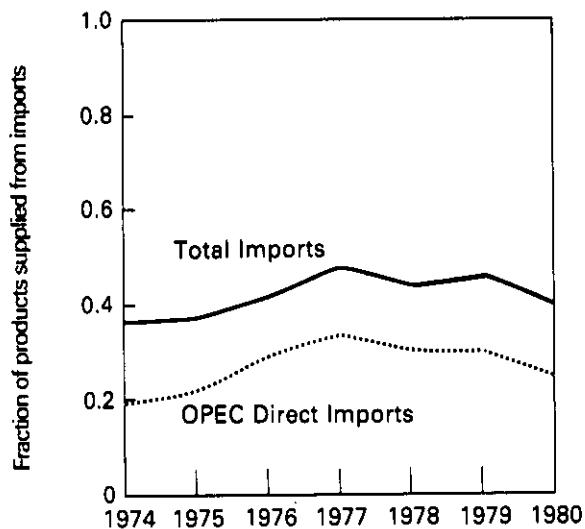
Yearly



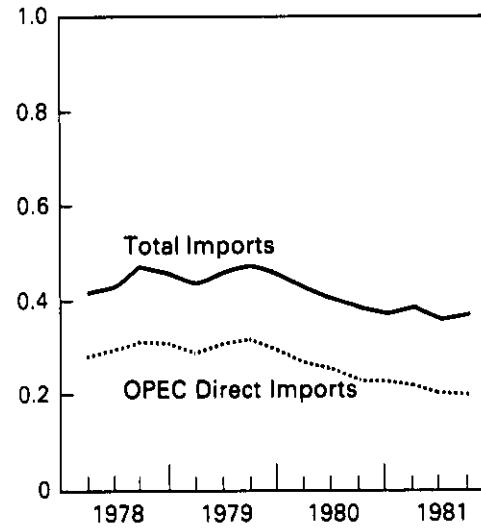
Quarterly



Yearly



Quarterly



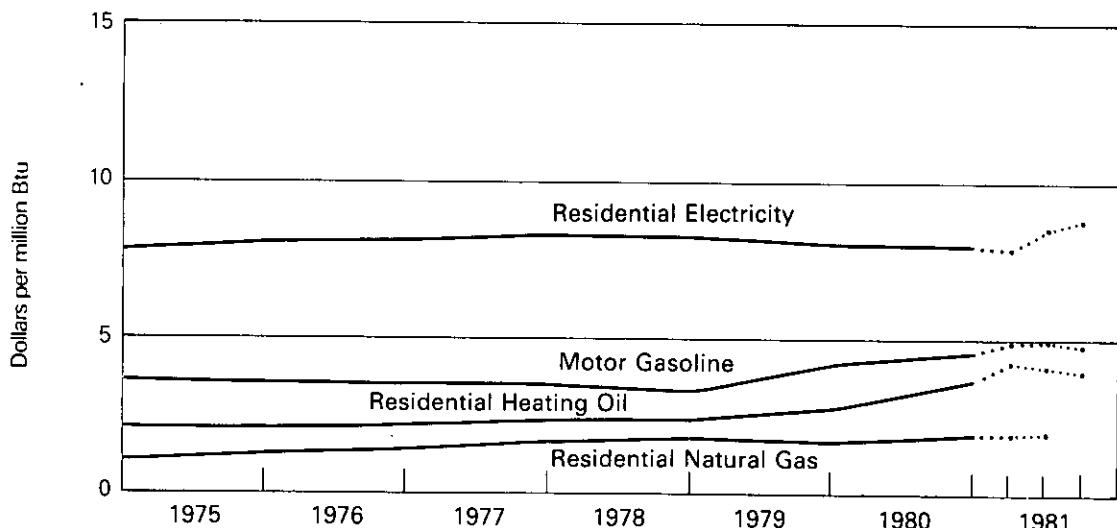
0108

## Executive Summary

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

|      |         | Leaded Regular Motor Gasoline |          | Residential Heating Oil |          | Residential Natural Gas |          | Residential Electricity |          |
|------|---------|-------------------------------|----------|-------------------------|----------|-------------------------|----------|-------------------------|----------|
|      |         | cent/gal                      | \$/MMBtu | cent/gal                | \$/MMBtu | cent/Mcf                | \$/MMBtu | cent/kWh                | \$/MMBtu |
| 1973 | AVERAGE | NA                            | NA       | NA                      | NA       | 121.2                   | 1.19     | 2.39                    | 7.00     |
| 1974 | AVERAGE | 45.1                          | 3.61     | 29.4                    | 2.12     | 121.4                   | 1.19     | 2.63                    | 7.71     |
| 1975 | AVERAGE | 44.1                          | 3.53     | 29.3                    | 2.11     | 132.8                   | 1.30     | 2.73                    | 8.00     |
| 1976 | AVERAGE | 43.4                          | 3.47     | 29.8                    | 2.15     | 145.4                   | 1.43     | 2.74                    | 8.03     |
| 1977 | AVERAGE | 42.9                          | 3.43     | 31.8                    | 2.29     | 162.2                   | 1.59     | 2.80                    | 8.21     |
| 1978 | AVERAGE | 40.1                          | 3.21     | 31.7                    | 2.29     | 164.4                   | 1.62     | 2.76                    | 8.09     |
| 1979 | AVERAGE | 49.4                          | 3.95     | 37.8                    | 2.73     | 171.5                   | 1.68     | 2.67                    | 7.83     |
| 1980 | 1st Qtr | 60.9                          | 4.87     | 49.8                    | 3.59     | 190.9                   | 1.88     | 2.53                    | 7.42     |
|      | 2nd Qtr | 62.1                          | 4.97     | 49.8                    | 3.59     | 197.2                   | 1.94     | 2.75                    | 8.06     |
|      | 3rd Qtr | 60.6                          | 4.85     | 49.2                    | 3.55     | 207.6                   | 2.04     | 2.86                    | 8.38     |
|      | 4th Qtr | 58.2                          | 4.65     | 50.7                    | 3.66     | 198.9                   | 1.95     | 2.73                    | 8.00     |
|      | AVERAGE | 60.5                          | 4.84     | 49.7                    | 3.58     | 198.8                   | 1.95     | 2.72                    | 7.97     |
| 1981 | 1st Qtr | 62.1                          | 4.97     | 57.0                    | 4.11     | 196.0                   | 1.93     | 2.65                    | 7.77     |
|      | 2nd Qtr | 62.1                          | 4.97     | 57.2                    | 4.12     | 207.5                   | 2.04     | 2.91                    | 8.53     |
|      | 3rd Qtr | 59.3                          | 4.74     | 54.4                    | 3.92     | NA                      | NA       | 2.99                    | 8.76     |

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



Geographic coverage: the 50 United States and District of Columbia.

NA=Not available.

Note: This page is updated every quarter, during the months of March, June, September, and December. In other months, data appearing elsewhere in this publication are more current.

Sources: • Motor Gasoline—Bureau of Labor Statistics.

• Heating Oil—1974 and 1975: Form CLC-92, "No. 2 Heating Oil Monthly Price Adjustment Report"; 1976 forward: FEA Form P112-M-1 and EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report."

• Natural Gas—1973 through 1979 annual numbers: Bureau of Mines and Energy Information Administration, Form 1340-A, "Supply and Disposition of Natural Gas to Non-Producing Distributors" and Form 1341-A, "Supply and Disposition of Natural Gas to Producers and Pipelines"; 1980 and 1981 quarterly numbers and 1980 annual numbers: Bureau of Labor Statistics.

• Electricity—1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

• Deflator—The Consumer Price Index.

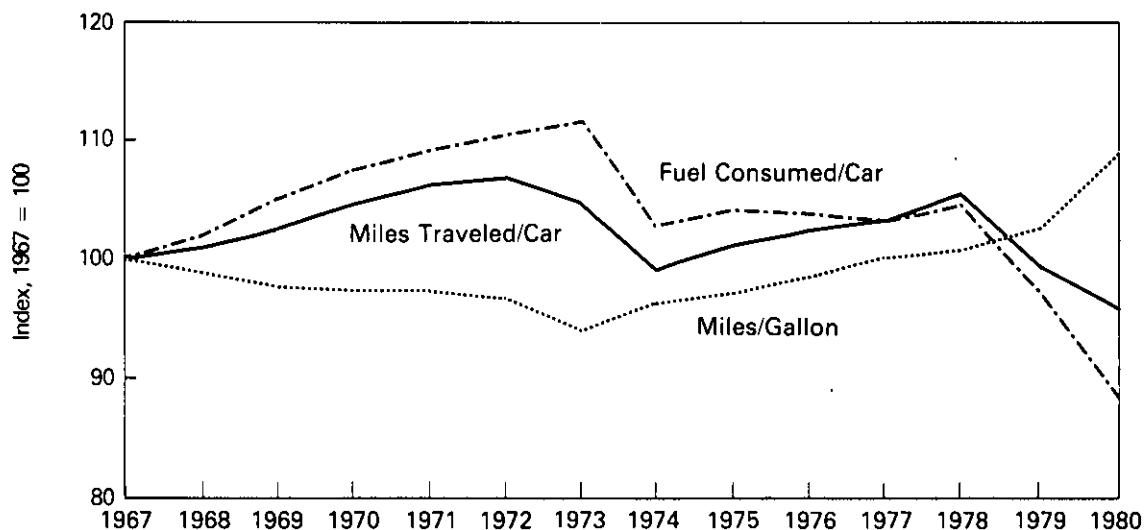
0109

## Executive Summary

### Energy Indicator—U.S. Passenger Car Efficiency

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

U.S. Passenger Car Efficiency Index



Geographic coverage: the 50 United States and District of Columbia.

Source: • U.S. Department of Transportation, Federal Highway Administration, Federal Highway Statistics Division, "Highway Statistics," Table VM-1.

## Note for the Executive Summary Section

**•Merchandise Trade Value Table:** The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory which includes the 50 United States, the District of Columbia, and Puerto Rico. The statistics exclude imports into Guam, American Samoa, and other U.S. possessions; as well as shipments between the United States and Puerto Rico, between the United States and U.S. possessions, and between any of these outlying areas. Also, U.S. Virgin Island trade with foreign countries is included in all import data and total export data beginning with January 1980 and is included in energy export data beginning with January 1981. Data presented are on a free alongside ship (f.a.s.) basis except for 1973 imports which are on a customs value basis (i.e., generally at prices in principal foreign markets). Monthly data are adjusted for seasonal and working-day variation; annual data are unadjusted. Statistics include nonmonetary gold. Statistics exclude Department of Defense (DOD) Military Program Grant-Aid shipments. "All Other" and "Total" columns include foreign exports (i.e., reexports). The "Energy" columns include mineral fuels, lubricants, and related material. "Imports" represent general imports (i.e., entries for immediate consumption, entries into Customs bonded warehouses, and entries for the Strategic Petroleum Reserve). "Trade Balance" is exports minus imports: positive indicates surplus trade value and negative indicates deficit trade value. The "All Other" columns are calculated by subtracting "energy" from "total." Totals may not equal sum of components due to independent rounding.

Part N

## Energy Consumption

Preliminary data indicate total U.S. energy consumption in 1981 dropped to 74.4 quadrillion Btu, about 2.5 percent below 1980 and a 5.8 percent decrease from the 1979 consumption level.

The Residential and Commercial Sector consumption was 26.4 quadrillion Btu in 1981, a 2.1 percent decrease from the amount consumed last year and 2.6 percent below the 1979 level. The Residential and Commercial Sector consumed 35.5 percent of the total consumption for 1981, about the same as the sector's percent share in 1980.

The Industrial Sector consumption was 29.3 quadrillion Btu in 1981, down 3.1 percent from 1980, and down 6.8 percent from the consumption level in 1979. The Industrial Sector consumed 39.3 percent

of the 1981 total, as compared to the 39.6 percent share in 1980.

The Transportation Sector consumption was 18.7 quadrillion Btu in 1981, down 2.1 percent from 1980 and down 8.7 percent from the consumption level in 1979. This sector consumed 25.1 percent of the 1981 total, as compared to a 25.0 percent share in 1980.

The Electric Utilities consumption was an estimated 24.8 quadrillion Btu of energy in 1981, about the same level as in the previous year, and 2.6 percent higher than the energy consumed in 1979. Coal contributed 51.0 percent of the energy consumed by Electric Utilities in 1981, while natural gas contributed 15.1 percent, petroleum 9.9 percent, hydroelectric power 11.7 percent, nuclear power 11.7 percent, and geothermal, wood and waste 0.5 percent.

**See energy consumption summaries for the months of November and December on page 28.**

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## Consumption

### Energy Consumption Summary for January through December 1981\* Quadrillion (10<sup>15</sup>) Btu

| Primary Energy Source        | Sector                     |               |                |                    | TOTAL         |
|------------------------------|----------------------------|---------------|----------------|--------------------|---------------|
|                              | Residential and Commercial | Industrial    | Transportation | Electric Utilities |               |
| Coal                         | 0.164                      | 3.248         | 0.000          | 12.666             | 16.122        |
| Natural Gas (dry)            | 7.390                      | 8.467         | 0.599          | 3.759              | 20.215        |
| Petroleum                    | 3.825                      | 7.813         | 18.018         | 2.466              | 32.122        |
| Hydroelectric                | 0.000                      | 0.033         | 0.000          | 2.904              | 2.937         |
| Nuclear                      | 0.000                      | 0.000         | 0.000          | 2.908              | 2.908         |
| Net Coke Imports             | 0.000                      | (0.014)       | 0.000          | 0.000              | (0.014)       |
| Other                        | 0.000                      | 0.000         | 0.000          | 0.128              | 0.128         |
| <b>TOTAL PRIMARY ENERGY</b>  | <b>11.379</b>              | <b>19.547</b> | <b>18.617</b>  | <b>24.830</b>      | <b>74.417</b> |
| Electricity Sales            | 4.375                      | 2.821         | 0.011          | (7.207)            |               |
| Net Energy Consumption       | 15.754                     | 22.368        | 18.628         |                    | 56.750        |
| Electrical Energy Losses     | 10.692                     | 6.901         | 0.026          | (17.547)           | 17.547        |
| <b>TOTAL ENERGY CONSUMED</b> | <b>26.446</b>              | <b>29.269</b> | <b>18.654</b>  |                    | <b>74.417</b> |

\* Preliminary data.  
Totals may not equal sum of components due to independent rounding and, in the case of coal, the use of preliminary conversion factors.

Consumption

02 02

## Consumption

### Consumption of Energy by End-Use Sector<sup>1</sup>

|                                     |              | Residential and Commercial | Industrial     | Transportation | Total Energy Consumed |
|-------------------------------------|--------------|----------------------------|----------------|----------------|-----------------------|
| Quadrillion (10 <sup>12</sup> ) Btu |              |                            |                |                |                       |
| 1973                                | TOTAL        | 26.615                     | 29.472         | 18.519         | 74.609                |
| 1974                                | TOTAL        | 25.981                     | 28.748         | 18.026         | 72.759                |
| 1975                                | TOTAL        | 26.015                     | 26.510         | 18.177         | 70.707                |
| 1976                                | TOTAL        | 27.217                     | 28.226         | 19.063         | 74.510                |
| 1977                                | TOTAL        | 27.568                     | 29.026         | 19.735         | 76.332                |
| 1978                                | TOTAL        | 28.217                     | 29.317         | 20.613         | 78.150                |
| 1979                                | TOTAL        | 27.144                     | 31.396         | 20.425         | 78.968                |
| 1980                                | January      | R2.870                     | R2.910         | R1.680         | R7.457                |
|                                     | February     | R2.817                     | 2.592          | R1.612         | 7.018                 |
|                                     | March        | 2.637                      | R2.635         | 1.635          | R6.905                |
|                                     | April        | R2.102                     | R2.355         | R1.582         | R6.031                |
|                                     | May          | R1.859                     | R2.421         | R1.572         | R5.847                |
|                                     | June         | R1.882                     | R2.304         | R1.515         | R5.705                |
|                                     | July         | R2.100                     | R2.272         | R1.580         | R5.964                |
|                                     | August       | 2.076                      | R2.219         | R1.544         | R5.852                |
|                                     | September    | R1.937                     | R2.346         | 1.515          | R5.806                |
|                                     | October      | R1.926                     | R2.643         | R1.612         | R6.182                |
|                                     | November     | R2.107                     | R2.675         | R1.507         | R6.289                |
|                                     | December     | R2.710                     | R2.835         | R1.698         | R7.244                |
|                                     | <b>TOTAL</b> | <b>R27.024</b>             | <b>R30.207</b> | <b>R19.052</b> | <b>R76.300</b>        |
| 1981                                | January      | 3.127                      | 2.598          | 1.700          | 7.426                 |
|                                     | February     | 2.684                      | 2.206          | 1.456          | 6.346                 |
|                                     | March        | 2.439                      | 2.458          | 1.561          | 6.458                 |
|                                     | April        | 1.976                      | 2.265          | 1.496          | 5.737                 |
|                                     | May          | 1.841                      | 2.419          | 1.522          | 5.786                 |
|                                     | June         | 1.912                      | 2.361          | 1.563          | 5.847                 |
|                                     | July         | 2.069                      | R2.434         | 1.590          | R6.104                |
|                                     | August       | R2.017                     | R2.419         | 1.546          | R5.990                |
|                                     | September    | R1.823                     | R2.360         | R1.510         | R5.696                |
|                                     | October      | R1.910                     | R2.551         | R1.562         | R6.027                |
|                                     | November     | 2.055                      | 2.499          | 1.503          | 6.058                 |
|                                     | December     | 2.593                      | 2.699          | 1.645          | 6.942                 |
|                                     | <b>TOTAL</b> | <b>26.446</b>              | <b>29.269</b>  | <b>18.654</b>  | <b>74.417</b>         |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>See Explanatory Note 5 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the Notes and Sources at the end of this section.

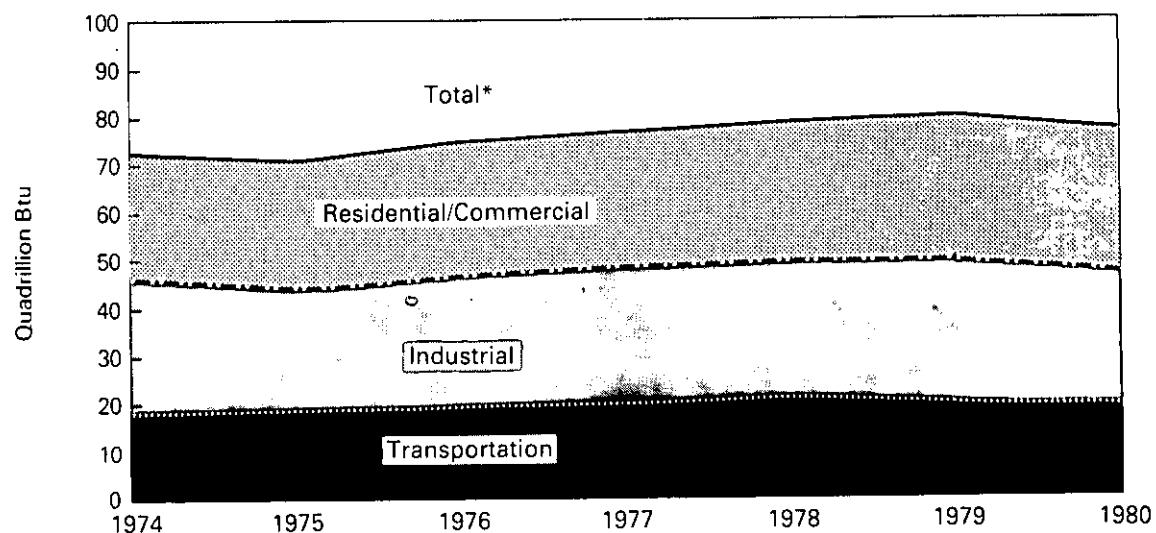
R = Revised data.

Source: •See Notes and Sources at the end of this section.

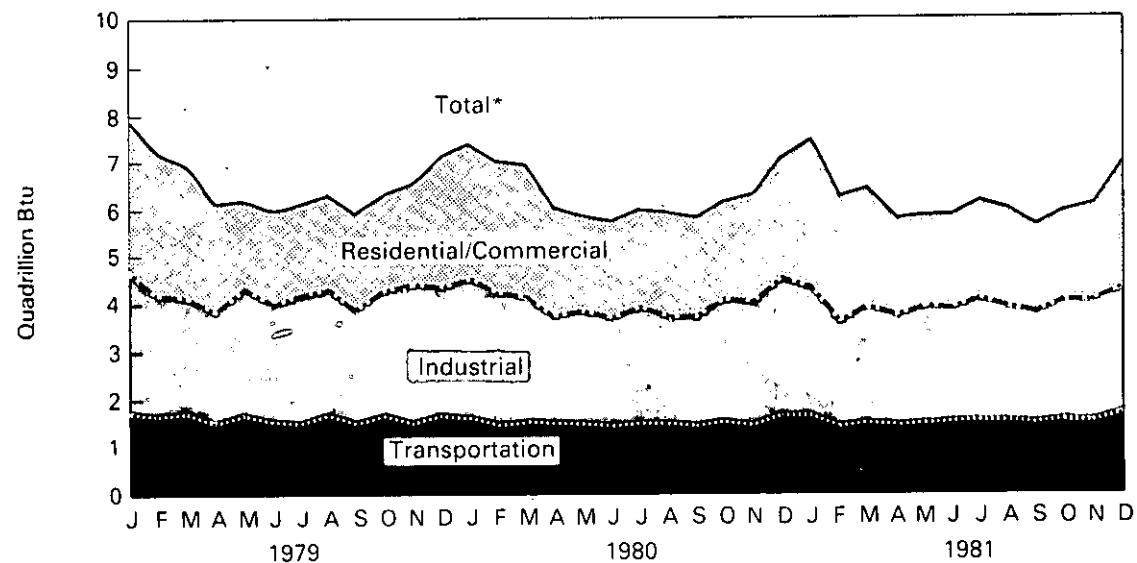
# Consumption

## Consumption of Energy by End-Use Sector

Yearly



Monthly



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

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Consumption

Consumption of Energy by the Residential and Commercial Sector<sup>1</sup>

|                                     |           | Natural Gas<br>(Dry) | Petroleum | Electricity Sales | Electrical Energy Losses <sup>2</sup> | Total Energy Consumed | Yearly Cumulative Energy Consumed |
|-------------------------------------|-----------|----------------------|-----------|-------------------|---------------------------------------|-----------------------|-----------------------------------|
| Quadrillion (10 <sup>12</sup> ) Btu |           |                      |           |                   |                                       |                       |                                   |
| 1973                                | TOTAL     | 0.291 ✓              | 7.626 ✓   | 6.741 R           | 3.495 ✓                               | 8.462 R               | 26.615 R                          |
| 1974                                | TOTAL     | 0.292 ✓              | 7.518 ✓   | 6.141 R           | 3.475 ✓                               | 8.556 R               | 25.981 R                          |
| 1975                                | TOTAL     | 0.238 ✓              | 7.581 ✓   | 5.792 R           | 3.588 R                               | 8.816 R               | 26.015 R                          |
| 1976                                | TOTAL     | 0.227 ✓              | 7.866 ✓   | 6.302 R           | 3.729 R                               | 9.093 R               | 27.217 R                          |
| 1977                                | TOTAL     | 0.225 ✓              | 7.461 ✓   | 6.245 R           | 3.936 R                               | 9.701 R               | 27.568 R                          |
| 1978                                | TOTAL     | 0.239 ✓              | 7.624 ✓   | 6.268 R           | 4.100 R                               | 9.986 R               | 28.217 R                          |
| 1979                                | TOTAL     | 0.210 ✓              | 7.891 ✓   | 4.725 R           | 4.184 ✓                               | 10.133 R              | 27.144 R                          |
| 1980                                | January   | 0.022                | 1.114     | 0.382             | 0.381                                 | R0.970                | R2.870                            |
|                                     | February  | 0.019                | 1.192     | R0.356            | 0.375                                 | R0.875                | R2.817                            |
|                                     | March     | 0.014                | 1.054     | R0.334            | 0.358                                 | 0.876                 | 2.637                             |
|                                     | April     | 0.015                | 0.717     | R0.292            | 0.319                                 | R0.759                | R2.102                            |
|                                     | May       | 0.009                | 0.450     | R0.314            | 0.298                                 | 0.787                 | R1.859                            |
|                                     | June      | 0.007                | 0.329     | R0.324            | 0.334                                 | 0.888                 | R1.882                            |
|                                     | July      | 0.009                | 0.259     | 0.337             | 0.410                                 | 1.085                 | R2.100                            |
|                                     | August    | 0.008                | 0.240     | 0.332             | 0.439                                 | 1.056                 | R16.267                           |
|                                     | September | 0.011                | 0.252     | R0.352            | 0.410                                 | 0.912                 | R1.937                            |
|                                     | October   | 0.015                | 0.370     | 0.374             | 0.343                                 | 0.824                 | R1.926                            |
|                                     | November  | 0.016                | 0.640     | R0.328            | 0.322                                 | R0.802                | R2.107                            |
|                                     | December  | 0.020                | 1.026     | R0.380            | 0.364                                 | R0.919                | R2.710                            |
|                                     | TOTAL     | 0.166                | 7.645     | R4.108            | 4.355                                 | R10.752               | R27.024                           |
| 1981                                | January   | 0.022                | 1.291     | 0.398             | 0.413                                 | 1.003                 | 3.127                             |
|                                     | February  | 0.014                | 1.139     | 0.310             | 0.379                                 | 0.842                 | 2.684                             |
|                                     | March     | 0.012                | 0.928     | 0.306             | 0.344                                 | 0.848                 | 2.439                             |
|                                     | April     | 0.014                | 0.605     | 0.282             | 0.315                                 | 0.761                 | 1.976                             |
|                                     | May       | 0.009                | 0.429     | 0.287             | 0.313                                 | 0.802                 | 1.841                             |
|                                     | June      | 0.008                | 0.302     | 0.308             | 0.355                                 | 0.939                 | 1.912                             |
|                                     | July      | R0.011               | 0.251     | 0.319             | 0.420                                 | 1.069                 | 2.069                             |
|                                     | August    | R0.010               | 0.243     | 0.319             | 0.421                                 | 1.024                 | R2.017                            |
|                                     | September | R0.013 ✓             | 0.253 ✓   | R0.314 R          | 0.383 ✓                               | R0.859                | R18.065                           |
|                                     | October   | 0.014                | 0.399 R   | R0.344            | 0.339                                 | R0.814                | R1.823                            |
|                                     | November  | 0.015 ✓              | 0.595 R   | 0.307 R           | 0.327 ✓                               | 0.810 R               | R1.910                            |
|                                     | December  | 0.021 R              | 0.955 R   | 0.329 R           | 0.368 ✓                               | 0.921 R               | 2.055 R                           |
|                                     | TOTAL     | 0.164 R              | 7.390 R   | 3.825 R           | 4.375 ✓                               | 10.692 R              | 23.853 R                          |
|                                     |           |                      |           |                   |                                       |                       | 26.446 R                          |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.

<sup>2</sup>Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.

R=Revised data.

Source: • See Notes and Sources at the end of this section.

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## Consumption

### Consumption of Energy by the Industrial Sector<sup>1</sup>

|                                     |           | Coal    | Natural Gas (Dry) | Petroleum | Hydro-electric | Net Coke Imports <sup>2</sup> | Electricity Sales | Electrical Energy Losses <sup>3</sup> | Total Energy Consumed | Yearly Cumulative Energy Consumed |
|-------------------------------------|-----------|---------|-------------------|-----------|----------------|-------------------------------|-------------------|---------------------------------------|-----------------------|-----------------------------------|
| Quadrillion (10 <sup>12</sup> ) Btu |           |         |                   |           |                |                               |                   |                                       |                       |                                   |
| 1973                                | TOTAL     | 4.349 ✓ | 10.395 R          | 6.683 R   | 0.035 ✓        | (0.008) ✓                     | 2.341 ✓           | 5.678 R                               | 29.472 R              |                                   |
| 1974                                | TOTAL     | 4.048 ✓ | 10.010 R          | 6.506 R   | 0.033 ✓        | 0.059 ✓                       | 2.337 ✓           | 5.755 R                               | 28.748 R              |                                   |
| 1975                                | TOTAL     | 3.797 ✓ | 8.533 R           | 6.160 R   | 0.032 ✓        | 0.014 ✓                       | 2.304 R           | 5.689 R                               | 26.510 R              |                                   |
| 1976                                | TOTAL     | 3.786 ✓ | 8.769 R           | 6.951 R   | 0.033 ✓        | 0.000 ✓                       | 2.525 R           | 6.163 R                               | 28.226 R              |                                   |
| 1977                                | TOTAL     | 3.498 ✓ | 8.643 R           | 7.692 R   | 0.033 ✓        | 0.015 ✓                       | 2.635 R           | 6.510 R                               | 29.026 R              |                                   |
| 1978                                | TOTAL     | 3.372 ✓ | 8.540 R           | 7.840 R   | 0.032 ✓        | 0.131 ✓                       | 2.732 R           | 6.671 R                               | 29.317 R              |                                   |
| 1979                                | TOTAL     | 3.636 ✓ | 8.554 R           | 9.263 R   | 0.034 ✓        | 0.066 ✓                       | 2.873 ✓           | 6.970 R                               | 31.396 R              |                                   |
| 1980                                | January   | 0.319   | 0.858             | R0.910    | 0.003          | 0.003                         | 0.230             | R0.586                                | R2.910                | R2.910                            |
|                                     | February  | 0.296   | 0.708             | 0.807     | 0.003          | (0.001)                       | 0.234             | 0.545                                 | 2.592                 | R5.502                            |
|                                     | March     | 0.302   | 0.733             | R0.789    | 0.003          | (0.003)                       | 0.236             | 0.576                                 | R2.635                | R8.137                            |
|                                     | April     | 0.295   | 0.572             | R0.707    | 0.003          | (0.005)                       | 0.232             | 0.551                                 | R2.355                | R10.492                           |
|                                     | May       | 0.286   | 0.602             | R0.700    | 0.003          | (0.006)                       | 0.229             | 0.606                                 | R2.421                | R12.913                           |
|                                     | June      | 0.260   | 0.565             | R0.647    | 0.003          | (0.004)                       | 0.228             | 0.605                                 | R2.304                | R15.217                           |
|                                     | July      | 0.237   | 0.597             | R0.624    | 0.003          | (0.004)                       | 0.224             | 0.592                                 | R2.272                | R17.488                           |
|                                     | August    | 0.239   | 0.577             | R0.621    | 0.002          | (0.003)                       | 0.230             | 0.553                                 | R2.219                | R19.708                           |
|                                     | September | 0.233   | 0.667             | R0.683    | 0.002          | (0.004)                       | 0.237             | 0.527                                 | R2.346                | R22.053                           |
|                                     | October   | 0.262   | 0.847             | R0.732    | 0.002          | (0.006)                       | 0.237             | 0.570                                 | R2.643                | R24.696                           |
|                                     | November  | 0.272   | 0.863             | R0.734    | 0.002          | (0.002)                       | 0.231             | R0.575                                | R2.675                | R27.372                           |
|                                     | December  | 0.296   | 0.861             | R0.853    | 0.002          | (0.001)                       | 0.234             | R0.590                                | R2.835                | R30.207                           |
|                                     | TOTAL     | 3.297 R | 8.451 R           | R8.806 R  | 0.033 ✓        | (0.037) ✓                     | 2.781 ✓           | R6.875 R                              | R30.207 R             |                                   |
| 1981                                | January   | 0.310   | 0.706             | 0.794     | 0.003          | 0.000                         | 0.229             | 0.557                                 | 2.598                 | 2.598                             |
|                                     | February  | 0.287   | 0.512             | 0.665     | 0.003          | (0.001)                       | 0.230             | 0.511                                 | 2.206                 | 4.804                             |
|                                     | March     | 0.290   | 0.679             | 0.678     | 0.003          | (0.003)                       | 0.234             | 0.576                                 | 2.458                 | 7.262                             |
|                                     | April     | 0.263   | 0.597             | 0.609     | 0.003          | (0.001)                       | 0.232             | 0.562                                 | 2.265                 | 9.527                             |
|                                     | May       | 0.241   | 0.692             | 0.646     | 0.003          | 0.000                         | 0.235             | 0.602                                 | 2.419                 | 11.946                            |
|                                     | June      | 0.234   | 0.623             | 0.614     | 0.003          | (0.004)                       | 0.244             | 0.646                                 | 2.361                 | 14.307                            |
|                                     | July      | R0.273  | 0.681             | 0.609     | 0.003          | 0.000                         | 0.245             | 0.623                                 | R2.434                | R16.741                           |
|                                     | August    | R0.277  | 0.709             | 0.587     | 0.002          | 0.000                         | 0.246             | 0.598                                 | R2.419                | R19.160                           |
|                                     | September | R0.269  | R0.698            | R0.608    | 0.002          | (0.002)                       | 0.242             | R0.542                                | R2.360                | R21.520                           |
|                                     | October   | 0.262   | 0.836             | R0.651    | 0.002          | (0.003)                       | 0.236             | R0.567                                | R2.551                | R24.070                           |
|                                     | November  | 0.275   | 0.832             | 0.604     | [0.002]        | 0.000                         | 0.226             | 0.560                                 | 2.499                 | 26.570                            |
|                                     | December  | 0.268   | 0.902             | 0.748     | 0.002          | 0.000                         | 0.222             | 0.556                                 | 2.699                 | 29.269                            |
|                                     | TOTAL     | 3.248 R | 8.467 R           | 7.813 R   | 0.033 ✓        | (0.014) R                     | 2.821 ✓           | 6.901 R                               | 29.269 R              |                                   |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.

<sup>2</sup>Net imports equals imports minus exports. Parentheses indicate exports are greater than imports.

<sup>3</sup>Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.

R = Revised data.

Source: \*See Notes and Sources at the end of this section.

## Consumption

### Consumption of Energy by the Transportation Sector<sup>1</sup>

|                                     | Coal    | Natural Gas (Dry) | Petroleum | Electricity Sales | Electrical Energy Losses <sup>2</sup> | Total Energy Consumed | Yearly Cumulative Energy Consumed |
|-------------------------------------|---------|-------------------|-----------|-------------------|---------------------------------------|-----------------------|-----------------------------------|
| Quadrillion (10 <sup>15</sup> ) Btu |         |                   |           |                   |                                       |                       |                                   |
| 1973 TOTAL                          | 0.003 ✓ | 0.743 ✓           | 17.745 ✓  | 0.009 ✓           | 0.020 R                               | 18.519 R              |                                   |
| 1974 TOTAL                          | 0.002 ✓ | 0.685 ✓           | 17.309 R  | 0.009 ✓           | 0.021 R                               | 18.026 R              |                                   |
| 1975 TOTAL                          | 0.001 ✓ | 0.595 ✓           | 17.547 ✓  | 0.010 ✓           | 0.024 R                               | 18.177 ✓              |                                   |
| 1976 TOTAL                          | (*) ✓   | 0.559 ✓           | 18.469 ✓  | 0.010 ✓           | 0.025 ✓                               | 19.063 R              |                                   |
| 1977 TOTAL                          | (*) ✓   | 0.543 ✓           | 19.157 ✓  | 0.010 ✓           | 0.024 R                               | 19.735 R              |                                   |
| 1978 TOTAL                          | (*) ✓   | 0.539             | 20.044 ✓  | 0.009 ✓           | 0.021 R                               | 20.613 R              |                                   |
| 1979 TOTAL                          | (*)     | 0.612 ✓           | 19.778 R  | 0.010 ✓           | 0.024 R                               | 20.425 R              |                                   |
| 1980 January                        | (*)     | 0.069             | R1.608    | 0.001             | 0.002                                 | R1.680                | R1.680                            |
| February                            | (*)     | 0.066             | R1.543    | 0.001             | 0.002                                 | R1.612                | R3.292                            |
| March                               | (*)     | 0.063             | 1.569     | 0.001             | 0.002                                 | 1.635                 | R4.927                            |
| April                               | (*)     | 0.047             | R1.532    | 0.001             | 0.002                                 | R1.582                | R6.509                            |
| May                                 | (*)     | 0.041             | R1.528    | 0.001             | 0.002                                 | R1.572                | R8.082                            |
| June                                | (*)     | 0.038             | R1.474    | 0.001             | 0.002                                 | R1.515                | R9.597                            |
| July                                | (*)     | 0.039             | R1.537    | 0.001             | 0.002                                 | R1.580                | R11.177                           |
| August                              | (*)     | 0.038             | 1.503     | 0.001             | 0.002                                 | R1.544                | R12.720                           |
| September                           | (*)     | 0.039             | 1.473     | 0.001             | 0.002                                 | 1.515                 | R14.235                           |
| October                             | (*)     | 0.047             | R1.562    | 0.001             | 0.002                                 | R1.612                | R15.847                           |
| November                            | (*)     | 0.054             | R1.450    | 0.001             | 0.002                                 | R1.507                | R17.354                           |
| December                            | (*)     | 0.065             | R1.630    | 0.001             | 0.002                                 | R1.698                | R19.052                           |
| TOTAL                               | (*)     | 0.607 R           | R18.409 R | 0.011 -           | 0.025 R                               | R19.052 R             |                                   |
| 1981 January                        | (*)     | 0.068             | 1.628     | 0.001             | 0.002                                 | 1.700                 | 1.700                             |
| February                            | (*)     | 0.057             | 1.395     | 0.001             | 0.002                                 | 1.456                 | 3.156                             |
| March                               | (*)     | 0.058             | 1.500     | 0.001             | 0.002                                 | 1.561                 | 4.716                             |
| April                               | (*)     | 0.046             | 1.448     | 0.001             | 0.002                                 | 1.496                 | 6.213                             |
| May                                 | (*)     | 0.044             | 1.475     | 0.001             | 0.002                                 | 1.522                 | 7.735                             |
| June                                | (*)     | 0.040             | 1.520     | 0.001             | 0.002                                 | 1.563                 | 9.298                             |
| July                                | (*)     | 0.041             | 1.546     | 0.001             | 0.002                                 | 1.590                 | 10.888                            |
| August                              | (*)     | 0.041             | 1.502     | 0.001             | 0.002                                 | 1.546                 | 12.435                            |
| September                           | (*)     | R0.039            | R1.467    | 0.001             | 0.002                                 | R1.510                | R13.944                           |
| October                             | (*)     | 0.047             | R1.512    | 0.001             | 0.002                                 | R1.562                | R15.506                           |
| November                            | (*)     | 0.052 R           | 1.448 R   | 0.001 -           | 0.002 -                               | 1.503 R               | 17.009 R                          |
| December                            | (*)     | 0.064 R           | 1.577 R   | 0.001 -           | 0.002 -                               | R1.645                | R18.654                           |
| TOTAL                               | (*)     | 0.599 R           | 18.018 R  | 0.011 -           | 0.026 R                               | 18.654 R              |                                   |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. Notes on the methodology used for sector calculations are provided in the Notes and Sources at the end of this section.

<sup>2</sup>Proportion of total electrical energy losses incurred in the generation and transmission of electricity plus plant use and unaccounted for that are attributed to this sector.

<sup>a</sup>Since 1976 the amount of coal consumed by the Transportation Sector has been negligible.

R = Revised data.

Source: •See Notes and Sources at the end of this section.

