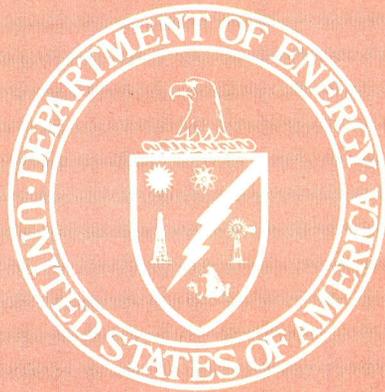


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March 1978

①  
**Monthly  
Energy  
Review**



**U.S. Department of Energy  
Energy Information Administration  
National Energy Information Center**

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*Editor:* Judy Gaynor

*Publication Coordinator and Editorial Review:*  
Patricia M. Jacobus

*Graphics Review:* Graphics Branch, Office of Administrative Services

*Overview:* Editor

*Crude Petroleum and Products:* Frank E. Lalley,  
Katherine E. Seiferlein, Leonard L. Fanelli  
*Strategic Petroleum Reserve:* Jay F. Lubin

*Natural Gas:* Gordon Koelling

*Coal:* Leonard W. Westerstrom

*Electric Utilities:* Mark A. O'Neal

*Nuclear Power:* Barry W. Roberts

*Consumption:* Michael J. Maloney, James  
Harrigan

*Petroleum Consumption Forecast:* Joan  
Heinkel

*Degree-Days:* Michael J. Maloney, James  
Harrigan

*Resource Development:* Editor

*Price:* Christopher B. Bordeaux, William Davis,  
William Gillespie, Annie Whatley

*International:* Edward Rossi, Jr.

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Correspondence regarding editorial matters should be addressed to:

Editor, Monthly Energy Review  
National Energy Information Center  
U.S. Department of Energy  
Washington, D.C. 20461

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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 Fore-  
casting at FEA—October 1975

Curtailments of Natural Gas Service—January  
1976

Home Heating Conservation Alternatives and the  
Solar Collector Industry—March 1976

Trends in United States Petroleum Imports—  
September 1976

Crude Oil Entitlements Program—January 1977

Motor Gasoline Supply and Demand—July 1977

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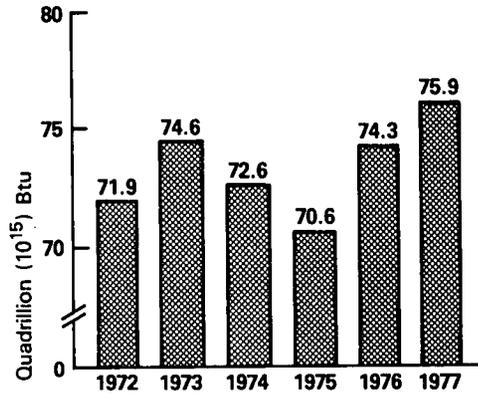
## Overview

Energy production in the United States during January 1978 declined to its lowest level in 12 years on an annualized basis, with the bulk of the decrease attributable to the coal strike. Energy output during the month totaled 4.53 quadrillion Btu (or 25.2 million barrels per day of crude oil equivalent\*), 6 percent below the January 1977 output level and 11 percent below the output in January 1976. Coal production in January 1978 was 43 percent lower than for the previous January, and estimated natural gas production was down 2 percent. Crude oil output, on the other hand, was 11 percent greater (due to the startup of Alaskan North Slope production), and nuclear electric power production increased 16 percent to an all-time high of 25.6 billion net kilowatt hours (equal to 13 percent of the Nation's total electricity generation for the month). Estimated hydroelectric power production was about 10 percent higher than the January 1977 level.

Imports of fossil fuels during January 1978 fell below previous year levels for the third consecutive month. Imports totaled 1.5 quadrillion Btu (or 8.4 million barrels per day of crude oil equivalent\*), 12 percent less than for January 1977, but 16 percent more than for the same month of 1976. Imports of crude oil and refined petroleum products were, respectively, 8 percent and 24 percent lower than for a year ago, while imports of natural gas were estimated to have increased 5 percent.

Consumption of energy in the United States during 1977 totaled 75.93 quadrillion Btu (the equivalent of 35.9 million barrels per day of crude oil\*), surpassing the previous record high of 74.55 quadrillion Btu achieved in 1973, and 2 percent greater than consumption in 1976 (see Figure 1). It was the second year in a row that domestic energy consumption increased after declining in both 1974 and 1975. The growth rate in 1977, however, was far less than the 5-percent growth in 1976. Refined petroleum product consumption, which accounted for 48 percent of the energy used during 1977, was 6 percent greater than in 1976. Natural gas use, constituting 26 percent of the total, decreased almost 4 percent. Coal consumption, 19 percent of the total, was 3

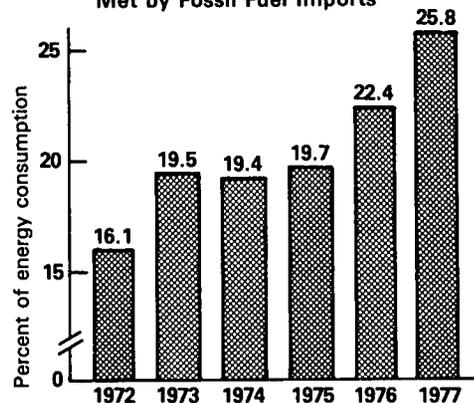
Figure 1. U.S. Consumption of Energy



percent higher in 1977. The largest increase of the year, 31 percent, was posted for nuclear electric power consumption, but hydroelectric power consumption dropped 21 percent because of the prolonged drought in some of the Nation's major watersheds. Combined consumption of nuclear and hydroelectric power constituted 7 percent of domestic energy requirements.

During 1977, imports continued to play a major role in filling the gap between domestic energy production and demand. Fossil fuel imports satisfied 25.8 percent of U.S. energy requirements during 1977 compared with 22.4 percent in 1976 (see Figure 2). During the 3-year period prior to 1976, import dependence was relatively stable at about 19.5 percent of demand.

Figure 2. Percent of U.S. Energy Consumption Met by Fossil Fuel Imports



Stocks of heating oils exhibited normal seasonal patterns during January. Distillate fuel oil stocks were drawn down 36 million barrels to

\*One barrel of crude oil contains approximately 5.8 million Btu.

214 million (a 50-day supply at January consumption rates), the largest drawdown of the current heating season. Residual fuel oil stocks were depleted by 4 million barrels to 86 million barrels (a 26-day supply). End-of-January crude oil stocks were 339 million barrels (equal to 24 days of crude input to refineries), about the same as stocks 1 month before. The amount of natural gas in underground storage reservoirs declined 656 billion cubic feet during January but was 612 billion cubic feet (11 percent) above the January 1976 storage level. End-of-December coal stocks began to reflect the effects of the strike by dropping 20.5 million tons from the November level to 153 million tons, which is much larger than the normal seasonal decline.

Utilities produced 197 billion net kilowatt hours of electricity during January 1978, slightly more than in January 1977, and only 1 percent less than the record production of July 1977.

Temperatures in the continental United States during February 1978 were colder than for the same period in 1977, and for the first time in the current heating season there were more degree-days than last year. February heating degree-days were 22 percent above last year and 23 percent above normal. Cumulative degree-days for the 1977-78 heating season, however, were 8 percent below the 1976-77 season, but 9 percent above normal.

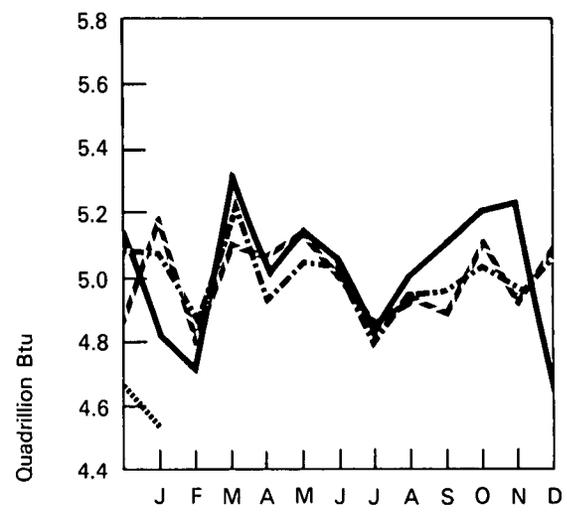
The average price paid by first purchasers for domestic crude oil was \$8.76 per barrel in December 1977, 12 cents more than the price a year earlier. The composite refiner acquisition cost of imported and domestic crude oil (which includes transportation costs) was \$12.25 per barrel in December, up \$1.36 from the December 1976 level.

World crude oil production rose to 62.1 million barrels per day in December, bringing the 1977 annual average to 59.6 million barrels per day, up 4 percent from the 1976 output rate. The increase reflects expanded output from the North Sea and Mexico, and the start-up of production on the Alaskan North Slope.