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## Consumption

### Consumption of Energy by the Electric Utilities

|                                     | Coal <sup>1</sup> | Natural Gas (Dry) | Petro-leum <sup>2</sup> | Hydro-electric power <sup>3</sup> | Nuclear Electric Power | Other <sup>4</sup> | Total Energy Consumed | Yearly Cumulative Energy Consumed |
|-------------------------------------|-------------------|-------------------|-------------------------|-----------------------------------|------------------------|--------------------|-----------------------|-----------------------------------|
| Quadrillion (10 <sup>16</sup> ) Btu |                   |                   |                         |                                   |                        |                    |                       |                                   |
| 1973 TOTAL                          | 8.658 ✓           | 3.748 ✓           | 3.671 ✓                 | 2.975 ✓                           | 0.910 ✓                | 0.046 ✓            | 20.008 ✓              |                                   |
| 1974 TOTAL                          | 8.535 ✓           | 3.519 ✓           | 3.499 ✓                 | 3.276 ✓                           | 1.272 ✓                | 0.056 ✓            | 20.156 ✓              |                                   |
| 1975 TOTAL                          | 8.786 ✓           | 3.240 ✓           | 3.231 ✓                 | 3.187 ✓                           | 1.900 ✓                | 0.072 ✓            | 20.416 ✓              |                                   |
| 1976 TOTAL                          | 9.720 ✓           | 3.152 ✓           | 3.454 ✓                 | 3.032 ✓                           | 2.111 ✓                | 0.081 ✓            | 21.549 ✓              |                                   |
| 1977 TOTAL                          | 10.243 ✓          | 3.284 ✓           | 4.028 ✓                 | 2.482 ✓                           | 2.702 ✓                | 0.082 ✓            | 22.821 ✓              |                                   |
| 1978 TOTAL                          | 10.236 ✓          | 3.297 ✓           | 3.813 ✓                 | 3.132 R                           | 2.977 R                | 0.068 ✓            | 23.523 R              |                                   |
| 1979 TOTAL                          | 11.264 ✓          | 3.609 ✓           | 3.357 ✓                 | 3.132 R                           | 2.748 R                | 0.089 ✓            | 24.199 R              |                                   |
| 1980 January                        | 1.073             | 0.285             | R0.311                  | 0.282                             | 0.213                  | 0.008              | R2.171                | R2.171                            |
| February                            | 1.012             | 0.272             | R0.293                  | 0.240                             | 0.208                  | 0.008              | R2.032                | R4.203                            |
| March                               | 0.995             | 0.292             | R0.267                  | 0.272                             | 0.216                  | 0.008              | R2.050                | R6.252                            |
| April                               | 0.867             | 0.264             | R0.236                  | 0.286                             | 0.202                  | 0.008              | R1.864                | R8.116                            |
| May                                 | 0.883             | 0.290             | 0.223                   | 0.319                             | 0.198                  | 0.010              | 1.924                 | R10.040                           |
| June                                | 0.976             | 0.347             | 0.223                   | 0.306                             | 0.197                  | 0.009              | R2.058                | R12.098                           |
| July                                | 1.143             | 0.433             | 0.228                   | 0.273                             | 0.226                  | 0.010              | R2.314                | R14.412                           |
| August                              | 1.134             | 0.418             | 0.226                   | 0.231                             | 0.262                  | 0.011              | 2.282                 | R16.694                           |
| September                           | 1.021             | 0.368             | 0.228                   | 0.210                             | 0.254                  | 0.010              | 2.091                 | R18.784                           |
| October                             | 0.961             | 0.310             | 0.226                   | 0.204                             | 0.264                  | 0.011              | 1.976                 | R20.761                           |
| November                            | 0.974             | 0.263             | R0.241                  | 0.218                             | 0.226                  | 0.011              | R1.932                | R22.693                           |
| December                            | 1.090             | 0.249             | R0.272                  | 0.251                             | 0.238                  | 0.011              | R2.111                | R24.804                           |
| TOTAL                               | 12.127 R          | 3.792 R           | R2.973 R                | 3.092 R                           | 2.704 R                | 0.114 ✓            | R24.804 ✓             |                                   |
| 1981 January                        | 1.158             | 0.239             | 0.294                   | 0.251                             | 0.252                  | 0.011              | 2.205                 | 2.205                             |
| February                            | 1.021             | 0.231             | 0.234                   | 0.237                             | 0.233                  | 0.010              | 1.965                 | 4.170                             |
| March                               | 1.031             | 0.281             | 0.213-                  | 0.233                             | 0.237                  | 0.011              | 2.006                 | 6.176                             |
| April                               | 0.930             | 0.296             | 0.180                   | 0.234                             | 0.222                  | 0.010              | 1.873                 | 8.049                             |
| May                                 | 0.959             | 0.324             | 0.180                   | 0.269                             | 0.212                  | 0.010              | 1.955                 | 10.004                            |
| June                                | 1.065             | 0.399             | 0.195                   | 0.293                             | 0.228                  | 0.010              | 2.189                 | 12.192                            |
| July                                | 1.196             | 0.422             | 0.202                   | 0.280                             | 0.249                  | 0.011              | 2.360                 | 14.553                            |
| August                              | 1.157             | 0.402             | 0.187                   | 0.244                             | 0.290                  | 0.011              | 2.292                 | 16.844                            |
| September                           | 1.033             | 0.335             | R0.185                  | 0.204                             | 0.263                  | 0.011              | R2.030                | R18.874                           |
| October                             | 1.018 ✓           | 0.311 R           | R0.191 R                | 0.207 R                           | 0.221 R                | 0.011 ✓            | R1.960                | R20.833                           |
| November                            | 1.001 ✓           | 0.267 R           | 0.187 R                 | 0.216 R                           | 0.245 R                | 0.010 ✓            | 1.926                 | 22.759                            |
| December                            | 1.097 R           | 0.254 R           | 0.218 R                 | 0.236 R                           | 0.256 R                | 0.011 R            | 2.071                 | 24.830                            |
| TOTAL                               | 12.666 R          | 3.759 R           | 2.466 R                 | 2.904 R                           | 2.908 R                | 0.128 R            | 24.830 R              |                                   |

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

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

<sup>2</sup>Based on deliveries to utilities.

<sup>3</sup>Includes net imports of electricity.

<sup>4</sup>Includes geothermal power and electricity produced from wood and waste.

R=Revised data.

Source: \*See Notes and Sources at the end of this section.

## Consumption

### Energy Consumption Summary for November 1981 Quadrillion (10<sup>15</sup>) Btu

| Primary Energy Source        | Sector                     |              |                |                    | TOTAL        |
|------------------------------|----------------------------|--------------|----------------|--------------------|--------------|
|                              | Residential and Commercial | Industrial   | Transportation | Electric Utilities |              |
| Coal                         | 0.015                      | 0.275        | 0.000          | 1.001              | 1.292        |
| Natural Gas (dry)            | 0.595                      | 0.832        | 0.052          | 0.267              | 1.746        |
| Petroleum                    | 0.307                      | 0.604        | 1.448          | 0.187              | 2.547        |
| Hydroelectric                | 0.000                      | 0.002        | 0.000          | 0.216              | 0.218        |
| Nuclear                      | 0.000                      | 0.000        | 0.000          | 0.245              | 0.245        |
| Net Coke Imports             | 0.000                      | 0.000        | 0.000          | 0.000              | (0.000)      |
| Other                        | 0.000                      | 0.000        | 0.000          | 0.010              | 0.010        |
| <b>TOTAL PRIMARY ENERGY</b>  | <b>0.918</b>               | <b>1.714</b> | <b>1.500</b>   | <b>1.928</b>       | <b>6.058</b> |
| Electricity Sales            | 0.327                      | 0.226        | 0.001          | (0.553)            |              |
| Net Energy Consumption       | 1.245                      | 1.940        | 1.501          |                    | 4.686        |
| Electrical Energy Losses     | 0.810                      | 0.560        | 0.002          | (1.372)            | 1.372        |
| <b>TOTAL ENERGY CONSUMED</b> | <b>2.055</b>               | <b>2.499</b> | <b>1.603</b>   |                    | <b>6.058</b> |

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

Notes and sources for this table and all other tables in this section are provided at the end of this section.

## Consumption

### Energy Consumption Summary for December 1981\* Quadrillion (10<sup>15</sup>) Btu

| Primary Energy Source        | Sector                     |              |                |                    | TOTAL        |
|------------------------------|----------------------------|--------------|----------------|--------------------|--------------|
|                              | Residential and Commercial | Industrial   | Transportation | Electric Utilities |              |
| Coal                         | 0.021                      | 0.268        | 0.000          | 1.097              | 1.390        |
| Natural Gas (dry)            | 0.955                      | 0.902        | 0.064          | 0.254              | 2.175        |
| Petroleum                    | 0.329                      | 0.748        | 1.577          | 0.218              | 2.872        |
| Hydroelectric                | 0.000                      | 0.002        | 0.000          | 0.236              | 0.239        |
| Nuclear                      | 0.000                      | 0.000        | 0.000          | 0.256              | 0.256        |
| Net Coke Imports             | 0.000                      | (0.000)      | 0.000          | 0.000              | (0.000)      |
| Other                        | 0.000                      | 0.000        | 0.000          | 0.011              | 0.011        |
| <b>TOTAL PRIMARY ENERGY</b>  | <b>1.304</b>               | <b>1.921</b> | <b>1.842</b>   | <b>2.071</b>       | <b>6.942</b> |
| Electricity Sales            | 0.368                      | 0.222        | 0.001          | (0.591)            |              |
| Net Energy Consumption       | 1.672                      | 2.143        | 1.643          |                    | 5.463        |
| Electrical Energy Losses     | 0.921                      | 0.556        | 0.002          | (1.479)            | 1.479        |
| <b>TOTAL ENERGY CONSUMED</b> | <b>2.593</b>               | <b>2.699</b> | <b>1.845</b>   |                    | <b>6.942</b> |

\*Preliminary data.

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

Notes and sources for this table and all other tables in this section are provided at the end of this section.

## Notes and Sources for the Consumption Section

1. See Explanatory Note 5 in the Explanatory Notes Section located at the end of this publication for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

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

- Sources:**
- Anthracite—1973 through 1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, "Coal—Pennsylvania Anthracite, Annual."
  - 1977 forward: U.S. Department of Energy (DOE), Energy Information Administration (EIA), *Energy Data Reports*, "Weekly Coal Report."
  - Bituminous coal and lignite—1973 through 1975: U.S. DOI, BOM, *Minerals Yearbook*, "Bituminous Coal and Lignite, Annual," Federal Power Commission (FPC), Form 4, "Monthly Power Plant Report." 1976 forward: DOE, EIA, *Energy Data Reports*, "Weekly Coal Report."
  - Electric Utilities consumption of coal: same as Note 6 below.

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

- Sources:**
- 1973 through 1975: DOI, BOM, *Minerals Yearbook*, "Natural Gas" chapter.
  - 1976 forward: DOE, *Energy Data Reports*, "Natural Gas Production and Consumption."
  - Electric Utilities consumption—1973 through 1976: FPC Form 4, "Monthly Power Plant Report." 1977 forward: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."
  - American Gas Association, "Monthly Gas Utility Statistical Report."

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

- Sources for petroleum products supplied by individual products are**
- 1973 through 1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."
  - 1976 through 1980: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Annual."
  - 1981 forward: DOE, EIA, *Energy Data Reports*, "Petroleum Statement, Monthly,"  
DOE, EIA, "Monthly Petroleum Statistics Report," and  
DOE, EIA, estimates for current months where above sources are not yet available.

Each product's total is allocated to end-use sectors as follows:

- Aviation gasoline—All to the Transportation Sector.
- Asphalt and road oil—All to the Commercial Sector for use by government in road maintenance.
- Distillate fuel—Allocated to the major end-use sectors in proportion to the sales of distillate fuel sold to each sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys*, "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports*, "Fuel Oil Sales, Annual." In summary, the sectors' proportions are created from sales groupings as follows:
  - Residential and Commercial is sales for heating;
  - Industrial is sales for industrial use, oil company use, and for miscellaneous use except for that part of the miscellaneous use which is diesel used on the highway and is part of the Transportation Sector;
  - Transportation is sales for vessel bunkering, military, railroads, and diesel used on the highway (from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, since 1979); and
  - Electric Utilities is the sales to the electric utilities (except since 1979 when it is deliveries to the electric utilities from the FPC Form 423).

The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.

- Jet fuel—Small amounts in 1975 through 1977 are used in industrial and small amounts in all months are consumed by the electric utilities. All remaining jet fuel is allocated to the Transportation Sector.
- Kerosene—Allocated to the major end-use sectors in proportion to the sales of kerosene sold to the Residential and Commercial Sector and the Industrial Sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys*, "Fuel Oil Sales, Annual," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports*, "Fuel Oil Sales, Annual";
  - Residential and Commercial is sales for heating in the "Fuel Oil Sales, Annual";
  - Industrial is sales for "All Other Uses" in the "Fuel Oil Sales, Annual."

The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.

- Liquefied petroleum gases (LPG)—Allocated to the major end-use sectors in proportion to the sales of LPG sold to each sector as reported for 1973 through 1975 in the DOI, BOM, *Mineral Industry Surveys*, "Sales of Liquefied Gases and Ethane," and for 1976 through 1979 in the DOE, EIA, *Energy Data Reports*, "Sales of Liquefied Gases and Ethane." In summary, the sectors' proportions are created from sales groupings as follows:
  - Residential and Commercial is sales for residential and commercial use;
  - Industrial is sales for industrial use, for miscellaneous uses, to utility gas companies, to chemical plants, and 84 percent of LPG sold for use as internal combustion engine fuel use; and
  - Transportation is the remaining 16 percent of LPG sold for use as internal combustion fuel use.

The 1979 shares are used as estimates for the succeeding periods until sales after 1979 are developed.

- Lubricants—Allocated to the Industrial Sector and Transportation Sector for all months according to proportions of sales to those sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied from 1977 forward.
- Motor gasoline—the DOE motor gasoline consumption data are allocated to end-use according to shares derived from the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24 and MF-25. In summary, the sectors' proportions are created from sales groupings as follows:
  - Residential and Commercial is sales for construction use, for miscellaneous use, for public non-highway use, and for unclassified use;

## Notes and Sources for the Consumption Section (continued)

### 4. Petroleum (continued):

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

The 1979 shares are used as estimates for succeeding periods until sales after 1979 are developed.

- All other products are allocated to the Industrial Sector.

### 5. Hydroelectric: Includes electricity generated by hydropower at electric utilities, small amounts in the Industrial Sector, and net imports of electricity, which are assumed to be generated by hydropower and are included in the hydroelectricity in the Electric Utilities Sector.

#### Sources for Electric Utilities Sector:

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

#### Sources for Industrial Sector:

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

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

*Sources for Imports and Exports of Electricity:* Annual Data from DOE, Economic Regulatory Administration, "Report on Electric Energy Exchanges with Canada and Mexico." Monthly estimates are derived from annual data by dividing by the number of days in the year and multiplying by the number of days in the month. 1979 estimates are used for succeeding periods until later estimates are developed.

### 6. Nuclear: Sources:

- 1973 through 1976: FPC, Form 4, "Monthly Power Plant Report."

- 1977 forward: DOE, EIA, FPC, Form 4, "Monthly Power Plant Report."

### 7. Net Coke Imports:

Net coke imports is coke made from coal.

*Sources:* • 1973 through 1975, DOE, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals, Annual."

• 1976 forward: DOE, EIA, *Energy Data Reports*, "Coke and Coal Chemicals, Monthly."

### 8. Other Energy:

"Other" is electricity produced from geothermal power and from wood and waste.

*Sources:* same as Note 6 above, for Nuclear.

### 9. Electricity Sales:

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

*Sources of sales data:* 1973 through February 1980: FPC, Form 5, "Monthly Statement of Electric Operating Revenue and Income."

March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

### 10. Electrical Energy Losses:

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

## **Crude Oil and Refined Petroleum Products\***

Domestic crude oil production during December 1981 was estimated to be 8.6 million barrels per day. This production rate was 0.2 percent above the rate in December 1980 and 0.1 percent higher than in November 1981.

Total petroleum imports averaged 5.8 million barrels per day in December 1981, 12.8 percent less than the December 1980 rate and 11.5 percent higher than in November 1981.

In December 1981, 16.9 million barrels per day of petroleum products were supplied for domestic use. Motor gasoline accounted for 39.5 percent of the total, distillate fuel oil 18.8 percent, and residual fuel oil 12.6 percent.

Motor gasoline supplied during December 1981 averaged 6.7 million barrels per day, 4.1 percent higher than in November 1981.

In December 1981, 3.2 million barrels of distillate fuel oil were supplied per day, 9.6 percent higher than the November 1981 rate. Distillate fuel oil stocks were 188.7 million barrels at the end of December 1981, 5.5 percent lower than at the end of the previous month.

Residual fuel oil supplied in December 1981 averaged 2.1 million barrels per day, 13.1 percent higher than in November 1981. Residual fuel oil stocks measured 77.3 million barrels at the end of December 1981, 4.6 percent lower than during the previous month.

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\*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 provisional data for September 1981. The total petroleum import data excludes imports into the Strategic Petroleum Reserve.

# Petroleum

## Crude Oil

|                          |           | Crude Input to Refineries | Total Domestic Production <sup>1,2</sup> | Alaskan Production | Crude Oil Imports <sup>3</sup> | Strategic Petroleum Reserve (SPR) Imports | Crude Oil Exports | Primary Crude Oil Stocks <sup>1,3</sup> | Strategic Petroleum Reserve (SPR) Stocks |
|--------------------------|-----------|---------------------------|--|--------------------|--------------------------------|---|-------------------|---|--|
| Thousand barrels per day |           |                           |  |                    |                                |   |                   |   |  |
| 1973                     | AVERAGE   | 12,431                    | 9,208                                    | 198                | 3,244                          |   | 2                 | ‡242,478                                |  |
| 1974                     | AVERAGE   | 12,133                    | 8,774                                    | 193                | 3,477                          |   | 3                 | ‡265,020                                |  |
| 1975                     | AVERAGE   | 12,442                    | 8,375                                    | 191                | 4,105                          |   | 6                 | ‡271,354                                |  |
| 1976                     | AVERAGE   | 13,416                    | 8,132                                    | 173                | 5,287                          |   | 8                 | ‡285,471                                |  |
| 1977                     | AVERAGE   | 14,602                    | 8,245                                    | 464                | 6,594                          | 20  | 50                | ‡339,857                                | ‡7,540                                   |
| 1978                     | AVERAGE   | 14,739                    | 8,707                                    | 1,229              | 6,195                          | 162                                       | 158               | ‡309,421                                | ‡66,860                                  |
| 1979                     | AVERAGE   | 14,648                    | 8,552                                    | 1,401              | 6,452                          | 67  | 235               | ‡339,074                                | ‡91,191                                  |
| 1980                     | January   | R14,301                   | R8,675                                   | 1,634              | R6,406                         | 0   | R322              | R357,500                                | 91,191                                   |
|                          | February  | R14,187                   | R8,705                                   | 1,630              | R6,013                         | 0   | R332              | R365,965                                | 91,191                                   |
|                          | March     | 13,709                    | R8,698                                   | 1,647              | R5,695                         | 0   | R330              | R367,420                                | 91,191                                   |
|                          | April     | 13,484                    | R8,685                                   | 1,649              | R5,598                         | 0   | R192              | R379,788                                | 91,191                                   |
|                          | May       | 13,326                    | R8,635                                   | R1,627             | R5,106                         | 0   | R326              | R383,420                                | 91,191                                   |
|                          | June      | 13,705                    | R8,554                                   | 1,626              | 5,480                          | 0   | 365               | R381,472                                | 91,191                                   |
|                          | July      | R13,264                   | R8,547                                   | 1,612              | R4,843                         | 0   | 238               | R378,742                                | 91,191                                   |
|                          | August    | R12,984                   | R8,414                                   | 1,612              | R4,803                         | 0   | 78                | R387,223                                | 91,191                                   |
|                          | September | R13,313                   | 8,619                                    | 1,610              | 4,653                          | 54  | 322               | R376,388                                | 92,824                                   |
|                          | October   | R12,772                   | R8,532                                   | 1,588              | R4,637                         | 131                                       | 309               | R378,503                                | 96,645                                   |
|                          | November  | 13,119                    | R8,495                                   | 1,561              | R4,538                         | 142                                       | 289               | R373,077                                | 102,320                                  |
|                          | December  | 13,648                    | R8,606                                   | 1,602              | R4,884                         | 198                                       | 343               | R358,166                                | 107,800                                  |
|                          | AVERAGE   | R13,481                   | 8,597                                    | 1,617              | R5,219                         | 44  | R288              |   |  |
| 1981                     | January   | 13,248                    | 8,533                                    | 1,606              | 4,817                          | 106                                       | 339               | 376,456                                 | 112,490                                  |
|                          | February  | 12,903                    | 8,598                                    | 1,619              | 4,793                          | 80  | 198               | 386,793                                 | 116,057                                  |
|                          | March     | 12,383                    | 8,601                                    | 1,618              | 4,382                          | 140                                       | 210               | 397,191                                 | 120,860                                  |
|                          | April     | 12,090                    | 8,543                                    | 1,608              | 4,185                          | 272                                       | 198               | 407,182                                 | 134,170                                  |
|                          | May       | 12,309                    | 8,496                                    | 1,580              | 3,881                          | 386                                       | 312               | 402,273                                 | 150,068                                  |
|                          | June      | 12,415                    | 8,616                                    | 1,632              | 3,766                          | 318                                       | 123               | 392,211                                 | 163,081                                  |
|                          | July      | 12,267                    | 8,422                                    | 1,605              | 4,161                          | 175                                       | 257               | 392,514                                 | 173,128                                  |
|                          | August    | 12,911                    | 8,576                                    | 1,602              | 3,908                          | 257                                       | 204               | 365,219                                 | 184,674                                  |
|                          | September | R12,510                   | R8,586                                   | R1,610             | 4,279                          | 435                                       | 194               | R361,428                                | 199,247                                  |
|                          | October   | R12,065                   | R8,541                                   | R1,599             | R3,929                         | 453                                       | 226               | R369,496                                | 214,777                                  |
|                          | November† | R12,261                   | 8,611                                    | 1,620              | R3,704                         | R277                                      | 278               | R372,122                                | R222,542                                 |
|                          | December† | 12,656                    | 8,623                                    | 1,629              | 4,121                          | 191                                       | NA                | 378,194                                 | 229,887                                  |
|                          | AVERAGE   | 12,500                    | 8,562                                    | 1,611              | 4,157                          | 258                                       | NA                |   |  |

Geographic coverage: the 50 United States and District of Columbia.

Includes lease condensate.

Includes Alaskan production.

Excludes Strategic Petroleum Reserve storage that began in October 1977.

†Total as of December 31. †Preliminary data. R=Revised data. NA=Not available.

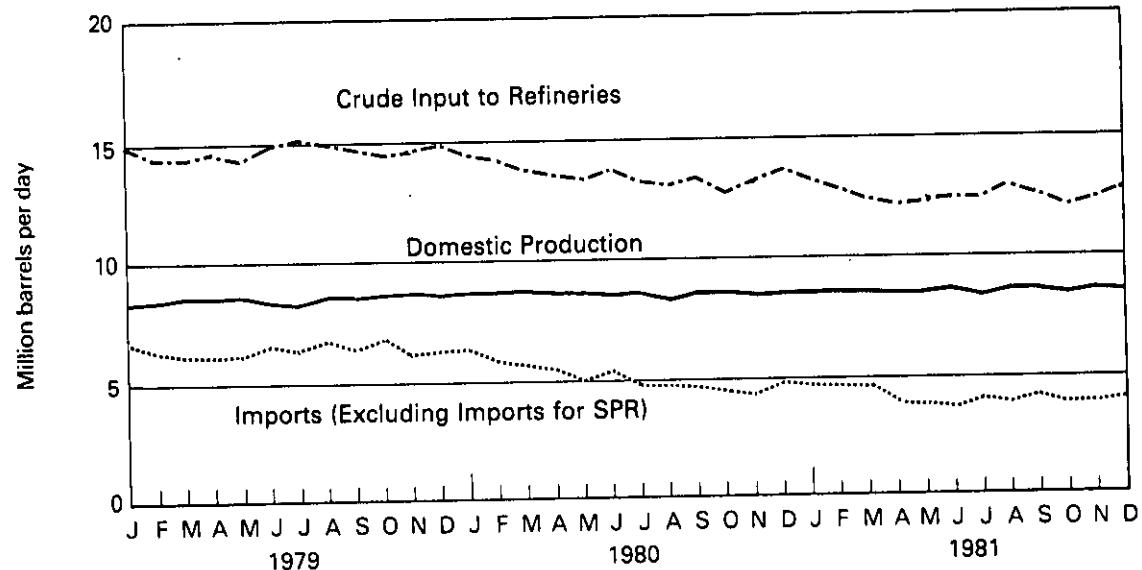
Note: Estimated data are in italics and are likely to be revised.

Sources: •See Sources at the end of this section.

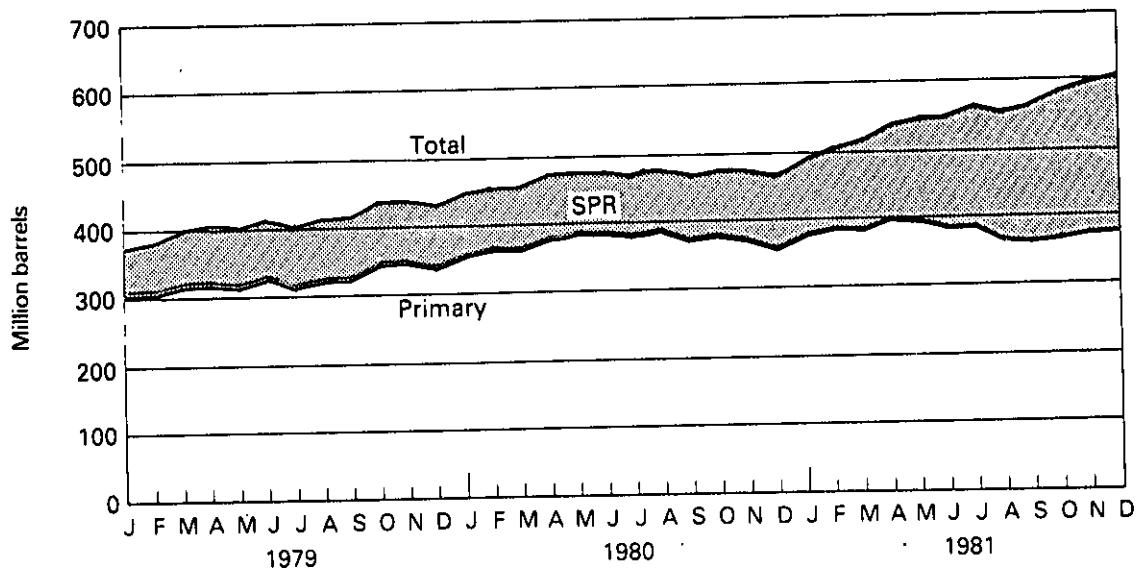
# Petroleum

## Crude Oil

### Production, Refinery Input and Imports



### Stocks



## Petroleum

|              | Total Petroleum Products <sup>1</sup> |                              |                 | Total Crude Oil and Petroleum Products Trade |                          |  |                          |             |
|--------------|---------------------------------------|------------------------------|-----------------|--|--------------------------|--|--------------------------|-------------|
|              | Products Supplied <sup>2</sup>        | Product Imports <sup>3</sup> | Product Exports | Total Imports (Excluding SPR)                | SPR Imports <sup>3</sup> | Total Imports (Including SPR) <sup>3</sup> | Total Exports            | Net Imports |
|              |                                       |                              |                 | Thousand barrels per day                     |                          |  | Thousand barrels per day |             |
|              |                                       |                              |                 |  |                          |  |                          |             |
| 1973 AVERAGE | 17,308                                | 3,012                        | 229             | 6,256  |                          |  | 231                      | 6,025       |
| 1974 AVERAGE | 16,653                                | 2,635                        | 218             | 6,112  |                          |  | 221                      | 5,892       |
| 1975 AVERAGE | 16,322                                | 1,951                        | 204             | 6,056  |                          |  | 209                      | 5,846       |
| 1976 AVERAGE | 17,461                                | 2,026                        | 215             | 7,313  |                          |  | 223                      | 7,090       |
| 1977 AVERAGE | 18,431                                | 2,193                        | 193             | 8,787  | 20                       | 8,807                                      | 243                      | 8,565       |
| 1978 AVERAGE | 18,847                                | 2,008                        | 204             | 8,202  | 162                      | 8,363                                      | 362                      | 8,002       |
| 1979 AVERAGE | 18,513                                | 1,937                        | 236             | 8,389  | 67                       | 8,456                                      | 471                      | 7,985       |
| 1980 January | R18,851                               | R2,192                       | 228             | R8,598                                       | 0                        | R8,598                                     | R550                     | R8,048      |
| February     | R18,817                               | R1,931                       | 227             | R7,945                                       | 0                        | R7,945                                     | R558                     | R7,386      |
| March        | R17,377                               | R1,757                       | 243             | R7,452                                       | 0                        | R7,452                                     | R573                     | R6,879      |
| April        | R16,784                               | R1,508                       | 241             | R7,106                                       | 0                        | R7,106                                     | R434                     | R6,672      |
| May          | R16,238                               | R1,472                       | 266             | R6,579                                       | 0                        | R6,579                                     | R591                     | R5,987      |
| June         | R16,187                               | R1,414                       | R289            | R6,894                                       | 0                        | R6,894                                     | 654                      | R6,240      |
| July         | R16,008                               | R1,414                       | R293            | R6,257                                       | 0                        | R6,257                                     | R531                     | R5,727      |
| August       | R15,753                               | R1,389                       | 241             | R6,192                                       | 0                        | R6,192                                     | 319                      | R5,873      |
| September    | R16,598                               | R1,532                       | 235             | R6,185                                       | 54                       | R6,239                                     | 557                      | R5,682      |
| October      | R16,995                               | R1,611                       | 288             | R6,248                                       | 131                      | R6,379                                     | 598                      | R5,781      |
| November     | R16,702                               | R1,728                       | 260             | R6,266                                       | 142                      | R6,408                                     | 549                      | R5,859      |
| December     | R18,410                               | 1,812                        | 279             | R6,696                                       | 198                      | R6,894                                     | 622                      | R6,272      |
| AVERAGE      | R17,056                               | R1,646                       | 258             | R6,865                                       | 44                       | R6,909                                     | R544                     | R6,365      |
| 1981 January | 18,288                                | 1,892                        | 219             | 6,709  | 106                      | 6,814                                      | 558                      | 6,257       |
| February     | 16,930                                | 1,904                        | 371             | 6,697  | 80                       | 6,777                                      | 569                      | 6,208       |
| March        | 15,838                                | 1,505                        | 376             | 5,886  | 140                      | 6,026                                      | 586                      | 5,440       |
| April        | 15,280                                | 1,310                        | 372             | 5,495  | 272                      | 5,767                                      | 570                      | 5,198       |
| May          | 15,196                                | 1,436                        | 283             | 5,317  | 386                      | 5,702                                      | 595                      | 5,107       |
| June         | 15,996                                | 1,338                        | 297             | 5,104  | 318                      | 5,422                                      | 420                      | 5,002       |
| July         | 15,713                                | 1,473                        | 314             | 5,634  | 175                      | 5,809                                      | 571                      | 5,238       |
| August       | 15,236                                | 1,572                        | 440             | 5,480  | 257                      | 5,737                                      | 644                      | 5,093       |
| September    | R15,619                               | R1,612                       | 325             | R5,890                                       | 435                      | R6,326                                     | 519                      | R5,807      |
| October      | R15,840                               | R1,557                       | 512             | R5,486                                       | 453                      | R5,939                                     | 738                      | R5,202      |
| November†    | R15,451                               | R1,534                       | 423             | R5,238                                       | R271                     | R5,509                                     | 701                      | 4,808       |
| December†    | 16,865                                | 1,719                        | NA              | 5,840  | 191                      | 6,031                                      | NA                       | NA          |
| AVERAGE      | 16,018                                | 1,570                        | NA              | 5,727  | 258                      | 5,984                                      | NA                       | NA          |

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

\*See Definitions.

<sup>1</sup>Includes plant condensate, natural gasoline, and unfinished oils.

<sup>2</sup>Strategic Petroleum Reserve storage began in October 1977.

<sup>3</sup>Preliminary data. R=Revised data. NA=Not available.

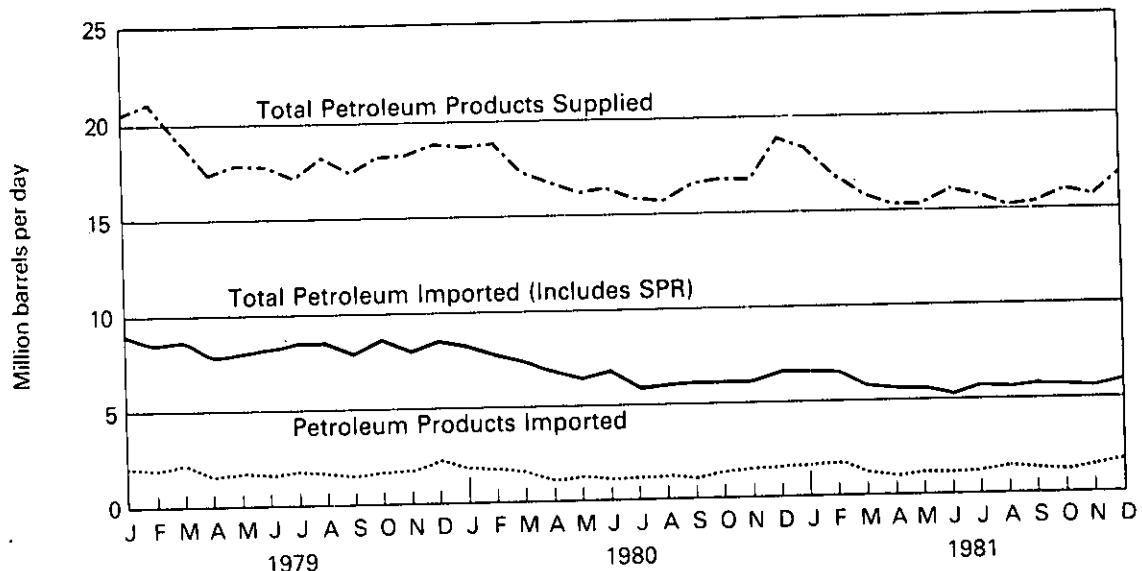
Note: Estimated data are in italics and are likely to be revised.

Sources: \*See Sources at the end of this section.

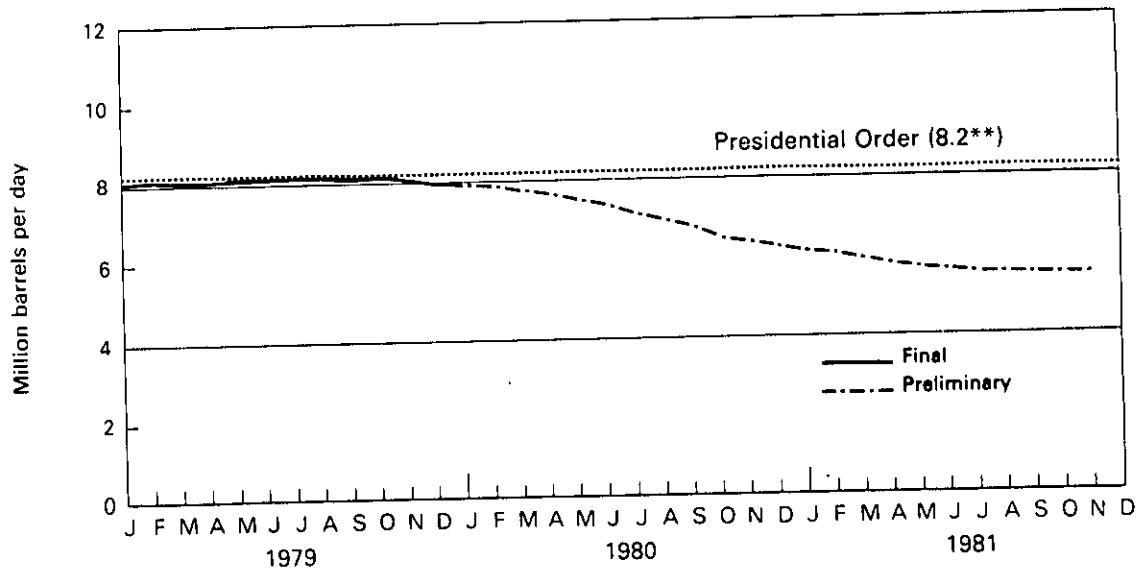
# Petroleum

## Products Supplied and Imports

### Products Supplied and Imports



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



\* Includes SPR.

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

# Petroleum

## Petroleum Imports from OPEC Sources

|                          |           | Algeria | Indo-nesia | Iran | Libya | Nigeria | Saudi Arabia | United Arab Emirates | Vene-zuela | Other OPEC <sup>1</sup> | Total OPEC | Arab Members of OPEC <sup>2</sup> |
|--------------------------|-----------|---------|------------|------|-------|---------|--------------|----------------------|------------|-------------------------|------------|-----------------------------------|
| Thousand barrels per day |           |         |            |      |       |         |              |                      |            |                         |            |                                   |
| 1973                     | AVERAGE   | 136     | 213        | 223  | 164   | 459     | 486          | 71                   | 1,135      | 106                     | 2,993      | 915                               |
| 1974                     | AVERAGE   | 190     | 300        | 469  | 4     | 713     | 461          | 74                   | 979        | 88                      | 3,280      | 752                               |
| 1975                     | AVERAGE   | 282     | 390        | 280  | 232   | 762     | 715          | 117                  | 702        | 122                     | 3,601      | 1,383                             |
| 1976                     | AVERAGE   | 432     | 539        | 298  | 453   | 1,025   | 1,230        | 254                  | 700        | 134                     | 5,068      | 2,424                             |
| 1977                     | AVERAGE   | 559     | 541        | 535  | 723   | 1,143   | 1,380        | 335                  | 690        | 287                     | 6,193      | 3,185                             |
| 1978                     | AVERAGE   | 649     | 573        | 555  | 654   | 919     | 1,144        | 385                  | 645        | 226                     | 5,751      | 2,963                             |
| 1979                     | AVERAGE   | 636     | 420        | 304  | 658   | 1,080   | 1,356        | 281                  | 690        | 212                     | 5,637      | 3,056                             |
| 1980                     | January   | R503    | R454       | R95  | R618  | 1,054   | R1,576       | 202                  | R786       | 179                     | R5,467     | R3,034                            |
|                          | February  | R656    | 317        | 9    | 603   | R1,036  | R1,412       | 304                  | 543        | R152                    | R5,031     | R3,058                            |
|                          | March     | 472     | 405        | 0    | 654   | 924     | R1,380       | R289                 | 352        | 175                     | R4,652     | R2,889                            |
|                          | April     | R546    | 374        | 0    | 683   | R734    | R1,300       | 150                  | R343       | R240                    | R4,369     | R2,862                            |
|                          | May       | 441     | 360        | 0    | 468   | 955     | 1,149        | 172                  | 405        | R147                    | R4,098     | R2,329                            |
|                          | June      | 497     | 331        | 0    | 561   | 998     | R1,328       | 178                  | 409        | R106                    | 4,408      | 2,598                             |
|                          | July      | R557    | R365       | 0    | 492   | R752    | R1,192       | 158                  | R417       | R62                     | R3,995     | R2,418                            |
|                          | August    | 432     | 289        | 0    | 431   | R792    | R1,139       | 142                  | R406       | R112                    | R3,743     | R2,222                            |
|                          | September | 375     | 299        | 0    | 505   | 735     | 1,112        | 107                  | 425        | 111                     | 3,670      | 2,185                             |
|                          | October   | R465    | 348        | 0    | R478  | R728    | R1,044       | 182                  | 482        | R95                     | R3,821     | R2,226                            |
|                          | November  | 493     | 348        | 0    | 500   | R624    | 1,201        | 105                  | 595        | 78                      | R3,944     | R2,338                            |
|                          | December  | R423    | R288       | 0    | R658  | 958     | R1,301       | 83                   | 610        | 101                     | R4,423     | R2,484                            |
|                          | AVERAGE   | R488    | R348       | R9   | R554  | R857    | R1,261       | R172                 | R481       | R130                    | R4,300     | R2,551                            |
| 1981                     | January   | 324     | 424        | 0    | 500   | 908     | 1,297        | 93                   | 556        | 27                      | 4,129      | 2,214                             |
|                          | February  | 381     | 407        | 0    | 468   | 866     | 1,122        | 93                   | 466        | 92                      | 3,895      | 2,064                             |
|                          | March     | 352     | 328        | 0    | 485   | 771     | 1,027        | 47                   | 360        | 54                      | 3,425      | 1,911                             |
|                          | April     | 263     | 314        | 0    | 496   | 826     | 1,056        | 85                   | 237        | 42                      | 3,317      | 1,916                             |
|                          | May       | 393     | 277        | 0    | 443   | 664     | 929          | 17                   | 317        | 124                     | 3,164      | 1,792                             |
|                          | June      | 390     | 355        | 0    | 380   | 519     | 865          | 60                   | 248        | 118                     | 2,934      | 1,736                             |
|                          | July      | 333     | 340        | 0    | 251   | 651     | 1,073        | 80                   | 502        | 38                      | 3,269      | 1,757                             |
|                          | August    | 348     | 377        | 0    | 274   | 321     | 1,068        | 61                   | 514        | 84                      | 3,047      | 1,751                             |
|                          | September | R336    | 371        | 0    | 154   | 323     | R1,451       | 96                   | 359        | 149                     | R3,238     | R2,036                            |
|                          | October   | R242    | 427        | 0    | R147  | 412     | R1,342       | 90                   | R383       | 172                     | R3,214     | R1,820                            |
|                          | November† | 185     | 340        | 0    | 132   | 517     | 1,236        | 112                  | 492        | 55                      | 3,070      | 1,665                             |
|                          | AVERAGE   | 322     | 360        | 0    | 338   | 615     | 1,133        | 76                   | 403        | 87                      | 3,334      | 1,877                             |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>2</sup>Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

†Preliminary data. R=Revised data.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Sources: • See Sources at the end of this section.