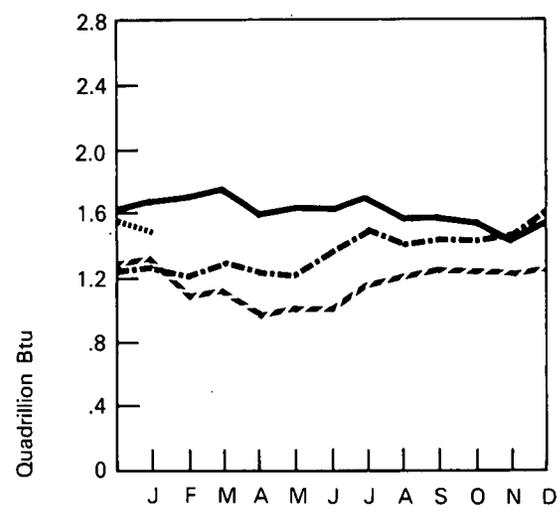
|                   | Domestic Production of Energy* | Imports of Fossil Fuels** | Domestic Consumption of Energy*** |
|-------------------|--------------------------------|---------------------------|-----------------------------------|
| <b>1972 TOTAL</b> | <b>62.937</b>                  | <b>11.563</b>             | <b>71.895</b>                     |
| <b>1973 TOTAL</b> | <b>62.373</b>                  | <b>14.519</b>             | <b>74.551</b>                     |
| <b>1974 TOTAL</b> | <b>61.138</b>                  | <b>14.114</b>             | <b>72.601</b>                     |
| <b>1975</b>       | January 5.199                  | 1.334                     | 6.927                             |
| February          | 4.793                          | 1.093                     | 6.054                             |
| March             | 5.118                          | 1.128                     | 6.267                             |
| April             | 5.060                          | 0.971                     | 5.685                             |
| May               | 5.148                          | 1.030                     | 5.368                             |
| June              | 4.999                          | 1.027                     | 5.315                             |
| July              | 4.849                          | 1.164                     | 5.550                             |
| August            | 4.942                          | 1.220                     | 5.634                             |
| September         | 4.896                          | 1.272                     | 5.388                             |
| October           | 5.118                          | 1.232                     | 5.801                             |
| November          | 4.918                          | 1.210                     | 5.747                             |
| December          | 5.095                          | 1.255                     | 6.821                             |
| <b>TOTAL</b>      | <b>60.134</b>                  | <b>13.935</b>             | <b>70.557</b>                     |
| <b>1976</b>       | January 5.087                  | 1.297                     | R7.179                            |
| February          | 4.867                          | 1.209                     | R6.253                            |
| March             | 5.219                          | 1.300                     | R6.259                            |
| April             | 4.957                          | 1.246                     | R5.736                            |
| May               | 5.071                          | 1.231                     | R5.664                            |
| June              | 5.067                          | 1.390                     | R5.697                            |
| July              | 4.808                          | 1.506                     | 5.889                             |
| August            | 4.964                          | 1.417                     | R5.831                            |
| September         | 4.974                          | 1.465                     | R5.607                            |
| October           | 5.045                          | 1.448                     | 6.110                             |
| November          | 4.964                          | 1.498                     | R6.604                            |
| December          | 5.182                          | 1.609                     | R7.510                            |
| <b>TOTAL</b>      | <b>60.206</b>                  | <b>16.617</b>             | <b>R74.338</b>                    |
| <b>1977</b>       | January 4.819                  | 1.700                     | R7.695                            |
| February          | R4.701                         | 1.718                     | R6.503                            |
| March             | R5.321                         | 1.786                     | R6.399                            |
| April             | R5.001                         | 1.604                     | R5.817                            |
| May               | R5.151                         | 1.638                     | R5.827                            |
| June              | R5.056                         | 1.632                     | R5.919                            |
| July              | R4.817                         | 1.714                     | R6.028                            |
| August            | 5.023                          | R1.638                    | R6.124                            |
| September         | 5.138                          | †1.587                    | R†5.933                           |
| October           | †5.231                         | R†1.569                   | R†6.122                           |
| November          | R†5.223                        | R†1.476                   | †6.293                            |
| December          | R†4.667                        | R†1.559                   | †7.275                            |
| <b>TOTAL</b>      | <b>R60.148</b>                 | <b>R19.621</b>            | <b>R75.934</b>                    |
| <b>1978</b>       | January ††4.535                | †1.502                    | NA                                |

*Mar 78*

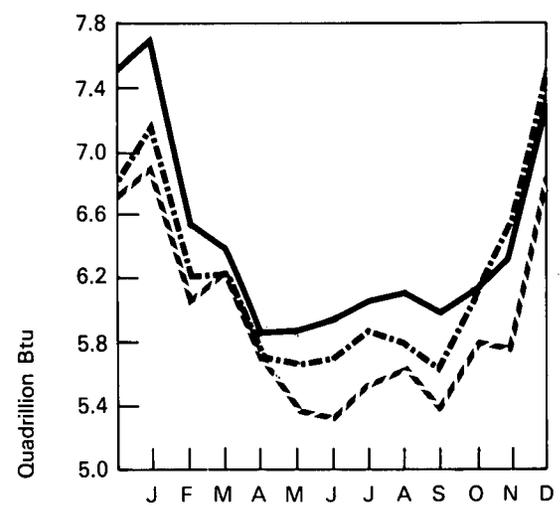
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



--- 1975    - - - 1976    — 1977    ..... 1978

\*See Explanatory Note 1.  
 \*\*See Explanatory Note 2.  
 \*\*\*See Explanatory Note 3.  
 †Preliminary data.  
 ††Partially estimated.  
 R=Revised data.  
 NA=Not available.

Source: Energy Information Administration (EIA) calculations based on data appearing elsewhere in this publication.

# Part 2 Crude Oil and Refined Petroleum Products

## Crude Oil and Refined Petroleum Products

Total petroleum imports averaged 7.8 million barrels per day in January 1978,\* 12.4 percent below the January 1977 rate. Crude oil imports averaged 5.8 million barrels per day and accounted for 74.6 percent of the January import total.

Total domestic demand for petroleum products averaged 19.2 million barrels per day in January 1978, 6.3 percent below that of a year ago. The major components of domestic demand in January were motor gasoline (33.7 percent), distillate fuel oil (22.4 percent), and residual fuel oil (17.2 percent).

Motor gasoline demand averaged 6.5 million barrels per day in January 1978, unchanged from the level 1 year earlier.

Residual fuel oil demand in January averaged 3.3 million barrels per day, 11.6 percent less than last January's rate. Distillate fuel oil demand averaged 4.3 million barrels per day, down 16.0 percent from a year ago.

Stocks of residual fuel oil totaled 85.6 million barrels at the end of January, 32.2 percent higher than a year ago. Stocks of distillate fuel oil were 214.2 million barrels at the end of January, 49.8 percent above the level of January 1977.

Domestic crude oil production averaged 8.6 million barrels per day in January, 10.7 percent above the January 1977 production level.

---

\*January 1978 estimates are based upon preliminary data from the American Petroleum Institute and will be revised to conform with data published in EIA *Energy Data Reports* as available.

# Crude Oil

|                              |                | Crude Input<br>to Refineries | Domestic<br>Production* | Imports*      | Stocks*                 |
|------------------------------|----------------|------------------------------|-------------------------|---------------|-------------------------|
|                              |                |                              |                         |               | Thousands<br>of barrels |
| Thousands of barrels per day |                |                              |                         |               |                         |
| <b>1972</b>                  | <b>AVERAGE</b> | <b>11,696</b>                | <b>9,441</b>            | <b>2,216</b>  | <b>**246,395</b>        |
| <b>1973</b>                  | <b>AVERAGE</b> | <b>12,431</b>                | <b>9,208</b>            | <b>3,244</b>  | <b>**242,478</b>        |
| <b>1974</b>                  | <b>AVERAGE</b> | <b>12,133</b>                | <b>8,774</b>            | <b>3,477</b>  | <b>**265,020</b>        |
| <b>1975</b>                  | January        | 12,297                       | 8,455                   | 4,029         | 270,462                 |
|                              | February       | 12,135                       | 8,591                   | 3,828         | 276,755                 |
|                              | March          | 11,905                       | 8,493                   | 3,656         | 279,989                 |
|                              | April          | 11,803                       | 8,457                   | 3,378         | 281,908                 |
|                              | May            | 11,983                       | 8,379                   | 3,486         | 280,961                 |
|                              | June           | 12,417                       | 8,421                   | 3,905         | 276,132                 |
|                              | July           | 12,915                       | 8,336                   | 4,192         | 264,157                 |
|                              | August         | 13,046                       | 8,249                   | 4,581         | 256,616                 |
|                              | September      | 12,945                       | 8,280                   | 4,689         | 259,446                 |
|                              | October        | 12,365                       | 8,324                   | 4,389         | 269,584                 |
|                              | November       | 12,689                       | 8,278                   | 4,623         | 270,950                 |
|                              | December       | 12,779                       | 8,254                   | 4,476         | 271,354                 |
|                              | <b>AVERAGE</b> | <b>12,442</b>                | <b>8,375</b>            | <b>4,105</b>  |                         |
| <b>1976</b>                  | January        | 12,560                       | 8,211                   | 4,595         | 289,296                 |
|                              | February       | 12,834                       | 8,196                   | 4,208         | 277,414                 |
|                              | March          | 12,877                       | 8,175                   | 4,738         | 283,112                 |
|                              | April          | 12,727                       | 8,080                   | 4,790         | 286,628                 |
|                              | May            | 12,920                       | 8,168                   | 4,669         | 283,982                 |
|                              | June           | 13,799                       | 8,144                   | 5,621         | 281,715                 |
|                              | July           | 13,901                       | 8,104                   | 5,792         | 282,599                 |
|                              | August         | 13,888                       | 8,074                   | 5,556         | 277,272                 |
|                              | September      | 13,716                       | 8,185                   | 5,875         | 284,357                 |
|                              | October        | 13,319                       | 8,049                   | 5,699         | 297,683                 |
|                              | November       | 14,101                       | 8,043                   | 5,946         | 298,836                 |
|                              | December       | 14,333                       | 8,006                   | 5,925         | 285,471                 |
|                              | <b>AVERAGE</b> | <b>13,416</b>                | <b>8,119</b>            | <b>5,287</b>  |                         |
| <b>1977</b>                  | January        | 14,140                       | 7,790                   | 6,288         | 294,037                 |
|                              | February       | 14,740                       | 8,067                   | 6,652         | 291,387                 |
|                              | March          | 14,270                       | 8,022                   | 6,633         | 299,464                 |
|                              | April          | 14,185                       | 8,079                   | 6,785         | 318,588                 |
|                              | May            | 14,605                       | 8,009                   | 6,821         | 328,559                 |
|                              | June           | 14,867                       | 8,039                   | 6,997         | 333,635                 |
|                              | July           | 14,884                       | 8,040                   | 7,021         | 335,193                 |
|                              | August         | R14,645                      | 8,244                   | R6,416        | R338,300                |
|                              | September      | 14,966                       | 8,416                   | 6,557         | 323,327                 |
|                              | October        | 14,711                       | 8,589                   | 6,363         | 330,956                 |
|                              | November       | 14,611                       | R8,699                  | R6,207        | 337,921                 |
|                              | December       | R14,741                      | R8,602                  | R6,053        | R338,911                |
|                              | <b>AVERAGE</b> | <b>R14,612</b>               | <b>R8,217</b>           | <b>R6,565</b> |                         |
| <b>1978</b>                  | January        | 14,137                       | 8,626                   | 5,805         | 339,147                 |

McGraw Hill

\*See Definitions.

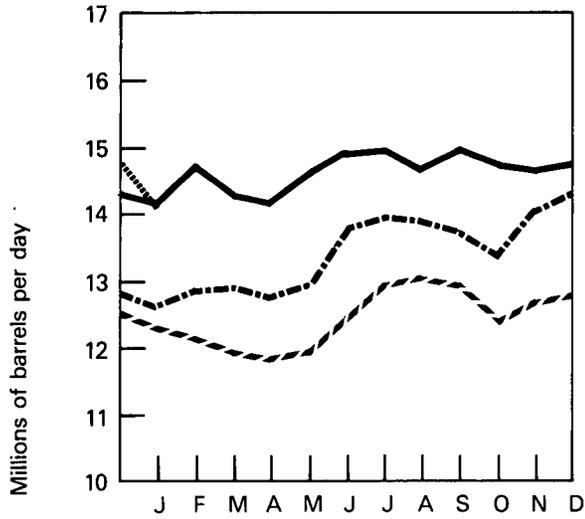
\*\*Total as of December 31.

R=Revised data.

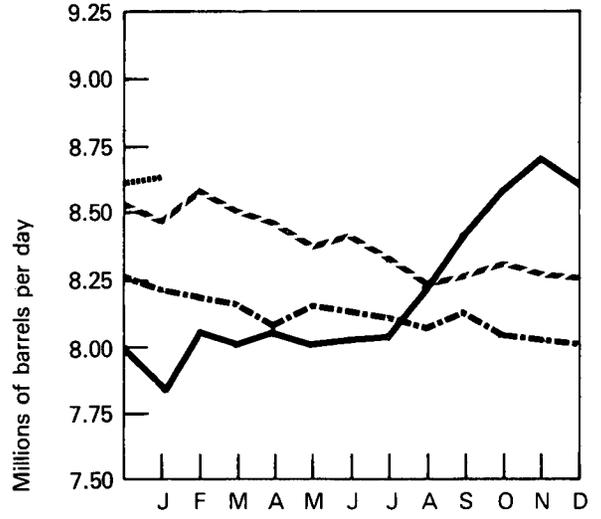
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 (through September for Domestic Production) and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

# Crude Oil

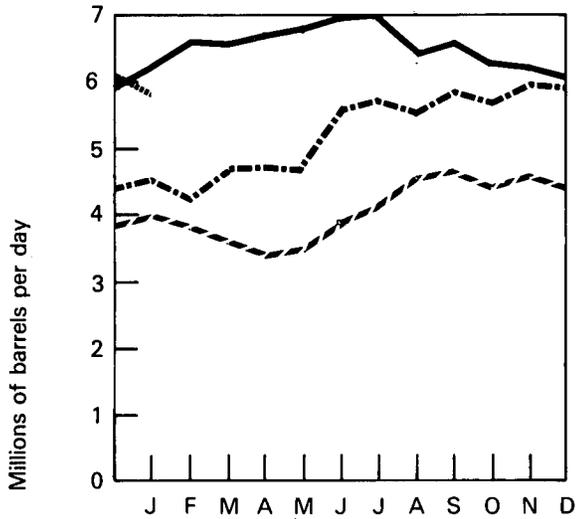
## Crude Input to Refineries



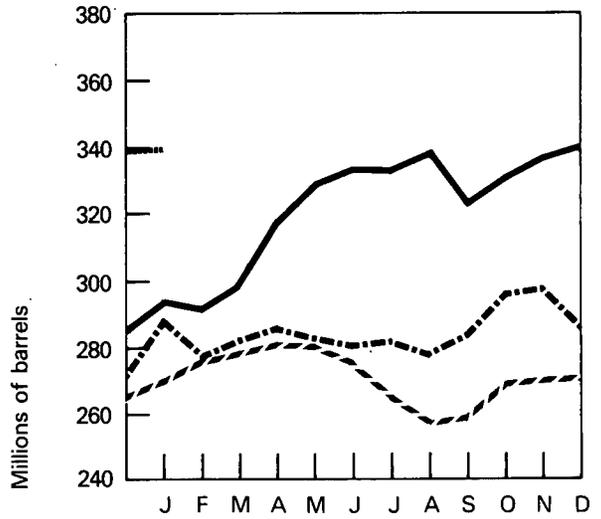
## Domestic Production



## Imports



## Stocks



- 1975 BOM
- .- 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

## Total Refined Petroleum Products

|                              |                | Domestic<br>Demand | Imports*      |
|------------------------------|----------------|--------------------|---------------|
| Thousands of barrels per day |                |                    |               |
| 1972                         | <b>AVERAGE</b> | <b>16,367</b>      | <b>2,525</b>  |
| 1973                         | <b>AVERAGE</b> | <b>17,308</b>      | <b>3,012</b>  |
| 1974                         | <b>AVERAGE</b> | <b>16,653</b>      | <b>2,635</b>  |
| 1975                         | January        | 18,004             | 2,832         |
|                              | February       | 17,084             | 2,348         |
|                              | March          | 16,315             | 2,074         |
|                              | April          | 16,048             | 1,662         |
|                              | May            | 15,155             | 1,728         |
|                              | June           | 15,610             | 1,502         |
|                              | July           | 15,740             | 1,767         |
|                              | August         | 15,806             | 1,717         |
|                              | September      | 15,768             | 2,115         |
|                              | October        | 16,377             | 1,940         |
|                              | November       | 15,777             | 1,796         |
|                              | December       | 18,185             | 1,949         |
|                              | <b>AVERAGE</b> | <b>16,322</b>      | <b>1,951</b>  |
| 1976                         | January        | 18,598             | 2,071         |
|                              | February       | 17,429             | 2,423         |
|                              | March          | 17,299             | 1,945         |
|                              | April          | 16,671             | 1,805         |
|                              | May            | 15,977             | 1,654         |
|                              | June           | 16,836             | 1,858         |
|                              | July           | 16,613             | 2,099         |
|                              | August         | 16,642             | 1,826         |
|                              | September      | 16,825             | 2,038         |
|                              | October        | 17,052             | 1,808         |
|                              | November       | 18,847             | 2,115         |
|                              | December       | 20,506             | 2,468         |
|                              | <b>AVERAGE</b> | <b>17,443</b>      | <b>2,007</b>  |
| 1977                         | January        | 20,481             | 2,594         |
|                              | February       | 20,427             | 3,278         |
|                              | March          | 18,056             | 2,610         |
|                              | April          | 17,570             | 1,886         |
|                              | May            | 16,960             | 1,753         |
|                              | June           | 18,048             | 1,872         |
|                              | July           | 17,549             | 2,021         |
|                              | August         | R18,009            | R2,175        |
|                              | September      | 17,863             | 2,036         |
|                              | October        | 17,889             | 1,818         |
|                              | November       | R18,300            | R1,711        |
|                              | December       | R20,050            | R2,038        |
|                              | <b>AVERAGE</b> | <b>R18,422</b>     | <b>R2,143</b> |
| 1978                         | January        | 19,185             | 1,976         |