## Petroleum

### Petroleum Imports from Non-OPEC Sources

|                          |           | Bahamas | Canada | Mexico | Netherlands<br>Antilles | Puerto<br>Rico | Trinidad<br>and Tobago | Virgin<br>Islands | Other <sup>1</sup> | Total  |
|--------------------------|-----------|---------|--------|--------|-------------------------|----------------|------------------------|-------------------|--------------------|--------|
| Thousand barrels per day |           |         |        |        |                         |                |                        |                   |                    |        |
| 1973                     | AVERAGE   | 174     | 1,325  | 16     | 585                     | 99             | 255                    | 329               | 480                | 3,263  |
| 1974                     | AVERAGE   | 164     | 1,070  | 8      | 511                     | 90             | 251                    | 391               | 347                | 2,832  |
| 1975                     | AVERAGE   | 152     | 846    | 71     | 332                     | 90             | 242                    | 406               | 314                | 2,454  |
| 1976                     | AVERAGE   | 118     | 599    | 87     | 275                     | 88             | 274                    | 422               | 382                | 2,247  |
| 1977                     | AVERAGE   | 171     | 517    | 179    | 211                     | 105            | 289                    | 466               | 676                | 2,614  |
| 1978                     | AVERAGE   | 160     | 467    | 318    | 229                     | 94             | 253                    | 429               | 663                | 2,613  |
| 1979                     | AVERAGE   | 147     | 538    | 439    | 231                     | 92             | 190                    | 431               | 751                | 2,819  |
| 1980                     | January   | 175     | R570   | 545    | 289                     | R57            | 239                    | 467               | R788               | R3,131 |
|                          | February  | 111     | 540    | R477   | 205                     | 95             | 192                    | R536              | R757               | R2,914 |
|                          | March     | 124     | 460    | 460    | 184                     | R101           | 189                    | R449              | R833               | R2,800 |
|                          | April     | 56      | R459   | 546    | 231                     | R76            | 143                    | R425              | R801               | R2,737 |
|                          | May       | 77      | 419    | 576    | R176                    | 88             | 221                    | 303               | R621               | R2,481 |
|                          | June      | 77      | R409   | 627    | R197                    | 91             | R162                   | R314              | R610               | R2,486 |
|                          | July      | 43      | 378    | R460   | 242                     | 90             | 180                    | R378              | H491               | R2,262 |
|                          | August    | 62      | 319    | 646    | 255                     | 85             | 159                    | R264              | R659               | R2,449 |
|                          | September | 58      | R458   | R550   | 213                     | 52             | 205                    | 343               | R691               | R2,569 |
|                          | October   | 70      | R475   | R605   | R230                    | 107            | 114                    | R372              | R585               | R2,557 |
|                          | November  | 22      | 470    | R459   | R264                    | 108            | R158                   | 391               | R591               | R2,464 |
|                          | December  | 54      | 502    | 445    | 212                     | 109            | 149                    | 423               | R576               | R2,471 |
|                          | AVERAGE   | 78      | R455   | R533   | R225                    | R88            | 176                    | R388              | R666               | R2,609 |
| 1981                     | January   | 39      | 543    | 401    | 197                     | 89             | 150                    | 494               | 771                | 2,686  |
|                          | February  | 84      | 546    | 437    | 227                     | 46             | 163                    | 481               | 897                | 2,881  |
|                          | March     | 74      | 471    | 488    | 227                     | 45             | 93                     | 370               | 832                | 2,601  |
|                          | April     | 68      | 410    | 440    | 198                     | 40             | 139                    | 365               | 806                | 2,467  |
|                          | May       | 122     | 366    | 522    | 213                     | 58             | 105                    | 344               | 807                | 2,538  |
|                          | June      | 51      | 352    | 537    | 196                     | 67             | 124                    | 262               | 898                | 2,488  |
|                          | July      | 77      | 381    | 384    | 212                     | 50             | 177                    | 206               | 1,053              | 2,540  |
|                          | August    | 69      | 378    | 489    | 255                     | 68             | 123                    | 184               | 1,125              | 2,691  |
|                          | September | R111    | R419   | R708   | R163                    | 72             | 169                    | 265               | R1,181             | R3,088 |
|                          | October   | R63     | R446   | R668   | 153                     | 60             | 121                    | 303               | R910               | R2,726 |
|                          | November† | 48      | 454    | 610    | 168                     | 76             | 108                    | 294               | 681                | 2,439  |
|                          | AVERAGE   | 73      | 433    | 517    | 201                     | 61             | 133                    | 323               | 906                | 2,647  |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Includes Non-OPEC Arab, Western Europe, Angola, U.S.S.R., Rumania, other Western Hemisphere and other Eastern Hemisphere.

†Preliminary data. R=Revised data.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Sources: \*See Sources at the end of this section.

# Petroleum

## Motor Gasoline

|      |           | Product Supplied <sup>1</sup> |          |                                 | Imports <sup>1,2</sup>                |                            |                               | Stocks <sup>1,2,3</sup> |                               |
|------|-----------|-------------------------------|----------|---------------------------------|---------------------------------------|----------------------------|-------------------------------|-------------------------|-------------------------------|
|      |           | Total                         | Unleaded | Unleaded<br>Percent<br>of Total | Refinery<br>Production <sup>1,3</sup> | Total<br>Motor<br>Gasoline | Finished<br>Motor<br>Gasoline | Exports                 | Total<br>Motor<br>Gasoline    |
|      |           |                               |          |                                 |                                       |                            |                               |                         | Finished<br>Motor<br>Gasoline |
|      |           |                               |          | Thousand barrels per day        |                                       |                            |                               | Thousand barrels        |                               |
| 1973 | AVERAGE   | 6,674                         | NA       | NA                              | 6,527                                 | 134                        | 4                             | \$209,395               |                               |
| 1974 | AVERAGE   | 6,537                         | NA       | NA                              | 6,358                                 | 204                        | 2                             | \$218,346               |                               |
| 1975 | AVERAGE   | 6,675                         | NA       | NA                              | 6,518                                 | 184                        | 2                             | \$234,925               |                               |
| 1976 | AVERAGE   | 6,978                         | NA       | NA                              | 6,838                                 | 131                        | 3                             | \$231,387               |                               |
| 1977 | AVERAGE   | 7,177                         | 1,976    | 27.5                            | 7,031                                 | 217                        | 2                             | \$257,578               |                               |
| 1978 | AVERAGE   | 7,412                         | 2,521    | 34.0                            | 7,167                                 | 190                        | 1                             | \$237,956               |                               |
| 1979 | AVERAGE   | 7,034                         | 2,798    | 39.8                            | 6,837                                 | 181                        | (s)                           | \$237,082               |                               |
| 1980 | January   | R6,323                        | 2,718    | R43.0                           | 6,977                                 | 141                        | 1                             | R262,137                |                               |
|      | February  | R6,596                        | 2,969    | 45.0                            | 6,851                                 | R154                       | (s)                           | R274,390                |                               |
|      | March     | R6,406                        | 3,032    | 47.3                            | R6,509                                | R155                       | (s)                           | R282,720                |                               |
|      | April     | R6,800                        | 3,021    | 44.4                            | 6,268                                 | R155                       | 1                             | R271,799                |                               |
|      | May       | R6,729                        | 2,980    | 44.3                            | R6,299                                | 132                        | 1                             | R263,071                |                               |
|      | June      | R6,657                        | 3,099    | R46.6                           | 6,552                                 | 148                        | 1                             | R264,823                |                               |
|      | July      | R6,743                        | 3,131    | R46.4                           | 6,446                                 | 149                        | 3                             | R260,731                |                               |
|      | August    | R6,648                        | 3,135    | 47.2                            | R6,438                                | 141                        | 1                             | R258,986                |                               |
|      | September | R6,510                        | 3,054    | 46.9                            | 6,369                                 | 106                        | 7                             | R258,140                |                               |
|      | October   | 6,662                         | 3,110    | 46.7                            | 6,124                                 | 152                        | 1                             | 246,422                 |                               |
|      | November  | R6,234                        | 3,123    | 50.1                            | 6,456                                 | 126                        | (s)                           | R257,176                |                               |
|      | December  | R6,632                        | 3,421    | 51.6                            | 6,632                                 | R122                       | 1                             | 261,327                 |                               |
|      | AVERAGE   | 6,579                         | 3,067    | 46.6                            | 6,492                                 | 140                        | 1                             |                         |                               |
| 1981 | January   | 6,389                         | 3,113    | 48.7                            | 6,677                                 | 152                        | (s)                           | 276,511                 | 226,686                       |
|      | February  | 6,293                         | 3,100    | 49.3                            | 6,269                                 | 121                        | 1                             | 283,983                 | 229,465                       |
|      | March     | 6,303                         | 3,095    | 49.1                            | 6,202                                 | 200                        | (s)                           | 284,859                 | 231,977                       |
|      | April     | 6,585                         | 3,278    | 49.8                            | 6,110                                 | 195                        | (s)                           | 271,782                 | 223,240                       |
|      | May       | 6,608                         | 3,117    | 47.2                            | 6,119                                 | 159                        | 1                             | 258,187                 | 212,729                       |
|      | June      | 7,001                         | 3,418    | 48.8                            | 6,219                                 | 195                        | 1                             | 241,671                 | 194,200                       |
|      | July      | 6,817                         | 3,417    | 50.1                            | 6,415                                 | 124                        | 118                           | (s)                     | 227,131                       |
|      | August    | 6,645                         | 3,343    | 50.3                            | 6,614                                 | 167                        | 125                           | 3                       | 185,451                       |
|      | September | R6,660                        | R3,334   | R50.1                           | R6,565                                | 193                        | 169                           | 2                       | 232,474                       |
|      | October   | R6,598                        | R3,250   | 49.3                            | R6,446                                | 161                        | 143                           | 3                       | R237,015                      |
|      | November† | R6,410                        | 3,204    | 50.0                            | R6,582                                | R185                       | 145                           | 1                       | R190,558                      |
|      | December† | 6,670                         | NA       | NA                              | 6,723                                 | 131                        | NA                            | NA                      | R234,983                      |
|      | AVERAGE   | 6,583                         | NA       | NA                              | 6,413                                 | 165                        | NA                            | NA                      | R190,240                      |
|      |           |                               |          |                                 |                                       |                            |                               | 249,952                 | 199,772                       |
|      |           |                               |          |                                 |                                       |                            |                               |                         | NA                            |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. Non-refinery blenders were added to the reporting universe and gasohol was included as a motor gasoline component. On the new basis motor gasoline production and product supplied during the last half of 1980 would have averaged 289,000 barrels per day higher than shown.

<sup>2</sup>Total motor gasoline includes finished motor gasoline and blending components.

<sup>3</sup>See Definitions.

†Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

Note: Estimated data are in italics and are likely to be revised.

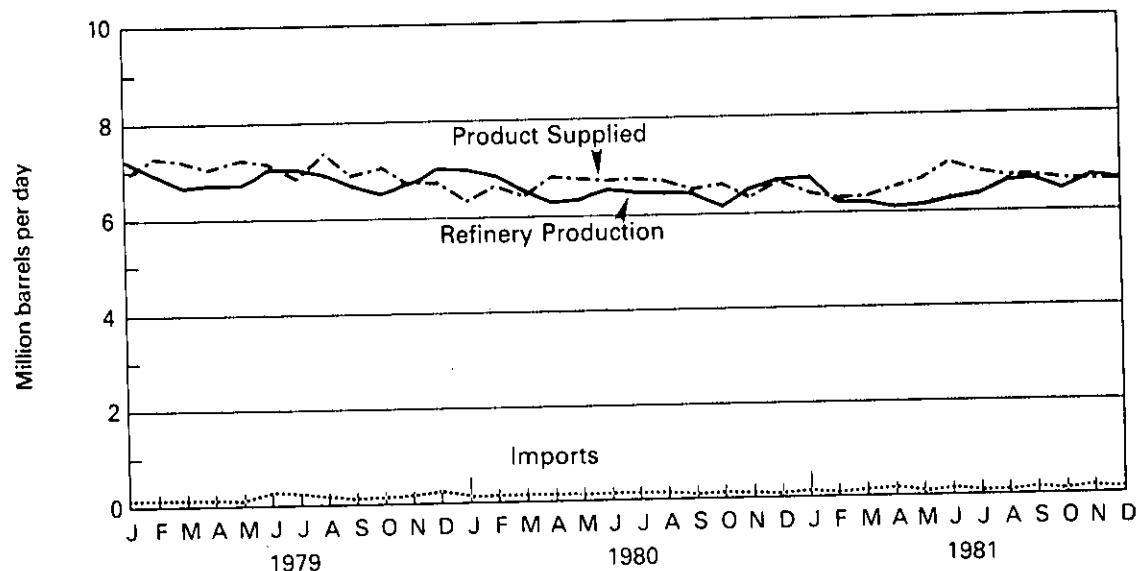
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: •See Sources at the end of this section.

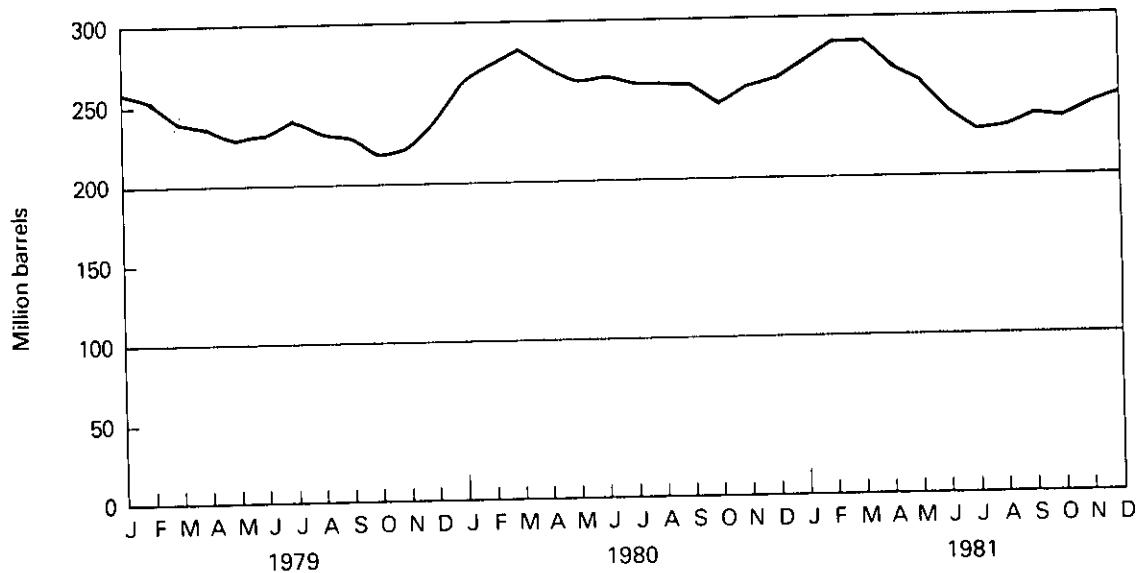
## Petroleum

### Motor Gasoline

#### Product Supplied, Refinery Production and Imports



#### Stocks



# Petroleum

## Jet Fuel

|      |           | Product Supplied | Refinery Production      | Imports | Exports | Stocks   |  |  |
|------|-----------|------------------|--------------------------|---------|---------|----------|--|--|
|      |           |                  | Thousand barrels per day |         |         |          |  |  |
| 1973 | AVERAGE   | 1,059            | 859                      | 212     | 4       | \$28,544 |  |  |
| 1974 | AVERAGE   | 993              | 836                      | 163     | 3       | \$29,435 |  |  |
| 1975 | AVERAGE   | 1,001            | 871                      | 133     | 2       | \$30,380 |  |  |
| 1976 | AVERAGE   | 987              | 918                      | 76      | 2       | \$32,085 |  |  |
| 1977 | AVERAGE   | 1,039            | 973                      | 75      | 2       | \$34,548 |  |  |
| 1978 | AVERAGE   | 1,057            | 970                      | 86      | 1       | \$33,665 |  |  |
| 1979 | AVERAGE   | 1,076            | 1,012                    | 78      | 1       | \$38,520 |  |  |
| 1980 | January   | R1,103           | 1,004                    | R96     | 1       | 38,412   |  |  |
|      | February  | 1,072            | 1,026                    | 43      | 2       | 38,258   |  |  |
|      | March     | 1,116            | 1,031                    | R100    | 2       | R38,674  |  |  |
|      | April     | R1,108           | 1,023                    | R110    | 3       | 39,339   |  |  |
|      | May       | R1,008           | R1,002                   | R73     | 2       | R41,346  |  |  |
|      | June      | R1,058           | 1,004                    | 86      | 1       | 42,283   |  |  |
|      | July      | 1,110            | 974                      | 93      | 2       | R40,904  |  |  |
|      | August    | 1,043            | 959                      | 67      | 1       | 40,331   |  |  |
|      | September | R1,055           | 1,041                    | 77      | 1       | R42,178  |  |  |
|      | October   | R1,031           | R976                     | R86     | 1       | R43,112  |  |  |
|      | November  | R1,025           | 988                      | R63     | 1       | R43,904  |  |  |
|      | December  | R1,082           | 962                      | 60      | 1       | 42,031   |  |  |
|      | AVERAGE   | R1,068           | 999                      | 81      | 1       |          |  |  |
| 1981 | January   | 1,060            | 956                      | 12      | 1       | 39,478   |  |  |
|      | February  | 1,016            | 949                      | 41      | 1       | 38,726   |  |  |
|      | March     | 1,055            | 995                      | 76      | (s)     | 39,206   |  |  |
|      | April     | 965              | 960                      | 55      | 1       | 40,690   |  |  |
|      | May       | 924              | 1,006                    | 47      | 1       | 44,668   |  |  |
|      | June      | 1,038            | 993                      | 68      | (s)     | 45,372   |  |  |
|      | July      | 1,086            | 1,038                    | 35      | 1       | 44,926   |  |  |
|      | August    | 1,025            | 977                      | 47      | 1       | 44,899   |  |  |
|      | September | R1,031           | R934                     | R45     | 1       | R43,313  |  |  |
|      | October   | R934             | R903                     | R14     | (s)     | R42,772  |  |  |
|      | November† | R986             | R962                     | R4      | 1       | R41,920  |  |  |
|      | December† | 1,055            | 981                      | 8       | NA      | 40,123   |  |  |
|      | AVERAGE   | 1,015            | 971                      | 38      | NA      |          |  |  |

Geographic coverage: the 50 United States and District of Columbia.

†Total as of December 31. †Preliminary data. R=Revised data. NA=Not available. (s)=Less than 500 barrels per day.

Note: Estimated data are in italics and are to be revised.

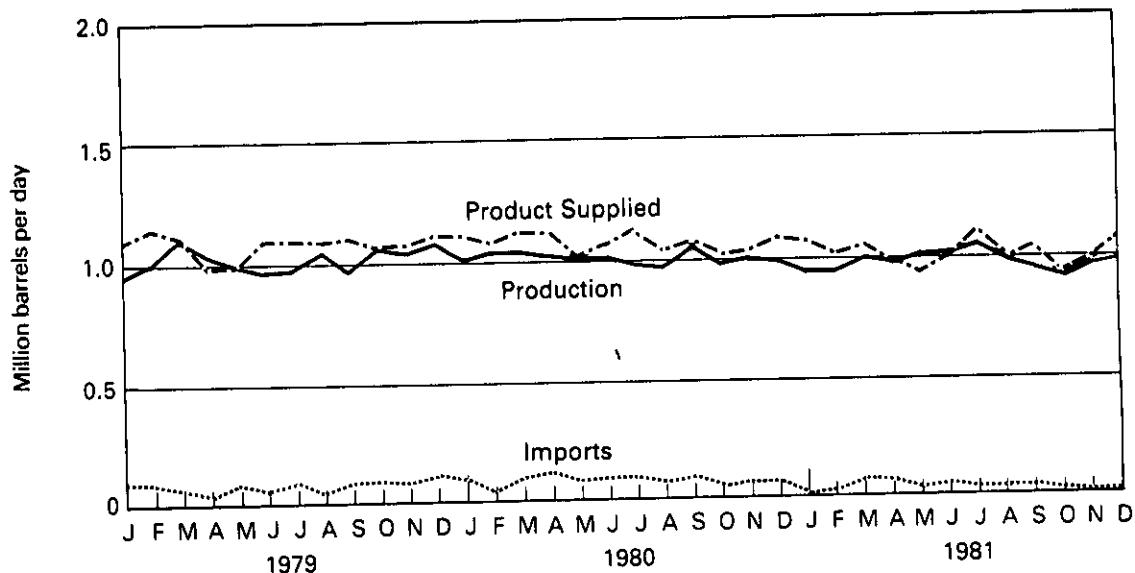
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: •See Sources at the end of this section.

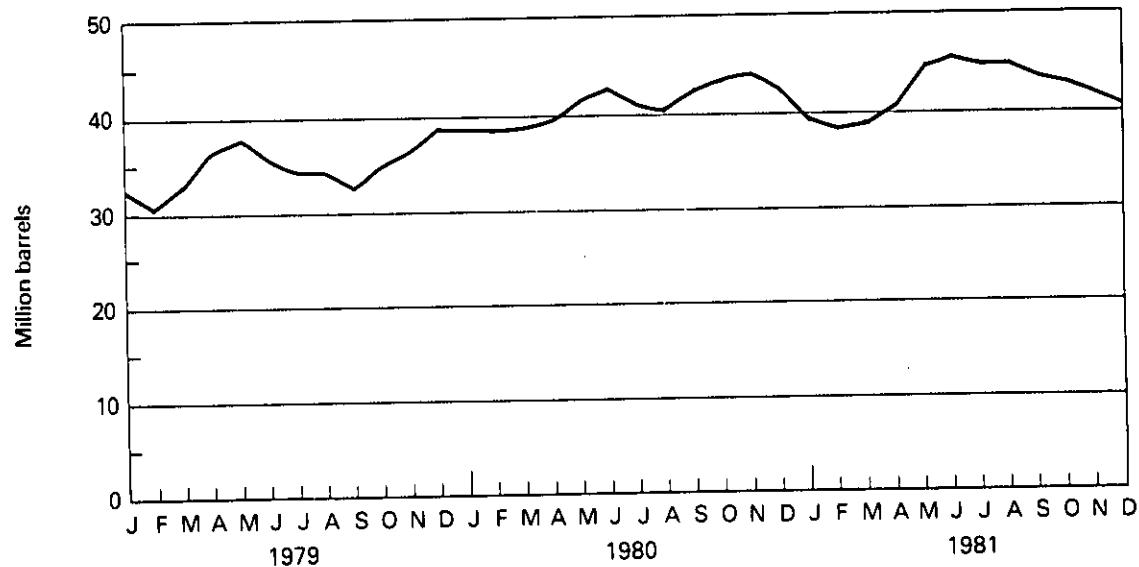
# Petroleum

## Jet Fuel

Product Supplied, Refinery Production and Imports



## Stocks



# Petroleum

## Distillate Fuel Oil

|      |           | Product Supplied <sup>1</sup> | Refinery Production <sup>1, 2</sup> | Imports | Exports | Stocks <sup>2</sup> |
|------|-----------|-------------------------------|-------------------------------------|---------|---------|---------------------|
|      |           |                               | Thousand barrels per day            |         |         | Thousand barrels    |
| 1973 | AVERAGE   | 3,092                         | 2,820                               | 392     | 9       | ‡196,421            |
| 1974 | AVERAGE   | 2,948                         | 2,668                               | 289     | 2       | ‡200,029            |
| 1975 | AVERAGE   | 2,851                         | 2,653                               | 155     | 1       | ‡208,787            |
| 1976 | AVERAGE   | 3,133                         | 2,924                               | 146     | 1       | ‡185,948            |
| 1977 | AVERAGE   | 3,352                         | 3,277                               | 250     | 1       | ‡250,260            |
| 1978 | AVERAGE   | 3,432                         | 3,167                               | 173     | 3       | ‡216,439            |
| 1979 | AVERAGE   | 3,311                         | 3,152                               | 193     | 3       | ‡228,712            |
| 1980 | January   | R3,714                        | R3,013                              | 179     | 7       | R212,394            |
|      | February  | R3,712                        | R2,766                              | R237    | 8       | R191,657            |
|      | March     | R3,179                        | R2,557                              | R193    | 19      | R177,866            |
|      | April     | R2,635                        | R2,460                              | R154    | 2       | R177,241            |
|      | May       | 2,402                         | R2,474                              | 126     | 1       | R183,405            |
|      | June      | R2,317                        | R2,646                              | 108     | (s)     | R196,566            |
|      | July      | R2,249                        | R2,689                              | 117     | 3       | R213,835            |
|      | August    | R2,137                        | R2,461                              | 77      | (s)     | R226,331            |
|      | September | R2,587                        | R2,686                              | 101     | (s)     | R232,373            |
|      | October   | R2,920                        | 2,589                               | 115     | (s)     | R225,707            |
|      | November  | R2,949                        | R2,703                              | 133     | (s)     | R222,365            |
|      | December  | R3,615                        | R2,891                              | 166     | (s)     | R205,132            |
|      | AVERAGE   | R2,866                        | R2,661                              | R142    | 3       |                     |
| 1981 | January   | 4,090                         | 2,987                               | 273     | (s)     | 180,004             |
|      | February  | 3,395                         | 2,809                               | 325     | 17      | 172,528             |
|      | March     | 2,891                         | 2,484                               | 144     | (s)     | 164,638             |
|      | April     | 2,541                         | 2,418                               | 116     | 3       | 164,634             |
|      | May       | 2,395                         | 2,454                               | 165     | (s)     | 171,918             |
|      | June      | 2,437                         | 2,501                               | 201     | (s)     | 180,176             |
|      | July      | 2,381                         | 2,403                               | 179     | 2       | 186,675             |
|      | August    | 2,384                         | 2,656                               | 159     | (s)     | 200,268             |
|      | September | R2,532                        | R2,610                              | 129     | 1       | R206,766            |
|      | October   | R2,792                        | R2,490                              | 117     | 5       | R201,132            |
|      | November  | R2,894                        | R2,729                              | R114    | 6       | R199,748            |
|      | December  | 3,173                         | 2,919                               | 114     | NA      | 188,712             |
|      | AVERAGE   | 2,823                         | 2,621                               | 169     | NA      |                     |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. On the new basis distillate fuel oil production and product supplied in 1980 would have been an average of 105,000 barrels per day higher than shown.

<sup>2</sup>See Definitions.

‡Total as of December 31. †Preliminary data. R = Revised data. NA = Not available. (s) = Less than 500 barrels per day.

Note: Estimated data are in italics and are likely to be revised.

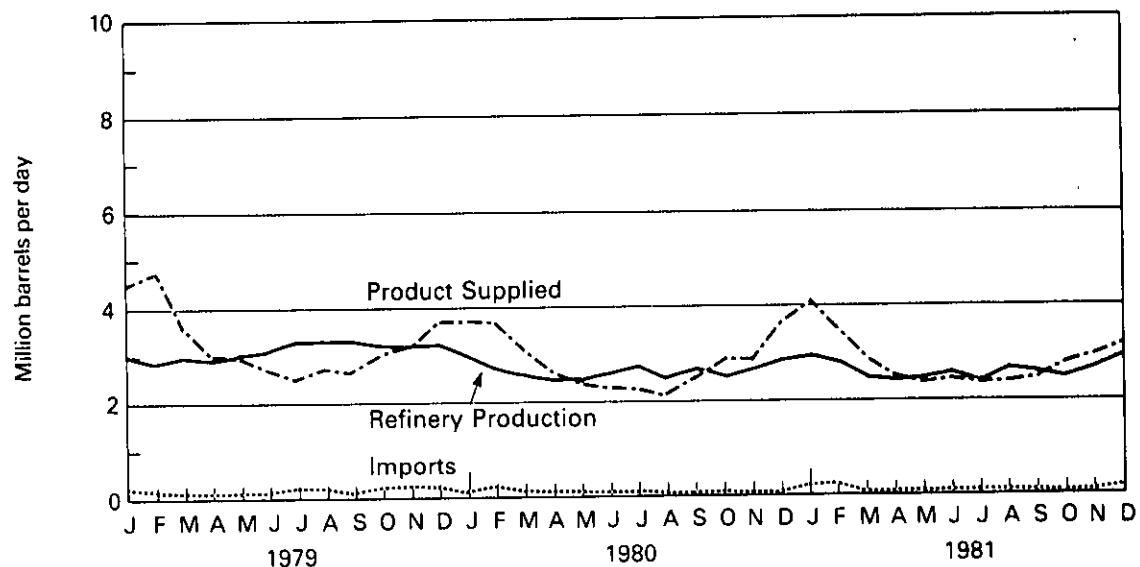
Note: Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with 1975.

Sources: \*See Sources at the end of this section.

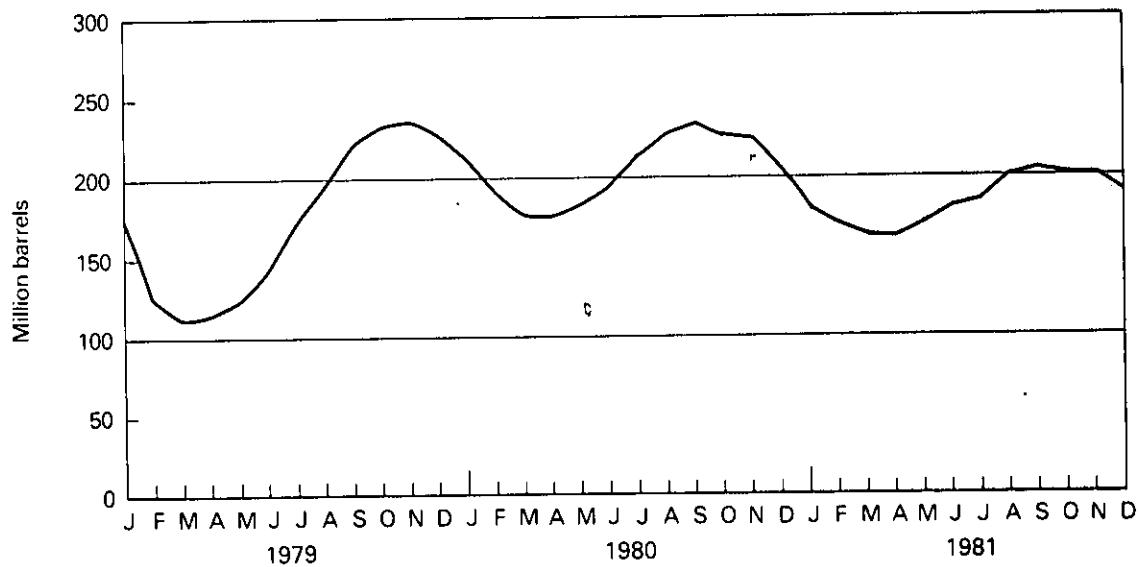
## Petroleum

### Distillate Fuel Oil

#### Product Supplied, Refinery Production and Imports



#### Stocks



# Petroleum

## Residual Fuel Oil

|      |           | Product Supplied <sup>1</sup> | Refinery Production <sup>1</sup> | Imports | Exports | Stocks   |
|------|-----------|-------------------------------|----------------------------------|---------|---------|----------|
|      |           | Thousand barrels per day      |                                  |         |         |          |
| 1973 | AVERAGE   | 2,822                         | 971                              | 1,853   | 23      | \$53,480 |
| 1974 | AVERAGE   | 2,639                         | 1,070                            | 1,587   | 14      | \$59,694 |
| 1975 | AVERAGE   | 2,462                         | 1,235                            | 1,223   | 15      | \$74,126 |
| 1976 | AVERAGE   | 2,801                         | 1,377                            | 1,413   | 12      | \$72,344 |
| 1977 | AVERAGE   | 3,071                         | 1,754                            | 1,359   | 6       | \$89,993 |
| 1978 | AVERAGE   | 3,023                         | 1,667                            | 1,355   | 13      | \$90,194 |
| 1979 | AVERAGE   | 2,826                         | 1,687                            | 1,151   | 9       | \$95,598 |
| 1980 | January   | R3,067                        | R1,771                           | R1,338  | 5       | R97,187  |
|      | February  | R3,105                        | R1,773                           | R1,122  | 17      | R90,993  |
|      | March     | R2,658                        | R1,584                           | R976    | 2       | R88,302  |
|      | April     | R2,444                        | R1,595                           | R775    | 40      | R85,252  |
|      | May       | R2,235                        | R1,509                           | 812     | 20      | R87,671  |
|      | June      | R2,321                        | 1,575                            | 749     | 14      | R87,792  |
|      | July      | R2,291                        | 1,480                            | 787     | 60      | R85,603  |
|      | August    | R2,286                        | 1,444                            | 875     | 2       | R86,944  |
|      | September | R2,359                        | R1,495                           | 906     | 21      | R87,868  |
|      | October   | R2,227                        | R1,512                           | R875    | 70      | R90,975  |
|      | November  | R2,451                        | R1,579                           | 1,024   | 88      | R93,208  |
|      | December  | R2,679                        | R1,660                           | 1,025   | 62      | R91,786  |
|      | AVERAGE   | R2,508                        | R1,580                           | R939    | 33      |          |
| 1981 | January   | 2,870                         | 1,611                            | 1,015   | 65      | 82,267   |
|      | February  | 2,549                         | 1,565                            | 956     | 125     | 78,230   |
|      | March     | 2,098                         | 1,423                            | 699     | 145     | 74,920   |
|      | April     | 1,829                         | 1,320                            | 584     | 151     | 73,045   |
|      | May       | 1,769                         | 1,222                            | 735     | 25      | 78,542   |
|      | June      | 1,993                         | 1,232                            | 540     | 76      | 70,064   |
|      | July      | 1,995                         | 1,174                            | 830     | 82      | 69,264   |
|      | August    | 1,849                         | 1,230                            | 819     | 69      | 74,813   |
|      | September | R1,878                        | R1,286                           | 841     | 126     | R80,041  |
|      | October   | R1,865                        | 1,232                            | R773    | 202     | R79,782  |
|      | November† | R1,877                        | R1,221                           | R844    | 203     | R80,953  |
|      | December† | 2,123                         | 1,275                            | 961     | NA      | 77,256   |
|      | AVERAGE   | 2,056                         | 1,314                            | 800     | NA      |          |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Beginning in January 1981, the Energy Information Administration modified its monthly petroleum surveys. On the new basis residual fuel oil production and product supplied in 1980 would have been an average of 54,000 barrels per day higher than shown.

<sup>2</sup>Beginning in April 1980, residual fuel oil exports increased due to shipments of high sulfur fuel to the Caribbean to be desulfurized and returned to the United States. In July 1980, additional exports of high sulfur fuel oil began to be shipped to Asia.

†Total as of December 31. †Preliminary data. R = Revised data. NA = Not available.

Note: Estimated data are in italics and are likely to be revised.

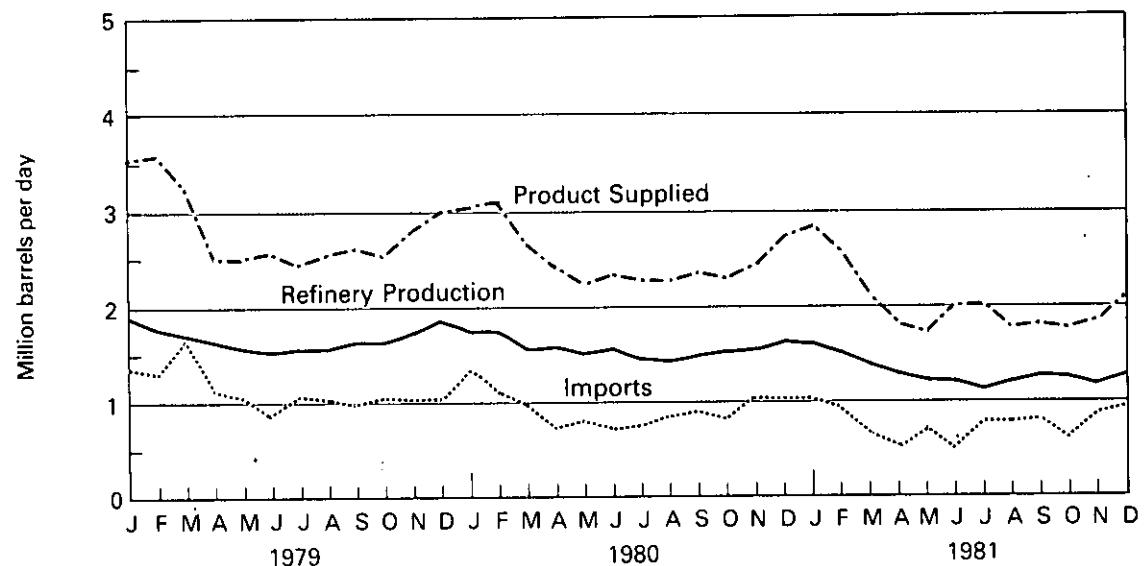
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Sources: \*See Sources at the end of this section.

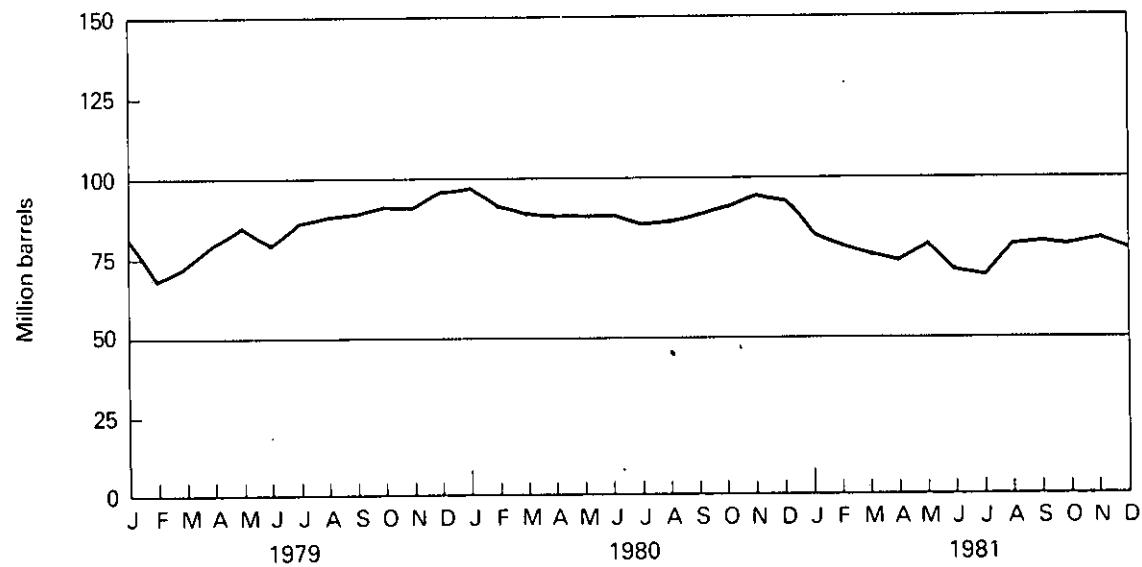
## Petroleum

### Residual Fuel Oil

#### Product Supplied, Refinery Production and Imports



#### Stocks



# Petroleum

## Natural Gas Plant Liquids, Including Liquefied Refinery Gases

|      | Products Supplied <sup>1</sup> | Production <sup>2</sup> |                          | Used at Refineries <sup>3</sup> | Imports | Stocks <sup>4</sup> |  |  |  |
|------|--------------------------------|-------------------------|--------------------------|---------------------------------|---------|---------------------|--|--|--|
|      |                                | At processing plants    |                          |                                 |         |                     |  |  |  |
|      |                                | At refineries           | Thousand barrels per day |                                 |         |                     |  |  |  |
| 1973 | AVERAGE                        | 1,454                   | 1,738                    | 375                             | 815     | 239                 |  |  |  |
| 1974 | AVERAGE                        | 1,422                   | 1,688                    | 338                             | 746     | 212                 |  |  |  |
| 1975 | AVERAGE                        | 1,352                   | 1,633                    | 311                             | 710     | 185                 |  |  |  |
| 1976 | AVERAGE                        | 1,407                   | 1,603                    | 340                             | 725     | 196                 |  |  |  |
| 1977 | AVERAGE                        | 1,427                   | 1,618                    | 352                             | 673     | 203                 |  |  |  |
| 1978 | AVERAGE                        | 1,416                   | 1,567                    | 355                             | 639     | 139                 |  |  |  |
| 1979 | AVERAGE                        | 1,695                   | 1,584                    | 340                             | 504     | 230                 |  |  |  |
| 1980 | January                        | R2,174                  | R1,648                   | 338                             | R547    | 282                 |  |  |  |
|      | February                       | R1,924                  | R1,656                   | R353                            | R483    | 265                 |  |  |  |
|      | March                          | R1,669                  | R1,568                   | 342                             | R412    | 224                 |  |  |  |
|      | April                          | R1,359                  | R1,630                   | R335                            | R400    | R196                |  |  |  |
|      | May                            | R1,470                  | R1,615                   | 325                             | R410    | R189                |  |  |  |
|      | June                           | R1,370                  | R1,561                   | 335                             | 386     | 193                 |  |  |  |
|      | July                           | R1,217                  | R1,524                   | R329                            | R441    | 178                 |  |  |  |
|      | August                         | R1,262                  | R1,519                   | 323                             | R428    | 166                 |  |  |  |
|      | September                      | R1,515                  | R1,515                   | 314                             | R460    | R223                |  |  |  |
|      | October                        | R1,681                  | R1,516                   | R299                            | 501     | R223                |  |  |  |
|      | November                       | R1,641                  | R1,571                   | 324                             | R553    | 262                 |  |  |  |
|      | December                       | R2,009                  | R1,560                   | 346                             | 545     | 240                 |  |  |  |
|      | AVERAGE                        | R1,607                  | R1,573                   | R330                            | R462    | R226                |  |  |  |
| 1981 | January                        | 2,010                   | 1,595                    | 324                             | 611     | 319                 |  |  |  |
|      | February                       | 1,893                   | 1,615                    | 332                             | 560     | 338                 |  |  |  |
|      | March                          | 1,696                   | 1,581                    | 313                             | 484     | 128,722             |  |  |  |
|      | April                          | 1,405                   | 1,551                    | 322                             | 462     | 260                 |  |  |  |
|      | May                            | 1,384                   | 1,554                    | 325                             | 443     | 222                 |  |  |  |
|      | June                           | 1,424                   | 1,579                    | 326                             | 471     | 133,375             |  |  |  |
|      | July                           | 1,349                   | 1,547                    | 307                             | 465     | 197                 |  |  |  |
|      | August                         | 1,220                   | 1,582                    | 341                             | 466     | 140,492             |  |  |  |
|      | September                      | R1,470                  | R1,630                   | R326                            | R530    | 209                 |  |  |  |
|      | October                        | R1,683                  | R1,601                   | R298                            | R569    | 218                 |  |  |  |
|      | November†                      | 1,471                   | 1,614                    | 298                             | 595     | 153,841             |  |  |  |
|      | AVERAGE                        | 1,547                   | 1,586                    | 319                             | 514     | 161,934             |  |  |  |
|      |                                |                         |                          |                                 |         | R166,185            |  |  |  |
|      |                                |                         |                          |                                 |         | R313                |  |  |  |
|      |                                |                         |                          |                                 |         | R162,602            |  |  |  |
|      |                                |                         |                          |                                 |         | 160,951             |  |  |  |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>See Explanatory Note 7 and Definitions.

<sup>2</sup>Energy Information Administration (EIA) natural gas plant coverage was expanded in January 1979 to include approximately 80 more plants. Calculated on the new basis, December 1978 closing stocks totaled 147,548 thousand barrels.

<sup>3</sup>EIA natural gas liquids operations coverage was expanded in January 1981 to include additional storage terminals. Calculated on the new basis, December 1980 closing stocks totaled 146,544 thousand barrels.

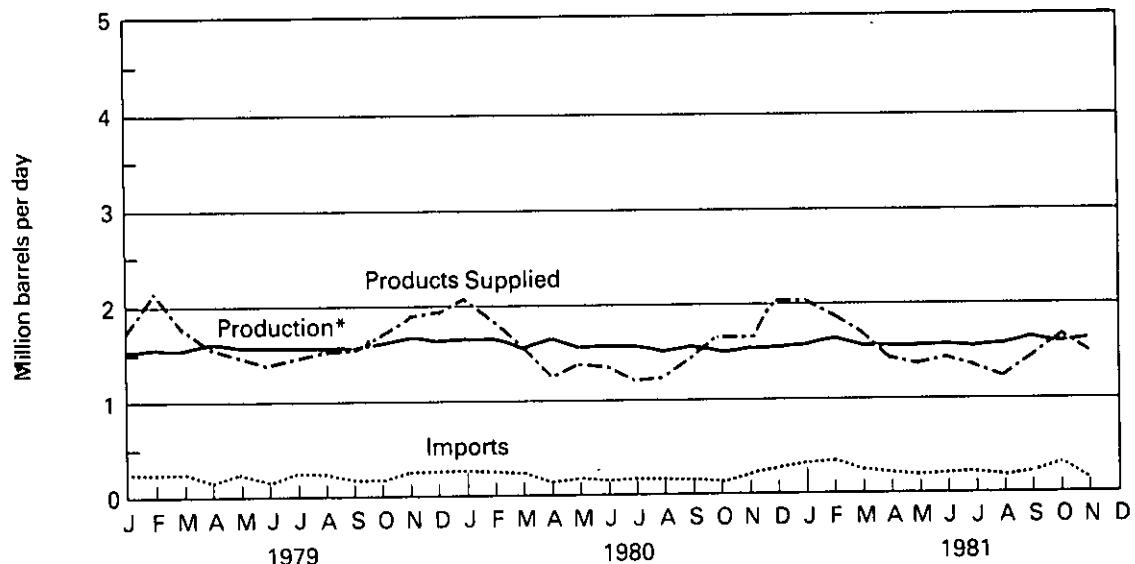
<sup>4</sup>Total as of December 31. †Preliminary data. R=Revised data.

Sources: • See Sources at the end of this section.

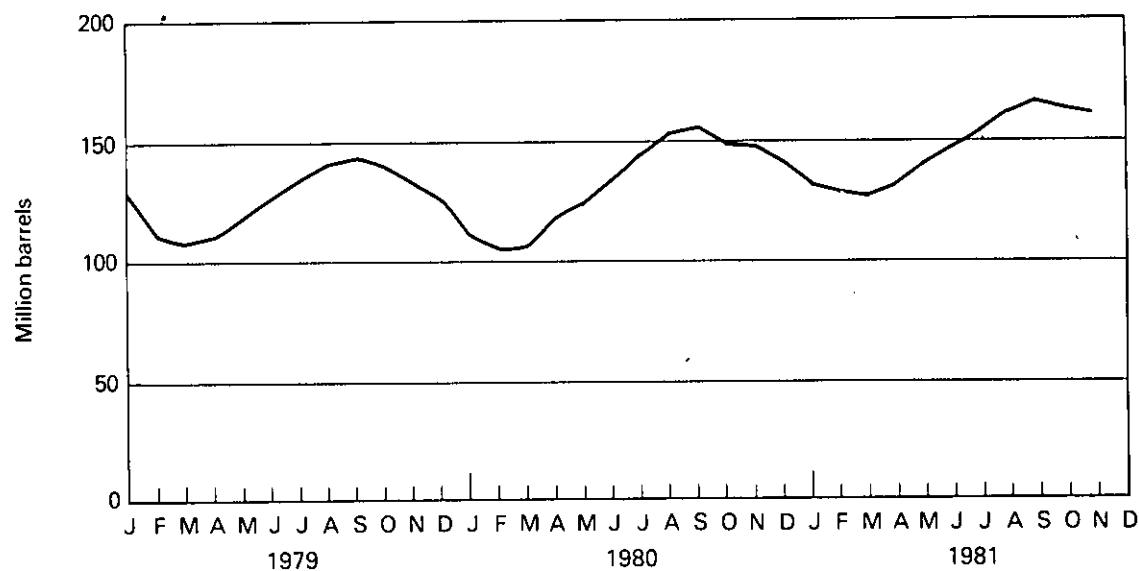
# Petroleum

## Natural Gas Plant Liquids

### Products Supplied, Production and Imports



### Stocks



\*At processing plants.

# Petroleum

## Petroleum Primary Supply Balance

|   | 1980     |                       |                       |          |        |
|---|----------|-----------------------|-----------------------|----------|--------|
|   | 1st Qtr. | 2nd Qtr.              | 3rd Qtr.              | 4th Qtr. | Year   |
| Thousand barrels per day                  |          |                       |                       |          |        |
| <b>Primary Supply</b>                     |          |                       |                       |          |        |
| Crude oil and lease condensate production | 8,685    | 8,625                 | 8,531                 | 8,548    | 8,597  |
| Natural gas plant liquids production      | 1,622    | 1,580                 | 1,513                 | 1,541    | 1,564  |
| Other hydrocarbon supply                  | 56       | 49                    | 44                    | 42       | 48     |
| Crude oil imported <sup>1</sup>           | 6,029    | 5,366                 | 4,692                 | 4,806    | 5,220  |
| Petroleum products imported <sup>2</sup>  | 1,872    | 1,440                 | 1,418                 | 1,714    | 1,611  |
| Total new primary supply                  | 18,263   | 17,059                | 16,197                | 16,652   | 17,040 |
| Processing gain                           | 629      | 567                   | 593                   | 591      | 595    |
| Stock change—all oils <sup>3</sup>        | -1       | +753                  | +393                  | -557     | +146   |
| Total net primary supply                  | 18,893   | 16,873                | 16,398                | 17,800   | 17,489 |
| Unaccounted for crude oil <sup>4</sup>    | -57      | +61                   | +158                  | +131     | +73    |
| <b>Disposition</b>                        |          |                       |                       |          |        |
| Crude oil and petroleum products exported | 547      | 562                   | 468                   | 590      | 542    |
| Crude oil losses                          | 15       | 14                    | 14                    | 14       | 14     |
| Total products supplied <sup>5</sup>      | 18,274   | 16,358                | 16,074                | 17,327   | 17,006 |
| Total disposition                         | 18,836   | 16,934                | 16,556                | 17,931   | 17,562 |
|   | 1981     |                       |                       |          |        |
|   | 1st Qtr. | 2nd Qtr. <sup>†</sup> | 3rd Qtr. <sup>†</sup> |          |        |
| <b>Primary Supply</b>                     |          |                       |                       |          |        |
| Crude oil and lease condensate production | 8,577    | 8,549                 | 8,613                 |          |        |
| Natural gas plant liquids production      | 1,596    | 1,590                 | 1,609                 |          |        |
| Other hydrocarbon supply                  | 37       | 57                    | 53                    |          |        |
| Crude oil imported <sup>1</sup>           | 4,769    | 4,237                 | 4,368                 |          |        |
| Petroleum products imported <sup>2</sup>  | 1,762    | 1,340                 | 1,472                 |          |        |
| Total new primary supply                  | 16,741   | 15,773                | 16,113                |          |        |
| Processing gain                           | 528      | 488                   | 481                   |          |        |
| Stock change—all oils <sup>3</sup>        | -219     | +320                  | +413                  |          |        |
| Total net primary supply                  | 17,489   | 15,941                | 16,182                |          |        |
| Unaccounted for crude oil <sup>4</sup>    | +109     | +66                   | +19                   |          |        |
| <b>Disposition</b>                        |          |                       |                       |          |        |
| Crude oil and petroleum products exported | 571      | 524                   | 579                   |          |        |
| Crude oil losses                          | 5        | 7                     | 14                    |          |        |
| Total products supplied <sup>5</sup>      | 17,021   | 15,476                | 15,608                |          |        |
| Total disposition                         | 17,598   | 16,007                | 16,201                |          |        |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Includes crude oil imported for the Strategic Petroleum Reserve.

<sup>2</sup>Includes plant condensate, natural gasoline and unfinished oils.

<sup>3</sup>Includes petroleum stored in the Strategic Petroleum Reserve.

<sup>4</sup>Balancing item resulting from statistical inconsistencies.

<sup>5</sup>Includes international bunkers.

<sup>†</sup>Preliminary data.

Sources: • January 1980 through May 1981: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly."

• June 1981 through September 1981: EIA, "Monthly Petroleum Statistics Report".

• Sources for the *Energy Data Reports* and the "Monthly Petroleum Statistics Report" are shown on the last page of this section.

## Sources for the Petroleum Section

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



## Natural Gas

Consumption of natural gas in the United States during December 1981 was an estimated 2.1 trillion cubic feet (Tcf). This was 24.6 percent higher than in November 1981 and 1.2 percent less than in December 1980. Estimated consumption during 1981 totaled 19.8 Tcf, 1.4 percent lower than the 1980 level.

Production of dry natural gas in December 1981 was an estimated 1.7 Tcf, 6.2 percent more than in November 1981 and almost the same as in December 1980. Estimated output during 1981 totaled 19.6 Tcf, 1.1 percent higher than during the previous year.

Imports of natural gas in December 1981 were an estimated 85 billion cubic feet (Bcf), 13.3 percent lower than in the previous December. Total imports of natural gas during 1981 were an estimated 868 Bcf, 11.9 percent lower than during 1980. Receipts of foreign gas during 1981 included Algerian liquefied natural gas (LNG) equivalent to approximately 37 Bcf, 57.0 percent less than during the previous year. Exports of natural gas in 1981 totaled an estimated 50 Bcf, almost the same as during 1980.

Domestic producer sales to major interstate pipelines in October 1981 (latest data available) totaled 889 Bcf, 0.6 percent lower than sales for the previous October. Total sales during the first 10 months of 1981 were 9.0 Tcf, approximately 2.9 percent above sales during the comparable 1980 period.

Stocks of working gas\* in underground natural gas storage reservoirs at the end of December 1981 totaled 2.8 Tcf, according to preliminary data. This was 6.4 percent above stocks available a year earlier. Net withdrawals from storage during December 1981 were 362 Bcf, 1.6 percent less than during the previous December.

\*Gas available for withdrawal.

## Natural Gas

|      |           | Production           |          | Domestic Producer Sales to Major Interstate Pipelines |         |         |
|------|-----------|----------------------|----------|---|---------|---------|
|      |           | Domestic Consumption | Marketed | Dry   | Imports | Exports |
|      |           |                      |          | Billion cubic feet                                    |         |         |
| 1973 | TOTAL     | 22,049               | 22,648   | 21,731  | 12,067  | 1,033   |
| 1974 | TOTAL     | 21,223               | 21,601   | 20,714  | 11,462  | 959     |
| 1975 | TOTAL     | 19,538               | 20,109   | 19,237  | 10,652  | 953     |
| 1976 | TOTAL     | 19,946               | 19,952   | 19,098  | 10,140  | 964     |
| 1977 | TOTAL     | 19,521               | 20,025   | 19,163  | 9,883   | 1,011   |
| 1978 | TOTAL     | 19,627               | 19,974   | 19,122  | 9,911   | 966     |
| 1979 | TOTAL     | 20,241               | 20,471   | 19,663  | 10,496  | 1,253   |
| 1980 | January   | 2,279                | 1,817    | 1,745   | 981     | 118     |
|      | February  | 2,192                | 1,705    | 1,638   | 898     | 108     |
|      | March     | 2,099                | 1,827    | 1,754   | 960     | 109     |
|      | April     | 1,568                | 1,667    | 1,601   | 897     | 77      |
|      | May       | 1,355                | 1,692    | 1,625   | 859     | 70      |
|      | June      | 1,253                | 1,583    | 1,520   | 794     | 61      |
|      | July      | 1,301                | 1,613    | 1,549   | 825     | 61      |
|      | August    | 1,246                | 1,572    | 1,510   | 828     | 60      |
|      | September | 1,299                | 1,577    | 1,515   | 800     | 60      |
|      | October   | 1,542                | 1,647    | 1,582   | 894     | 75      |
|      | November  | 1,783                | 1,651    | 1,586   | 906     | 88      |
|      | December  | 2,156                | 1,794    | 1,723   | 963     | 98      |
|      | TOTAL     | 20,073               | 20,145   | 19,348  | 10,605  | 985     |
| 1981 | January   | 2,256                | 1,769    | 1,699   | 965     | 86      |
|      | February  | 1,899                | 1,592    | 1,529   | 873     | 79      |
|      | March     | 1,906                | 1,745    | 1,676   | 945     | 73      |
|      | April     | 1,512                | 1,675    | 1,609   | 905     | 68      |
|      | May       | 1,459                | 1,720    | 1,652   | 909     | 61      |
|      | June      | 1,336                | 1,666    | 1,600   | 877     | 63      |
|      | July      | 1,366                | 1,697    | 1,630   | 889     | 64      |
|      | August    | 1,367                | 1,747    | 1,678   | 864     | 62      |
|      | September | R1,298               | R1,607   | R1,544  | 869     | 67      |
|      | October   | 1,560                | 1,680    | 1,610   | 889     | 78      |
|      | November  | 1,710                | 1,690    | 1,620   | NA      | R82     |
|      | December  | 2,130                | 1,790    | 1,720   | NA      | 85      |
|      | TOTAL     | 19,799               | 20,378   | 19,587  | NA      | 868     |
|      |           |                      |          |   |         | 50      |

Geographic coverage: the 50 United States and District of Columbia.

R=Revised data. NA=Not available.

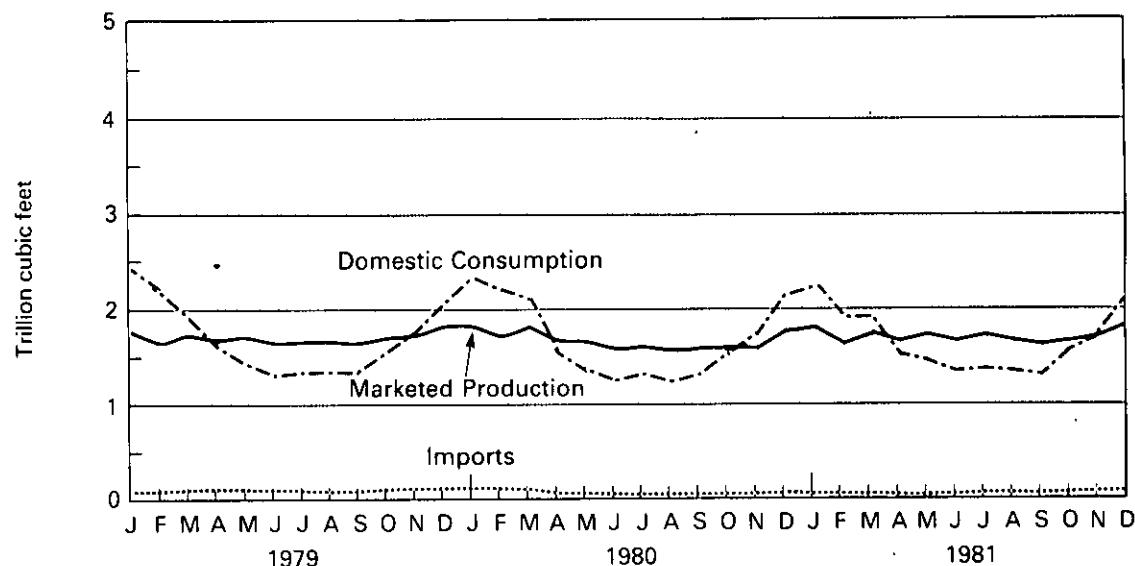
Note: Estimated data are in italics and are likely to be revised.

Sources: Domestic Consumption—1973 through 1975: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, "Natural Gas" chapter; 1976 through 1979: Energy Information Administration (EIA), *Energy Data Report*, "Natural Gas Production and Consumption"; January 1980 forward: EIA estimates based on a supply/disposition balance calculation.

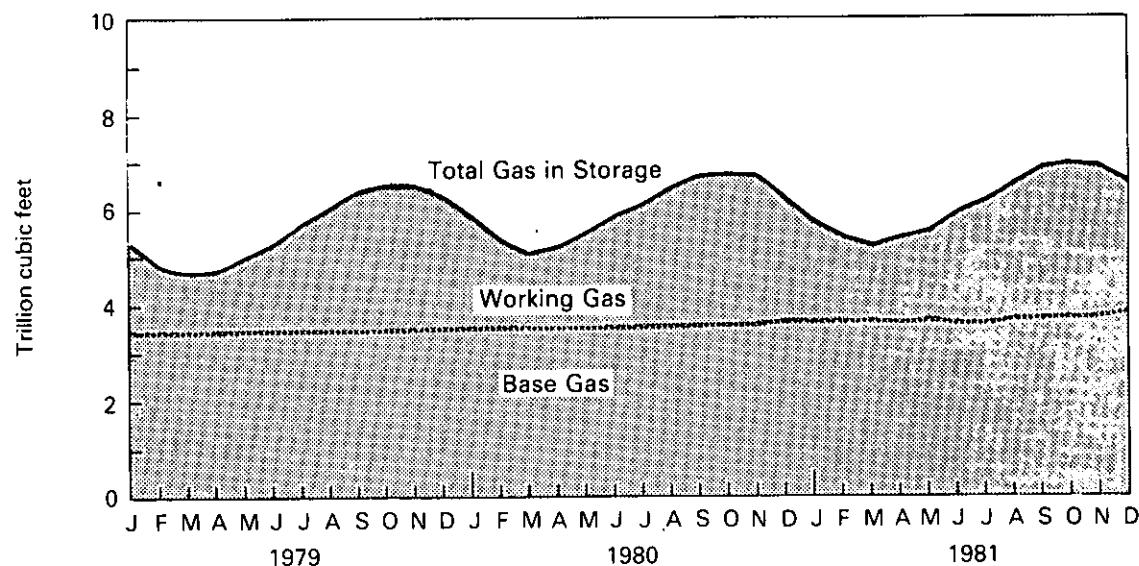
- Production—State reports to the Interstate Oil Compact Commission, data from the United States Geological Survey and EIA estimates for states that do not report monthly data on a regular or timely basis.
- Domestic Producer Sales—FPC Form 11, "Natural Gas Pipeline Company Monthly Statement."
- Imports—1973 through 1980: FPC Form 14, "Imports and Exports of Natural Gas"; January 1981 forward: EIA estimates based on import data from FPC Form 11.
- Exports—1973 through 1980: FPC Form 14; January 1981 forward: EIA estimates based primarily on historical data reported on FPC Form 14.

## Natural Gas

Domestic Consumption, Marketed Production and Imports



Gas in Storage



## Natural Gas

### Natural Gas in Underground Storage<sup>1</sup>

|                    |           | Total Gas<br>In<br>Storage | Base<br>Gas | Working<br>Gas | Storage<br>Injections | Storage<br>Withdrawals | Net<br>Storage<br>Injections <sup>2</sup> |
|--------------------|-----------|----------------------------|-------------|----------------|-----------------------|------------------------|---|
| Billion cubic feet |           |                            |             |                |                       |                        |   |
| 1973               | TOTAL     | 14,898                     | 12,864      | 12,034         | NA                    | NA                     | NA  |
| 1974               | TOTAL     | 14,962                     | 12,912      | 12,050         | NA                    | NA                     | NA  |
| 1975               | TOTAL     | 15,358                     | 13,150      | 12,208         | NA                    | NA                     | NA  |
| 1976               | TOTAL     | 15,231                     | 13,310      | 11,922         | 1,952                 | 2,074                  | (122)                                     |
| 1977               | TOTAL     | 15,844                     | 13,377      | 12,466         | 2,390                 | 1,767                  | 623                                       |
| 1978               | TOTAL     | 15,999                     | 13,459      | 12,540         | 2,330                 | 2,176                  | 154                                       |
| 1979               | TOTAL     | 16,297                     | 13,537      | 12,761         | 2,384                 | 2,041                  | 343                                       |
| 1980               | January   | 5,865                      | 3,535       | 2,330          | 21                    | 465                    | (444)                                     |
|                    | February  | 5,397                      | 3,536       | 1,861          | 24                    | 493                    | (469)                                     |
|                    | March     | 5,131                      | 3,542       | 1,589          | 41                    | 307                    | (266)                                     |
|                    | April     | 5,227                      | 3,547       | 1,680          | 174                   | 78                     | 96  |
|                    | May       | 5,538                      | 3,553       | 1,985          | 319                   | 8                      | 311                                       |
|                    | June      | 5,841                      | 3,560       | 2,281          | 316                   | 13                     | 303                                       |
|                    | July      | 6,127                      | 3,564       | 2,563          | 302                   | 18                     | 284                                       |
|                    | August    | 6,444                      | 3,594       | 2,850          | 328                   | 30                     | 298                                       |
|                    | September | 6,692                      | 3,596       | 3,096          | 260                   | 11                     | 249                                       |
|                    | October   | 6,782                      | 3,598       | 3,184          | 141                   | 53                     | 88  |
|                    | November  | 6,639                      | 3,620       | 3,019          | 66                    | 203                    | (137)                                     |
|                    | December  | 6,272                      | 3,629       | 2,643          | 34                    | 402                    | (368)                                     |
| 1981               | January   | 5,763                      | 3,629       | 2,134          | 28                    | 537                    | (509)                                     |
|                    | February  | 5,440                      | 3,628       | 1,812          | 62                    | 385                    | (323)                                     |
|                    | March     | 5,248                      | 3,630       | 1,618          | 50                    | 243                    | (193)                                     |
|                    | April     | 5,380                      | 3,631       | 1,749          | 191                   | 59                     | 132                                       |
|                    | May       | 5,598                      | 3,634       | 1,964          | 243                   | 25                     | 218                                       |
|                    | June      | 5,895                      | 3,634       | 2,261          | 323                   | 31                     | 292                                       |
|                    | July      | 6,200                      | 3,649       | 2,551          | 324                   | 29                     | 295                                       |
|                    | August    | 6,589                      | 3,709       | 2,880          | 356                   | 18                     | 338                                       |
|                    | September | 6,868                      | 3,719       | 3,149          | 285                   | 6                      | 279                                       |
|                    | October   | 6,966                      | 3,724       | 3,242          | 149                   | 53                     | 96  |
|                    | November  | R6,919                     | R3,726      | R3,193         | R83                   | R126                   | R(43)                                     |
|                    | December† | 6,560                      | 3,748       | 2,812          | 35                    | 397                    | (362)                                     |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>See Explanatory Note 9.

<sup>2</sup>Net storage injections are storage injections minus storage withdrawals. Parentheses indicate withdrawals greater than injections.

†Total as of December 31. †Preliminary data. R=Revised data. NA=Not available.

Source: • 1973 and 1974: American Gas Association, *Gas Facts*; 1975 forward: Energy Information Administration, EIA Form 191 and FPC Form 8, "Underground Gas Storage Report."

# Part 5

## Oil and Gas Resource Development

### Oil and Gas Resource Development

The December 1981 rotary rig count of 4,520 was the highest in U.S. drilling history, 1.9 percent above the previous record of 4,436 rigs attained the month before and 37.6 percent higher than the December 1980 count of 3,286 rotary rigs.

Well completions reported in 1981 totaled 78,454. This is a 28.9 percent increase over the number for 1980 (60,845 reported).

The cumulative oil well completions in 1981 (37,639 reported) were up 39.3 percent over the 1980 figure (27,026 reported). During 1981, 17,870 gas well completions were reported, 13.6 percent above the 15,730 reported during 1980. Reported footage drilled during 1981 totaled 361.0 million feet, a 26.9 percent increase from the 1980 level.

There were 47 crews engaged in seismic exploratory work offshore during December 1981. This was a 17.5 percent increase from the December 1980 level. December 1981 onshore seismic activity decreased from the previous month's level to 656 crews but was 21.5 percent higher than activity during December 1980.

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## Oil and Gas Resource Development

|      |           | Rotary Rigs<br>in Operation | Exploratory and Development<br>Wells Completed <sup>1,2</sup> |        |        |        | Total Footage of<br>Wells Completed <sup>1</sup><br>Thousand feet |         |
|------|-----------|-----------------------------|---|--------|--------|--------|---|---------|
|      |           |                             | Oil   | Gas    | Dry    | Total  |   |         |
|      |           | Monthly average             |   |        |        |        |   |         |
| 1973 | AVERAGE   | 1,194                       | TOTAL   | 9,902  | 6,385  | 10,305 | 26,592  | 136,391 |
| 1974 | AVERAGE   | 1,475                       | TOTAL   | 12,784 | 7,240  | 11,674 | 31,698  | 150,551 |
| 1975 | AVERAGE   | 1,660                       | TOTAL   | 16,408 | 7,580  | 13,247 | 37,235  | 174,434 |
| 1976 | AVERAGE   | 1,656                       | TOTAL   | 17,059 | 9,085  | 13,621 | 39,765  | 181,780 |
| 1977 | AVERAGE   | 2,001                       | TOTAL   | 18,912 | 11,378 | 14,692 | 44,982  | 210,848 |
| 1978 | AVERAGE   | 2,259                       | TOTAL   | 17,775 | 13,064 | 16,218 | 47,057  | 227,110 |
| 1979 | AVERAGE   | 2,177                       | TOTAL   | 19,383 | 14,681 | 15,752 | 49,816  | 238,659 |
| 1980 | January   | 2,571                       |   | 1,436  | 782    | 1,240  | 3,458   | 16,475  |
|      | February  | 2,613                       |   | 1,635  | 1,000  | 1,297  | 3,932   | 18,891  |
|      | March     | 2,658                       |   | 2,390  | 1,834  | 1,542  | 5,766   | 27,691  |
|      | April     | 2,682                       |   | 1,841  | 1,121  | 1,158  | 4,120   | 18,855  |
|      | May       | 2,797                       |   | 2,059  | 1,070  | 1,191  | 4,320   | 19,899  |
|      | June      | 2,850                       |   | 2,228  | 1,282  | 1,451  | 4,961   | 24,479  |
|      | July      | 2,953                       |   | 2,079  | 1,042  | 1,337  | 4,458   | 21,734  |
|      | August    | 3,045                       |   | 2,357  | 1,275  | 1,539  | 5,171   | 24,112  |
|      | September | 3,099                       |   | 2,641  | 1,720  | 1,767  | 6,128   | 28,171  |
|      | October   | 3,148                       |   | 2,417  | 1,190  | 1,697  | 5,304   | 24,600  |
|      | November  | 3,220                       |   | 2,258  | 1,503  | 1,617  | 5,378   | 25,417  |
|      | December  | 3,286                       |   | R3,685 | R1,910 | R2,257 | R7,852  | R34,161 |
|      | AVERAGE   | 2,909                       | TOTAL   | 27,026 | 15,730 | 18,089 | 60,845  | 284,461 |
| 1981 | January   | 3,386                       |   | 1,789  | 971    | 1,360  | 4,120   | 20,195  |
|      | February  | 3,502                       |   | 2,462  | 1,045  | 1,609  | 5,116   | 22,763  |
|      | March     | 3,595                       |   | 3,102  | 1,424  | 1,878  | 6,404   | 30,144  |
|      | April     | 3,728                       |   | 2,905  | 1,600  | 1,546  | 6,051   | 27,836  |
|      | May       | 3,816                       |   | 2,604  | 1,159  | 1,675  | 5,438   | 24,842  |
|      | June      | 3,926                       |   | 3,497  | 1,320  | 2,105  | 6,922   | 31,689  |
|      | July      | 3,998                       |   | 2,790  | 1,116  | 1,698  | 5,604   | 25,542  |
|      | August    | 4,131                       |   | 3,137  | 1,266  | 1,867  | 6,270   | 28,886  |
|      | September | 4,242                       |   | 3,416  | 1,967  | 2,019  | 7,402   | 33,608  |
|      | October   | 4,352                       |   | 3,775  | 1,875  | 2,091  | 7,741   | 35,500  |
|      | November  | 4,436                       |   | 3,587  | 1,577  | 2,057  | 7,221   | 32,149  |
|      | December  | 4,520                       |   | 4,581  | 2,572  | 3,055  | 10,208  | 48,275  |
|      | AVERAGE   | 3,970                       | TOTAL   | 37,639 | 17,870 | 22,945 | 78,454  | 360,987 |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>These data are for well completions reported to the American Petroleum Institute (API) during the reporting period. They exclude service wells and stratigraphic and core tests.

<sup>2</sup>Data reported for the first 2 months of each quarter cover 4 weeks of drilling activity, and data for the last month of the quarter cover 5 weeks of drilling activity.

R = Revised data.

Note: Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.

Sources: • Rotary Rigs: Hughes Tool Company, "Rotary Rigs Running—By State."

• Wells: API, "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

## Oil and Gas Resource Development

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

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Monthly data not available.

Sources: • Society of Exploration Geophysicists, "Monthly Seismic Crew Count" and annual reports published in their bulletin, *Geophysics*.



## **Coal**

Coal production in 1981 was estimated at 807.7 million short tons, down 2.6 percent from 829.7 million short tons in 1980. Following the 72-day coal strike in the first half of 1981, coal production during the second half was at record-breaking levels. Output in the final 6 months of 1981 totaled 456.5 million short tons, an increase of 10.9 percent over the production of 411.6 million short tons in the second half of 1980.

Electric utility coal consumption in November 1981 totaled 47.0 million short tons, 2.9 percent more than consumption in November 1980.

Electric utility coal stocks of 167.0 million short tons at the end of November 1981 were 17.1 million short tons (9.3 percent) below the level 1 year earlier.

Imports of coal in November 1981 totaled 76 thousand short tons. Exports of coal in November 1981 totaled 11.8 million short tons, 2.9 million short tons (31.8 percent) more than the amount exported during November 1980. Coal exports were principally to Japan (26.8 percent) and Canada (17.6 percent).

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# Coal

## Bituminous Coal, Lignite, and Anthracite

|                     |            | Production | Domestic Consumption | Imports <sup>1</sup> | Exports <sup>2, 3</sup> | Stocks <sup>4</sup> |
|---------------------|------------|------------|----------------------|----------------------|-------------------------|---------------------|
| Thousand short tons |            |            |                      |                      |                         |                     |
| 1973                | TOTAL      | 598,568    | 562,584              | 127                  | 53,587                  | 104,335             |
| 1974                | TOTAL      | 610,023    | 558,402              | 2,080                | 60,661                  | 96,323              |
| 1975                | TOTAL      | 654,641    | 562,641              | 940                  | 66,309                  | 128,050             |
| 1976                | TOTAL      | 684,913    | 603,790              | 1,203                | 60,021                  | 134,438             |
| 1977                | TOTAL      | 697,205    | 625,291              | 1,647                | 54,312                  | 157,098             |
| 1978                | TOTAL      | 670,164    | 625,225              | 2,953                | 40,714                  | 145,551             |
| 1979                | TOTAL      | 781,134    | 680,524              | 2,059                | 66,042                  | 181,646             |
| 1980                | January    | 69,594     | 63,521               | 121                  | 4,460                   | 179,450             |
|                     | February   | 65,546     | 59,678               | 193                  | 4,041                   | 176,808             |
|                     | March      | 70,953     | 58,851               | 93                   | 5,633                   | 176,685             |
|                     | April      | 69,658     | 52,635               | 63                   | 7,563                   | 185,367             |
|                     | May        | 71,043     | 52,834               | 207                  | 8,597                   | 193,920             |
|                     | June       | 71,338     | 56,098               | 104                  | 8,899                   | 199,299             |
|                     | July       | 61,285     | 63,122               | 32                   | 8,247                   | 187,913             |
|                     | August     | 68,399     | 62,752               | 166                  | 9,270                   | 190,689             |
|                     | September  | 68,822     | 57,306               | 2                    | 8,364                   | 194,467             |
|                     | October    | 72,290     | 55,774               | 139                  | 9,454                   | 201,975             |
|                     | November   | 68,655     | 56,800               | 3                    | 8,987                   | 204,436             |
|                     | December   | 72,117     | 63,362               | 70                   | 8,228                   | 204,028             |
|                     | TOTAL      | 829,700    | 702,733              | 1,194                | 91,742                  |                     |
| 1981                | January†   | R65,601    | 67,146               | 35                   | 5,795                   | 198,603             |
|                     | February†  | R70,498    | 59,530               | 104                  | 6,771                   | 197,962             |
|                     | March†     | R77,873    | 60,054               | 77                   | 9,710                   | 206,850             |
|                     | April†     | R37,332    | 54,354               | 63                   | 8,271                   | 186,816             |
|                     | May†       | R37,516    | 54,644               | 96                   | 6,086                   | 166,814             |
|                     | June†      | R62,379    | 59,319               | 138                  | 6,158                   | 157,773             |
|                     | July†      | R73,911    | 67,092               | 13                   | 10,762                  | 154,390             |
|                     | August†    | R78,738    | 65,382               | 150                  | 11,315                  | 156,529             |
|                     | September† | R80,240    | 59,364               | 69                   | 11,900                  | 164,222             |
|                     | October†   | 83,309     | NA                   | 94                   | 12,360                  | NA                  |
|                     | November†  | 72,676     | NA                   | 76                   | 11,849                  | NA                  |
|                     | December†  | 67,672     | NA                   | NA                   | NA                      | NA                  |
|                     | TOTAL      | 807,745    | NA                   | NA                   | NA                      | NA                  |

Geographic coverage: the 50 United States and District of Columbia.

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

See Explanatory Note 10 for methodology used to calculate domestic consumption from 1978 forward.

<sup>1</sup>Bituminous coal is the only type of coal imported during the years shown above.

<sup>2</sup>Includes exports of lignite beginning in 1978. Lignite prior to 1978 was combined with lignite briquets. Exports of lignite totaled 22,821 short tons in 1978; 26,389 short tons in 1979; and 65,064 short tons in 1980.

<sup>3</sup>Excludes shipments of anthracite to U.S. Armed Forces overseas (340,000 short tons in 1980).

<sup>4</sup>Stocks held by electric utilities, coke plants, and general industry at the end of period. Excludes stocks at retail dealers (which are consumed by the Residential and Commercial Sectors).

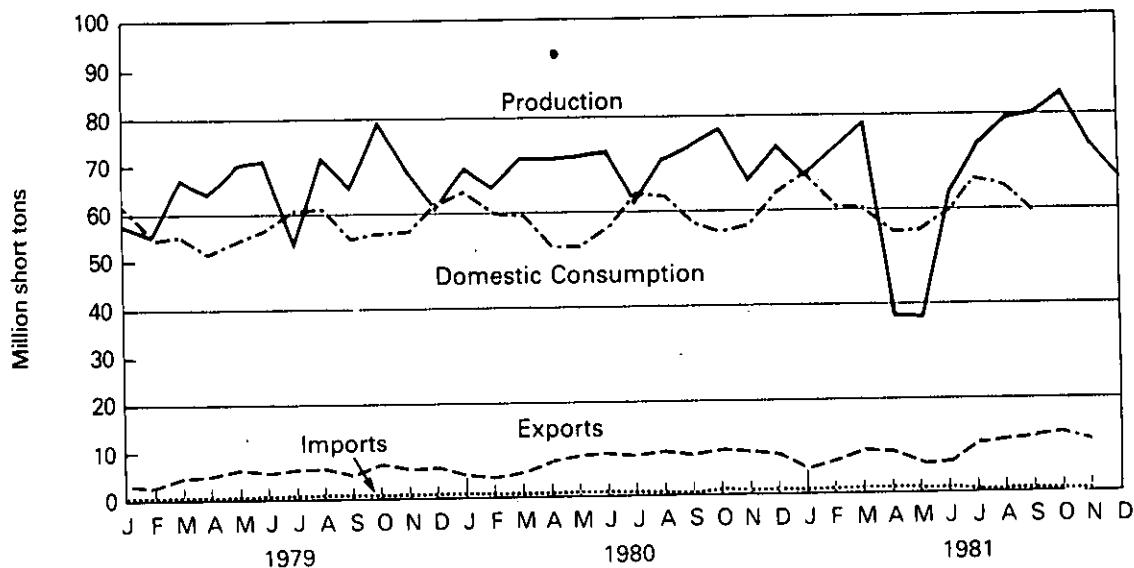
†Preliminary data. R=Revised data. NA=Not available.

Sources: • See Sources at the end of this section.

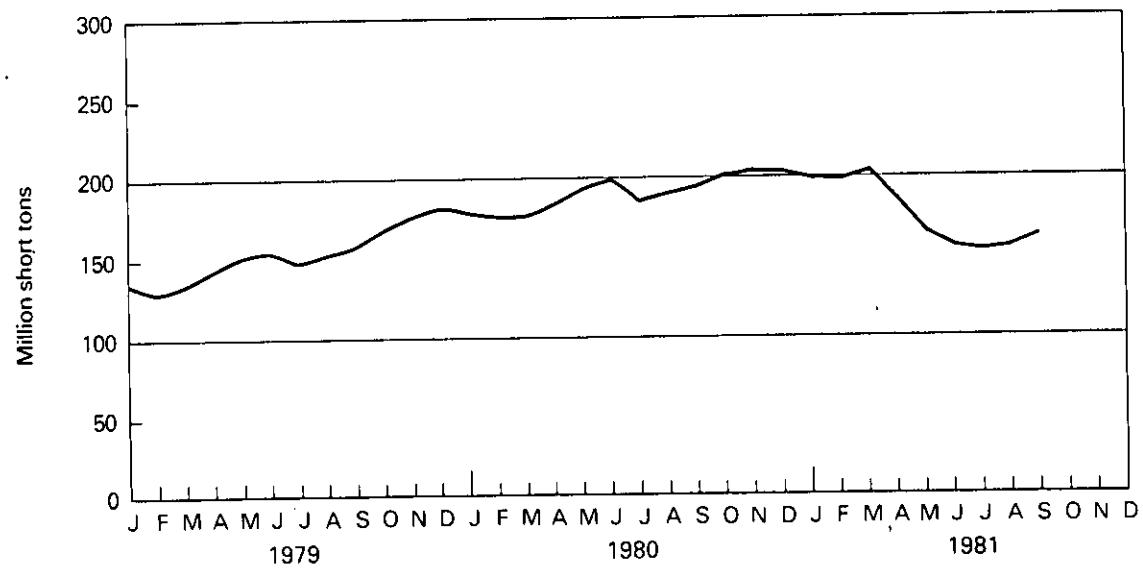
# Coal

## Bituminous Coal, Lignite, and Anthracite

### Production, Consumption, Imports, and Exports



### Stocks



# Coal

## Consumption—Bituminous Coal, Lignite, and Anthracite

|                     |                         | Industrial         |                          |                               |                            | Total   |  |
|---------------------|-------------------------|--------------------|--------------------------|-------------------------------|----------------------------|---------|--|
|                     |                         | Electric Utilities | Coke Plants <sup>1</sup> | Other Industrial <sup>2</sup> | Residential and Commercial |         |  |
|                     |                         |                    |                          | Including Transportation      |                            |         |  |
| Thousand short tons |                         |                    |                          |                               |                            |         |  |
| 1973                | TOTAL                   | 389,212            | 94,101                   | 68,154                        | 11,117                     | 562,584 |  |
| 1974                | TOTAL                   | 391,811            | 90,191                   | 64,983                        | 11,417                     | 558,402 |  |
| 1975                | TOTAL                   | 405,962            | 83,598                   | 63,670                        | 9,410                      | 562,641 |  |
| 1976                | TOTAL                   | 448,371            | 84,704                   | 61,799                        | 8,916                      | 603,790 |  |
| 1977                | TOTAL                   | 477,126            | 77,739                   | 61,472                        | 8,954                      | 625,291 |  |
| 1978                | TOTAL                   | 481,235            | 71,394                   | 63,085                        | 9,511                      | 625,225 |  |
| 1979                | TOTAL                   | 527,051            | 77,368                   | 67,717                        | 8,388                      | 680,524 |  |
| 1980                | January                 | 50,371             | 6,342                    | 5,944                         | 864                        | 63,521  |  |
|                     | February                | 47,512             | 6,010                    | 5,400                         | 756                        | 59,678  |  |
|                     | March                   | 46,685             | 6,428                    | 5,199                         | 539                        | 58,851  |  |
|                     | April                   | 40,692             | 6,247                    | 5,118                         | 578                        | 52,635  |  |
|                     | May                     | 41,464             | 6,127                    | 4,894                         | 349                        | 52,834  |  |
|                     | June                    | 45,821             | 5,326                    | 4,675                         | 276                        | 56,098  |  |
|                     | July                    | 53,655             | 4,903                    | 4,222                         | 342                        | 63,122  |  |
|                     | August                  | 53,214             | 4,878                    | 4,337                         | 323                        | 62,752  |  |
|                     | September               | 47,913             | 4,794                    | 4,170                         | 429                        | 57,306  |  |
|                     | October                 | 45,092             | 5,107                    | 4,990                         | 585                        | 55,774  |  |
|                     | November                | 45,698             | 5,152                    | 5,331                         | 619                        | 56,800  |  |
|                     | December                | 51,157             | 5,346                    | 6,067                         | 792                        | 63,362  |  |
|                     | TOTAL                   | 569,274            | 66,660                   | 60,347                        | 6,452                      | 702,733 |  |
| 1981                | January†                | 54,357             | 5,465                    | 6,469                         | 855                        | 67,146  |  |
|                     | February†               | 47,914             | 5,177                    | 5,874                         | 565                        | 59,530  |  |
|                     | March†                  | 48,398             | 5,532                    | 5,654                         | 470                        | 60,054  |  |
|                     | April†                  | 43,677             | 4,862                    | 5,254                         | 561                        | 54,354  |  |
|                     | May†                    | 44,999             | 4,259                    | 5,016                         | 370                        | 54,644  |  |
|                     | June†                   | 49,988             | 4,460                    | 4,571                         | 300                        | 59,319  |  |
|                     | July†                   | 56,144             | 5,440                    | 5,092                         | 416                        | 67,092  |  |
|                     | August†                 | 54,328             | 5,425                    | 5,233                         | 396                        | 65,382  |  |
|                     | September†              | 48,483             | 5,329                    | 5,025                         | 529                        | 59,364  |  |
|                     | October†                | 47,800             | NA                       | NA                            | NA                         | NA      |  |
|                     | November†               | 47,014             | NA                       | NA                            | NA                         | NA      |  |
|                     | TOTAL<br>(Year-to-date) | 543,102            | NA                       | NA                            | NA                         | NA      |  |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Bituminous coal and anthracite only. Lignite is not used at coke plants.