## Total Petroleum Imports (Crude Oil and Refined Products)

Thousands of barrels per day

4,741

6,256

6,112

6,861

6,176

5,730

5,040

5,214

5,406

5,959

6,298

6,804

6,329

6,419

6,425

6,056

6,666

6,631

6,683

6,595

6,323

7,479

7,890

7,382

7,913

7,508

8,060

8,393

7,295

8,882

9,930

9,243

8,671

8,574

8,869

9,042

R8,591

8,593

8,181

R7,918

R8,091

R8,708

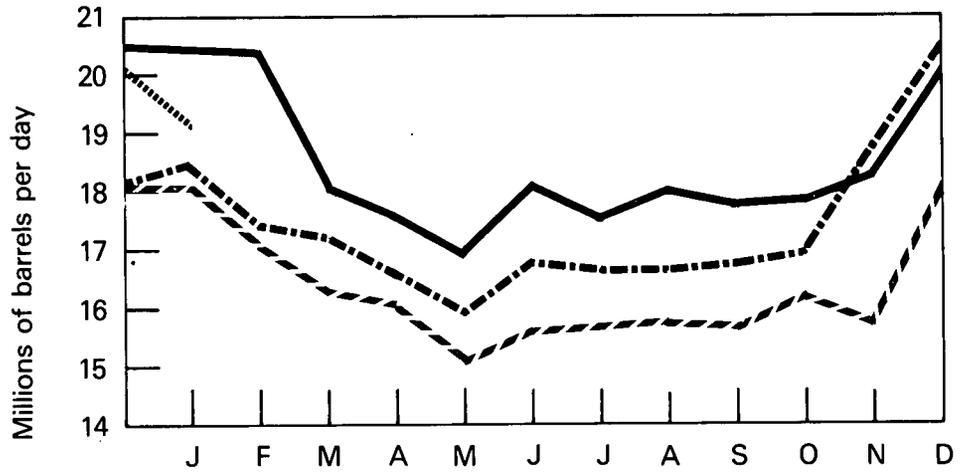
7,781

\*See Definitions.

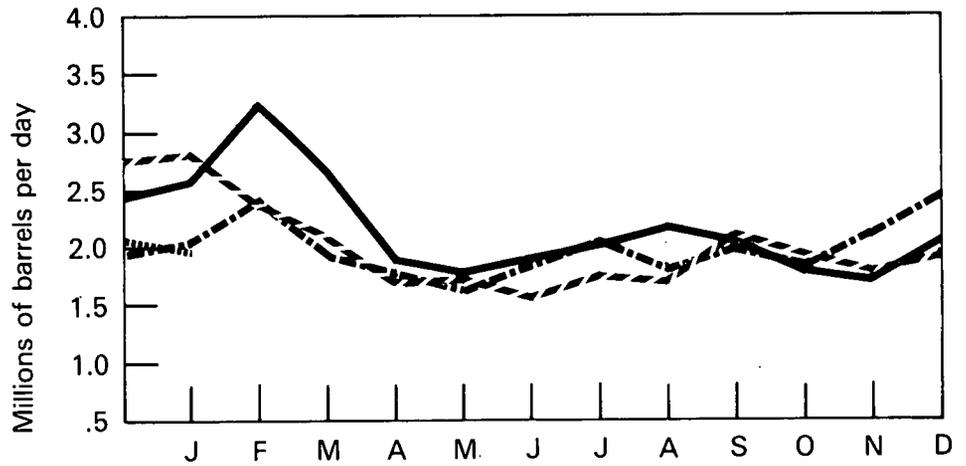
R=Revised data.

Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

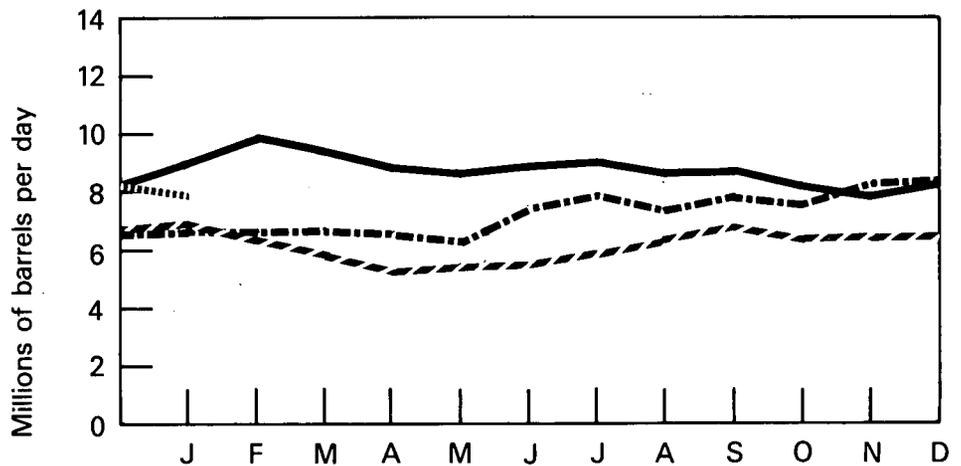
### Total Refined Product Domestic Demand