<sup>2</sup>See Explanatory Note 10.

†Preliminary data. NA=Not available.

Sources: • See Sources at the end of this section.

## Coal

### Stocks<sup>1</sup>—Bituminous Coal, Lignite, and Anthracite

|      | Industrial         |                          |                  |                     | : |
|------|--------------------|--------------------------|------------------|---------------------|---|
|      | Electric Utilities | Coke Plants <sup>2</sup> | Other Industrial | Total <sup>3</sup>  |   |
|      |                    |                          |                  | Thousand short tons |   |
| 1973 | 86,967             | 6,998                    | 10,370           | 104,335             |   |
| 1974 | 83,509             | 6,209                    | 6,605            | 96,323              |   |
| 1975 | 110,724            | 8,797                    | 8,529            | 128,050             |   |
| 1976 | 117,436            | 9,902                    | 7,100            | 134,438             |   |
| 1977 | 133,219            | 12,816                   | 11,063           | 157,098             |   |
| 1978 | 128,225            | 8,278                    | 9,048            | 145,551             |   |
| 1979 | 159,714            | 10,155                   | 11,777           | 181,646             |   |
| 1980 | January            | 158,717                  | 9,634            | 179,450             |   |
|      | February           | 157,124                  | 9,263            | 176,808             |   |
|      | March              | 157,625                  | 9,317            | 176,685             |   |
|      | April              | 165,817                  | 9,579            | 185,367             |   |
|      | May                | 174,029                  | 9,692            | 193,920             |   |
|      | June               | 178,959                  | 9,913            | 199,299             |   |
|      | July               | 168,806                  | 8,427            | 187,913             |   |
|      | August             | 171,891                  | 7,866            | 190,689             |   |
|      | September          | 175,067                  | 8,213            | 194,467             |   |
|      | October            | 182,045                  | 8,488            | 201,975             |   |
|      | November           | 184,133                  | 8,606            | 204,436             |   |
|      | December           | 183,010                  | 9,067            | 204,028             |   |
| 1981 | January†           | 176,975                  | 9,634            | 198,603             |   |
|      | February†          | 175,715                  | 10,211           | 197,962             |   |
|      | March†             | 183,983                  | 10,788           | 206,850             |   |
|      | April†             | 168,894                  | 6,952            | 186,816             |   |
|      | May†               | 152,103                  | 4,850            | 166,814             |   |
|      | June†              | 144,520                  | 4,500            | 157,773             |   |
|      | July†              | 140,656                  | 5,074            | 154,390             |   |
|      | August†            | 142,315                  | 5,648            | 156,529             |   |
|      | September†         | 149,526                  | 6,224            | 164,222             |   |
|      | October†           | 159,676                  | NA               | NA                  |   |
|      | November†          | 167,002                  | NA               | NA                  |   |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Stocks held by electric utilities, coke plants, and general industry at end of period.

<sup>2</sup>Bituminous coal and anthracite only. Lignite is not used at coke plants.

<sup>3</sup>Total excludes stocks at retail dealers (which are consumed by the Residential and Commercial Sectors).

†Preliminary data. NA=Not available.

Sources: • See Sources at the end of this section.

## Sources for the Coal Section

- Production:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook and Mineral Industry Surveys*; October 1977 forward: Energy Information Administration (EIA), "Weekly Coal Report," "Coal Distribution Report," (Form EIA-6), and selected State agencies.
- Consumption and Stocks:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook and Mineral Industry Surveys*;
  - Electric Utilities—October 1977 forward: EIA, "Monthly Power Plant Report" (FPC Form 4).
  - Other Industrial—October 1977 through December 1979: EIA, "Monthly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3); January 1980 forward: EIA, "Quarterly Fuel Consumption Report - Manufacturing Plants" (Form EIA-3) and EIA, "Coal Distribution Report" (Form EIA-6).
  - Coke Plants—October 1977 through December 1980: EIA, "Coke and Coal Chemicals - Monthly/Annual" (Form EIA-5/5A); January 1981 forward: EIA, "Coke and Coal Chemicals - Quarterly/Annual" Form EIA-5/5A).
  - Residential and Commercial—October 1977 through December 1979: EIA, "Monthly Coal Report, Retail Dealers and Upper Lake Docks" (Form EIA-2); January 1980 forward: EIA, "Coal Distribution Report" (Form EIA-6).
- Imports/Exports:** 1973 through September 1977: Bureau of Mines, *Minerals Yearbook and Mineral Industry Surveys*; October 1977 forward: Bureau of the Census, Monthly Reports IM 145 (Imports) and EM 522 (Exports).

## **Electric Utilities**

November 1981 production of electricity by utilities was 175.6 billion kilowatt-hours, 1.6 percent below the November 1980 production level. Coal-fired production totaled 94.8 billion kilowatt-hours, 1.4 percent above the November 1980 level. Natural gas-fired production decreased to 24.7 billion kilowatt-hours, 1.4 percent above the level 1 year earlier. Nuclear production totaled 22.8 billion kilowatt-hours, 8.6 percent above the November 1980 level. Hydroelectric production was 19.0 billion kilowatt-hours in November 1981, 1.0 percent below the November 1980 level. Petroleum-fired production totaled 13.8 billion kilowatt-hours, 30.7 percent below the November 1980 level.

Sales of electricity to all ultimate consumers in the United States in November 1981 totaled 162.1 billion kilowatt-hours, a decrease of 3.9 percent from sales of the month before and less than 0.1 percent below November 1980 sales. Sales to residential consumers during November 1981 were 50.8 billion kilowatt-hours, 0.4 percent above sales for the corresponding month in 1980. Commercial sales were 38.7 billion kilowatt-hours, 2.1 percent

more than the amount for November 1980. Sales to industrial consumers totaled 66.1 billion kilowatt-hours in November 1981, 2.2 percent less than the November 1980 figure. In November 1981 other sales totaled 6.5 billion kilowatt-hours, 7.0 percent above the November 1980 level.

Electric utility petroleum consumption (excluding petroleum coke) during November 1981 was 23.2 million barrels, a 32.0 percent drop from the November 1980 level. Coal consumption for November 1981 was 47.0 million tons, 2.9 percent above the November 1980 rate. During November 1981, consumption of natural gas by electric utilities was 258.8 billion cubic feet, 1.3 percent above the November 1980 consumption level.

On November 30, 1981, utility stocks of anthracite, bituminous coal, and lignite totaled 167.0 million tons. Stockpiles were 9.3 percent below the levels of November 1980.

Petroleum stocks (excluding petroleum coke) on November 30, 1981, totaled 127.0 million barrels, 7.9 percent below the levels for the same month of 1980.

Petroleum Status Report

# Electric Utilities

## Net Electricity Production by Primary Energy Source

|                        |                         | Coal <sup>1</sup> | Petroleum <sup>2</sup> | Natural Gas | Nuclear | Hydro   | Other <sup>3</sup> | Total     |
|------------------------|-------------------------|-------------------|------------------------|-------------|---------|---------|--------------------|-----------|
| Million kilowatt-hours |                         |                   |                        |             |         |         |                    |           |
| 1973                   | TOTAL                   | 847,651           | 314,343                | 340,858     | 83,479  | 272,083 | 2,294              | 1,860,710 |
| 1974                   | TOTAL                   | 828,433           | 300,931                | 320,065     | 113,976 | 301,032 | 2,703              | 1,867,140 |
| 1975                   | TOTAL                   | 852,786           | 289,095                | 299,778     | 172,505 | 300,047 | 3,437              | 1,917,649 |
| 1976                   | TOTAL                   | 944,391           | 319,988                | 294,624     | 191,104 | 283,707 | 3,883              | 2,037,696 |
| 1977                   | TOTAL                   | 985,219           | 358,179                | 305,505     | 250,883 | 220,475 | 4,063              | 2,124,323 |
| 1978                   | TOTAL                   | 975,742           | 365,060                | 305,391     | 276,403 | 280,419 | 3,315              | 2,206,331 |
| 1979                   | TOTAL                   | 1,075,037         | 303,525                | 329,485     | 255,155 | 279,783 | 4,387              | 2,247,372 |
| 1980                   | January                 | 103,258           | 24,986                 | 26,349      | 19,746  | 25,278  | 388                | 200,005   |
|                        | February                | 98,151            | 24,781                 | 24,755      | 19,277  | 21,378  | 373                | 188,715   |
|                        | March                   | 95,386            | 20,415                 | 26,891      | 20,039  | 24,332  | 401                | 187,464   |
|                        | April                   | 83,562            | 16,025                 | 24,181      | 18,794  | 25,748  | 410                | 168,720   |
|                        | May                     | 84,884            | 16,545                 | 26,587      | 18,385  | 28,865  | 468                | 175,734   |
|                        | June                    | 93,692            | 18,020                 | 31,295      | 18,322  | 27,656  | 445                | 189,430   |
|                        | July                    | 108,457           | 23,289                 | 39,063      | 21,024  | 24,469  | 475                | 216,776   |
|                        | August                  | 107,580           | 24,885                 | 37,647      | 24,333  | 20,431  | 517                | 215,393   |
|                        | September               | 97,557            | 17,815                 | 33,580      | 23,572  | 18,491  | 469                | 191,485   |
|                        | October                 | 91,196            | 15,858                 | 28,592      | 24,510  | 17,866  | 533                | 178,555   |
|                        | November                | 93,501            | 19,989                 | 24,338      | 20,984  | 19,217  | 520                | 178,550   |
|                        | December                | 104,339           | 23,386                 | 22,961      | 22,130  | 22,290  | 506                | 195,613   |
|                        | TOTAL                   | 1,161,562         | 245,994                | 346,240     | 251,116 | 276,021 | 5,506              | 2,286,439 |
| 1981                   | January                 | 111,148           | 25,724                 | 22,081      | 23,368  | 22,355  | 540                | 205,217   |
|                        | February                | 97,653            | 17,444                 | 21,339      | 21,595  | 21,134  | 483                | 179,648   |
|                        | March                   | 99,482            | 16,962                 | 25,900      | 22,004  | 20,572  | 541                | 185,461   |
|                        | April                   | 88,109            | 15,106                 | 27,309      | 20,646  | 20,723  | 500                | 172,393   |
|                        | May                     | 88,941            | 14,508                 | 29,920      | 19,723  | 24,081  | 483                | 177,656   |
|                        | June                    | 99,828            | 18,972                 | 35,885      | 21,166  | 26,370  | 473                | 202,694   |
|                        | July                    | 112,854           | 19,973                 | 38,602      | 23,080  | 25,133  | 523                | 220,164   |
|                        | August                  | 108,225           | 16,031                 | 36,888      | 26,946  | 21,635  | 520                | 210,245   |
|                        | September               | 97,664            | 15,566                 | 30,850      | 24,398  | 17,842  | 538                | 186,858   |
|                        | October                 | 97,046            | 16,213                 | 28,917      | 20,556  | 18,114  | 531                | 181,377   |
|                        | November                | 94,841            | 13,847                 | 24,670      | 22,783  | 19,030  | 465                | 175,637   |
|                        | TOTAL<br>(Year-to-date) | 1,095,792         | 190,346                | 322,361     | 246,266 | 236,989 | 5,597              | 2,097,351 |

Geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>Includes bituminous coal, lignite, and anthracite.

<sup>2</sup>Includes fuel oil No. 2, No. 4, No. 5, No. 6, crude oil, kerosene, and petroleum coke.

<sup>3</sup>Includes geothermal, wood and waste.

Source: •Federal Power Commission Form 4, "Monthly Power Plant Report".

# Electric Utilities

## Electricity Sales<sup>1</sup>

|                        |                         | Residential | Commercial | Industrial | Other <sup>2</sup> | Total      |
|------------------------|-------------------------|-------------|------------|------------|--------------------|------------|
| Million kilowatt-hours |                         |             |            |            |                    |            |
| 1973                   | TOTAL                   | 579,231     | 388,266    | 686,085    | 59,326             | 1,712,909  |
| 1974                   | TOTAL                   | 578,184     | 384,826    | 684,875    | 58,039             | 1,705,924  |
| 1975                   | TOTAL                   | 584,712     | 401,674    | 675,271    | 68,153             | 1,729,810  |
| 1976                   | TOTAL                   | 602,863     | 423,639    | 739,965    | 69,557             | 1,836,024  |
| 1977                   | TOTAL                   | 641,134     | 444,931    | 772,291    | 70,487             | 1,928,845  |
| 1978                   | TOTAL                   | 671,094     | 459,908    | 800,656    | 73,152             | 2,004,814  |
| 1979                   | TOTAL                   | 682,819     | 473,307    | 841,903    | 73,070             | 2,071,101  |
| 1980                   | January                 | 65,841      | 39,578     | 67,532     | 6,634              | 179,585    |
|                        | February                | 64,514      | 39,528     | 68,508     | 6,171              | 178,720    |
|                        | March                   | 60,497      | 38,762     | 69,086     | 6,028              | 174,373    |
|                        | April                   | 51,749      | 36,453     | 67,908     | 5,591              | 161,702    |
|                        | May                     | 45,699      | 36,110     | 67,235     | 5,807              | 154,851    |
|                        | June                    | 52,267      | 40,129     | 66,739     | 5,737              | 164,872    |
|                        | July                    | 68,611      | 45,525     | 65,531     | 6,215              | 185,882    |
|                        | August                  | 75,020      | 47,763     | 67,415     | 6,266              | 196,464    |
|                        | September               | 67,969      | 46,028     | 69,570     | 6,572              | 190,139    |
|                        | October                 | 54,014      | 40,479     | 69,413     | 6,174              | 170,080    |
|                        | November                | 50,539      | 37,954     | 67,613     | 6,068              | 162,174    |
|                        | December                | 60,775      | 39,846     | 68,517     | 6,469              | 175,607    |
|                        | TOTAL                   | R717,495    | R488,156   | R815,067   | 73,732             | R2,094,449 |
| 1981                   | January                 | 72,240      | 42,120     | 67,087     | 6,830              | 188,277    |
|                        | February                | 64,588      | 40,244     | 67,394     | 6,387              | 178,613    |
|                        | March                   | 56,238      | 38,586     | 68,599     | 6,366              | 169,789    |
|                        | April                   | 49,624      | 36,975     | 68,136     | 5,953              | 160,688    |
|                        | May                     | 47,281      | 38,409     | 68,761     | 6,191              | 160,642    |
|                        | June                    | 54,997      | 43,130     | 71,615     | 6,237              | 175,979    |
|                        | July                    | 68,901      | 47,859     | 71,716     | 6,532              | 195,008    |
|                        | August                  | 69,224      | 47,842     | 72,021     | 6,553              | 195,640    |
|                        | September               | 60,173      | 45,877     | 70,986     | 6,585              | 183,620    |
|                        | October                 | 51,985      | 41,175     | 69,132     | 6,388              | 168,679    |
|                        | November                | 50,754      | 38,746     | 66,139     | 6,490              | 162,129    |
|                        | TOTAL<br>(Year-to-date) | 646,005     | 460,963    | 761,586    | 70,512             | 1,939,064  |

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

<sup>1</sup>Electricity sales to all ultimate consumers.

<sup>2</sup>Includes street lighting and transportation uses.

R=Revised data.

Source: \*1973 through February 1980: FPC Form 5, "Monthly Statement of Electric Operating Revenue and Income"; March 1980 forward: FERC Form 5, "Electric Utility Company Monthly Statement."

# Electric Utilities

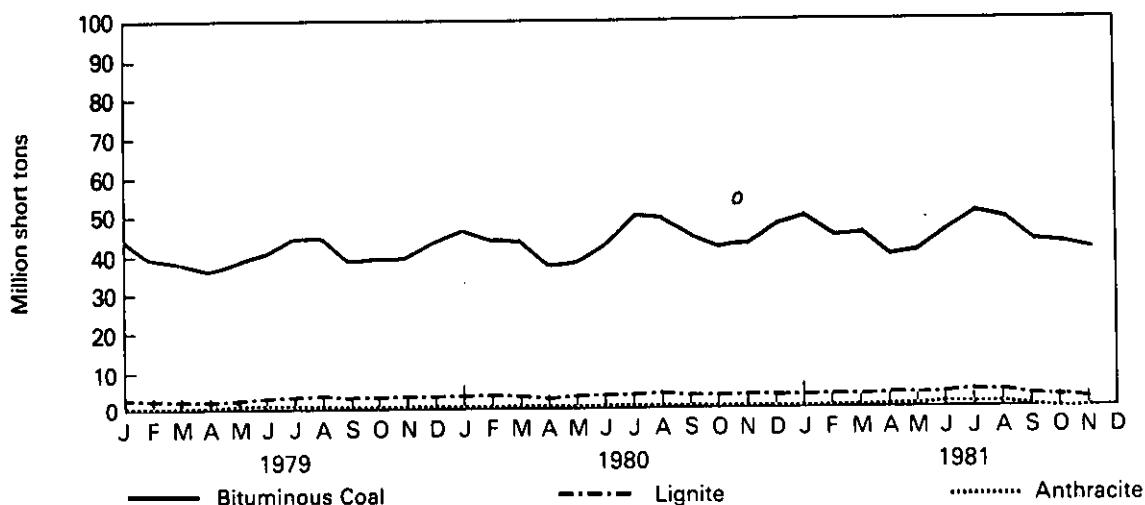
## Primary Energy Consumed to Produce Electricity

|      |                | Coal       |                 |         |         | Petroleum |                       |               |                | Natural Gas         |                    |
|------|----------------|------------|-----------------|---------|---------|-----------|-----------------------|---------------|----------------|---------------------|--------------------|
|      |                | Anthracite | Bituminous Coal | Lignite | Total   | Steam     | Gas Turb./ Int. Comb. | Total Liquids | Petroleum Coke |                     |                    |
|      |                |            |                 |         |         |           |                       |               |                | Thousand short tons | Million cubic feet |
| 1973 | TOTAL          | 1,443      | 376,975         | 10,794  | 389,212 | 513,190   | 47,058                | 560,248       | 507            | 3,660,172           |                    |
| 1974 | TOTAL          | 1,498      | 378,643         | 11,670  | 391,811 | 483,146   | 53,128                | 536,274       | 625            | 3,443,428           |                    |
| 1975 | TOTAL          | 1,480      | 368,523         | 15,960  | 405,962 | 467,221   | 38,907                | 506,128       | 70             | 3,157,669           |                    |
| 1976 | TOTAL          | 1,350      | 425,205         | 21,817  | 448,371 | 514,077   | 41,843                | 555,920       | 68             | 3,080,868           |                    |
| 1977 | TOTAL          | 1,425      | 451,051         | 24,650  | 477,126 | 574,869   | 48,837                | 623,706       | 98             | 3,191,200           |                    |
| 1978 | TOTAL          | 1,064      | 448,763         | 31,407  | 481,235 | 588,319   | 47,520                | 635,839       | 398            | 3,188,363           |                    |
| 1979 | TOTAL          | 1,046      | 488,129         | 37,876  | 527,051 | 492,606   | 30,691                | 523,297       | 268            | 3,490,523           |                    |
| 1980 | January        | 74         | 46,518          | 3,779   | 50,371  | 40,695    | 2,197                 | 42,892        | 54             | 276,743             |                    |
|      | February       | 72         | 43,969          | 3,471   | 47,512  | 40,231    | 1,919                 | 42,150        | 21             | 263,771             |                    |
|      | March          | 83         | 43,244          | 3,357   | 46,685  | 33,406    | 1,379                 | 34,785        | 13             | 283,945             |                    |
|      | April          | 71         | 37,971          | 2,651   | 40,692  | 26,867    | 673                   | 27,540        | 7              | 256,606             |                    |
|      | May            | 86         | 38,116          | 3,262   | 41,464  | 26,991    | 840                   | 27,831        | 11             | 281,886             |                    |
|      | June           | 89         | 42,073          | 3,658   | 45,821  | 29,551    | 1,138                 | 30,689        | 11             | 336,894             |                    |
|      | July           | 93         | 49,815          | 3,746   | 53,655  | 37,297    | 2,791                 | 40,088        | 11             | 420,339             |                    |
|      | August         | 80         | 49,077          | 4,057   | 53,214  | 40,019    | 2,833                 | 42,852        | 15             | 405,343             |                    |
|      | September      | 84         | 44,487          | 3,342   | 47,913  | 29,367    | 1,286                 | 30,653        | 11             | 357,286             |                    |
|      | October        | 73         | 41,819          | 3,200   | 45,092  | 26,269    | 689                   | 26,958        | 8              | 301,266             |                    |
|      | November       | 56         | 42,379          | 3,263   | 45,698  | 32,782    | 1,320                 | 34,102        | 7              | 255,559             |                    |
|      | December       | 89         | 47,212          | 3,856   | 51,157  | 38,387    | 1,285                 | 39,672        | 9              | 241,957             |                    |
|      | TOTAL          | 951        | 526,680         | 41,642  | 569,274 | 401,863   | 18,351                | 420,214       | 179            | 3,681,595           |                    |
| 1981 | January        | 81         | 50,304          | 3,972   | 54,357  | 41,556    | 2,027                 | 43,583        | 10             | 231,606             |                    |
|      | February       | 58         | 44,583          | 3,272   | 47,914  | 28,948    | 1,049                 | 29,997        | 9              | 224,003             |                    |
|      | March          | 75         | 45,168          | 3,155   | 48,398  | 28,492    | 784                   | 29,276        | 9              | 272,348             |                    |
|      | April          | 73         | 40,535          | 3,069   | 43,677  | 25,028    | 557                   | 25,585        | 7              | 287,679             |                    |
|      | May            | 91         | 41,405          | 3,503   | 44,999  | 23,958    | 967                   | 24,925        | 14             | 314,767             |                    |
|      | June           | 105        | 46,500          | 3,383   | 49,988  | 30,673    | 1,741                 | 32,413        | 13             | 386,972             |                    |
|      | July           | 102        | 51,705          | 4,337   | 56,144  | 32,577    | 1,720                 | 34,297        | 11             | 409,979             |                    |
|      | August         | 133        | 50,010          | 4,184   | 54,328  | 26,630    | 586                   | 27,216        | 13             | 390,587             |                    |
|      | September      | 98         | 44,557          | 3,828   | 48,483  | 25,762    | 520                   | 26,282        | 13             | 324,824             |                    |
|      | October        | 115        | 44,161          | 3,524   | 47,800  | 26,646    | 556                   | 27,201        | 15             | 301,578             |                    |
|      | November       | 141        | 43,032          | 3,841   | 47,014  | 22,749    | 433                   | 23,182        | 12             | 258,811             |                    |
|      | TOTAL          | 1,073      | 501,962         | 40,067  | 543,102 | 313,019   | 10,940                | 323,959       | 127            | 3,403,155           |                    |
|      | (Year-to-date) |            |                 |         |         |           |                       |               |                |                     |                    |

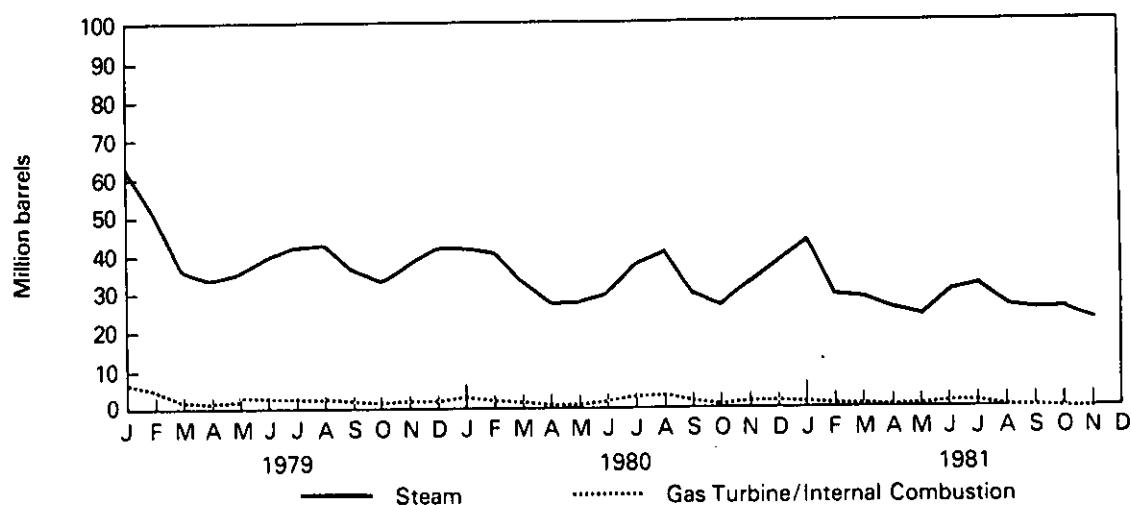
Geographic coverage: the 50 United States and District of Columbia.  
 Totals may not equal sum of components due to independent rounding.  
 Source: •Federal Power Commission, Form 4, "Monthly Power Plant Report."

## Electric Utilities

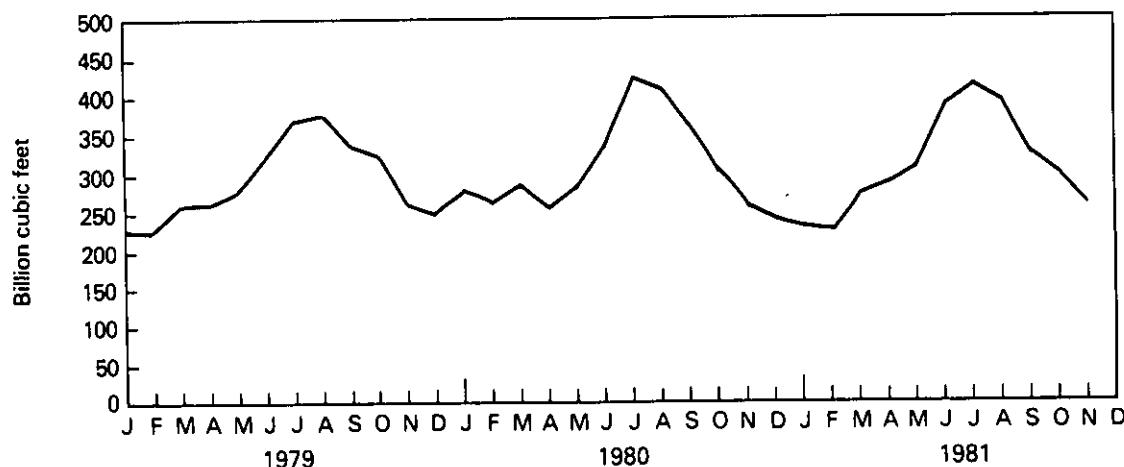
### Coal Consumption



### Petroleum Consumption



### Natural Gas Consumption



## Electric Utilities

### End-of-Month Coal and Petroleum Stocks

|      | Coal       |                    |           |         | Petroleum |                          |                  |                   |       |
|------|------------|--------------------|-----------|---------|-----------|--------------------------|------------------|-------------------|-------|
|      | Anthracite | Bituminous<br>Coal | Lignite   | Total   | Steam     | Gas Turb./<br>Int. Comb. | Total<br>Liquids | Petroleum<br>Coke |       |
|      |            |                    |           |         |           | Thousand short tons      |                  | Thousand barrels  |       |
| 1973 |            | \$1,066            | \$84,941  | \$961   | \$86,967  | \$79,121                 | \$10,095         | \$89,216          | \$312 |
| 1974 |            | \$930              | \$81,712  | \$867   | \$83,509  | \$97,718                 | \$15,199         | \$112,917         | \$35  |
| 1975 |            | \$982              | \$107,927 | \$1,815 | \$110,724 | \$108,825                | \$16,432         | \$125,257         | \$31  |
| 1976 |            | \$1,000            | \$114,130 | \$2,306 | \$117,436 | \$106,993                | \$14,703         | \$121,696         | \$32  |
| 1977 |            | \$2,321            | \$128,210 | \$2,688 | \$133,219 | \$124,750                | \$19,281         | \$144,031         | \$44  |
| 1978 |            | \$2,178            | \$123,020 | \$3,027 | \$128,225 | \$102,402                | \$16,386         | \$118,788         | \$198 |
| 1979 |            | \$3,274            | \$152,981 | \$3,459 | \$159,714 | \$111,121                | \$20,301         | \$131,422         | \$183 |
| 1980 | January    | 3,371              | 151,891   | 3,455   | 158,717   | 114,313                  | 19,597           | 133,909           | 175   |
|      | February   | 3,451              | 150,151   | 3,522   | 157,124   | 111,353                  | 19,055           | 130,409           | 168   |
|      | March      | 3,488              | 151,022   | 3,116   | 157,625   | 116,246                  | 18,934           | 135,180           | 154   |
|      | April      | 3,533              | 158,441   | 3,843   | 165,817   | 118,824                  | 19,201           | 138,025           | 103   |
|      | May        | 3,725              | 166,325   | 3,980   | 174,029   | 123,043                  | 19,485           | 142,529           | 69    |
|      | June       | 3,838              | 171,042   | 4,079   | 178,959   | 124,177                  | 19,273           | 143,450           | 65    |
|      | July       | 3,955              | 161,159   | 3,691   | 168,806   | 121,596                  | 18,680           | 140,276           | 65    |
|      | August     | 4,098              | 163,756   | 4,036   | 171,891   | 118,514                  | 18,150           | 136,664           | 63    |
|      | September  | 4,291              | 166,515   | 4,262   | 175,067   | 122,240                  | 18,064           | 140,304           | 61    |
|      | October    | 4,481              | 173,411   | 4,153   | 182,045   | 124,046                  | 18,398           | 142,445           | 60    |
|      | November   | 4,661              | 175,489   | 3,983   | 184,133   | 119,863                  | 18,051           | 137,915           | 53    |
|      | December   | 4,741              | 174,154   | 4,115   | 183,010   | 117,227                  | 18,147           | 135,374           | 52    |
| 1981 | January    | 4,824              | 167,884   | 4,267   | 176,975   | 109,915                  | 18,280           | 128,195           | 51    |
|      | February   | 4,859              | 166,552   | 4,304   | 175,715   | 112,439                  | 17,397           | 129,836           | 52    |
|      | March      | 4,951              | 174,554   | 4,478   | 183,983   | 111,105                  | 17,502           | 128,607           | 52    |
|      | April      | 5,035              | 159,318   | 4,541   | 168,894   | 108,848                  | 17,205           | 126,053           | 52    |
|      | May        | 5,008              | 142,188   | 4,907   | 152,103   | 111,758                  | 17,068           | 128,826           | 52    |
|      | June       | 5,081              | 134,321   | 5,119   | 144,520   | 109,313                  | 18,027           | 127,341           | 49    |
|      | July       | 5,802              | 129,684   | 5,171   | 140,656   | 110,294                  | 16,883           | 127,177           | 48    |
|      | August     | 5,337              | 132,068   | 4,909   | 142,315   | 113,472                  | 16,833           | 130,305           | 47    |
|      | September  | 5,428              | 138,808   | 5,290   | 149,526   | 112,771                  | 16,588           | 129,359           | 46    |
|      | October    | 5,512              | 148,952   | 5,213   | 159,676   | 111,578                  | 16,220           | 127,798           | 44    |
|      | November   | 5,548              | 156,360   | 5,094   | 167,002   | 110,971                  | 16,064           | 127,035           | 43    |

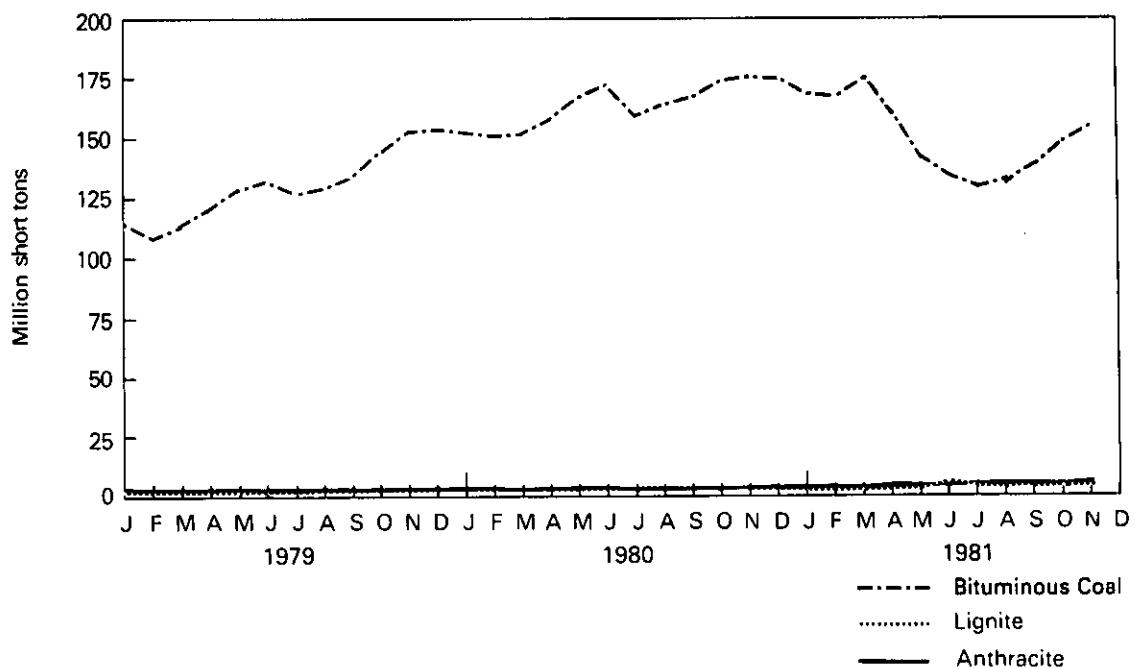
Geographic coverage: the 50 United States and District of Columbia.  
 Totals may not equal sum of components due to independent rounding.

†Total as of December 31.

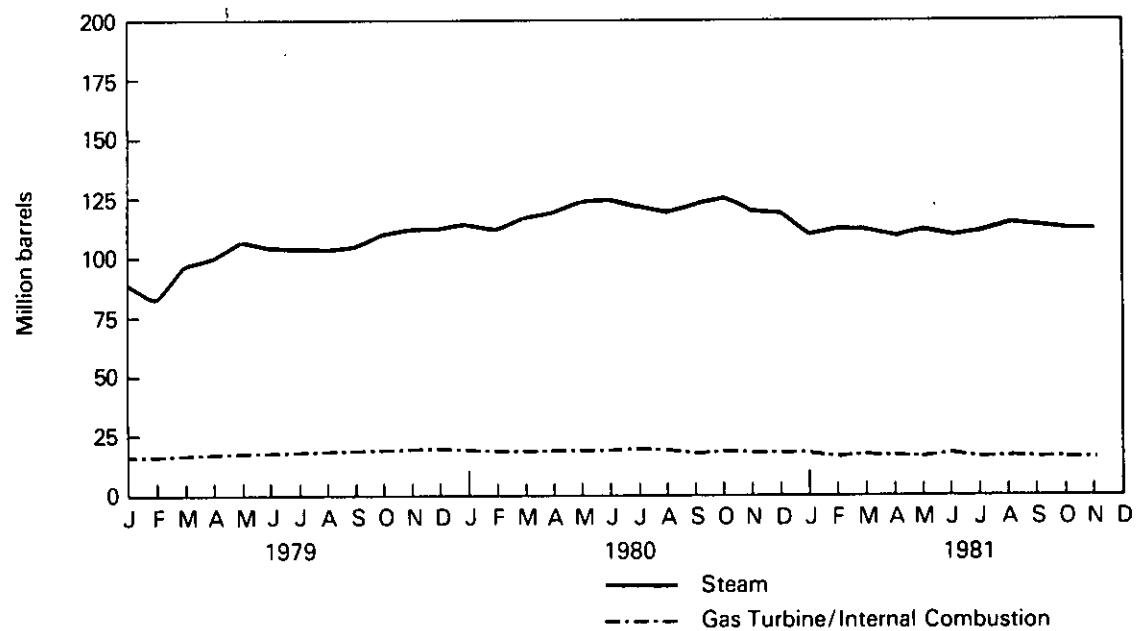
Source: •Federal Power Commission, Form 4, "Monthly Power Plant Report."

## Electric Utilities

### Coal Stocks (Bituminous Coal, Lignite, and Anthracite)



### Petroleum Stocks





# Part 8

## Nuclear

During November 1981, operating domestic power reactors generated a total of 22.8 billion net kilowatt-hours of electricity, 10.8 percent above October 1981 output and 8.6 percent above November 1980 generation. Nuclear power accounted for 13.0 percent of all U.S. commercial electricity generation during November 1981.

In November, the Nuclear Regulatory Commission (NRC) withdrew the license it had issued in September to Pacific Gas and Electric Co. for low-power operation of its Diablo Canyon power reactor unit (design capacity of 1,084 net megawatts [MWe]). This action, taken by the NRC because of suspected earthquake-proofing design errors, reduced the number of "Reactors Licensed for Commercial Operations" in the Status of Nuclear Reactor Units table by 1 and, concurrently, increased the units with "Construction Permits Granted" to the September level of 78.

As of November 30, 1981, the combined maximum dependable capacity of the 74 licensed domestic power reactor units was 55,785 MWe. Of these 74 units, 2 units (McGuire-1 and Sequoyah-2) were in power ascension and 22 units (Browns Ferry-3, Crystal River-3, Farley-1, Fitzpatrick, Ft. Calhoun, Ft. St. Vrain, Hatch-1, Indian Point-3, Monticello, Oconee-1, Palisades, Pilgrim, Point Beach-1, Quad Cities-2, Robinson-2, St. Lucie-1, Surry-2, Three Mile Island-1, Turkey Point-3 and -4, Vermont Yankee, and Zion-2), generated no electricity or operated substantially below capacity during November.

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# Nuclear

## Nuclear Powerplant Operations

|      |           | Reactors<br>Licensed For<br>Commercial<br>Operations <sup>1,2</sup> | Nuclear-Based<br>Electricity<br>Generation <sup>3</sup> | Nuclear<br>Portion of<br>Domestic<br>Electricity<br>Generation |         | Maximum<br>Dependable<br>Capacity <sup>4</sup> | Capacity<br>Factor <sup>5</sup> |
|------|-----------|---|---|--|---------|--|---------------------------------|
|      |           |   |   | Million net<br>kilowatt-hours                                  | Percent |  |                                 |
| 1973 | AVERAGE   | 40  | 83,479  | 4.5  | 13.850  | 63.2   |                                 |
| 1974 | AVERAGE   | 53  | 113,976   | 6.1  | 29.921  | 43.5   |                                 |
| 1975 | AVERAGE   | 56  | 172,505   | 9.0  | 35.671  | 55.2   |                                 |
| 1976 | AVERAGE   | 62  | 191,104   | 9.4  | 40.642  | 53.5   |                                 |
| 1977 | AVERAGE   | 67  | 250,883   | 11.8   | 45.554  | 62.9   |                                 |
| 1978 | AVERAGE   | 71  | 276,403   | 12.5   | 49.385  | 63.9   |                                 |
| 1979 | AVERAGE   | 71  | 255,155   | 11.4   | 50.604  | 57.6   |                                 |
| 1980 | January   | 71  | 19,746  | 9.9  | 49.945  | 53.1   |                                 |
|      | February  | 72  | 19,277  | 10.2   | 51.055  | 54.3   |                                 |
|      | March     | 72  | 20,039  | 10.7   | 51.031  | 52.8   |                                 |
|      | April     | 74  | 18,794  | 11.1   | 53.040  | 49.3   |                                 |
|      | May       | 74  | 18,385  | 10.5   | 53.040  | 46.6   |                                 |
|      | June      | 74  | 18,322  | 9.7  | 53.040  | 48.0   |                                 |
|      | July      | 74  | 21,024  | 9.7  | 54.064  | 52.3   |                                 |
|      | August    | 74  | 24,333  | 11.3   | 53.957  | 60.6   |                                 |
|      | September | 74  | 23,572  | 12.3   | 53.855  | 60.8   |                                 |
|      | October   | 75  | 24,510  | 13.7   | 54.724  | 60.1   |                                 |
|      | November  | 75  | 20,984  | 11.8   | 54.737  | 53.2   |                                 |
|      | December  | 75  | 22,130  | 11.3   | 54.749  | 54.3   |                                 |
|      | AVERAGE   | 74  | 251,116   | 11.0   | 53.103  | 53.8   |                                 |
| 1981 | January   | 75  | 23,368  | 11.4   | 55.853  | 56.2   |                                 |
|      | February  | 75  | 21,595  | 12.0   | 55.830  | 57.6   |                                 |
|      | March     | 75  | 22,004  | 11.9   | 55.818  | 53.0   |                                 |
|      | April     | 75  | 20,646  | 12.0   | 55.817  | 51.4   |                                 |
|      | May       | 75  | 19,723  | 11.1   | 55.841  | 47.5   |                                 |
|      | June      | 76  | 21,166  | 10.4   | 56.981  | 51.6   |                                 |
|      | July      | 74  | 23,080  | 10.5   | 55.840  | 55.6   |                                 |
|      | August    | 74  | 26,946  | 12.8   | 55.840  | 64.9   |                                 |
|      | September | 75  | 24,398  | 13.1   | 56.924  | 59.5   |                                 |
|      | October   | 75  | 20,556  | 11.3   | 56.869  | 48.5   |                                 |
|      | November  | 74  | 22,783  | 13.0   | 55.785  | 56.7   |                                 |
|      | AVERAGE   | 75  | 246,266   | 11.7   | 56.127  | 54.8   |                                 |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>See next table (Reactor Status Table) for explanation and sources.

<sup>2</sup>Dresden-1 (capacity=200 MWe) and Three Mile Island-2 (capacity=906 MWe) units are excluded from all tabulations as of July 1, 1981, reflecting the fact that these units have each been inoperative for several years and are likely to remain so for indefinite or extended periods.

<sup>3</sup>Electricity generation entries represent yearly or monthly totals rather than averages.

<sup>4</sup>See Explanatory Note 11.

<sup>5</sup>Average percentage of the net Maximum Dependable Capacity utilized yearly or monthly.

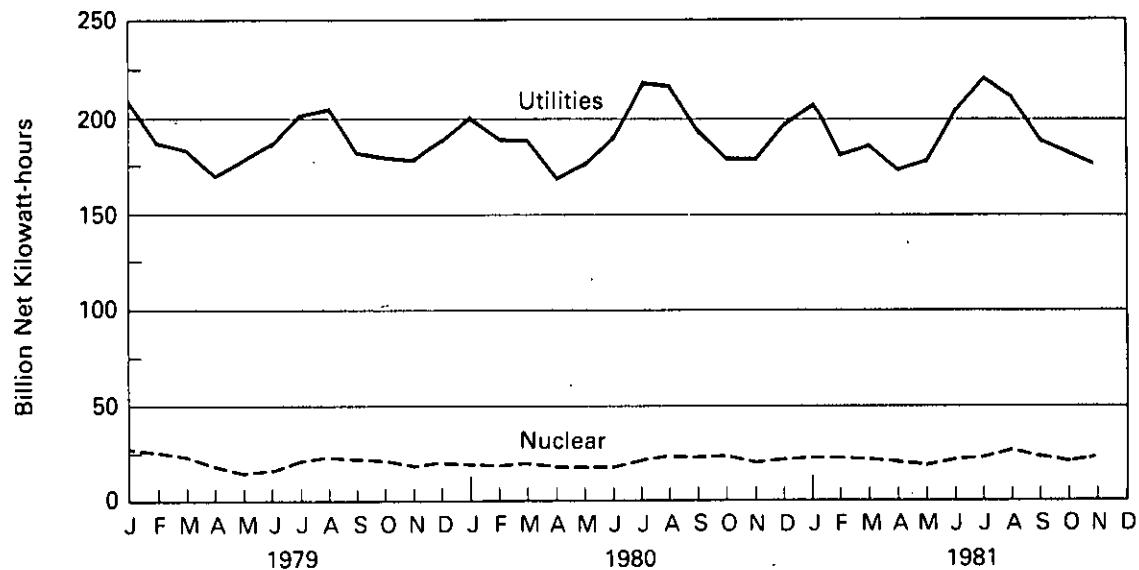
Sources: • Capacity data for units in commercial operation or start-up testing—Nuclear Regulatory Commission, 'Licensed Operating Reactors.'

• Generation Data—FPC Form 4, 'Monthly Power Plant Report.'

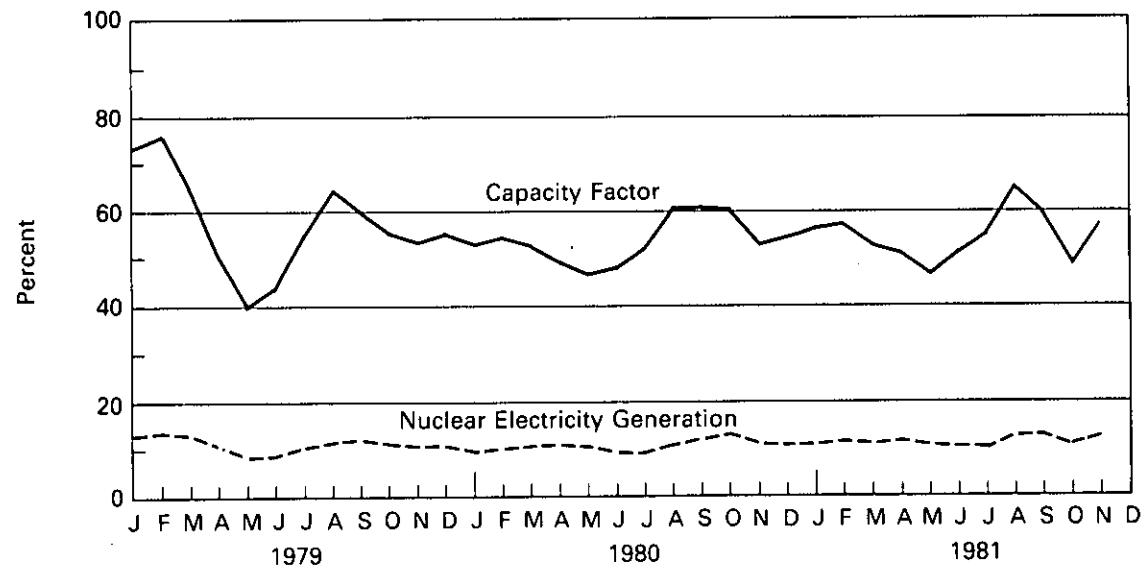
## Nuclear

### Nuclear Powerplant Operations

#### Electricity Generated by Utilities and by Nuclear Powerplants



#### Nuclear Portion of Electricity Generation and Capacity Factor\*



\*Percentage of Maximum Dependable Capacity utilized.

# Nuclear

## Status of Nuclear Reactor Units<sup>1</sup>

|      | <b>Reactors<br/>Licensed For<br/>Commercial<br/>Operations<sup>2</sup></b>   | <b>Construction<br/>Permits<br/>Granted</b>                          | <b>Construction<br/>Permits<br/>Pending</b>                          | <b>Reactor<br/>Units on<br/>Order</b>                                | <b>Reactor<br/>Units<br/>Announced</b>                   | <b>Total<br/>Reactor<br/>Units</b>                       | <b>Total<br/>Design<br/>Capacity<sup>3</sup><br/>(Million<br/>Net<br/>Kilowatts)</b> |  |
|------|--|--|--|--|--|--|--|--|
| 1973 | 40   | 51   | 58   | 48   | 20   | 217  | 212  |  |
| 1974 | 53   | 58   | 80   | 28   | 16   | 235  | 234  |  |
| 1975 | 56   | 69   | 73   | 19   | 19   | 236  | 236  |  |
| 1976 | 62   | 72   | 66   | 16   | 19   | 235  | 236  |  |
| 1977 | 67   | 80   | 52   | 13   | 9  | 221  | 220  |  |
| 1978 | 71   | 90   | 32   | 9  | 4  | 206  | 204  |  |
| 1979 | 71   | 91   | 21   | 3  | 0  | 186  | 180  |  |
| 1980 | January<br>February<br>March<br>April<br>May<br>June<br>July<br>August<br>September<br>October<br>November<br>December | 71<br>72<br>72<br>74<br>74<br>74<br>74<br>74<br>74<br>75<br>75<br>75 | 90<br>89<br>87<br>85<br>85<br>85<br>85<br>85<br>85<br>84<br>82<br>82 | 17<br>16<br>14<br>14<br>14<br>14<br>14<br>14<br>14<br>14<br>14<br>12 | 3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3 | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 181<br>180<br>176<br>176<br>176<br>176<br>176<br>176<br>176<br>176<br>174<br>172     | 174<br>173<br>169<br>169<br>169<br>169<br>169<br>169<br>169<br>169<br>167<br>164 |
| 1981 | January<br>February<br>March<br>April<br>May<br>June<br>July<br>August<br>September<br>October<br>November             | 75<br>75<br>75<br>75<br>75<br>76<br>74<br>74<br>75<br>75<br>74       | 81<br>81<br>81<br>81<br>81<br>80<br>80<br>79<br>78<br>77<br>78       | 12<br>12<br>12<br>12<br>12<br>12<br>12<br>12<br>11<br>11<br>11       | 3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3      | 0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0      | 171<br>171<br>171<br>171<br>171<br>171<br>169<br>168<br>167<br>166<br>166            | 164<br>164<br>164<br>164<br>164<br>164<br>163<br>162<br>161<br>160<br>160        |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>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.

<sup>2</sup>These figures include reactors in fuel-loading, power-testing, and power-ascension stages. They also include two Department of Energy dual-purpose reactors, Shippingport and Hanford, which are not licensed by the Nuclear Regulatory Commission but do generate electricity on a commercial basis. Not included in the above table is the Experimental Breeder Reactor-2 which does generate electricity but does not distribute it commercially. Three reactors which have been inoperative for at least 2 years have been dropped from this list due to their uncertain futures. Humboldt Bay, which requires major seismic modifications, was dropped from the list in January 1981. Dresden-1, which is undergoing major modifications, and Three Mile Island-2, which was shut down due to an accident in March 1979, were dropped from the list in July 1981.

<sup>3</sup>See Explanatory Note 11.

Sources: • Compiled from various sources, primarily the Nuclear Energy, Office of Nuclear Reactor Programs, 'U.S. Central Station Nuclear Electric Generating Units: Significant Milestones,' and from the Energy Information Administration, Office of Coal, Nuclear and Alternate Fuels.

# Part 9

# Price

## Price

### Crude Oil

The average price of domestic crude oil purchased at the wellhead was \$30.98 per barrel in November 1981. This was 0.1 percent below the previous month's level, and 29.5 percent above the level in November 1980. Due to the January 1981 decontrol order, prices are no longer available by regulatory price categories.

During November 1981, the composite refiner acquisition cost of crude oil was \$34.34 per barrel, \$0.27 per barrel (0.8 percent) above the previous month's price of \$34.07. The imported price increased \$0.83 per barrel from the October 1981 level to \$36.26 per barrel in November. This price was 3.3 percent above the November 1980 level. The domestic price in November 1981 was \$33.49, an increase of \$0.01 per barrel from the October average.

### Residual Fuel Oil

The average price, excluding taxes, for No. 6 residual fuel oil sold to utilities, industry, and other ultimate consumers in October 1981 was \$30.44 per barrel, \$0.11 per barrel (0.4 percent) above the previous month's price and 14.1 percent over the October 1980 average. The average price, excluding taxes, for No. 6 residual fuel oil sold to resellers, bulk plants, jobbers, and other wholesale accounts in October 1981 was \$26.82 per barrel, \$0.62 (2.4 percent) above the September 1981 average and an 11.5 percent increase over the October 1980 average.

### Heating Oil

The national average price of heating oil sold to residential customers in November 1981 was 120.9 cents per gallon. This was 1.8 percent above the selling price in October 1981 and 19.6 percent above the

November 1980 price. The average distributor margin on residential heating oil in November was 17.6 cents per gallon, 27.5 percent above the margin during November 1980. Refiners' national average selling price to resellers and retailers was 100.0 cents per gallon in November 1981, 19.0 percent above the November 1980 average.

### Aviation Fuel

The average price, excluding taxes, for kerosene-type jet fuel sold to commercial airlines, Department of Defense, and other ultimate consumers in October 1981 was 101.1 cents per gallon, a 2.1 percent decrease from the previous month's average and a 14.0 percent increase over the October 1980 average.

### Motor Gasoline

The national average retail price for all grades and all types of motor gasoline was 134.8 cents per gallon in December 1981. Leaded regular gasoline at all types of stations sold for an average of 129.3 cents per gallon in December, 0.4 cents lower (0.3 percent) than the price in November. The price for unleaded regular gasoline at all types of stations was 136.5 cents per gallon in December, 0.4 cents lower (0.3 percent) than the price in November.

### Liquefied Petroleum Gases

The average wholesale price for propane during October 1981 (excluding taxes) was 47.5 cents per gallon, 0.4 percent below the previous month's level and 10.0 percent above the October 1980 level.

In October 1981, the average wholesale price for butane, excluding taxes, was 65.2 cents per gallon, 0.9 percent above the previous month's price and 20.1 percent above the October 1980 average.

# Price

## Petroleum Price Summary

|                     | Actual<br>Domestic<br>Average<br>Wellhead Price <sup>1</sup> | Refiner Acquisition Cost of Crude Oil <sup>2</sup> |              |              | No. 6 Residual Oil Price<br>Average <sup>3</sup> |                     |
|---------------------|--|--|--------------|--------------|--|---------------------|
|                     |  | Domestic   | Imported     | Composite    | Wholesale <sup>4</sup>                           | Retail <sup>4</sup> |
| Dollars per barrel  |  |  |              |              |  |                     |
| <b>1976 AVERAGE</b> | <b>8.19</b>  | <b>8.84</b>  | <b>13.48</b> | <b>10.89</b> | <b>10.72</b>                                     | <b>11.49</b>        |
| <b>1977 AVERAGE</b> | <b>8.57</b>  | <b>9.55</b>  | <b>14.53</b> | <b>11.96</b> | <b>11.96</b>                                     | <b>13.23</b>        |
| <b>1978 AVERAGE</b> | <b>9.00</b>  | <b>10.61</b>                                       | <b>14.57</b> | <b>12.46</b> | <b>11.51</b>                                     | <b>12.75</b>        |
| <b>1979 AVERAGE</b> | <b>12.64</b>   | <b>14.27</b>                                       | <b>21.67</b> | <b>17.72</b> | <b>17.66</b>                                     | <b>18.67</b>        |
| <b>1980</b>         |  |  |              |              |  |                     |
| January             | 17.86  | 19.78  | 30.75        | 24.81        | 24.41  | 26.21               |
| February            | 18.81  | 21.22  | 32.40        | 26.11        | 23.34  | 26.48               |
| March               | 19.34  | 22.07  | 33.42        | 26.88        | 21.11  | 25.33               |
| April               | 20.29  | 22.89  | 33.54        | 27.09        | 19.09  | 22.87               |
| May                 | 21.01  | 23.63  | 34.33        | 27.85        | 20.22  | 23.75               |
| June                | 21.53  | 24.48  | 34.48        | 28.80        | 20.44  | 24.09               |
| July                | 22.26  | 25.05  | 34.51        | 28.73        | 21.28  | 23.86               |
| August              | 22.63  | 24.98  | 34.44        | 28.70        | 22.25  | 25.00               |
| September           | 22.59  | 25.37  | 34.46        | 28.96        | 22.47  | 25.31               |
| October             | 23.23  | 26.21  | 34.63        | 29.56        | 24.06  | 26.68               |
| November            | 23.92  | 26.51  | 35.09        | 29.79        | 28.12  | 30.10               |
| December            | 25.80  | 28.55  | 35.63        | 31.39        | 29.76  | 32.33               |
| <b>AVERAGE</b>      | <b>21.19</b>   | <b>24.23</b>                                       | <b>33.89</b> | <b>28.07</b> | <b>23.14</b>                                     | <b>26.09</b>        |
| <b>1981</b>         |  |  |              |              |  |                     |
| 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        | R26.20   | R30.33              |
| October             | R31.00   | 33.48  | 35.43        | 34.07        | †26.82   | †30.44              |
| November            | †30.98   | †33.49   | †36.26       | †34.34       | NA   | NA                  |
| December            | NA   | NA   | NA           | NA           | NA   | NA                  |
| <b>AVERAGE</b>      | <b>NA</b>  | <b>NA</b>  | <b>NA</b>    | <b>NA</b>    | <b>NA</b>  | <b>NA</b>           |

Geographic coverage: Actual domestic average wellhead prices and No. 6 residual oil prices—the 50 United States and District of Columbia. Refiner acquisition cost of crude oil—the 50 United States, District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

<sup>1</sup>See Explanatory Note 12.

<sup>2</sup>See Explanatory Note 13.

<sup>3</sup>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.

<sup>4</sup>Excludes tax.

†Preliminary data. R=Revised data. NA=Not available.

Sources: •Actual domestic average—January 1976: FEA Form 90, "Crude Petroleum Production Monthly Report"; February 1976 forward: ERA Form 182, "Domestic Crude Oil First Purchase Report."

•Refiner acquisition cost—January 1976: Form FEO 96, "Monthly Cost Allocation Report"; February 1976 through June 1978: FEA Form P110-M-1, "Refiners' Monthly Cost Allocation Report"; July 1978 through December 1980: ERA Form 49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report"; January 1981 forward: Form EIA-14, "Refiners' Monthly Cost Report."

•No. 6 residual oil price—FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

## Price

### Petroleum Price Summary (continued)

|                  | No. 2 Diesel Price Average <sup>1</sup> |                     | No. 2 Heating Oil Price Average |        | Gasoline Price Average All Types <sup>2</sup> | Propane Price Average <sup>3</sup> | Butane Price Average <sup>4</sup> |
|------------------|---|---------------------|---------------------------------|--------|---|------------------------------------|-----------------------------------|
|                  | Wholesale <sup>5</sup>                  | Retail <sup>5</sup> | Wholesale                       | Retail | Retail  | Wholesale <sup>5</sup>             | Wholesale <sup>5</sup>            |
| Cents per gallon |   |                     |                                 |        |   |                                    |                                   |
| 1976 AVERAGE     | 31.9                                    | 34.7                | 32.6                            | 40.6   | NA  | 20.6                               | 21.9                              |
| 1977 AVERAGE     | 36.1                                    | 39.3                | 36.9                            | 46.0   | NA  | 25.0                               | 25.4                              |
| 1978 AVERAGE     | 37.1                                    | 40.2                | 38.7                            | 49.4   | 65.2  | 24.0                               | 23.0                              |
| 1979 AVERAGE     | 58.2                                    | 62.4                | 53.0                            | 65.6   | 88.2  | 29.5                               | 45.8                              |
| 1980 January     | 76.0                                    | 82.2                | 75.2                            | 90.8   | 111.0   | 41.8                               | 73.3                              |
| February         | 78.3                                    | 85.0                | 79.0                            | 95.3   | 118.6   | 42.7                               | 70.1                              |
| March            | 79.8                                    | 87.8                | 80.4                            | 97.1   | 123.0   | 41.0                               | 66.8                              |
| April            | 80.4                                    | 88.0                | 81.0                            | 97.4   | 124.2   | 41.2                               | 63.1                              |
| May              | 80.5                                    | 87.8                | 81.4                            | 97.2   | 124.4   | 41.7                               | 63.7                              |
| June             | 81.7                                    | 88.6                | 82.5                            | 97.9   | 124.6   | 41.2                               | 58.2                              |
| July             | 81.9                                    | 87.6                | 83.0                            | 97.9   | 124.7   | 40.8                               | 53.8                              |
| August           | 81.6                                    | 86.9                | 82.9                            | 97.9   | 124.3   | 40.6                               | 53.1                              |
| September        | 80.3                                    | 86.6                | 83.0                            | 98.1   | 123.1   | 41.4                               | 51.2                              |
| October          | 81.5                                    | 85.9                | 83.7                            | 98.7   | 122.3   | 43.2                               | 54.3                              |
| November         | 83.6                                    | 88.9                | 86.1                            | 101.1  | 122.2   | 45.1                               | 65.5                              |
| December         | 87.5                                    | 92.4                | 91.3                            | 106.5  | 123.1   | 46.5                               | 72.7                              |
| AVERAGE          | 81.2                                    | 87.3                | 82.2                            | 97.8   | 122.1   | 42.4                               | 62.9                              |
| 1981 January     | 92.5                                    | 100.9               | 98.6                            | 114.4  | 126.9   | 46.5                               | 66.1                              |
| February         | 99.5                                    | 106.1               | 106.0                           | 123.4  | 135.3   | 48.2                               | 63.0                              |
| March            | 101.7                                   | 108.8               | 106.3                           | 125.5  | 138.8   | 48.3                               | 62.1                              |
| April            | 101.3                                   | 107.7               | 105.2                           | 123.9  | 138.1   | 49.3                               | 60.1                              |
| May              | 100.8                                   | 106.8               | 104.0                           | 122.7  | 137.0   | 48.6                               | 56.8                              |
| June             | 99.5                                    | 106.6               | 103.0                           | 120.9  | 136.2   | 46.0                               | 52.7                              |
| July             | 98.8                                    | 103.8               | 102.7                           | 121.0  | 135.3   | 46.0                               | 56.5                              |
| August           | 97.8                                    | 105.9               | 102.2                           | 119.4  | 134.8   | 47.2                               | 60.6                              |
| September        | R97.6                                   | 104.8               | 101.6                           | 119.7  | 135.8   | R47.7                              | R64.6                             |
| October          | †97.5                                   | †105.3              | 101.1                           | 118.8  | 135.3   | †47.5                              | †65.2                             |
| November         | NA                                      | NA                  | †102.3                          | †120.9 | 135.1   | NA                                 | NA                                |
| December         | NA                                      | NA                  | NA                              | NA     | 134.8   | NA                                 | NA                                |
| AVERAGE          | NA                                      | NA                  | NA                              | NA     | 135.3   | NA                                 | NA                                |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and operated retail dealers sell to customers.

<sup>2</sup>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 Explanatory Note 16 for additional information on motor gasoline prices.

<sup>3</sup>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.

<sup>4</sup>Excludes tax.

<sup>5</sup>Preliminary data. R=Revised data. NA=Not available.

Sources: •No. 2 diesel price—FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

•No. 2 heating oil price—1976 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report"; November 1980 forward: EIA-9A "No. 2 Distillate Price Monitoring Report."

•Gasoline price—Bureau of Labor Statistics.

•Propane and butane prices—FEA Form P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices."

## Price

### FOB Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

|                    |           | Algeria | Indonesia | Iran  | Libya  | Mexico | Nigeria | Saudi<br>Arabia | United<br>Arab<br>Emirates | United<br>Kingdom | Venezuela |
|--------------------|-----------|---------|-----------|-------|--------|--------|---------|-----------------|----------------------------|-------------------|-----------|
| Dollars per barrel |           |         |           |       |        |        |         |                 |                            |                   |           |
| 1976               | AVERAGE   | 13.05   | 12.76     | 11.61 | 12.55  | NA     | 13.08   | 11.89           | 11.94                      | NA                | 11.32     |
| 1977               | AVERAGE   | 14.36   | 13.57     | 12.67 | 13.90  | 13.42  | 14.44   | 12.37           | 12.83                      | NA                | 12.68     |
| 1978               | AVERAGE   | 14.10   | 13.64     | 12.65 | 13.75  | 13.24  | 14.04   | 12.70           | 13.24                      | 13.82             | 12.45     |
| 1979               | AVERAGE   | 20.65   | 19.35     | 23.71 | 22.43  | 20.29  | 21.80   | 17.63           | 19.58                      | 21.20             | 17.37     |
| 1980               | January   | 33.67   | 29.67     | 29.28 | 35.72  | 29.43  | 31.57   | 26.25           | 29.85                      | 30.77             | 25.34     |
|                    | February  | 34.03   | 31.11     | NA    | 35.71  | 31.77  | 33.39   | 26.62           | 30.95                      | 32.66             | 24.82     |
|                    | March     | 36.74   | 31.54     | (*)   | 35.88  | 30.56  | 35.59   | 26.85           | 29.34                      | 34.34             | 24.03     |
|                    | April     | 36.93   | 32.22     | (*)   | 35.30  | 30.24  | 36.11   | 27.78           | 30.38                      | 34.15             | 23.85     |
|                    | May       | 37.10   | 32.40     | (*)   | 36.13  | 30.68  | 36.50   | 28.50           | 32.67                      | 34.10             | 24.82     |
|                    | June      | 37.61   | 32.90     | (*)   | 36.83  | 30.76  | 36.99   | 28.95           | 33.34                      | 36.28             | 25.56     |
|                    | July      | 38.40   | 33.19     | (*)   | 37.26  | 31.84  | 37.17   | 28.47           | NA                         | 36.26             | 24.34     |
|                    | August    | 37.53   | 33.01     | (*)   | 37.01  | 31.87  | 36.69   | 29.74           | NA                         | 34.83             | 25.30     |
|                    | September | 37.21   | 33.13     | (*)   | 36.94  | 31.21  | 36.38   | 30.34           | NA                         | 35.18             | 24.21     |
|                    | October   | 37.60   | 32.31     | (*)   | 37.15  | 31.27  | 36.82   | 30.19           | NA                         | 35.66             | 22.71     |
|                    | November  | 37.05   | 32.94     | (*)   | 36.90  | 31.59  | 36.87   | 31.43           | NA                         | 35.47             | 26.83     |
|                    | December  | 37.37   | 33.21     | (*)   | 37.58  | 32.33  | 36.79   | 32.01           | NA                         | 35.00             | 26.66     |
|                    | AVERAGE   | 36.57   | 32.37     | (*)   | 36.41  | 31.11  | 35.82   | 28.53           | NA                         | 34.58             | 24.78     |
| 1981               | January   | 39.37   | 36.54     | (*)   | 40.52  | 35.88  | 40.11   | 32.39           | NA                         | 38.34             | 32.87     |
|                    | February  | 40.13   | 36.13     | (*)   | 40.73  | 36.57  | 40.03   | 32.60           | NA                         | 39.41             | 30.36     |
|                    | March     | 40.30   | 36.40     | (*)   | 40.25  | 35.60  | 39.85   | 32.73           | NA                         | 39.50             | 31.24     |
|                    | April     | 39.70   | 36.38     | (*)   | 40.04  | 33.81  | 39.92   | 32.41           | NA                         | 38.85             | 29.93     |
|                    | May       | 39.57   | 36.09     | (*)   | 38.91  | 34.45  | 39.11   | 32.13           | NA                         | 37.16             | 28.39     |
|                    | June      | 39.20   | 36.95     | (*)   | 39.85  | 30.30  | 38.44   | 32.42           | NA                         | 35.84             | 30.50     |
|                    | July      | 38.06   | 35.47     | (*)   | 38.70  | 32.72  | 39.25   | 32.07           | NA                         | 34.89             | 29.25     |
|                    | August    | 39.34   | 35.61     | (*)   | 39.45  | 31.23  | 39.55   | 31.95           | NA                         | 34.38             | 27.08     |
|                    | September | 39.60   | 35.82     | (*)   | 36.74  | 30.37  | 36.04   | 32.09           | NA                         | 34.44             | 28.14     |
|                    | October   | R36.90  | 35.08     | (*)   | R36.36 | R30.83 | R35.45  | R33.56          | NA                         | R34.87            | R27.27    |
|                    | November† | 36.55   | 35.53     | (*)   | 37.15  | 31.80  | 36.41   | 33.49           | NA                         | 35.97             | 28.39     |

<sup>1</sup>The Free on Board (FOB) cost excludes all costs related to insurance and transportation. See Explanatory Note 14.

\*No crude oil has been imported from Iran since February 1980.

†Preliminary data. R=Revised data. NA=Not available.

Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 the prices are for the month of reporting.

Sources: 1976 through January 1979: FEA Form 701-M-0, "Transfer Pricing Report";

\* February 1979 forward: Economic Regulatory Administration Form 51, "Transfer Pricing Report."

## Price

### Landed Cost of Crude Oil Imports from Selected Countries<sup>1</sup>

|                    |           | Algeria | Canada | Indonesia | Iran             | Libya  | Mexico | Nigeria | Saudi Arabia | United Arab Emirates | United Kingdom | Venezuela |
|--------------------|-----------|---------|--------|-----------|------------------|--------|--------|---------|--------------|----------------------|----------------|-----------|
| Dollars per barrel |           |         |        |           |                  |        |        |         |              |                      |                |           |
| 1975               | AVERAGE   | 12.72   | 12.72  | 13.79     | 12.21            | 12.35  | NA     | 12.62   | 12.30        | 12.87                | NA             | 11.65     |
| 1976               | AVERAGE   | 13.81   | 13.57  | 13.82     | 12.82            | 13.58  | NA     | 13.80   | 13.04        | 13.30                | NA             | 11.80     |
| 1977               | AVERAGE   | 15.20   | 14.21  | 14.63     | 13.80            | 14.87  | 13.75  | 15.25   | 13.61        | 14.04                | NA             | 13.13     |
| 1978               | AVERAGE   | 14.91   | 14.50  | 14.64     | 13.88            | 14.72  | 13.54  | 14.86   | 13.92        | 14.39                | NA             | 12.83     |
| 1979               | AVERAGE   | 21.90   | 20.43  | 20.69     | 25.02            | 23.68  | 20.86  | 22.96   | 19.15        | 21.90                | 22.16          | 18.18     |
| 1980               | January   | 35.32   | 27.73  | 31.03     | 30.37            | 37.10  | 30.18  | 33.03   | 27.85        | 32.35                | 32.14          | 26.25     |
|                    | February  | 35.28   | 28.60  | 32.95     | NA               | 36.98  | 32.38  | 35.25   | 28.15        | 32.71                | 34.07          | 25.91     |
|                    | March     | 38.54   | 30.75  | 33.04     | ( <sup>2</sup> ) | 37.18  | 31.17  | 36.93   | 28.26        | 30.96                | 35.73          | 24.97     |
|                    | April     | 38.52   | 30.31  | 33.81     | ( <sup>2</sup> ) | 36.57  | 30.77  | 37.41   | 29.14        | 32.29                | 35.34          | 25.10     |
|                    | May       | 38.54   | 31.16  | 33.73     | ( <sup>2</sup> ) | 37.36  | 31.22  | 37.53   | 30.30        | 34.06                | 35.82          | 25.93     |
|                    | June      | 38.71   | 31.26  | 34.51     | ( <sup>2</sup> ) | 38.09  | 31.43  | 38.15   | 30.16        | 34.96                | 37.41          | 26.42     |
|                    | July      | 39.60   | 31.31  | 34.81     | ( <sup>2</sup> ) | 38.39  | 32.60  | 38.23   | 30.04        | NA                   | 37.25          | 25.47     |
|                    | August    | 38.60   | 31.44  | 34.81     | ( <sup>2</sup> ) | 38.38  | 32.62  | 37.77   | 31.24        | NA                   | 36.20          | 26.37     |
|                    | September | 38.28   | 30.97  | 34.64     | ( <sup>2</sup> ) | 38.30  | 31.93  | 37.60   | 31.86        | NA                   | 36.35          | 25.47     |
|                    | October   | 38.77   | 29.22  | 33.65     | ( <sup>2</sup> ) | 38.53  | 31.96  | 37.75   | 31.73        | NA                   | 36.82          | 23.92     |
|                    | November  | 38.41   | 28.81  | 34.55     | ( <sup>2</sup> ) | 38.22  | 32.42  | 37.97   | 32.86        | NA                   | 36.62          | 27.75     |
|                    | December  | 38.63   | 32.72  | 34.64     | ( <sup>2</sup> ) | 39.04  | 33.76  | 38.11   | 33.40        | NA                   | 36.31          | 27.66     |
|                    | AVERAGE   | 37.90   | 30.47  | 33.92     | ( <sup>2</sup> ) | 37.72  | 31.80  | 37.05   | 30.02        | NA                   | 35.88          | 25.86     |
| 1981               | January   | 41.25   | 34.26  | 38.08     | ( <sup>2</sup> ) | 41.81  | 36.81  | 41.55   | 34.06        | NA                   | 39.90          | 33.80     |
|                    | February  | 41.90   | 33.73  | 37.86     | ( <sup>2</sup> ) | 42.19  | 37.23  | 41.46   | 34.38        | NA                   | 40.69          | 31.20     |
|                    | March     | 41.62   | 33.88  | 38.11     | ( <sup>2</sup> ) | 41.60  | 36.42  | 40.98   | 34.42        | NA                   | 40.72          | 32.09     |
|                    | April     | 40.96   | 33.74  | 37.95     | ( <sup>2</sup> ) | 41.58  | 34.42  | 41.04   | 34.16        | NA                   | 40.02          | 30.97     |
|                    | May       | 40.81   | 32.70  | 37.72     | ( <sup>2</sup> ) | 40.46  | 34.83  | 40.10   | 33.73        | NA                   | 38.31          | 29.39     |
|                    | June      | 40.31   | 32.67  | 38.73     | ( <sup>2</sup> ) | 41.44  | 31.03  | 39.60   | 34.29        | NA                   | 37.04          | 31.46     |
|                    | July      | 39.59   | 31.19  | 37.20     | ( <sup>2</sup> ) | 40.27  | 33.18  | 40.05   | 33.72        | NA                   | 35.87          | 29.22     |
|                    | August    | 40.65   | 30.44  | 37.07     | ( <sup>2</sup> ) | 40.30  | 31.77  | 40.85   | 33.23        | NA                   | 35.40          | 28.11     |
|                    | September | 41.62   | 30.83  | 37.52     | ( <sup>2</sup> ) | 37.73  | 30.84  | 37.20   | 33.66        | NA                   | 35.26          | 29.12     |
|                    | October   | R37.52  | 31.17  | 36.39     | ( <sup>2</sup> ) | R38.15 | R31.34 | 36.64   | R34.88       | NA                   | R36.00         | R28.27    |
|                    | November† | 37.43   | 31.04  | 36.84     | ( <sup>2</sup> ) | 38.50  | 32.42  | 37.59   | 34.91        | NA                   | 36.87          | 29.27     |

<sup>1</sup>See Explanatory Note 15.

No crude has been imported from Iran since February 1980.

†Preliminary data. R = Revised data. NA = Not available.

Note: Prices shown for 1980 are for the month of loading; whereas prior to 1980 prices are for the month of reporting.

Sources: • 1975 through January 1979: Economic Regulatory Administration (ERA), FEA Form F701-M-0, "Transfer Pricing Report."

• February 1979 forward: ERA 51, "Transfer Pricing Report."

## Price

### U.S. City Average Retail Prices for Motor Gasoline<sup>1</sup>

|                                 |                        | Leaded<br>Regular | Unleaded<br>Regular | Leaded<br>Premium | Average<br>for All<br>Types |
|---------------------------------|------------------------|-------------------|---------------------|-------------------|-----------------------------|
| Cents per gallon, including tax |                        |                   |                     |                   |                             |
| 1974                            | AVERAGE                | 53.2              | NA                  | 56.9              | NA                          |
| 1975                            | AVERAGE                | 56.7              | NA                  | 60.9              | NA                          |
| 1976                            | AVERAGE                | 59.0              | 61.4                | 63.6              | NA                          |
| 1977                            | AVERAGE                | 62.2              | 65.6                | 67.4              | NA                          |
| 1978                            | AVERAGE                | 62.6              | 67.0                | 69.4              | 65.2                        |
| 1979                            | AVERAGE                | 85.7              | 90.3                | 92.2              | 88.2                        |
| 1980                            | January                | 108.6             | 113.1               | 114.9             | 111.0                       |
|                                 | February               | 115.9             | 120.7               | 123.3             | 118.6                       |
|                                 | March                  | 120.2             | 125.2               | 127.7             | 123.0                       |
|                                 | April                  | 121.2             | 126.4               | 129.2             | 124.2                       |
|                                 | May                    | 121.5             | 126.6               | 129.5             | 124.4                       |
|                                 | June                   | 121.7             | 126.9               | 130.0             | 124.6                       |
|                                 | July                   | 121.6             | 127.1               | 130.7             | 124.7                       |
|                                 | August                 | 121.0             | 126.7               | 131.0             | 124.3                       |
|                                 | September              | 119.7             | 125.7               | 130.4             | 123.1                       |
|                                 | October                | 118.8             | 125.0               | 130.1             | 122.3                       |
|                                 | November               | 118.8             | 125.0               | 129.9             | 122.2                       |
|                                 | December               | 119.7             | 125.8               | 131.0             | 123.1                       |
|                                 | AVERAGE                | 119.1             | 124.5               | 128.1             | 122.1                       |
| 1981                            | January                | 123.8             | 129.8               | 133.8             | 126.9                       |
|                                 | February               | 132.1             | 138.2               | 141.0             | 135.3                       |
|                                 | March                  | 135.2             | 141.7               | 144.9             | 138.8                       |
|                                 | April                  | 134.4             | 141.2               | 145.1             | 138.1                       |
|                                 | May                    | 133.3             | 140.0               | 144.7             | 137.0                       |
|                                 | June                   | 132.4             | 139.1               | 144.6             | 136.2                       |
|                                 | July                   | 131.5             | 138.2               | 144.6             | 135.3                       |
|                                 | August                 | 131.0             | 137.6               | 144.4             | 134.8                       |
|                                 | September <sup>2</sup> | 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                       |

Geographic coverage: 1974 through 1977—56 urban areas; 1978 forward—85 urban areas.

<sup>1</sup>See Explanatory Note 16.

<sup>2</sup>Beginning with September 1981, the Bureau of Labor Statistics changed the weights used in the calculation of average motor gasoline prices. In the average for all types category, gasohol is now included and unleaded premium is weighted more heavily.

NA=Not available.

Source: •Bureau of Labor Statistics.

# Price

## Aviation Fuel

|      |           | Aviation Gasoline               |                     | Naphtha-Type <sup>1</sup> |                        | Kerosene-Type       |  |
|------|-----------|---------------------------------|---------------------|---------------------------|------------------------|---------------------|--|
|      |           | Wholesale <sup>2</sup>          | Retail <sup>2</sup> | Retail <sup>2</sup>       | Wholesale <sup>2</sup> | Retail <sup>2</sup> |  |
|      |           | Cents per gallon, excluding tax |                     |                           |                        |                     |  |
| 1976 | AVERAGE   | 42.4                            | 43.1                | 31.5                      | 32.5                   | 31.2                |  |
| 1977 | AVERAGE   | 46.7                            | 47.7                | 35.0                      | 36.7                   | 35.8                |  |
| 1978 | AVERAGE   | 51.0                            | 52.1                | 37.5                      | 38.9                   | 38.9                |  |
| 1979 | AVERAGE   | 68.5                            | 69.5                | 52.3                      | 66.5                   | 55.1                |  |
| 1980 | January   | 90.6                            | 90.0                | 76.0                      | 83.4                   | 77.0                |  |
|      | February  | 98.5                            | 97.8                | 80.1                      | 86.2                   | 83.0                |  |
|      | March     | 102.9                           | 107.0               | 84.1                      | 86.6                   | 86.3                |  |
|      | April     | 104.8                           | 109.6               | 83.2                      | 88.4                   | 87.4                |  |
|      | May       | 106.2                           | 109.7               | 89.1                      | 89.0                   | 87.6                |  |
|      | June      | 107.7                           | 111.4               | 90.0                      | 86.1                   | 88.6                |  |
|      | July      | 109.3                           | 113.4               | 91.4                      | 88.3                   | 89.7                |  |
|      | August    | 110.2                           | 112.9               | 90.6                      | 86.2                   | 90.7                |  |
|      | September | 110.8                           | 113.3               | 92.9                      | 86.4                   | 88.8                |  |
|      | October   | 110.8                           | 113.0               | 91.1                      | 87.6                   | 88.7                |  |
|      | November  | 112.4                           | 113.0               | 92.5                      | 89.9                   | 91.0                |  |
|      | December  | 115.1                           | 117.2               | 94.1                      | 91.4                   | 91.6                |  |
|      | AVERAGE   | 107.2                           | 109.4               | 88.2                      | 87.5                   | 87.4                |  |
| 1981 | January   | 118.9                           | 121.6               | 99.2                      | 97.1                   | 95.7                |  |
|      | February  | 121.3                           | 128.1               | 102.7                     | 103.6                  | 101.6               |  |
|      | March     | 127.2                           | 131.1               | 106.9                     | 104.8                  | 106.3               |  |
|      | April     | 117.5                           | 131.3               | 109.0                     | 103.8                  | 106.4               |  |
|      | May       | 120.7                           | 133.5               | 109.1                     | 104.4                  | 106.2               |  |
|      | June      | 116.5                           | 132.1               | 107.6                     | 102.3                  | 104.8               |  |
|      | July      | 120.1                           | 133.4               | 106.3                     | 100.5                  | 103.8               |  |
|      | August    | 120.0                           | 132.5               | 105.7                     | 101.4                  | 103.3               |  |
|      | September | 121.0                           | 133.5               | R105.6                    | R103.0                 | 103.3               |  |
|      | October†  | 117.2                           | 134.5               | 104.8                     | 99.9                   | 101.1               |  |
|      | AVERAGE   | 119.4                           | 131.3               | 106.0                     | 102.1                  | 103.2               |  |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.