### Refined Product Imports



### Total Petroleum Imports



- 1975 BOM
- .- 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

## Direct and Indirect\* U.S. Petroleum Imports from OPEC Countries

|                              | Algeria      | Indonesia    | Iran         | Libya        | Nigeria        | Saudi Arabia   | United Arab Emirates | Venezuela      | Other OPEC** | Total OPEC     | Arab Members of OPEC |
|------------------------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------------|----------------|--------------|----------------|----------------------|
| Thousands of barrels per day |              |              |              |              |                |                |                      |                |              |                |                      |
| <b>1973</b>                  |              |              |              |              |                |                |                      |                |              |                |                      |
| Direct                       | 134.2        | 212.7        | 222.7        | 164.3        | 458.9          | 487.3          | 70.6                 | 1,124.7        | 106.5        | 2,981.9        | 914.4                |
| Indirect                     | 17.0         | 25.0         | 211.0        | 144.0        | 149.0          | 253.0          | 13.0                 | 509.0          | 88.0         | 1,409.0        | 463.0                |
| <b>TOTAL</b>                 | <b>151.2</b> | <b>237.7</b> | <b>433.7</b> | <b>308.3</b> | <b>607.9</b>   | <b>740.3</b>   | <b>83.6</b>          | <b>1,633.7</b> | <b>194.5</b> | <b>4,390.9</b> | <b>1,377.4</b>       |
| <b>1974</b>                  |              |              |              |              |                |                |                      |                |              |                |                      |
| Direct                       | 190.2        | 300.1        | 468.8        | 4.4          | 697.6          | 460.6          | 70.5                 | 979.3          | 88.3         | 3,259.8        | 748.5                |
| Indirect                     | 16.9         | 40.8         | 262.2        | 35.9         | 214.6          | 214.6          | 17.3                 | 478.5          | 128.7        | 1,409.5        | 357.9                |
| <b>TOTAL</b>                 | <b>207.1</b> | <b>310.9</b> | <b>731.0</b> | <b>40.3</b>  | <b>912.2</b>   | <b>675.2</b>   | <b>87.8</b>          | <b>1,457.8</b> | <b>217.0</b> | <b>4,669.3</b> | <b>1,106.4</b>       |
| <b>1975</b>                  |              |              |              |              |                |                |                      |                |              |                |                      |
| Direct                       | 281.5        | 388.4        | 280.4        | 232.0        | 761.5          | 715.0          | 116.7                | 697.6          | 116.1        | 3,589.2        | 1,381.3              |
| Indirect                     | 6.7          | 49.3         | 244.4        | 97.3         | 76.3           | 176.6          | 37.5                 | 332.5          | 143.2        | 1,163.8        | 408.8                |
| <b>TOTAL</b>                 | <b>288.2</b> | <b>437.7</b> | <b>524.8</b> | <b>329.3</b> | <b>837.8</b>   | <b>891.6</b>   | <b>154.2</b>         | <b>1,030.1</b> | <b>259.3</b> | <b>4,753.0</b> | <b>1,790.1</b>       |
| <b>1976</b>                  |              |              |              |              |                |                |                      |                |              |                |                      |
| Direct                       |              |              |              |              |                |                |                      |                |              |                |                      |
| January                      | 345.5        | 478.0        | 387.5        | 451.3        | 781.7          | 1,111.9        | 118.8                | 533.7          | 86.3         | 4,294.7        | 2,045.7              |
| February                     | 357.4        | 465.3        | 241.2        | 328.4        | 830.9          | 1,080.9        | 118.5                | 838.6          | 102.8        | 4,364.0        | 1,925.3              |
| March                        | 347.2        | 552.0        | 292.5        | 372.2        | 896.8          | 1,145.0        | 159.4                | 468.1          | 111.8        | 4,345.0        | 2,058.5              |
| April                        | 446.5        | 467.6        | 323.3        | 356.2        | 997.0          | 1,027.5        | 195.5                | 496.8          | 81.6         | 4,392.0        | 2,036.2              |
| May                          | 410.6        | 485.5        | 183.7        | 362.0        | 855.1          | 1,141.5        | 214.5                | 487.7          | 135.9        | 4,276.5        | 2,138.8              |
| June                         | 501.2        | 603.6        | 323.2        | 487.8        | 1,127.6        | 1,205.0        | 290.1                | 668.0          | 70.5         | 5,277.0        | 2,486.5              |
| July                         | 451.0        | 581.0        | 374.3        | 487.1        | 1,136.7        | 1,327.7        | 305.2                | 808.0          | 208.8        | 5,679.8        | 2,711.4              |
| August                       | 510.0        | 554.5        | 294.2        | 463.5        | 1,029.4        | 1,317.6        | 228.1                | 704.0          | 133.6        | 5,234.9        | 2,597.4              |
| September                    | 435.3        | 570.2        | 274.6        | 491.0        | 1,173.0        | 1,288.1        | 335.1                | 932.4          | 198.7        | 5,698.4        | 2,748.2              |
| October                      | 357.2        | 487.4        | 284.2        | 456.2        | 1,097.5        | 1,366.2        | 304.4                | 772.8          | 232.7        | 5,358.5        | 2,578.8              |
| November                     | 502.0        | 647.1        | 316.8        | 533.9        | 1,173.8        | 1,316.1        | 341.1                | 810.8          | 170.7        | 5,812.3        | 2,768.4              |
| December                     | 379.9        | 556.4        | 289.5        | 637.2        | 1,193.6        | 1,404.0        | 448.0                | 868.4          | 194.8        | 5,971.8        | 2,956.6              |
| Total Direct                 | 428.3        | 537.4        | 298.5        | 453.3        | 1,025.2        | 1,229.8        | 255.2                | 699.2          | 134.0        | 5,060.9        | 2,421.0              |
| Indirect                     | 10.0         | 32.0         | 248.0        | 76.0         | 94.0           | 136.0          | 68.0                 | 273.0          | 82.0         | 1,019.0        | 352.0                |
| <b>TOTAL</b>                 | <b>438.3</b> | <b>569.4</b> | <b>546.5</b> | <b>529.3</b> | <b>1,119.2</b> | <b>1,365.8</b> | <b>323.2</b>         | <b>972.2</b>   | <b>216.0</b> | <b>6,079.9</b> | <b>2,773.0</b>       |
| <b>1977</b>                  |              |              |              |              |                |                |                      |                |              |                |                      |
| Direct                       |              |              |              |              |                |                |                      |                |              |                |                      |
| January                      | 493.0        | 619.2        | 396.8        | 627.0        | 1,285.8        | 1,328.0        | 319.5                | 841.8          | 324.2        | 6,236.0        | 3,000.0              |
| February                     | 666.1        | 570.3        | 412.4        | 638.0        | 1,265.1        | 1,441.8        | 316.7                | 920.6          | 241.0        | 6,472.0        | 3,141.1              |
| March                        | 459.8        | 567.0        | 735.0        | 701.2        | 1,300.0        | 1,371.6        | 369.5                | 664.3          | 184.3        | 6,352.7        | 3,022.1              |
| April                        | 660.7        | 523.9        | 517.2        | 782.9        | 1,242.4        | 1,437.4        | 323.5                | 663.3          | 250.5        | 6,401.8        | 3,363.2              |
| May                          | 392.8        | 512.7        | 539.3        | 784.1        | 1,072.3        | 1,724.1        | 237.1                | 534.4          | 435.9        | 6,232.7        | 3,451.3              |
| June                         | 436.6        | 671.6        | 553.0        | 827.1        | 1,190.8        | 1,432.7        | 438.6                | 668.7          | 343.5        | 6,562.6        | 3,374.1              |
| July                         | 573.9        | 519.0        | 857.3        | 763.4        | 1,194.7        | 1,369.8        | 286.1                | 625.8          | 377.8        | 6,567.8        | 3,232.1              |
| August                       | 632.2        | 552.8        | 500.1        | 640.0        | 960.5          | 1,449.4        | 308.6                | 744.4          | 276.9        | 6,064.9        | 3,169.8              |
| Total Direct                 | 537.7        | 566.8        | 566.0        | 720.8        | 1,187.8        | 1,444.5        | 324.6                | 705.6          | 305.1        | 6,358.9        | 3,218.9              |
| Indirect                     | 14.5         | 47.1         | 256.2        | 124.9        | 94.3           | 152.0          | 113.3                | 229.4          | 89.8         | 1,121.5        | 476.7                |
| <b>TOTAL</b>                 | <b>552.2</b> | <b>613.9</b> | <b>822.2</b> | <b>845.7</b> | <b>1,282.1</b> | <b>1,596.5</b> | <b>437.9</b>         | <b>935.0</b>   | <b>394.9</b> | <b>7,480.4</b> | <b>3,695.6</b>       |
| (8 months)                   |              |              |              |              |                |                |                      |                |              |                |                      |

\*Indirect imports refer to U.S. imports of petroleum products, primarily from Caribbean and European areas, that have been refined from crude oil produced in other areas. U.S. imports of these products have been prorated to each OPEC country of origin based on the share of total crude oil supply in the Caribbean and European areas which was imported from each OPEC country.

\*\*Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

Sources: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly" through April 1977; EIA *Energy Data Reports*, "PAD Districts Supply/Demand, Monthly" for May 1977 forward; and EIA estimates.