<sup>2</sup>Wholesale refers to the price of aviation fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.

†Preliminary data. R=Revised data.

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

## Price

### National Average Heating Oil Prices<sup>1</sup>

|                  |           | Refiners' Average Selling Price to Resellers and Retailers | Average Purchase Price Paid by Distributors for Heating Oil <sup>2</sup> | Average Distributor Margin on Residential Heating Oil <sup>2</sup> | Average Selling Price to Residential Customers <sup>2</sup> |
|------------------|-----------|--|--|--|---|
| Cents per gallon |           |  |  |  |   |
| 1976             | AVERAGE   | 31.4   | 32.6   | NA   | 40.6  |
| 1977             | AVERAGE   | 35.7   | 36.9   | NA   | 46.0  |
| 1978             | AVERAGE   | 37.2   | 38.7   | 11.0   | 49.4  |
| 1979             | AVERAGE   | 55.9   | 53.0   | 12.8   | 65.6  |
| 1980             | January   | 75.0   | 75.2   | 16.2   | 90.8  |
|                  | February  | 77.8   | 79.0   | 16.7   | 95.3  |
|                  | March     | 78.8   | 80.4   | 17.1   | 97.1  |
|                  | April     | 78.8   | 81.0   | 17.0   | 97.4  |
|                  | May       | 79.3   | 81.4   | 16.3   | 97.2  |
|                  | June      | 80.2   | 82.5   | 15.8   | 97.9  |
|                  | July      | 79.2   | 83.0   | 15.3   | 97.9  |
|                  | August    | 79.3   | 82.9   | 15.2   | 97.9  |
|                  | September | 79.3   | 83.0   | 15.4   | 98.1  |
|                  | October   | 80.7   | 83.7   | 15.3   | 98.7  |
|                  | November  | 84.0   | 86.1   | 13.8   | 101.1   |
|                  | December  | 88.6   | 91.3   | 14.1   | 106.5   |
|                  | AVERAGE   | 80.0   | 82.2   | 15.8   | 97.8  |
| 1981             | January   | 94.9   | 98.6   | 15.1   | 114.4   |
|                  | February  | 102.5  | 106.0  | 16.1   | 123.4   |
|                  | March     | 102.8  | 106.3  | 17.6   | 125.5   |
|                  | April     | 100.9  | 105.2  | 17.7   | 123.9   |
|                  | May       | 100.7  | 104.0  | 17.6   | 122.7   |
|                  | June      | 99.3   | 103.0  | 16.9   | 120.9   |
|                  | July      | 98.5   | 102.7  | 17.1   | 121.0   |
|                  | August    | 98.2   | 102.2  | 16.2   | 119.4   |
|                  | September | 97.8   | 101.6  | 17.2   | 119.7   |
|                  | October   | 98.0   | 101.1  | 16.6   | 118.8   |
|                  | November† | 100.0  | 102.3  | 17.6   | 120.9   |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>See Explanatory Note 17.

<sup>2</sup>Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.

†Preliminary data. NA=Not available.

Source: • 1976 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report" and EIA-9A, "No. 2 Distillate Price Monitoring Report"; November 1980 forward: EIA-9A, "No. 2 Distillate Price Monitoring Report."

# Price

## Residential Heating Oil Prices by Region

|      |                       | DOE Region <sup>1</sup> |       |       |       |       |     |       |       |       |       |
|------|-----------------------|-------------------------|-------|-------|-------|-------|-----|-------|-------|-------|-------|
|      |                       | Cents per gallon        |       |       |       |       |     |       |       |       |       |
|      |                       | 1                       | 2     | 3     | 4     | 5     | 6   | 7     | 8     | 9     | 10    |
| 1979 | January               | 55.1                    | 54.5  | 53.3  | 51.6  | 51.5  | (*) | 49.6  | 50.4  | 47.6  | 50.8  |
|      | February              | 57.7                    | 57.3  | 55.5  | 53.2  | 53.7  | (*) | 51.3  | 51.4  | 49.4  | 52.9  |
|      | March                 | 60.6                    | 59.8  | 57.5  | 54.3  | 56.3  | (*) | 54.7  | 55.3  | 50.8  | 55.3  |
|      | April                 | 62.8                    | 61.9  | 60.0  | 57.3  | 58.8  | (*) | 58.2  | 58.4  | 53.8  | 57.8  |
|      | May                   | 65.9                    | 64.8  | 63.4  | 61.2  | 62.8  | (*) | 62.0  | 62.7  | 56.2  | 60.8  |
|      | June                  | 70.5                    | 69.7  | 68.4  | 66.2  | 68.5  | (*) | 68.9  | 67.8  | 62.2  | 66.4  |
|      | July                  | 75.9                    | 73.9  | 72.9  | 70.9  | 73.2  | (*) | 72.0  | 72.5  | 68.4  | 72.3  |
|      | August                | 80.1                    | 78.6  | 77.7  | 74.8  | 78.5  | (*) | 76.4  | 77.1  | 71.7  | 77.2  |
|      | September             | 83.3                    | 81.4  | 80.0  | 79.4  | 81.5  | (*) | 79.5  | 80.1  | 76.8  | 81.4  |
|      | October               | 84.1                    | 82.5  | 81.7  | 79.1  | 82.6  | (*) | 80.2  | 81.3  | 81.2  | 82.6  |
|      | November              | 85.1                    | 83.7  | 82.4  | 80.5  | 83.9  | (*) | 82.2  | 84.0  | 80.4  | 82.3  |
|      | December              | 87.2                    | 85.7  | 85.1  | 82.9  | 86.1  | (*) | 85.3  | 86.3  | 82.6  | 84.6  |
| 1980 | January               | 91.8                    | 91.0  | 90.2  | 88.6  | 90.4  | (*) | 90.0  | 90.2  | 89.6  | 91.0  |
|      | February              | 96.7                    | 95.3  | 94.7  | 93.0  | 93.5  | (*) | 93.6  | 93.5  | 95.8  | 95.7  |
|      | March                 | 98.7                    | 97.2  | 96.5  | 94.8  | 94.3  | (*) | 95.1  | 95.9  | 93.9  | 97.6  |
|      | April                 | 99.2                    | 97.3  | 96.6  | 94.1  | 94.5  | (*) | 95.3  | 99.5  | 94.7  | 99.0  |
|      | May                   | 98.7                    | 97.3  | 96.4  | 94.2  | 95.8  | (*) | 95.2  | 97.7  | 95.5  | 98.6  |
|      | June                  | 99.8                    | 97.9  | 96.8  | 95.1  | 95.8  | (*) | 95.3  | 98.4  | 96.0  | 99.8  |
|      | July                  | 100.3                   | 98.1  | 96.6  | 94.2  | 96.2  | (*) | 93.1  | 97.0  | 96.7  | 100.2 |
|      | August                | 100.2                   | 97.9  | 96.8  | 94.8  | 95.7  | (*) | 95.4  | 92.1  | 99.7  | 100.4 |
|      | September             | 100.5                   | 98.2  | 97.0  | 94.7  | 95.7  | (*) | 93.7  | 93.0  | 97.2  | 100.6 |
|      | October               | 101.1                   | 98.8  | 97.4  | 95.6  | 95.9  | (*) | 94.7  | 94.1  | 98.6  | 100.4 |
|      | November              | 102.5                   | 103.0 | 99.9  | 101.5 | 98.8  | (*) | 95.2  | 98.5  | 101.0 | 103.1 |
|      | December              | 108.2                   | 108.5 | 105.3 | 106.6 | 103.4 | (*) | 99.6  | 101.8 | (*)   | 105.6 |
| 1981 | January               | 116.2                   | 117.1 | 113.2 | 114.0 | 110.4 | (*) | 106.3 | 108.6 | (*)   | 107.5 |
|      | February              | 125.8                   | 126.6 | 123.0 | 124.4 | 117.8 | (*) | 114.2 | 113.1 | (*)   | 113.7 |
|      | March                 | 127.6                   | 128.4 | 125.0 | 125.3 | 119.3 | (*) | 115.4 | 119.3 | 111.5 | 116.5 |
|      | April                 | 126.8                   | 126.6 | 122.7 | 124.8 | 118.3 | (*) | 114.7 | 118.4 | (*)   | 117.5 |
|      | May                   | 125.5                   | 125.6 | 122.1 | 118.8 | 117.3 | (*) | 114.5 | 115.1 | 114.1 | 115.6 |
|      | June                  | 124.1                   | 123.6 | 121.1 | 115.9 | 116.5 | (*) | 112.5 | 116.0 | (*)   | 117.1 |
|      | July                  | 123.3                   | 122.9 | 120.6 | 120.2 | 116.0 | (*) | 115.9 | 116.2 | (*)   | 118.3 |
|      | August                | 122.7                   | 122.2 | 117.9 | 117.4 | 115.1 | (*) | 112.1 | 116.9 | (*)   | 117.7 |
|      | September             | 122.7                   | 121.4 | 118.5 | 120.5 | 116.2 | (*) | 111.6 | 116.8 | (*)   | 117.8 |
|      | October               | 122.5                   | 122.0 | 115.3 | 117.6 | 116.3 | (*) | 112.0 | 115.8 | (*)   | 118.2 |
|      | November <sup>†</sup> | 123.5                   | 123.1 | 119.2 | 118.5 | 116.9 | (*) | 113.4 | 115.0 | (*)   | 118.7 |

<sup>1</sup>DOE Regions are defined in Explanatory Note 18.

<sup>a</sup>Not available for publication. Data for Region 6, and occasionally Region 9, are based on a sample of less than four reporting firms.

<sup>†</sup>Preliminary data.

Source: • 1979 through October 1980: FEA Form P112-M-1/EIA-9, "No. 2 Heating Oil Supply/Price Monitoring Report"; November 1980 forward: EIA-9A, "No. 2 Distillate Price Monitoring Report".

## Price

### Average No. 6 Residual Fuel Oil Prices

|                                     |           | 0.0 to 0.3 percent sulfur |        | 0.31 to 1.0 percent sulfur |        | Greater than 1.0 percent sulfur |        | Average    |        |
|-------------------------------------|-----------|---------------------------|--------|----------------------------|--------|---------------------------------|--------|------------|--------|
|                                     |           | Whole-sale                | Retail | Whole-sale                 | Retail | Whole-sale                      | Retail | Whole-sale | Retail |
|                                     |           |                           |        |                            |        |                                 |        |            |        |
| Dollars per barrel, excluding taxes |           |                           |        |                            |        |                                 |        |            |        |
| 1976                                | AVERAGE   | 12.20                     | 12.54  | 10.83                      | 11.79  | 9.98                            | 10.43  | 10.72      | 11.49  |
| 1977                                | AVERAGE   | 13.45                     | 14.36  | 12.09                      | 13.45  | 11.31                           | 12.27  | 11.96      | 13.23  |
| 1978                                | AVERAGE   | 12.77                     | 14.47  | 11.95                      | 12.78  | 10.73                           | 11.70  | 11.51      | 12.75  |
| 1979                                | AVERAGE   | 19.87                     | 21.21  | 18.33                      | 19.33  | 15.89                           | 16.44  | 17.66      | 18.67  |
| 1980                                | January   | 29.11                     | 30.35  | 26.15                      | 28.12  | 21.56                           | 21.98  | 24.41      | 26.21  |
|                                     | February  | 27.07                     | 30.32  | 25.82                      | 28.15  | 20.21                           | 22.22  | 23.34      | 26.48  |
|                                     | March     | 26.88                     | 30.20  | 23.73                      | 27.29  | 17.81                           | 20.34  | 21.11      | 25.33  |
|                                     | April     | 25.16                     | 28.69  | 20.38                      | 24.78  | 16.41                           | 18.36  | 19.09      | 22.87  |
|                                     | May       | 25.48                     | 31.73  | 22.72                      | 25.77  | 17.72                           | 18.04  | 20.22      | 23.75  |
|                                     | June      | 23.14                     | 31.37  | 22.35                      | 25.44  | 17.72                           | 19.27  | 20.44      | 24.09  |
|                                     | July      | 24.89                     | 28.51  | 23.44                      | 25.55  | 19.20                           | 20.58  | 21.28      | 23.86  |
|                                     | August    | 23.20                     | 30.93  | 24.98                      | 26.11  | 20.42                           | 21.45  | 22.25      | 25.00  |
|                                     | September | 24.27                     | 33.12  | 23.46                      | 26.31  | 20.62                           | 21.71  | 22.47      | 25.31  |
|                                     | October   | 25.72                     | 31.88  | 25.86                      | 28.00  | 22.30                           | 23.29  | 24.06      | 26.68  |
|                                     | November  | 29.52                     | 33.70  | 29.40                      | 30.89  | 27.08                           | 27.50  | 28.12      | 30.10  |
|                                     | December  | 31.69                     | 35.76  | 31.29                      | 32.61  | 28.39                           | 30.03  | 29.76      | 32.33  |
|                                     | AVERAGE   | 26.41                     | 31.13  | 24.91                      | 27.59  | 20.77                           | 22.11  | 23.14      | 26.09  |
| 1981                                | January   | 34.27                     | 37.23  | 32.12                      | 33.96  | 29.12                           | 31.35  | 31.14      | 33.65  |
|                                     | February  | 38.04                     | 41.60  | 34.96                      | 37.32  | 28.96                           | 32.02  | 31.81      | 36.04  |
|                                     | March     | 37.78                     | 41.19  | 34.47                      | 38.01  | 29.55                           | 31.95  | 31.78      | 36.11  |
|                                     | April     | 35.66                     | 41.71  | 33.10                      | 35.94  | 28.35                           | 30.56  | 30.56      | 34.70  |
|                                     | May       | 33.61                     | 41.09  | 32.53                      | 35.94  | 28.77                           | 30.64  | 30.41      | 34.11  |
|                                     | June      | 28.01                     | 38.30  | 26.71                      | 32.38  | 25.33                           | 27.16  | 25.95      | 31.03  |
|                                     | July      | 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 | R29.91                    | 39.17  | R27.46                     | R32.08 | R24.80                          | R26.26 | R26.20     | R30.33 |
|                                     | October†  | 30.26                     | 39.90  | 28.64                      | 31.88  | 24.99                           | 26.22  | 26.82      | 30.44  |
|                                     | AVERAGE   | 33.33                     | 39.48  | 30.94                      | 34.01  | 27.33                           | 28.99  | 29.13      | 32.86  |

Geographic coverage: the 50 United States and District of Columbia.

†Preliminary data. R=Revised data.

Note: Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial, and residential accounts.

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

## Price

### Natural Gas

|                               |           | Average Wellhead Value | Delivered to Electric Plant <sup>1</sup> | Average Residential Heating |
|-------------------------------|-----------|------------------------|--|-----------------------------|
| Cents per thousand cubic feet |           |                        |  |                             |
| 1973                          | AVERAGE   | 21.6                   | 35.0                                     | 108.2                       |
| 1974                          | AVERAGE   | 30.4                   | 49.0                                     | 125.3                       |
| 1975                          | AVERAGE   | 44.5                   | 76.9                                     | 154.2                       |
| 1976                          | AVERAGE   | 58.0                   | 105.9                                    | 184.6                       |
| 1977                          | AVERAGE   | 79.0                   | 133.4                                    | 226.4                       |
| 1978                          | AVERAGE   | 90.5                   | 147.9                                    | 262.6                       |
| 1979                          | AVERAGE   | 117.8                  | 180.3                                    | 323.1                       |
| 1980                          | January   | 134.4                  | 201.1                                    | 354.9                       |
|                               | February  | 139.5                  | 210.5                                    | 357.9                       |
|                               | March     | 141.3                  | 214.7                                    | 368.1                       |
|                               | April     | 143.4                  | 210.4                                    | 367.8                       |
|                               | May       | 145.2                  | 218.1                                    | 393.9                       |
|                               | June      | 145.8                  | 216.4                                    | 394.8                       |
|                               | July      | 152.8                  | 237.3                                    | 410.6                       |
|                               | August    | 152.8                  | 245.6                                    | 413.1                       |
|                               | September | 157.4                  | 245.6                                    | 417.0                       |
|                               | October   | 159.4                  | 253.4                                    | 420.6                       |
|                               | November  | 163.3                  | 238.4                                    | 396.1                       |
|                               | December  | 162.2                  | 232.7                                    | 403.3                       |
|                               | AVERAGE   | 149.6                  | 212.8                                    | 391.5                       |
| 1981                          | January   | 167.6                  | 258.8                                    | 406.9                       |
|                               | February  | 171.3                  | 268.9                                    | 409.3                       |
|                               | March     | 172.1                  | 273.0                                    | 417.4                       |
|                               | April     | 173.8                  | 282.5                                    | 421.7                       |
|                               | May       | 177.3                  | 293.2                                    | 457.1                       |
|                               | June      | 182.9                  | 296.7                                    | 457.6                       |
|                               | July      | 184.5                  | 298.2                                    | 460.4                       |
|                               | August    | R185.1                 | 299.9                                    | 466.6                       |
|                               | September | R192.8                 | 297.4                                    | 486.3                       |
|                               | October   | 196.2                  | 299.3                                    | 487.4                       |

Geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>Includes all electric utility generating plants with a combined capacity for 25 megawatts or greater. Small quantities of coke oven gas, refinery gas, and blast furnace gas are included.

R=Revised data:

Sources: • Annual data for wellhead values are from the appropriate agencies of the individual producing States and the U.S. Geological Survey; monthly data are estimated primarily on the basis of values reported by State agencies in New Mexico, Oklahoma, and Texas.

• Electric plant data—FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

• Average residential heating prices—Bureau of Labor Statistics.

# Price

## Electricity

**Cost of Fossil Fuels Delivered  
to Steam-Electric Utility Plants**

**Average Retail Electricity Prices  
Selected Class A Privately-Owned Utilities**

|      |           | Coal  | Residual<br>Oil <sup>1</sup> | Natural<br>Gas <sup>2</sup> | All<br>Fossil<br>Fuels <sup>1</sup> | Cents per million Btu   |            |            |       |      | Total <sup>3</sup> |  |
|------|-----------|-------|------------------------------|-----------------------------|-------------------------------------|-------------------------|------------|------------|-------|------|--------------------|--|
|      |           |       |                              |                             |                                     | Cents per kilowatt-hour |            |            |       |      |                    |  |
|      |           |       |                              |                             |                                     | Residential             | Commercial | Industrial | Other |      |                    |  |
|      |           |       |                              |                             |                                     |                         |            |            |       |      |                    |  |
| 1973 | AVERAGE   | 40.5  | 78.8                         | 33.8                        | 47.5                                | 2.54                    | 2.41       | 1.25       | 2.10  | 1.96 |                    |  |
| 1974 | AVERAGE   | 71.0  | 191.0                        | 48.1                        | 90.9                                | 3.10                    | 3.04       | 1.69       | 2.75  | 2.49 |                    |  |
| 1975 | AVERAGE   | 81.4  | 201.4                        | 75.4                        | 103.0                               | 3.51                    | 3.45       | 2.07       | 3.08  | 2.92 |                    |  |
| 1976 | AVERAGE   | 84.8  | 195.9                        | 103.4                       | 110.4                               | 3.73                    | 3.69       | 2.21       | 3.27  | 3.09 |                    |  |
| 1977 | AVERAGE   | 94.7  | 220.4                        | 130.0                       | 127.7                               | 4.05                    | 4.09       | 2.50       | 3.51  | 3.42 |                    |  |
| 1978 | AVERAGE   | 111.6 | 212.3                        | 143.8                       | 139.3                               | 4.31                    | 4.36       | 2.79       | 3.62  | 3.69 |                    |  |
| 1979 | AVERAGE   | 122.4 | 299.7                        | 175.4                       | 162.1                               | 4.64                    | 4.68       | 3.05       | 3.96  | 3.99 |                    |  |
| 1980 | January   | 128.7 | 423.5                        | 194.8                       | 187.3                               | 4.69                    | 4.90       | 3.32       | 4.19  | 4.21 |                    |  |
|      | February  | 129.9 | 429.7                        | 203.9                       | 189.8                               | 4.74                    | 4.97       | 3.32       | 4.63  | 4.25 |                    |  |
|      | March     | 130.1 | 411.0                        | 207.9                       | 184.8                               | 4.92                    | 5.17       | 3.45       | 4.69  | 4.40 |                    |  |
|      | April     | 133.8 | 394.9                        | 204.0                       | 178.2                               | 5.14                    | 5.28       | 3.49       | 4.71  | 4.48 |                    |  |
|      | May       | 133.3 | 403.1                        | 212.0                       | 180.3                               | 5.41                    | 5.44       | 3.59       | 4.97  | 4.63 |                    |  |
|      | June      | 135.1 | 392.7                        | 209.3                       | 178.8                               | 5.60                    | 5.61       | 3.79       | 4.58  | 4.85 |                    |  |
|      | July      | 137.4 | 394.5                        | 228.5                       | 199.0                               | 5.66                    | 5.65       | 3.93       | 4.93  | 5.03 |                    |  |
|      | August    | 139.5 | 404.9                        | 237.2                       | 196.2                               | 5.72                    | 5.64       | 3.94       | 4.81  | 5.07 |                    |  |
|      | September | 138.9 | 411.3                        | 238.7                       | 193.5                               | 5.69                    | 5.73       | 3.89       | 4.95  | 5.03 |                    |  |
|      | October   | 138.1 | 452.2                        | 245.7                       | 192.2                               | 5.68                    | 5.84       | 3.84       | 4.88  | 4.95 |                    |  |
|      | November  | 139.3 | 496.0                        | 231.3                       | 200.0                               | R5.60                   | R5.70      | 3.85       | 5.06  | 4.89 |                    |  |
|      | December  | 137.8 | 521.9                        | 226.3                       | 206.6                               | 5.49                    | 5.69       | 3.88       | 4.82  | 4.90 |                    |  |
|      | AVERAGE   | 135.2 | 427.9                        | 212.9                       | 189.3                               | 5.36                    | 5.48       | 3.69       | 4.76  | 4.73 |                    |  |
| 1981 | January   | 142.3 | 540.2                        | 254.1                       | 221.3                               | 5.44                    | 5.73       | 3.94       | 4.92  | 4.96 |                    |  |
|      | February  | 146.3 | 572.9                        | 260.5                       | 218.4                               | 5.52                    | 5.83       | 3.95       | 5.01  | 4.99 |                    |  |
|      | March     | 148.4 | 583.9                        | 263.8                       | 215.2                               | 5.76                    | 6.01       | 4.04       | 5.33  | 5.12 |                    |  |
|      | April     | 146.9 | 568.4                        | 273.5                       | 242.1                               | 5.99                    | 6.14       | 4.07       | 5.20  | 5.20 |                    |  |
|      | May       | 146.7 | 552.8                        | 282.7                       | 250.8                               | 6.27                    | 6.30       | 4.17       | 5.49  | 5.37 |                    |  |
|      | June      | 152.8 | 503.2                        | 286.3                       | 236.2                               | 6.48                    | 6.48       | 4.36       | 5.38  | 5.59 |                    |  |
|      | July      | 156.5 | 502.4                        | 288.6                       | 227.5                               | 6.58                    | 6.47       | 4.48       | 5.60  | 5.76 |                    |  |
|      | August    | 157.0 | 494.4                        | 291.0                       | 220.3                               | 6.62                    | 6.49       | 4.49       | 5.52  | 5.78 |                    |  |
|      | September | 157.3 | 506.7                        | 287.6                       | 213.2                               | 6.63                    | 6.48       | 4.49       | 5.65  | 5.74 |                    |  |
|      | October   | 160.2 | 511.9                        | 300.7                       | 218.1                               | 6.57                    | 6.52       | 4.40       | 5.31  | 5.64 |                    |  |
|      | November  | NA    | NA                           | NA                          | NA                                  | 6.42                    | 6.48       | 4.46       | 5.43  | 5.61 |                    |  |

Geographic coverage: Fossil Fuels—the lower 48 States and District of Columbia. Electricity—the 50 United States and District of Columbia.

<sup>1</sup>See Explanatory Note 19.

<sup>2</sup>Includes small quantities of coke oven gas, refinery gas and blast furnace gas.

<sup>3</sup>Average price for total sales to ultimate consumers.

NA=Not available.

Sources: • Cost of fossil fuels—FPC Form 423, "Monthly Report of Cost and Quality of Fuels for Electric Plants."

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

## **International**

## **Crude Oil Production**

World crude oil production during October 1981 was 54.4 million barrels per day, up 0.8 million barrels per day (1.4 percent) from the September 1981 level.

Organization of Petroleum Exporting Countries (OPEC) output during October 1981 averaged 21.2 million barrels per day, an increase of 0.8 million barrels per day from the previous month. Average production by Arab members of OPEC was 15.0 million barrels per day, up 0.8 million barrels per day from the September 1981 level. The increase in OPEC production can be largely attributed to an increase in production of 0.5 million barrels per day in Saudi Arabia. Other important increases occurred in Nigeria, Algeria, and Kuwait up 0.2, 0.2, and 0.1 million barrels per day, respectively.

Production by non-OPEC nations was virtually unchanged from September to October. Production decreased by 0.1 million barrels per day in Canada while remaining about the same elsewhere.

## Petroleum Consumption

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

Petroleum consumption by International Energy Agency (IEA) member nations was 30.5 million barrels per day during August 1981 (latest data available). This preliminary average was an increase of 0.8 million barrels per day from the average rate of 29.7 million barrels per day in August 1980. The United States decreased petroleum consumption during the same period by 0.5 million barrels per day.

## Petroleum Stocks

Preliminary data on petroleum stocks for September 1981 were available for Canada, France, the United Kingdom, and the United States. Petroleum stocks in the United States were up from the level at the end of September 1980 by 2.4 percent. In contrast, stocks in Canada, France, and the United Kingdom were down 3.3, 8.7, and 14.5 percent, respectively, during the same interval.

Petroleum stocks of all Organization for Economic Cooperation and Development (OECD) members stood at 3,552 million barrels at the end of June 1981 (latest data available), an increase of 52 million barrels (1.5 percent) from stocks held at the end of June 1980. The United States held 1,438 million barrels of these stocks (40.5 percent).

## **Nuclear Electricity Production**

In November 1981, the non-Communist world generated 59.5 billion gross kilo-watt-hours of nuclear-based electricity, an increase of 6.7 percent over October 1981 generation and 12.7 percent above the comparable level for November 1980. U.S. nuclear electricity production in November 1981 was 24.1 billion gross kilo-watt-hours, about 40.4 percent of non-Communist commercial nuclear generation for that month.

Two changes occurred in the status of non-Communist reactors during November. The low-power operating license that had been issued for Diablo Canyon was withdrawn and Electricite de France's Dampierre-4 unit announced commercial operation. Since the Dampierre-4 unit has been included in our tabulations since August of this year, the net effect of these two changes was to reduce the number of operational, non-Communist power reactor units by one to 220. These 220 units have a combined gross generating capacity of 143.2 million kilowatts (GWe), of which 59.8 GWe (41.8 percent) was associated with the 74 licensed U.S. units.

# Part 10 International

## International

### Crude Oil Production for Major Petroleum Producing Countries

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

U.S. geographic coverage: the 50 United States and District of Columbia.

Monthly data may not average to annual data due to independent rounding. Data for 1981 are preliminary.

<sup>1</sup>Includes about one-half of the production in the former Kuwait-Saudi Arabia Neutral Zone. In October 1981 total production in this region amounted to approximately 374,000 barrels per day.

<sup>2</sup>Arab members of the Organization of Petroleum Exporting Countries (OPEC) include Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and the United Arab Emirates.

Additional footnotes on following page.

## International

### Crude Oil Production for Major Petroleum Producing Countries (continued)

|                          |           | Nigeria | Vene-zuela | Total OPEC <sup>a</sup> | Canada | Mexico | United Kingdom | United States | China | USSR   | Other <sup>b</sup> | World  |
|--------------------------|-----------|---------|------------|-------------------------|--------|--------|----------------|---------------|-------|--------|--------------------|--------|
| Thousand barrels per day |           |         |            |                         |        |        |                |               |       |        |                    |        |
| 1973                     | AVERAGE   | 2,054   | 3,366      | 30,989                  | 1,800  | 465    | 2              | 9,208         | 1,090 | 8,465  | 3,729              | 55,748 |
| 1974                     | AVERAGE   | 2,255   | 2,976      | 30,729                  | 1,684  | 571    | 2              | 8,774         | 1,315 | 9,000  | 3,835              | 55,910 |
| 1975                     | AVERAGE   | 1,783   | 2,346      | 27,155                  | 1,439  | 705    | 12             | 8,375         | 1,490 | 9,625  | 4,151              | 52,952 |
| 1976                     | AVERAGE   | 2,067   | 2,294      | 30,738                  | 1,295  | 831    | 245            | 8,132         | 1,670 | 10,143 | 4,351              | 57,405 |
| 1977                     | AVERAGE   | 2,085   | 2,238      | 31,278                  | 1,320  | 981    | 768            | 8,245         | 1,874 | 10,682 | 4,647              | 59,795 |
| 1978                     | AVERAGE   | 1,897   | 2,166      | 29,805                  | 1,313  | 1,209  | 1,082          | 8,707         | 2,082 | 11,185 | 4,782              | 60,165 |
| 1979                     | AVERAGE   | 2,302   | 2,356      | 30,928                  | 1,496  | 1,461  | 1,568          | 8,552         | 2,122 | 11,460 | 5,111              | 62,698 |
| 1980                     | January   | 2,155   | 2,280      | 29,535                  | 1,515  | 1,720  | 1,600          | R8,675        | 2,111 | 11,615 | R5,060             | 61,831 |
|                          | February  | 2,160   | 2,200      | 29,805                  | 1,475  | 1,725  | 1,660          | R8,705        | 2,127 | 11,590 | R5,043             | 62,130 |
|                          | March     | 2,155   | 1,995      | 29,100                  | 1,475  | 1,830  | 1,670          | R8,698        | 2,119 | 11,615 | R5,020             | 61,527 |
|                          | April     | 2,100   | 2,045      | 27,965                  | 1,390  | 1,885  | 1,510          | R8,685        | 2,121 | 11,680 | R5,245             | 60,481 |
|                          | May       | 2,200   | 2,150      | 27,645                  | 1,470  | 1,910  | 1,600          | R8,635        | 2,133 | 11,750 | R4,903             | 60,046 |
|                          | June      | 2,110   | 2,050      | 27,175                  | 1,535  | 1,905  | 1,625          | R8,554        | 2,132 | 11,660 | R5,117             | 59,703 |
|                          | July      | 2,095   | 2,170      | 27,030                  | 1,520  | 2,015  | 1,585          | R8,547        | 2,124 | 11,825 | R4,865             | 59,511 |
|                          | August    | 2,050   | 2,210      | 27,010                  | 1,440  | 2,000  | 1,535          | R8,414        | 2,143 | 11,875 | R5,065             | 59,482 |
|                          | September | 1,600   | 2,190      | 25,955                  | 1,420  | 2,125  | 1,540          | 8,619         | 2,110 | 11,950 | 4,963              | 58,682 |
|                          | October   | 1,879   | 2,225      | 23,255                  | 1,311  | 2,182  | 1,572          | R8,532        | 2,076 | 11,875 | R5,231             | 56,034 |
|                          | November  | 2,062   | 2,230      | 24,065                  | 1,467  | 1,901  | 1,731          | R8,495        | 2,088 | 11,930 | R5,101             | 56,778 |
|                          | December  | 2,026   | 2,330      | 25,050                  | 1,300  | 2,027  | 1,795          | R8,606        | 2,083 | 11,850 | R5,307             | 58,018 |
|                          | AVERAGE   | 2,055   | 2,167      | 26,890                  | 1,424  | 1,937  | 1,622          | 8,597         | 2,114 | 11,770 | 5,098              | 59,452 |
| 1981                     | January   | 1,900   | 2,220      | 25,025                  | 1,260  | 2,220  | 1,765          | 8,533         | 2,024 | 11,900 | 5,248              | 57,975 |
|                          | February  | 1,960   | 2,195      | 25,075                  | 1,300  | 2,120  | 1,820          | 8,598         | 2,025 | 11,900 | 5,257              | 58,095 |
|                          | March     | 1,875   | 2,240      | 25,190                  | 1,200  | 2,365  | 1,885          | 8,601         | 2,025 | 11,900 | 5,244              | 58,410 |
|                          | April     | 1,625   | 2,200      | 24,215                  | 1,190  | 2,540  | 1,750          | 8,543         | 2,011 | 11,800 | 5,376              | 57,325 |
|                          | May       | 1,295   | 2,200      | 23,380                  | 1,195  | 2,545  | 1,770          | 8,496         | 2,025 | 11,800 | 5,424              | 56,635 |
|                          | June      | 1,350   | 1,990      | 22,945                  | 1,130  | 2,300  | 1,765          | 8,616         | 2,025 | 11,800 | 5,284              | 55,865 |
|                          | July      | 770     | 1,760      | 21,620                  | 1,270  | 2,095  | 1,750          | 8,422         | 2,010 | 11,800 | 5,393              | 54,360 |
|                          | August    | 710     | 1,960      | 21,050                  | 1,235  | 2,260  | 1,760          | 8,576         | 2,020 | 11,800 | 5,069              | 53,770 |
|                          | September | 1,065   | 2,080      | 20,385                  | 1,265  | 2,480  | 1,830          | R8,586        | 1,990 | 11,800 | R5,284             | 53,620 |
|                          | October   | 1,250   | 1,970      | 21,200                  | 1,120  | 2,490  | 1,845          | 8,541         | 2,020 | 11,800 | 5,369              | 54,385 |

<sup>a</sup>OPEC total includes production in Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, United Arab Emirates, Indonesia, Iran, Nigeria, Venezuela, Ecuador, and Gabon.

<sup>b</sup>Other is a calculated total derived from the difference between world production and the nations represented above.

R=Revised data.

Sources: • 1973-1980 annual data: Energy Information Administration, 1980 *International Energy Annual*.

• 1973-1981 United States data: See sources at the end of the Petroleum Section.

• 1980 and 1981 monthly data (except U.S. and World total): Central Intelligence Agency, *International Energy Statistical Review*.

• 1981 monthly data for World: Sum of data for all countries using above sources.

Q

## International

### Petroleum Consumption for Major Non-Communist Industrialized Countries<sup>1</sup>

|                          |           | Canada | France <sup>2</sup> | Italy  | Japan  | United Kingdom | United States | West Germany | Other IEA <sup>3</sup> | Total IEA <sup>4</sup> |
|--------------------------|-----------|--------|---------------------|--------|--------|----------------|---------------|--------------|------------------------|------------------------|
| Thousand barrels per day |           |        |                     |        |        |                |               |              |                        |                        |
| 1973                     | AVERAGE   | 1,597  | 2,219               | 1,525  | 5,000  | 1,958          | 17,308        | 2,693        | 4,069                  | 34,150                 |
| 1974                     | AVERAGE   | 1,630  | 2,094               | 1,521  | 4,872  | 1,829          | 16,653        | 2,408        | 4,047                  | 32,960                 |
| 1975                     | AVERAGE   | 1,595  | 1,925               | 1,468  | 4,568  | 1,633          | 16,322        | 2,319        | 3,905                  | 31,810                 |
| 1976                     | AVERAGE   | 1,647  | 2,075               | 1,503  | 4,786  | 1,601          | 17,461        | 2,507        | 4,265                  | 33,770                 |
| 1977                     | AVERAGE   | 1,661  | 1,973               | 1,476  | 5,015  | 1,655          | 18,431        | 2,478        | 4,214                  | 34,930                 |
| 1978                     | AVERAGE   | 1,701  | 2,077               | 1,551  | 5,115  | 1,683          | 18,847        | 2,596        | 4,387                  | 35,880                 |
| 1979                     | AVERAGE   | 1,766  | 2,107               | 1,607  | 5,173  | 1,690          | 18,513        | 2,664        | 4,487                  | 35,900                 |
| 1980                     | January   | 1,820  | 2,465               | 1,778  | 5,255  | 1,769          | R18,851       | 2,690        | R4,337                 | 36,500                 |
|                          | February  | 1,930  | 2,444               | 1,864  | 5,722  | 1,621          | R18,817       | 2,410        | R4,736                 | 37,100                 |
|                          | March     | 1,720  | 1,982               | 1,657  | 5,433  | 1,585          | R17,377       | 2,430        | R4,398                 | 34,600                 |
|                          | April     | 1,600  | 2,110               | 1,541  | 4,626  | 1,472          | R16,784       | 2,680        | R4,197                 | 32,900                 |
|                          | May       | 1,590  | 1,853               | 1,448  | 4,376  | 1,348          | R16,238       | 2,230        | R3,870                 | 31,100                 |
|                          | June      | 1,660  | 1,848               | 1,511  | 4,224  | 1,286          | R16,187       | 2,220        | R4,012                 | 31,100                 |
|                          | July      | 1,680  | 1,450               | 1,537  | 4,250  | 1,217          | R16,008       | 2,420        | R3,988                 | 31,100                 |
|                          | August    | 1,650  | 1,220               | 1,310  | 3,910  | 1,120          | R15,753       | 2,150        | R3,807                 | 29,700                 |
|                          | September | 1,710  | 1,740               | 1,650  | 4,120  | 1,270          | R16,598       | 2,540        | R4,112                 | 32,000                 |
|                          | October   | 1,770  | 2,050               | 1,670  | 4,250  | 1,430          | R16,995       | 2,230        | R3,855                 | 32,200                 |
|                          | November  | 1,720  | 2,040               | 1,530  | 4,550  | 1,440          | R16,702       | 2,110        | R3,948                 | 32,000                 |
|                          | December  | 1,940  | 2,410               | 1,740  | 5,350  | 1,480          | R18,410       | 2,190        | R4,390                 | 35,500                 |
|                          | AVERAGE   | 1,730  | 1,965               | 1,602  | 4,680  | 1,420          | R17,056       | 2,360        | R4,152                 | 33,000                 |
| 1981                     | January   | 1,760  | 2,310               | 1,710  | 4,980  | 1,400          | 18,288        | 2,230        | 4,632                  | 35,000                 |
|                          | February  | 1,770  | 2,170               | 2,010  | 5,350  | 1,460          | 16,930        | 2,510        | 4,270                  | 34,300                 |
|                          | March     | 1,550  | 1,790               | 1,700  | 5,020  | 1,430          | 15,838        | 2,100        | 3,762                  | 31,400                 |
|                          | April     | 1,600  | 1,500               | 1,620  | 4,140  | 1,290          | 15,280        | 1,810        | 4,060                  | 31,300                 |
|                          | May       | 1,490  | 1,670               | 1,290  | 3,600  | 1,190          | 15,196        | 1,880        | 4,084                  | 30,400                 |
|                          | June      | R1,635 | 1,600               | 1,340  | 3,915  | 1,210          | 15,996        | 2,155        | R4,149                 | 32,000                 |
|                          | July      | 1,620  | 1,450               | 1,435  | 4,235  | 1,170          | 15,713        | 2,150        | 4,127                  | 31,900                 |
|                          | August    | 1,630  | 1,160               | R1,225 | R4,082 | 1,125          | 15,236        | 2,111        | 3,931                  | 30,500                 |
|                          | September | 1,605  | R1,425              | R1,510 | 4,070  | 1,270          | R15,619       | NA           | NA                     | NA                     |
|                          | October   | NA     | 1,655               | 1,495  | NA     | NA             | 15,840        | NA           | NA                     | NA                     |

U.S. geographic coverage: the 50 United States and District of Columbia.

<sup>1</sup>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.

<sup>2</sup>Not a member of the International Energy Agency (IEA).

<sup>3</sup>Other is a calculated total derived from the difference between total IEA consumption and the IEA nations represented above.

<sup>4</sup>The 21 signatory nations of the IEA are: Australia, Austria, Belgium, Canada, Denmark, West Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Australia and Portugal joined the IEA as new members in 1979 and 1980, respectively. In an effort to maintain comparability within this time series, consumption data for these two countries have been incorporated into the IEA total for all years.

NA=Not available. R=Revised data.

Note: Data for 1980 and 1981 are preliminary.

Sources: • Central Intelligence Agency, 'Economic and Energy Indicators,' 22 January 1982 (except the United States).

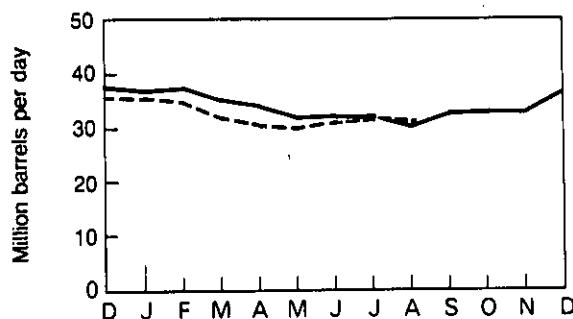
• 1973-1981 United States data: See sources at the end of the Petroleum Section.

• IEA totals for latest months are Energy Information Administration estimates.