## U.S. Petroleum Imports from Non-OPEC Sources

|                              | Bahamas      | Canada         | Netherlands<br>Antilles | Puerto<br>Rico | Trinidad<br>and Tobago | Virgin<br>Islands | Other        | Total          |
|------------------------------|--------------|----------------|-------------------------|----------------|------------------------|-------------------|--------------|----------------|
| Thousands of barrels per day |              |                |                         |                |                        |                   |              |                |
| <b>1973</b>                  | <b>170.8</b> | <b>1,312.9</b> | <b>573.6</b>            | <b>99.3</b>    | <b>250.6</b>           | <b>329.2</b>      | <b>537.8</b> | <b>3,274.2</b> |
| <b>1974</b>                  | <b>159.3</b> | <b>1,067.6</b> | <b>509.6</b>            | <b>90.4</b>    | <b>241.2</b>           | <b>391.7</b>      | <b>392.6</b> | <b>2,852.4</b> |
| <b>1975</b>                  |              |                |                         |                |                        |                   |              |                |
| January                      | 216.1        | 949.1          | 549.4                   | 99.0           | 232.9                  | 563.5             | 319.5        | 2,929.5        |
| February                     | 213.9        | 854.5          | 315.2                   | 148.8          | 255.1                  | 490.3             | 315.7        | 2,593.5        |
| March                        | 162.6        | 746.9          | 279.5                   | 139.0          | 185.7                  | 506.4             | 295.7        | 2,315.8        |
| April                        | 168.9        | 704.3          | 237.7                   | 73.1           | 171.8                  | 353.3             | 273.9        | 1,983.0        |
| May                          | 122.3        | 574.2          | 242.9                   | 77.9           | 237.1                  | 413.4             | 304.2        | 1,971.7        |
| June                         | 130.0        | 872.7          | 261.6                   | 75.1           | 204.5                  | 352.6             | 229.6        | 2,126.1        |
| July                         | 178.3        | 889.1          | 368.3                   | 104.9          | 281.1                  | 320.8             | 358.7        | 2,501.2        |
| August                       | 135.8        | 887.9          | 333.1                   | 72.9           | 289.4                  | 399.1             | 364.9        | 2,483.1        |
| September                    | 143.6        | 918.0          | 428.6                   | 66.9           | 283.2                  | 389.7             | 614.3        | 2,844.3        |
| October                      | 135.8        | 946.3          | 357.8                   | 105.8          | 222.2                  | 336.3             | 557.6        | 2,661.8        |
| November                     | 88.8         | 893.1          | 280.0                   | 60.6           | 265.5                  | 353.0             | 518.8        | 2,459.8        |
| December                     | 119.5        | 907.3          | 238.0                   | 50.9           | 262.5                  | 405.9             | 375.0        | 2,359.1        |
| <b>TOTAL</b>                 | <b>152.0</b> | <b>845.2</b>   | <b>323.6</b>            | <b>89.7</b>    | <b>240.9</b>           | <b>406.5</b>      | <b>377.5</b> | <b>2,435.4</b> |
| <b>1976</b>                  |              |                |                         |                |                        |                   |              |                |
| January                      | 134.1        | 681.7          | 291.7                   | 71.0           | 343.2                  | 468.4             | 380.2        | 2,370.3        |
| February                     | 127.6        | 644.9          | 262.4                   | 122.2          | 326.3                  | 462.3             | 321.7        | 2,267.4        |
| March                        | 90.4         | 590.2          | 328.7                   | 114.0          | 315.6                  | 424.5             | 475.5        | 2,338.9        |
| April                        | 131.9        | 578.4          | 274.9                   | 68.5           | 291.9                  | 341.2             | 516.5        | 2,203.3        |
| May                          | 95.2         | 614.9          | 214.1                   | 70.6           | 257.5                  | 388.5             | 405.7        | 2,046.5        |
| June                         | 104.2        | 653.3          | 190.4                   | 54.3           | 319.3                  | 427.5             | 453.0        | 2,202.0        |
| July                         | 112.8        | 581.7          | 259.1                   | 77.9           | 279.2                  | 386.5             | 513.4        | 2,210.6        |
| August                       | 98.5         | 580.9          | 268.7                   | 81.5           | 163.6                  | 437.2             | 516.6        | 2,147.0        |
| September                    | 143.1        | 564.8          | 273.3                   | 104.1          | 182.6                  | 408.5             | 537.9        | 2,214.3        |
| October                      | 78.3         | 562.0          | 239.0                   | 92.2           | 215.2                  | 460.5             | 502.0        | 2,149.2        |
| November                     | 140.4        | 561.8          | 267.6                   | 104.1          | 254.3                  | 454.4             | 465.3        | 2,247.9        |
| December                     | 141.5        | 578.3          | 400.3                   | 98.5           | 324.2                  | 408.4             | 470.5        | 2,421.3        |
| <b>TOTAL</b>                 | <b>116.5</b> | <b>599.3</b>   | <b>274.6</b>            | <b>88.1</b>    | <b>272.6</b>           | <b>422.3</b>      | <b>460.6</b> | <b>2,234.0</b> |
| <b>1977</b>                  |              |                |                         |                |                        |                   |              |                |
| January                      | 170.0        | 505.9          | 304.1                   | 82.5           | 316.2                  | 619.6             | 647.7        | 2,646.0        |
| February                     | 289.5        | 605.1          | 406.6                   | 86.3           | 406.3                  | 548.8             | 1,115.9      | 3,458.5        |
| March                        | 200.4        | 561.7          | 257.3                   | 97.4           | 286.5                  | 505.5             | 981.9        | 2,890.7        |
| April                        | 130.7        | 506.1          | 110.1                   | 85.3           | 210.5                  | 409.0             | 817.6        | 2,269.3        |
| May                          | 138.5        | 437.8          | 153.7                   | 105.8          | 308.1                  | 376.2             | 821.2        | 2,341.3        |
| June                         | 137.7        | 493.0          | 196.2                   | 89.4           | 271.1                  | 322.0             | 796.7        | 2,306.1        |
| July                         | 169.8        | 482.9          | 239.0                   | 129.7          | 275.8                  | 477.7             | 698.8        | 2,473.7        |
| August                       | 168.8        | 501.5          | 224.5                   | 88.4           | 281.2                  | 461.6             | 800.5        | 2,526.5        |
| <b>TOTAL</b><br>(8 months)   | <b>174.6</b> | <b>510.7</b>   | <b>235.0</b>            | <b>95.8</b>    | <b>293.5</b>           | <b>464.8</b>      | <b>831.8</b> | <b>2,606.2</b> |

Source: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly," through April 1977; EIA *Energy Data Reports*, "PAD Districts Supply/Demand Monthly" for May 1977 forward.

# Motor Gasoline

|             |                | Domestic<br>Demand           | Production*   | Imports     | Stocks*                 |
|-------------|----------------|------------------------------|---------------|-------------|-------------------------|
|             |                | Thousands of barrels per day |               |             | Thousands<br>of barrels |
| <b>1972</b> | <b>AVERAGE</b> | <b>6,376</b>                 | <b>6,281</b>  | <b>68</b>   | <b>**212,770</b>        |
| <b>1973</b> | <b>AVERAGE</b> | <b>6,674</b>                 | <b>6,527</b>  | <b>134</b>  | <b>**209,395</b>        |
| <b>1974</b> | <b>AVERAGE</b> | <b>6,537</b>                 | <b>6,358</b>  | <b>204</b>  | <b>**218,346</b>        |
| <b>1975</b> | January        | 6,206                        | 6,509         | 262         | ***242,285              |
|             | February       | 6,096                        | 6,276         | 171         | 251,915                 |
|             | March          | 6,326                        | 6,070         | 150         | 248,685                 |
|             | April          | 6,718                        | 6,046         | 133         | 232,556                 |
|             | May            | 6,871                        | 6,126         | 142         | 213,947                 |
|             | June           | 7,076                        | 6,669         | 177         | 207,114                 |
|             | July           | 7,041                        | 7,003         | 209         | 212,454                 |
|             | August         | 7,008                        | 6,872         | 232         | 215,480                 |
|             | September      | 6,729                        | 6,823         | 269         | 226,447                 |
|             | October        | 6,778                        | 6,410         | 207         | 221,493                 |
|             | November       | 6,390                        | 6,602         | 139         | 232,091                 |
|             | December       | 6,808                        | 6,786         | 119         | 234,925                 |
|             | <b>AVERAGE</b> | <b>6,675</b>                 | <b>6,518</b>  | <b>184</b>  |                         |
| <b>1976</b> | January        | 6,398                        | 6,483         | 92          | 240,464                 |
|             | February       | 6,263                        | 6,472         | 84          | 248,854                 |
|             | March          | 6,890                        | 6,455         | 123         | 239,049                 |
|             | April          | 7,159                        | 6,562         | 99          | 223,965                 |
|             | May            | 6,853                        | 6,775         | 112         | 225,037                 |
|             | June           | 7,482                        | 7,303         | 188         | 225,365                 |
|             | July           | 7,315                        | 7,174         | 190         | 226,922                 |
|             | August         | 7,168                        | 7,149         | 141         | 230,578                 |
|             | September      | 7,079                        | 6,878         | 171         | 229,751                 |
|             | October        | 6,929                        | 6,678         | 138         | 226,300                 |
|             | November       | 7,038                        | 6,938         | 146         | 227,742                 |
|             | December       | 7,138                        | 7,176         | 84          | 231,387                 |
|             | <b>AVERAGE</b> | <b>6,978</b>                 | <b>6,838</b>  | <b>131</b>  |                         |
| <b>1977</b> | January        | 6,466                        | 6,934         | 222         | 252,608                 |
|             | February       | 6,897                        | 6,817         | 184         | 255,519                 |
|             | March          | 6,899                        | 6,864         | 245         | 262,118                 |
|             | April          | 7,348                        | 6,968         | 269         | 258,831                 |
|             | May            | 7,034                        | 6,950         | 202         | 262,498                 |
|             | June           | 7,595                        | 7,145         | 246         | 256,389                 |
|             | July           | 7,441                        | 7,248         | 248         | 258,152                 |
|             | August         | R7,419                       | R7,191        | R187        | R256,904                |
|             | September      | 7,315                        | 7,062         | 221         | 255,848                 |
|             | October        | 7,140                        | 6,931         | 179         | 254,885                 |
|             | November       | R7,196                       | 7,123         | 179         | 258,039                 |
|             | December       | R7,378                       | R7,145        | R196        | R256,864                |
|             | <b>AVERAGE</b> | <b>R7,178</b>                | <b>R7,033</b> | <b>R215</b> |                         |
| <b>1978</b> | January        | 6,473                        | 6,965         | 138         | 274,438                 |

\*See Definitions.

\*\*Total as of December 31.

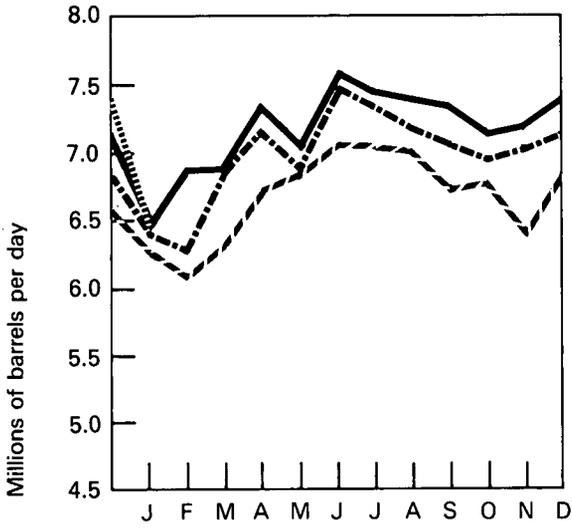
\*\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

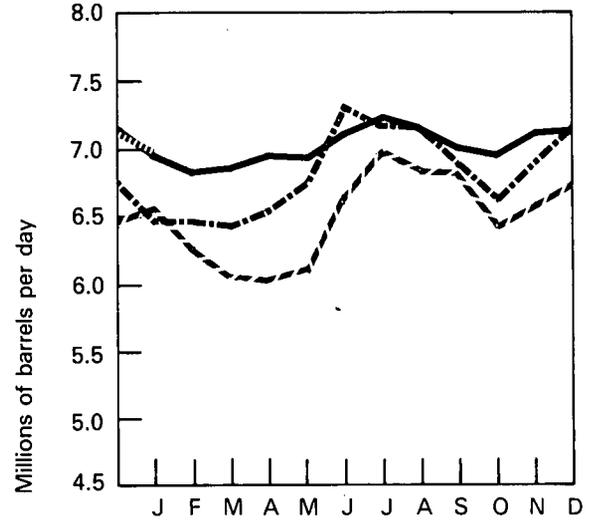
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

# Motor Gasoline

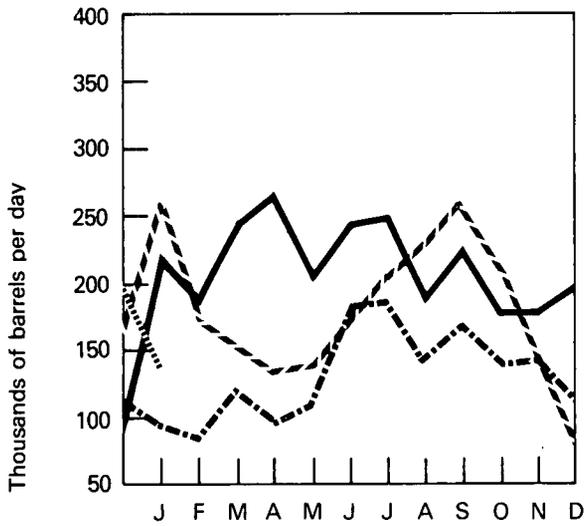
## Domestic Demand



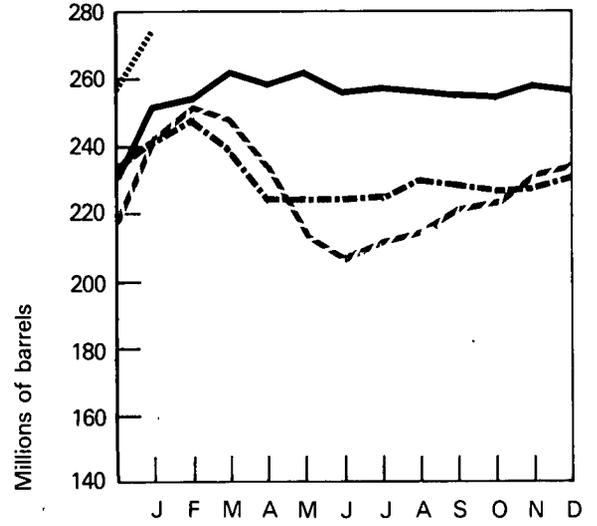
## Production



## Imports



## Stocks



- 1975 BOM
- .- 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

# Jet Fuel

|      |                | Domestic<br>Demand           | Production  | Imports    | Stocks                  |
|------|----------------|------------------------------|-------------|------------|-------------------------|
|      |                | Thousands of barrels per day |             |            | Thousands<br>of barrels |
| 1972 | <b>AVERAGE</b> | <b>1,045</b>                 | <b>847</b>  | <b>194</b> | <b>*25,493</b>          |
| 1973 | <b>AVERAGE</b> | <b>1,059</b>                 | <b>859</b>  | <b>212</b> | <b>*28,544</b>          |
| 1974 | <b>AVERAGE</b> | <b>993</b>                   | <b>836</b>  | <b>163</b> | <b>*29,435</b>          |
| 1975 | January        | 1,041                        | 831         | 229        | **30,321                |
|      | February       | 1,075                        | 835         | 200        | 29,133                  |
|      | March          | 982                          | 896         | 130        | 30,456                  |
|      | April          | 1,006                        | 864         | 137        | 30,263                  |
|      | May            | 977                          | 861         | 133        | 30,719                  |
|      | June           | 989                          | 839         | 106        | 29,337                  |
|      | July           | 954                          | 883         | 88         | 29,798                  |
|      | August         | 1,046                        | 958         | 132        | 31,103                  |
|      | September      | 1,040                        | 907         | 140        | 31,291                  |
|      | October        | 997                          | 864         | 106        | 30,410                  |
|      | November       | 999                          | 864         | 89         | 28,977                  |
|      | December       | 911                          | 849         | 109        | 30,380                  |
|      | <b>AVERAGE</b> | <b>1,001</b>                 | <b>871</b>  | <b>133</b> |                         |
| 1976 | January        | 948                          | 889         | 69         | 30,618                  |
|      | February       | 965                          | 918         | 71         | 31,180                  |
|      | March          | 965                          | 927         | 86         | 32,619                  |
|      | April          | 1,010                        | 927         | 108        | 33,332                  |
|      | May            | 960                          | 899         | 106        | 34,664                  |
|      | June           | 972                          | 879         | 68         | 33,879                  |
|      | July           | 1,099                        | 933         | 130        | 32,732                  |
|      | August         | 965                          | 942         | 38         | 33,121                  |
|      | September      | 1,048                        | 990         | 63         | 33,204                  |
|      | October        | 911                          | 890         | 50         | 34,032                  |
|      | November       | 978                          | 920         | 56         | 33,859                  |
|      | December       | 1,027                        | 900         | 72         | 32,085                  |
|      | <b>AVERAGE</b> | <b>987</b>                   | <b>918</b>  | <b>76</b>  |                         |
| 1977 | January        | 1,054                        | 917         | 77         | 30,170                  |
|      | February       | 1,036                        | 974         | 74         | 30,455                  |
|      | March          | 1,041                        | 954         | 98         | 30,739                  |
|      | April          | 1,019                        | 991         | 86         | 32,355                  |
|      | May            | 993                          | 979         | 57         | 33,644                  |
|      | June           | 989                          | 996         | 30         | 34,707                  |
|      | July           | 1,043                        | 969         | 85         | 35,048                  |
|      | August         | R1,113                       | 1,009       | R71        | 33,986                  |
|      | September      | 1,027                        | 1,004       | 30         | 34,161                  |
|      | October        | 1,010                        | 973         | 61         | 34,878                  |
|      | November       | R1,015                       | 950         | R86        | 35,483                  |
|      | December       | R1,105                       | R978        | R80        | R33,991                 |
|      | <b>AVERAGE</b> | <b>R1,037</b>                | <b>R974</b> | <b>R70</b> |                         |
| 1978 | January        | 1,037                        | 956         | 62         | 33,334                  |

\*Total as of December 31.

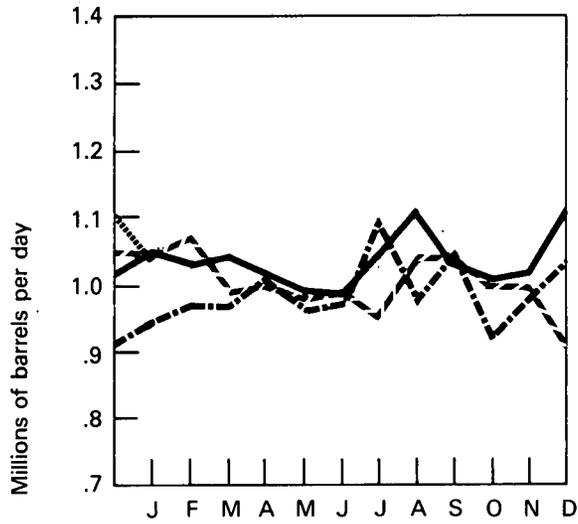
\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