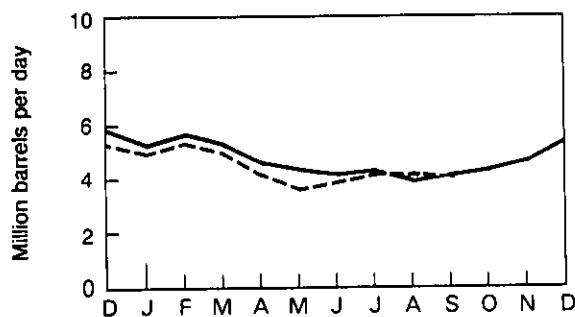
## International

### Petroleum Consumption

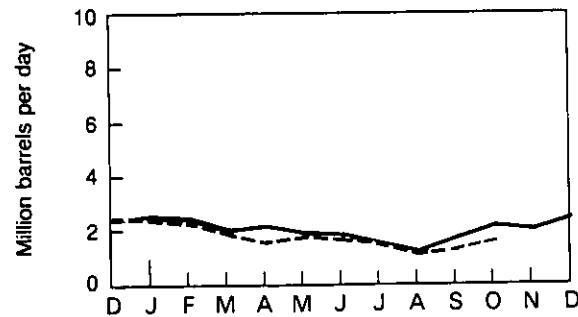
Total IEA



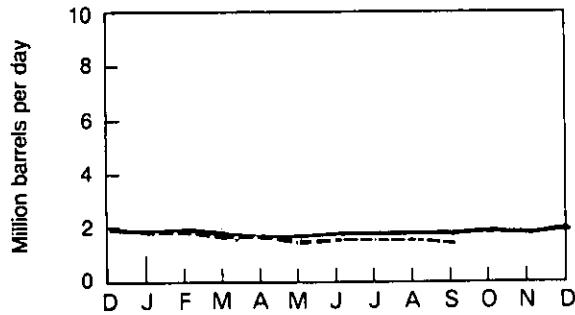
Japan\*



France\*\*



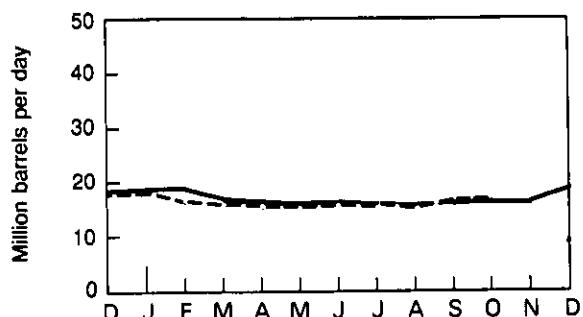
Canada



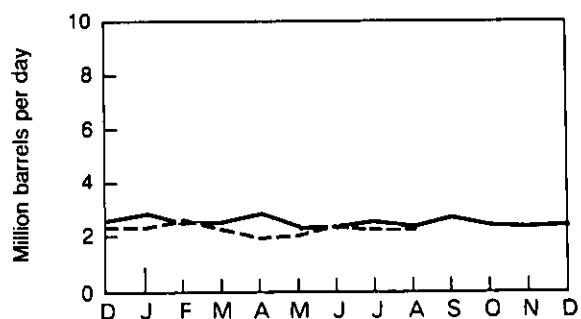
\*Excludes liquefied petroleum gases and condensates.

\*\*Not a member of IEA.

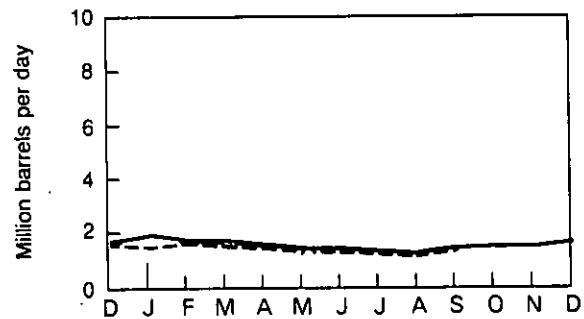
United States



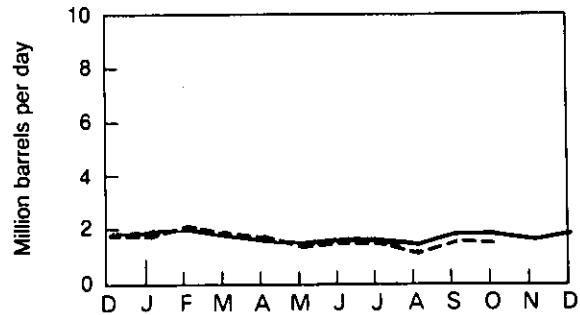
West Germany



United Kingdom



Italy\*\*\*



\*\*\*Principal products only.

— 1980  
- - - 1981

## International

### Petroleum Stocks for Major Non-Communist Industrialized Countries at End of Period<sup>1</sup>

|      | Canada   | France   | Italy  | Japan  | United Kingdom   | United States  | West Germany   | Other OECD <sup>2</sup>  | Total OECD <sup>3</sup>   |  |
|------|--|--|--|--|--|--|--|--|---|--|
|      | Million barrels  |  |  |  |  |  |  |  |   |  |
| 1973 | 149  | 203  | NA   | 303  | 156  | 1,008  | NA   | NA   | NA  |  |
| 1974 | 164  | 240  | 169  | 370  | 191  | 1,074  | 215  | NA   | NA  |  |
| 1975 | 167  | 239  | 143  | 375  | 164  | 1,133  | 190  | NA   | NA  |  |
| 1976 | 156  | 231  | 142  | 394  | 165  | 1,112  | 214  | NA   | NA  |  |
| 1977 | 170  | 241  | 162  | 399  | 147  | 1,312  | 236  | 485  | 3,152   |  |
| 1978 | 148  | 214  | 153  | 422  | 147  | 1,278  | 239  | 487  | 3,089   |  |
| 1979 | 156  | 231  | 163  | 457  | 163  | 1,341  | 273  | 574  | 3,358   |  |
| 1980 | January<br>February<br>March<br>April<br>May<br>June<br>July<br>August<br>September<br>October<br>November<br>December | 156<br>153<br>156<br>161<br>168<br>171<br>178<br>184<br>183<br>178<br>172<br>171 | 228<br>225<br>233<br>220<br>233<br>239<br>247<br>266<br>264<br>192<br>260<br>254 | 164<br>153<br>152<br>155<br>164<br>165<br>176<br>186<br>186<br>186<br>179<br>173 | 445<br>419<br>427<br>442<br>463<br>471<br>494<br>508<br>508<br>497<br>488<br>481 | 164<br>162<br>163<br>160<br>167<br>174<br>172<br>176<br>173<br>169<br>170<br>169 | 1,348<br>1,339<br>1,342<br>1,366<br>1,387<br>1,410<br>1,425<br>1,449<br>1,447<br>1,447<br>1,430<br>1,395 | 282<br>305<br>299<br>535<br>300<br>313<br>308<br>315<br>306<br>307<br>313<br>323 | NA<br>NA<br>NA<br>NA<br>NA<br>557<br>NA<br>NA<br>NA<br>NA<br>NA<br>NA | NA<br>NA<br>NA<br>3,307<br>NA<br>NA<br>3,500<br>NA<br>NA<br>NA<br>NA<br>NA<br>NA<br>NA |
| 1981 | January<br>February<br>March<br>April<br>May<br>June<br>July<br>August<br>September                                    | 169<br>162<br>165<br>174<br>176<br>179<br>174<br>177<br>177                      | 234<br>235<br>227<br>235<br>229<br>225<br>228<br>233<br>241                      | 155<br>184<br>158<br>169<br>173<br>171<br>NA<br>NA<br>NA                         | 479<br>457<br>452<br>484<br>496<br>484<br>NA<br>NA<br>NA                         | 168<br>170<br>164<br>165<br>162<br>158<br>153<br>R151<br>148                     | 1,391<br>1,398<br>1,405<br>1,423<br>1,447<br>1,438<br>1,444<br>1,458<br>1,481                            | 319<br>312<br>318<br>322<br>321<br>312<br>NA<br>NA<br>NA                         | NA<br>NA<br>NA<br>NA<br>NA<br>585<br>NA<br>NA<br>NA                   | NA<br>NA<br>NA<br>3,414<br>NA<br>NA<br>3,552<br>NA<br>NA<br>NA<br>NA                   |

U. S. geographic coverage: the 50 United States and District of Columbia. Totals may not equal sum of components due to independent rounding.

<sup>1</sup>Petroleum stocks include crude oil (including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. Petroleum stocks include all non-military petroleum held for storage regardless of ownership, within each particular country in the following facilities: bulk terminals, refinery tanks, pipeline tankage, intercoastal tankers, tankers in port, and inland ship bunkers. These data exclude oil held in pipelines (except for the United States), in rail and truck cars, in sea-going ships' bunkers, in service stations, retail stores, and in tankers at sea.

<sup>2</sup>"Other OECD" includes Organization of Economic Cooperation and Development (OECD) members not shown.

<sup>3</sup>The members of OECD are Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Total OECD excludes United States Territories.

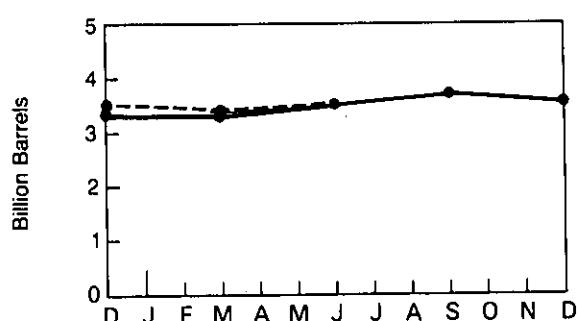
R=Revised data, NA=Not available.

Sources: • Canada: Energy, Mines and Resources Canada, *Energy Information Handbook*; Statistics Canada, *Refined Petroleum Products*. • France: Comité Professionnel du Pétrole, *Pétrole 80: Activité de L'Industrie Pétrolière et Bulletin Mensuel*. • West Germany and Italy: OECD, *Quarterly Oil Statistics* and *Monthly Oil Statistics*. • Japan: Ministry of International Trade and Industry, *Yearbook of Coal, Petroleum, and Coke Statistics 1979*; *Energy Production: Supply and Demand Statistics Report*. • United Kingdom: United Kingdom Department of Energy, *Digest of United Kingdom Energy Statistics 1981* and *Energy Trends*; and OECD, *Monthly Oil Statistics*. • United States: 1973 through 1979: Energy Information Administration (EIA), *Energy Data Reports*, "Petroleum Statement, Annual"; January 1980 through September 1981: EIA, "Petroleum Statement, Monthly". • Other OECD: OECD, *Quarterly Oil Statistics*. • Total OECD: Sum of data for all OECD member countries using above sources.

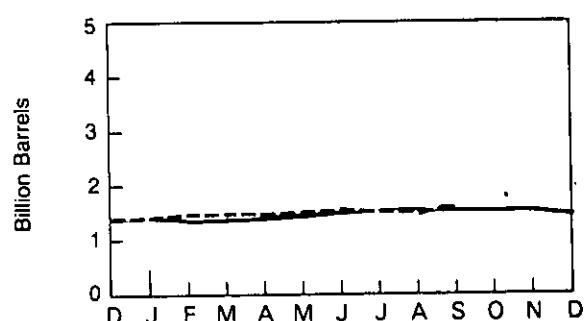
## International

### Petroleum Stocks

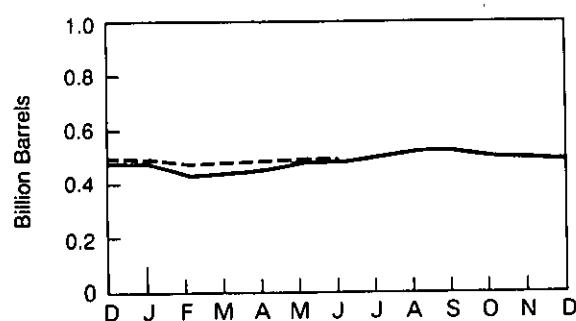
#### Total OECD



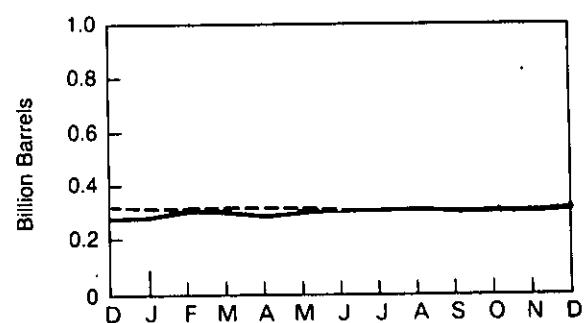
#### United States



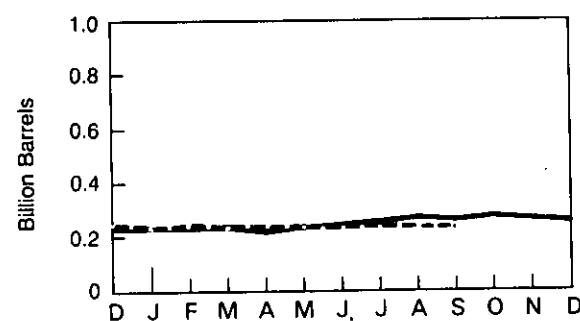
#### Japan



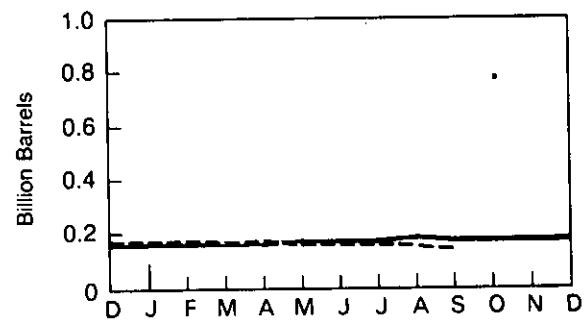
#### West Germany



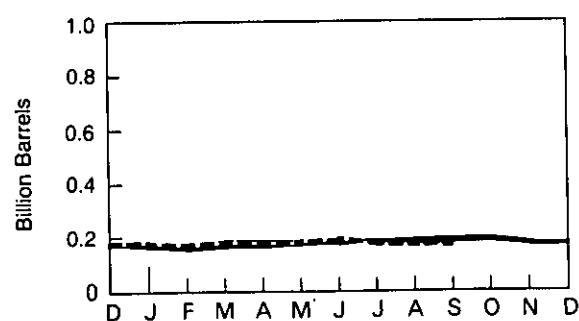
#### France



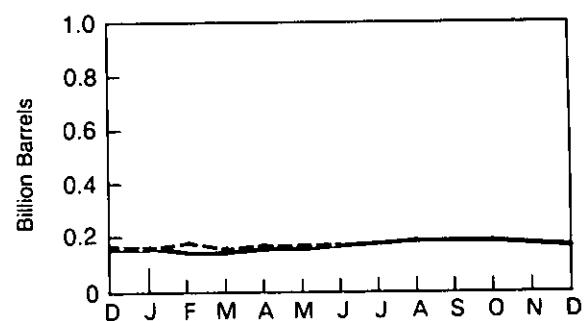
#### United Kingdom



#### Canada



#### Italy



— 1980  
- - - 1981

# International

## Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup>

|      |                         | Argentina                    | Belgium | Canada | Finland | France | India | Italy | Japan | Nether-lands | Pakistan |
|------|-------------------------|------------------------------|---------|--------|---------|--------|-------|-------|-------|--------------|----------|
|      |                         | Billion gross kilowatt-hours |         |        |         |        |       |       |       |              |          |
| 1973 | TOTAL                   | 0                            | 0       | 18.3   | 0       | 11.6   | 1.9   | 3.1   | 9.4   | 1.1          | 0.5      |
| 1974 | TOTAL                   | 1.0                          | 0.1     | 15.4   | 0       | 14.7   | 2.4   | 3.4   | 18.1  | 3.3          | 0.6      |
| 1975 | TOTAL                   | 2.5                          | 6.8     | 13.2   | 0       | 18.3   | 2.5   | 3.8   | 22.2  | 3.3          | 0.5      |
| 1976 | TOTAL                   | 2.6                          | 10.0    | 18.0   | 0       | 15.8   | 3.2   | 3.8   | 36.8  | 3.9          | 0.5      |
| 1977 | TOTAL                   | 1.6                          | 11.9    | 26.8   | 2.7     | 17.9   | 2.8   | 3.4   | 28.1  | 3.7          | 0.3      |
| 1978 | TOTAL                   | 2.9                          | 12.5    | 32.9   | 3.3     | 30.5   | 2.3   | 4.4   | 53.2  | 4.1          | 0.2      |
| 1979 | TOTAL                   | 2.7                          | 11.4    | 38.4   | 6.7     | 39.9   | 3.2   | 2.6   | 62.0  | 3.5          | (s)      |
| 1980 | January                 | 0.3                          | 1.2     | 3.6    | 0.8     | 5.5    | 0.2   | 0.2   | 8.0   | 0.4          | 0        |
|      | February                | 0.1                          | 1.0     | 3.5    | 0.8     | 5.3    | 0.1   | 0.4   | 7.4   | 0.4          | 0        |
|      | March                   | 0                            | 1.0     | 3.7    | 0.8     | 5.1    | 0.2   | 0.5   | 8.0   | 0.4          | 0        |
|      | April                   | 0.1                          | 0.5     | 3.2    | 0.8     | 5.0    | 0.3   | 0.4   | 5.6   | 0.3          | 0        |
|      | May                     | 0.2                          | 0.7     | 2.5    | 0.3     | 4.2    | 0.3   | 0.3   | 6.0   | 0.3          | 0        |
|      | June                    | 0.2                          | 1.1     | 3.1    | 0       | 4.1    | 0.2   | 0.1   | 6.7   | 0.3          | 0        |
|      | July                    | 0.2                          | 1.3     | 3.6    | 0.4     | 4.8    | 0.2   | 0.1   | 7.8   | 0.4          | (s)      |
|      | August                  | 0.3                          | 1.3     | 3.9    | 0.4     | 3.2    | 0.3   | 0.1   | 8.6   | 0.4          | (s)      |
|      | September               | 0.3                          | 1.1     | 3.1    | 0.4     | 4.5    | 0.3   | 0.1   | 7.0   | 0.4          | (s)      |
|      | October                 | 0.3                          | 0.9     | 3.3    | 0.5     | 5.1    | 0.2   | 0     | 6.0   | 0.3          | 0        |
|      | November                | 0.3                          | 1.1     | 3.4    | 0.6     | 5.8    | 0.3   | 0     | 5.4   | 0.3          | (s)      |
|      | December                | 0.3                          | 1.2     | 3.5    | 1.2     | 8.5    | 0.2   | 0     | 6.3   | 0.3          | (s)      |
|      | TOTAL                   | 2.3                          | 12.5    | 40.4   | 7.0     | 61.2   | 2.9   | 2.2   | 82.8  | 4.2          | 0.1      |
| 1981 | January                 | 0.3                          | 1.2     | 3.2    | 1.3     | 9.3    | 0.2   | 0.2   | 8.2   | 0.1          | (s)      |
|      | February                | 0.2                          | 1.0     | 3.5    | 0.9     | 8.6    | 0.2   | 0.3   | 7.1   | (s)          | (s)      |
|      | March                   | 0.3                          | 0.6     | 3.9    | 1.4     | 8.8    | 0.3   | 0.1   | 7.8   | 0.3          | 0        |
|      | April                   | 0.2                          | 0.7     | 3.3    | 1.5     | 8.3    | 0.3   | 0.6   | 7.9   | 0.4          | 0        |
|      | May                     | 0.2                          | 1.2     | 3.4    | 1.0     | 8.9    | 0.4   | 0.3   | 8.0   | 0.4          | (s)      |
|      | June                    | 0.2                          | 1.2     | 3.6    | 0.7     | 8.3    | 0.3   | 0.1   | 6.7   | 0.4          | (s)      |
|      | July                    | 0.3                          | 1.3     | 4.0    | 0.8     | 8.4    | 0.3   | 0.3   | 8.3   | 0.4          | (s)      |
|      | August                  | 0.2                          | 1.2     | 4.0    | 1.4     | 7.7    | 0.2   | 0.1   | 8.1   | 0.4          | (s)      |
|      | September               | 0.3                          | 0.9     | 3.3    | 1.5     | 8.5    | 0.2   | 0.1   | 5.9   | 0.4          | (s)      |
|      | October                 | 0.2                          | 1.0     | 3.4    | 1.4     | 8.1    | 0.2   | 0.1   | 5.1   | 0.4          | (s)      |
|      | November                | 0.2                          | 1.2     | 3.5    | 1.3     | 9.3    | 0.2   | 0.1   | 4.8   | 0.4          | (s)      |
|      | TOTAL<br>(Year-to-date) | 2.6                          | 11.5    | 39.2   | 13.3    | 94.2   | 2.8   | 2.3   | 77.9  | 3.3          | 0.2      |

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

<sup>1</sup>Figures are for gross electricity generation as opposed to net electricity generation. Net figures are generally less than gross figures by about 5 percent, which represents the energy consumed by the generating plants themselves.

(s)=Less than 0.05 billion gross kilowatt-hours.

Source: • Nucleonics Week.

## International

### Nuclear Electricity Generation by Non-Communist Countries<sup>1</sup> (continued)

|                              |                | South Korea | Spain | Sweden | Switzer-land | Taiwan | United Kingdom <sup>2</sup> | West Germany | Non- Communist World Excluding U.S. | United States | Total Non- Communist World |
|------------------------------|----------------|-------------|-------|--------|--------------|--------|-----------------------------|--------------|-------------------------------------|---------------|----------------------------|
| Billion gross kilowatt-hours |                |             |       |        |              |        |                             |              |                                     |               |                            |
| 1973                         | TOTAL          | 0           | 6.5   | 2.1    | 6.2          | 0      | 28.0                        | 11.9         | 100.7                               | 88.0          | 188.7                      |
| 1974                         | TOTAL          | 0           | 7.2   | 1.6    | 7.0          | 0      | 34.0                        | 12.0         | 121.1                               | 104.5         | 225.6                      |
| 1975                         | TOTAL          | 0           | 7.5   | 12.0   | 7.7          | 0      | 30.5                        | 21.7         | 152.7                               | 181.8         | 334.5                      |
| 1976                         | TOTAL          | 0           | 7.6   | 16.0   | 7.9          | 0      | 36.8                        | 24.5         | 187.3                               | 201.6         | 388.9                      |
| 1977                         | TOTAL          | 0.1         | 6.5   | 19.9   | 8.1          | 0.1    | 38.1                        | 35.8         | 207.8                               | 263.2         | 470.9                      |
| 1978                         | TOTAL          | 2.3         | 7.6   | 23.8   | 8.3          | 2.7    | 36.7                        | 35.9         | 263.6                               | 292.7         | 556.3                      |
| 1979                         | TOTAL          | 3.2         | 6.7   | 21.0   | 11.8         | 6.3    | 38.5                        | 42.2         | 300.1                               | 270.7         | 570.8                      |
| 1980                         | January        | 0.1         | 0.7   | 2.5    | 1.5          | 0.9    | 3.7                         | 4.7          | 34.2                                | 21.1          | 55.3                       |
|                              | February       | (s)         | 0.3   | 2.4    | 1.2          | 0.7    | 3.4                         | 4.2          | 31.3                                | 21.0          | 52.2                       |
|                              | March          | 0.4         | 0.4   | 2.3    | 1.3          | 0.8    | 4.2                         | 3.4          | 32.4                                | 21.0          | 53.4                       |
|                              | April          | 0.4         | 0.4   | 1.9    | 1.4          | 0.7    | 2.7                         | 3.6          | 27.3                                | 19.8          | 47.1                       |
|                              | May            | 0.4         | 0.4   | 1.6    | 1.4          | 0.4    | 2.6                         | 3.5          | 25.1                                | 19.6          | 44.7                       |
|                              | June           | 0.1         | 0.3   | 1.6    | 0.6          | 0.5    | 2.8                         | 2.9          | 24.7                                | 19.4          | 44.1                       |
|                              | July           | 0.4         | 0.3   | 1.3    | 0.6          | 0.8    | 2.0                         | 3.0          | 27.2                                | 22.4          | 49.6                       |
|                              | August         | 0.3         | 0.4   | 1.3    | 0.7          | 0.8    | 2.6                         | 2.7          | 27.2                                | 25.7          | 52.9                       |
|                              | September      | 0.4         | 0.4   | 2.1    | 1.3          | 0.8    | 3.1                         | 3.2          | 28.4                                | 24.8          | 53.2                       |
|                              | October        | 0.4         | 0.4   | 2.7    | 1.4          | 0.8    | 2.7                         | 3.1          | 28.2                                | 25.7          | 53.9                       |
|                              | November       | 0.4         | 0.5   | 3.4    | 1.4          | 0.6    | 3.2                         | 4.1          | 30.8                                | 22.0          | 52.8                       |
|                              | December       | 0.3         | 0.7   | 3.6    | 1.5          | 0.5    | 4.2                         | 5.3          | 37.5                                | 23.1          | 60.7                       |
|                              | TOTAL          | 3.5         | 5.2   | 26.7   | 14.3         | 8.2    | 37.2                        | 43.7         | 354.4                               | R265.5        | R619.9                     |
| 1981                         | January        | 0.3         | 0.8   | 3.5    | 1.5          | 0.8    | 3.8                         | 5.0          | 39.7                                | 25.7          | 65.4                       |
|                              | February       | 0           | 0.6   | 3.6    | 1.4          | 0.7    | 3.4                         | 4.6          | 36.2                                | 22.6          | 58.8                       |
|                              | March          | 0           | 0.7   | 3.7    | 1.5          | 0.8    | 4.2                         | 4.9          | 39.1                                | 23.1          | 62.2                       |
|                              | April          | 0           | 0.6   | 3.3    | 1.4          | 0.8    | 2.8                         | 4.4          | 36.5                                | 21.7          | 58.2                       |
|                              | May            | 0.2         | 0.8   | 2.8    | 1.4          | 0.8    | 2.5                         | 4.3          | 36.6                                | 20.9          | 57.4                       |
|                              | June           | 0.4         | 0.8   | 2.8    | 0.7          | 0.8    | 3.3                         | 4.1          | 34.5                                | 22.6          | 57.1                       |
|                              | July           | 0.4         | 1.1   | 1.4    | 0.6          | 0.8    | 2.5                         | 5.2          | 36.1                                | 24.8          | 60.9                       |
|                              | August         | 0.4         | 1.0   | 2.6    | 1.0          | 0.8    | 2.5                         | 3.9          | 35.6                                | R28.3         | R63.9                      |
|                              | September      | 0.3         | 0.6   | 3.0    | 1.3          | 0.8    | 3.1                         | 3.2          | 33.4                                | 25.7          | 59.1                       |
|                              | October        | 0.3         | 1.2   | 3.3    | 1.5          | 1.2    | 2.7                         | 4.0          | 34.2                                | 21.6          | 55.8                       |
|                              | November       | 0.3         | 0.6   | 3.6    | 1.4          | 1.0    | 3.1                         | 4.3          | 35.5                                | 24.1          | 59.5                       |
|                              | TOTAL          | 2.5         | 8.8   | 33.6   | 13.7         | 9.5    | 34.0                        | 48.0         | 397.3                               | 261.1         | 658.4                      |
|                              | (Year-to-date) |             |       |        |              |        |                             |              |                                     |               |                            |

United States geographic coverage: the 50 United States and District of Columbia.

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

<sup>1</sup>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.

<sup>2</sup>The United Kingdom assesses generation at 4- or 5-week intervals, rather than by calendar month.

R=Revised data. (s)=Less than 0.05 billion gross kilowatt-hours.

Source: • Nucleonics Week.

## **Definitions**

### **Anthracite**

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

### **Average Retail Selling Price, Motor Gasoline**

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

### **Bituminous Coal**

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

### **Coke (Coal)**

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

### **Crude Oil**

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

### **Crude Oil Domestic Production**

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

### **Crude Oil Refinery Input**

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

### **Crude Oil Stocks**

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

### **Distillate Fuel Oil**

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

### **Distillate Fuel Oil Production**

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

### **Electricity Production**

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

### **Exploratory Well**

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

### **Full Serve**

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

### **Imports**

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

### **Jet Fuel**

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

### **Landed Cost**

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

### **Lease Condensate**

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

### **Line Miles of Seismic Exploration**

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

### **Lignite**

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

### **Major Brand**

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

### **Maximum Dependable Capacity, Net**

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

### **Motor Gasoline**

A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark ignition engines. Included are leaded and unleaded products and all refinery products listed in ASTM Specification D439.

### **Motor Gasoline Production**

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

### **Motor Gasoline, Regular Grade**

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

### **Motor Gasoline, Premium Grade**

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

### **Natural Gas**

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

### **Natural Gas Liquids**

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

### **Natural Gas Plant Liquids**

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

### **Natural Gas Production (Dry)**

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

### **Petroleum**

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

### **Petroleum Coke**

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

### **Petroleum Products**

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

### **Refined Petroleum Product Supplied**

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

**Refiner Acquisition Cost**

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

**Residual Fuel Oil**

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

**Rotary Rig**

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

**Self Serve**

Motor vehicle services are not provided by attendants.

**Strategic Petroleum Reserve**

A plan developed to reduce the impact of interruption of imports of petroleum. Congress enacted legislation to establish a Strategic Petroleum Reserve in Title I, Part B of the Energy Policy and Conservation Act of 1975, Public Law 94-163.

**Startup Test Phase of Nuclear Powerplant**

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

**Stocks (Refined Petroleum Product)**

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

**Synthetic Natural Gas (SNG)**

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

**Unaccounted for Crude Oil**

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

**Well**

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

## Explanatory Notes

1. Domestic production of energy includes production of coal (anthracite, bituminous, and lignite), crude oil and lease condensate, natural gas plant liquids, natural gas (dry), electric utility and industrial production of hydropower, and electricity generated from nuclear power, geothermal power, and wood and waste. The volumetric data were converted to approximate heat contents (Btu values) of these energy sources using conversion factors listed in Thermal Conversion Factors.

2. Domestic consumption of energy includes consumption of coal (anthracite, bituminous coal, and lignite), natural gas (dry), refined petroleum products supplied, electric utility and industrial production of hydropower, net imports of electricity produced from hydropower, net imports of coke made from coal, and electricity generated from nuclear power, geothermal power, and wood and waste. Approximate heat contents (Btu values) were derived using conversion factors listed in Thermal Conversion Factors.

3. U.S. energy imports include imports of bituminous coal, crude oil (including crude oil imported for the Strategic Petroleum Reserve), refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.

4. U.S. energy exports include bituminous coal and anthracite, crude oil, refined petroleum products, natural gas (dry), electricity produced from hydropower, and coke made from coal.

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

6. Degree-days are relative measurements of outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65° F by convention. Heating degree-days are deviations of the mean daily temperature below 65° F. For example, if a weather station recorded a mean daily temperature of 78° F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40° F would report 25 heating degree-days (and 0 cooling degree-days).

There are two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather stations around the country. Monthly data are based on readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The

State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

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

7. Domestic products supplied figures for natural gas liquids (NGL) in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries (LRG). The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

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

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

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

10. Preliminary estimates of monthly coal production are based on the number of cars loaded at mines reported weekly to the Association of American Railroads by Class I railroads. The amount of coal produced and shipped by other modes of transportation is derived by employing the ratio of railroad shipments to total production for the most recent period for which this ratio is known. Final monthly and annual coal production data are derived from the Energy Information Administration (EIA) "Coal Distribution Report" (Form EIA-6) and selected State agencies.

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

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

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

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

$$C = S_B + R - S_E, \quad (1)$$

where

$S_B$  = beginning stocks  
 $R$  = receipts  
 $S_E$  = ending stocks.

The change in stocks ( $S_B - S_E$ ) can be denoted by  $\Delta S$ . From equation (1), consumption is

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

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

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

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

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

where

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

$C_3$  = the quarterly consumption in the "Other Industrial" sector as reported on Form EIA-3.

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

11. The units used to describe power generation at nuclear plants are based on the watt, a unit of power. (Power is

energy produced per unit of time.) Nuclear power plants may have more than one type of power rating, including:

- (a). Design Capacity or Design Electrical Rating (DER)—The nominal net, electrical output of the unit specified by the utility and used for the purpose of plant design.
- (b). Maximum Dependable Capacity (MDC), GROSS—The gross electrical output as measured at the output terminals of the turbine generator during the most restrictive seasonal conditions (usually summer).
- (c). Maximum Dependable Capacity, NET—The gross maximum dependable capacity less the nominal station service load. (The nominal station service load for a nuclear plant is about 5 percent of its gross generation.)
- (d). Thermal Capacity—The rate of heat production by the reactor core. The Nuclear Regulatory Commission authorizes a maximum thermal power rating for U.S. reactors.

12. The actual domestic average price represents the average price at which all domestic crude oil is purchased. Prior to February 1976, the domestic crude oil wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices.

13. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on Form EIA-14, the "Refiners' Monthly Cost Report." These prices were previously published from data collected on Form ERA-49, the "Domestic Crude Oil Entitlements Program Refiners Monthly Report." The Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. Also, the respondents for the two forms are essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken in comparing the data collected on the two forms.

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

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

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included Strategic Petroleum

Reserve (SPR). Crude oil costs and volumes reported on the FEA Form P110-M-1 included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

14. FOB literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

15. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries which export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

16. The motor gasoline prices are calculated monthly by the BLS in conjunction with the construction of the Consumer Price Index (CPI). For the period 1974 through 1978 prices were collected in 56 urban areas. For the period 1978 forward, prices are collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

17. The survey and method used to derive data for March 1976 forward differ from those used for prior months. Data for January 1974 through February 1976 are derived from a survey of distributors, and prices and margins are computed as unweighted averages. The average distributor purchase price and average dealer margin for March 1976 forward are for distributors only, whereas the average selling price includes both refiners and distributors. Data for March 1976 forward are computed as sales weighted averages.

18. The U.S. Department of Energy Regions are defined as follows:

- Region 1 —Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island;
- Region 2 —New York, New Jersey, Puerto Rico, Virgin Islands;
- Region 3 —Pennsylvania, Maryland, West Virginia, Virginia, District of Columbia, Delaware;
- Region 4 —Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, Canal Zone;
- Region 5 —Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio;
- Region 6 —Texas, New Mexico, Oklahoma, Arkansas, Louisiana;
- Region 7 —Kansas, Missouri, Iowa, Nebraska;
- Region 8 —Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado;
- Region 9 —California, Nevada, Arizona, Hawaii, Trust Territory of the Pacific Islands, American Samoa, Guam;
- Region 10 —Washington, Oregon, Idaho, Alaska.

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

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## Conversion Factors

(all KUS)

↓

| Approximate Heat Content of Various Fuels |                        | 1973 | 1974   | 1975   | 1976   | 1977   | 1978   | 1979   | 1980-81† | 1981   |
|---|------------------------|------|--------|--------|--------|--------|--------|--------|----------|--------|
| Anthracite                                |                        |      |        |        |        |        |        |        |          | 350    |
| Production                                | Thousand Btu/short ton | ACPR | 23,170 | 22,560 | 23,390 | 22,770 | 23,180 | 23,520 | 23,590   | 23,590 |
| Imports and Exports                       | Thousand Btu/short ton | ACIE | 25,400 | 25,400 | 25,400 | 25,400 | 25,400 | 25,400 | 25,400   | 25,400 |
| Consumption, average                      | Thousand Btu/short ton | ACTC | 22,710 | 21,950 | 21,740 | 22,150 | 22,710 | 22,970 | 22,700   | 22,700 |
| Electric utility consumption              | Thousand Btu/short ton | ACEU | 17,920 | 17,200 | 17,060 | 17,530 | 17,240 | 17,100 | 17,450   | 17,650 |
| Non-utility consumption                   | Thousand Btu/short ton | ACNU | 24,340 | 23,750 | 23,650 | 23,840 | 24,990 | 25,170 | 25,200   | 24,690 |
| Bituminous coal and lignite               |                        |      |        |        |        |        |        |        |          | 23,740 |
| Production                                | Thousand Btu/short ton | BCPR | 24,010 | 23,730 | 23,200 | 23,150 | 22,700 | 22,430 | 22,590   | 23,150 |
| Imports                                   | Thousand Btu/short ton | BLIM | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000   | 25,000 |
| Exports                                   | Thousand Btu/short ton | BCEX | 27,000 | 27,000 | 27,000 | 27,000 | 27,000 | 27,000 | 27,000   | 26,180 |
| Consumption, average                      | Thousand Btu/short ton | BCTC | 23,650 | 23,070 | 22,800 | 22,750 | 22,330 | 22,140 | 22,200   | 22,000 |
| Electric utility consumption              | Thousand Btu/short ton | BCEU | 22,260 | 21,800 | 21,660 | 21,690 | 21,480 | 21,280 | 21,380   | 21,300 |
| Non-utility consumption                   | Thousand Btu/short ton | BCNU | 26,840 | 26,120 | 25,810 | 25,870 | 25,130 | 25,070 | 25,060   | 25,970 |
| Coal Coke                                 | Thousand Btu/short ton |      | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000 | 26,000   | 25,060 |
| Crude petroleum <sup>1</sup>              |                        |      |        |        |        |        |        |        |          |        |
| Production                                | Thousand Btu/barrel    | CDPR | 5,800  | 5,800  | 5,800  | 5,800  | 5,800  | 5,800  | 5,800    | 5,800  |
| Imports                                   | Thousand Btu/barrel    | COIM | 5,817  | 5,827  | 5,821  | 5,808  | 5,810  | 5,802  | 5,810    | 5,812  |
| Exports                                   | Thousand Btu/barrel    | COEX | 5,800  | 5,800  | 5,800  | 5,800  | 5,800  | 5,800  | 5,800    | 5,800  |
| Crude petroleum and products              |                        |      |        |        |        |        |        |        |          |        |
| Imports, average                          | Thousand Btu/barrel    |      | 5,897  | 5,884  | 5,858  | 5,856  | 5,834  | 5,839  | 5,810    | 5,810  |
| Exports, average                          | Thousand Btu/barrel    |      | 5,752  | 5,774  | 5,748  | 5,745  | 5,797  | 5,808  | 5,832    | 5,832  |
| Petroleum products                        |                        |      |        |        |        |        |        |        |          |        |
| Consumption, average                      | Thousand Btu/barrel    | PATC | 5,515  | 5,504  | 5,494  | 5,504  | 5,518  | 5,519  | 5,494    | 5,479  |
| Residential and Commercial                | Thousand Btu/barrel    |      | 5,686  | 5,681  | 5,655  | 5,661  | 5,664  | 5,682  | 5,661    | 5,633  |
| Industrial                                | Thousand Btu/barrel    |      | 5,325  | 5,304  | 5,304  | 5,336  | 5,368  | 5,369  | 5,338    | 5,380  |
| Transportation                            | Thousand Btu/barrel    |      | 5,398  | 5,396  | 5,395  | 5,400  | 5,404  | 5,412  | 5,415    | 5,409  |
| Electric Utility                          | Thousand Btu/barrel    |      | 6,223  | 6,215  | 6,229  | 6,235  | 6,231  | 6,227  | 6,245    | 6,246  |
| Imports                                   | Thousand Btu/barrel    | RPM  | 5,983  | 5,959  | 5,935  | 5,980  | 5,908  | 5,955  | 5,811    | 5,748  |
| Exports                                   | Thousand Btu/barrel    | RPEX | 5,752  | 5,773  | 5,747  | 5,743  | 5,796  | 5,814  | 5,864    | 5,841  |
| LPG Consumption Average <sup>2</sup>      | Thousand Btu/barrel    | LGTC | 3,746  | 3,730  | 3,715  | 3,711  | 3,677  | 3,669  | 3,680    | 3,674  |
| Natural gas plant liquid production       | Thousand Btu/barrel    | NLPR | 4,049  | 4,011  | 3,984  | 3,984  | 3,941  | 3,925  | 3,955    | 3,914  |
| Natural gas, dry                          |                        |      |        |        |        |        |        |        |          |        |
| Production and consumption                | Btu/cubic foot         | NGTC | 1,021  | 1,024  | 1,021  | 1,020  | 1,021  | 1,019  | 1,021    | 1,021  |
| Electric utility consumption              | Btu/cubic foot         | NGEV | 1,024  | 1,022  | 1,026  | 1,023  | 1,029  | 1,034  | 1,034    | 1,030  |
| Non-utility consumption                   | Btu/cubic foot         | NGNU | 1,020  | 1,024  | 1,020  | 1,019  | 1,019  | 1,016  | 1,018    | 1,019  |
| Imports                                   | Btu/cubic foot         | NGIM | 1,026  | 1,027  | 1,026  | 1,025  | 1,026  | 1,030  | 1,037    | 1,022  |
| Exports                                   | Btu/cubic foot         | NGEX | 1,023  | 1,016  | 1,014  | 1,013  | 1,013  | 1,013  | 1,013    | 1,013  |
| Natural gas, wet                          |                        |      |        |        |        |        |        |        |          |        |
| Production                                | Btu/cubic foot         |      | 1,093  | 1,097  | 1,095  | 1,093  | 1,093  | 1,088  | 1,092    | 1,092  |
| Hydropower <sup>3</sup>                   | Btu/kWh                | HYEO | 10,389 | 10,442 | 10,406 | 10,373 | 10,435 | 10,435 | 10,435   | 10,435 |
| Nuclear power <sup>4</sup>                | Btu/kWh                | NVEO | 10,903 | 11,161 | 11,013 | 11,047 | 10,769 | 10,769 | 10,769   | 10,769 |
| Geothermal power <sup>5</sup>             | Btu/kWh                | GEOO | 21,674 | 21,674 | 21,611 | 21,611 | 21,611 | 21,611 | 21,611   | 21,611 |
| Electricity consumption                   | Btu/kWh                |      | 3,412  | 3,412  | 3,412  | 3,412  | 3,412  | 3,412  | 3,412    | 3,412  |

Thousands Btu/barrel

## 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                         |

### 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 |

<sup>1</sup> Includes lease condensate.

<sup>2</sup> 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.

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

<sup>4</sup> 60 percent butane and 40 percent propane.

<sup>5</sup> 70 percent ethane and 30 percent propane.

<sup>†</sup> Preliminary data.

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