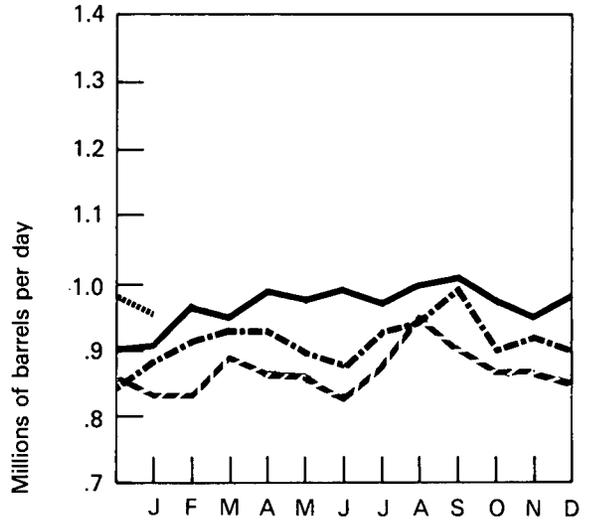
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

# Jet Fuel

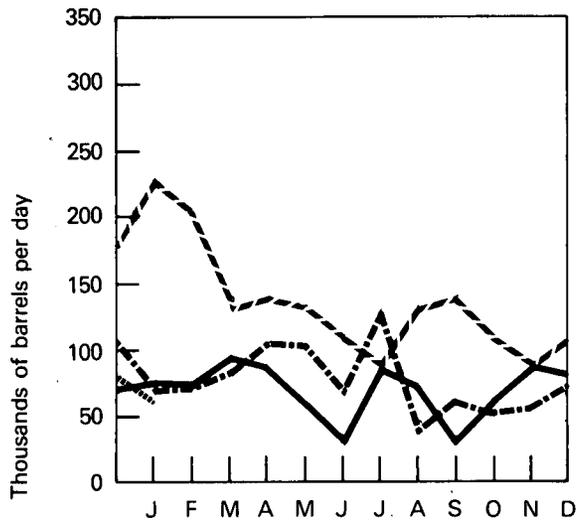
## Domestic Demand



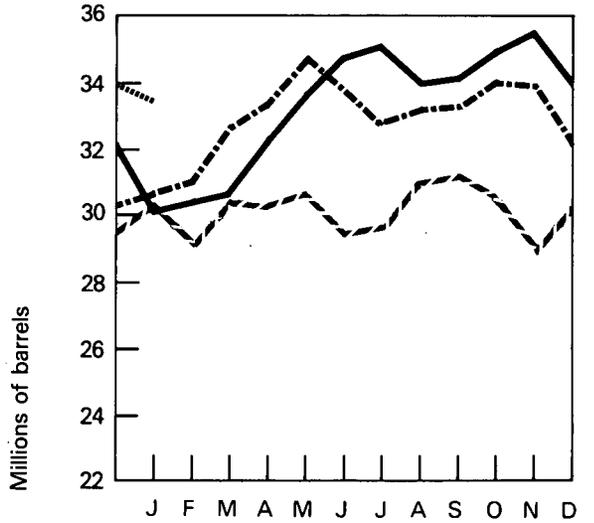
## Production



## Imports



## Stocks



- 1975 BOM
- .- 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

# Distillate Fuel Oil

|      |                | Domestic<br>Demand           | Production*   | Imports     | Stocks*                 |
|------|----------------|------------------------------|---------------|-------------|-------------------------|
|      |                | Thousands of barrels per day |               |             | Thousands<br>of barrels |
| 1972 | <b>AVERAGE</b> | <b>2,913</b>                 | <b>2,630</b>  | <b>182</b>  | <b>**154,284</b>        |
| 1973 | <b>AVERAGE</b> | <b>3,092</b>                 | <b>2,820</b>  | <b>392</b>  | <b>**196,421</b>        |
| 1974 | <b>AVERAGE</b> | <b>2,948</b>                 | <b>2,668</b>  | <b>289</b>  | <b>**200,029</b>        |
| 1975 | January        | 3,963                        | 2,852         | 334         | ***199,715              |
|      | February       | 3,803                        | 2,679         | 302         | 176,696                 |
|      | March          | 3,292                        | 2,532         | 255         | 161,111                 |
|      | April          | 3,094                        | 2,487         | 110         | 146,214                 |
|      | May            | 2,382                        | 2,431         | 136         | 152,027                 |
|      | June           | 2,267                        | 2,574         | 69          | 163,306                 |
|      | July           | 2,109                        | 2,590         | 104         | 181,472                 |
|      | August         | 2,173                        | 2,592         | 92          | 197,323                 |
|      | September      | 2,163                        | 2,812         | 130         | 220,732                 |
|      | October        | 2,677                        | 2,745         | 104         | 226,113                 |
|      | November       | 2,544                        | 2,767         | 96          | 235,749                 |
|      | December       | 3,792                        | 2,783         | 138         | 208,787                 |
|      | <b>AVERAGE</b> | <b>2,851</b>                 | <b>2,653</b>  | <b>155</b>  |                         |
| 1976 | January        | 4,298                        | 2,734         | 164         | 165,428                 |
|      | February       | 3,687                        | 2,961         | 207         | 150,439                 |
|      | March          | 3,336                        | 2,793         | 151         | 138,306                 |
|      | April          | 2,788                        | 2,655         | 96          | 137,249                 |
|      | May            | 2,519                        | 2,738         | 97          | 147,057                 |
|      | June           | 2,436                        | 2,885         | 151         | 165,064                 |
|      | July           | 2,255                        | 2,959         | 126         | 190,861                 |
|      | August         | 2,237                        | 2,982         | 131         | 217,930                 |
|      | September      | 2,618                        | 2,947         | 147         | 232,230                 |
|      | October        | 3,029                        | 2,995         | 141         | 235,599                 |
|      | November       | 3,714                        | 3,180         | 135         | 223,648                 |
|      | December       | 4,650                        | 3,255         | 179         | 185,948                 |
|      | <b>AVERAGE</b> | <b>3,130</b>                 | <b>2,924</b>  | <b>143</b>  |                         |
| 1977 | January        | 5,111                        | 3,375         | 350         | 142,989                 |
|      | February       | 4,714                        | 3,702         | 664         | 133,261                 |
|      | March          | 3,421                        | 3,179         | 519         | 141,882                 |
|      | April          | 2,942                        | 3,001         | 153         | 148,246                 |
|      | May            | 2,777                        | 3,124         | 99          | 162,123                 |
|      | June           | 2,776                        | 3,198         | 135         | 178,842                 |
|      | July           | 2,545                        | R3,192        | 192         | 204,899                 |
|      | August         | R2,635                       | R3,274        | R161        | R229,757                |
|      | September      | 2,706                        | 3,311         | 161         | 252,775                 |
|      | October        | 3,009                        | 3,328         | 155         | 267,440                 |
|      | November       | R3,414                       | 3,336         | R180        | 270,481                 |
|      | December       | R4,168                       | R3,280        | R229        | R250,063                |
|      | <b>AVERAGE</b> | <b>R3,345</b>                | <b>R3,272</b> | <b>R247</b> |                         |
| 1978 | January        | 4,291                        | 3,124         | 184         | 214,219                 |

\*See Definitions.

\*\*Total as of December 31.

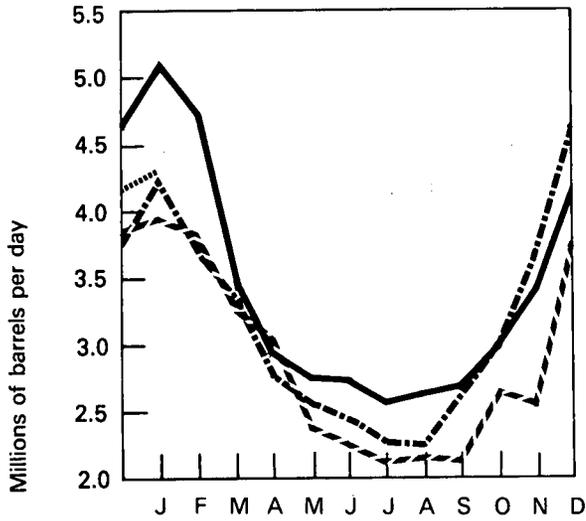
\*\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

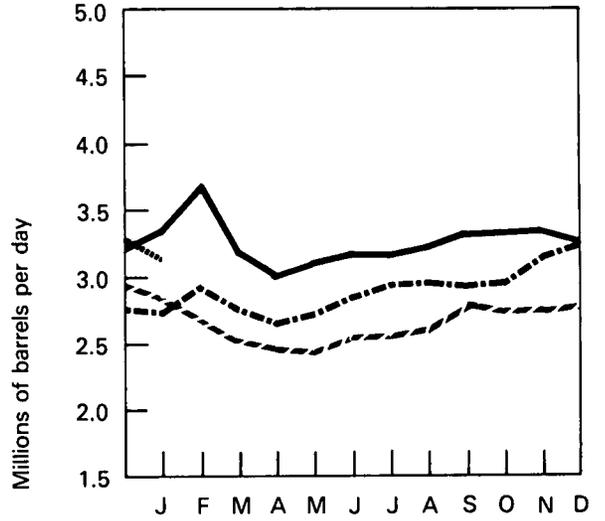
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

# Distillate Fuel Oil

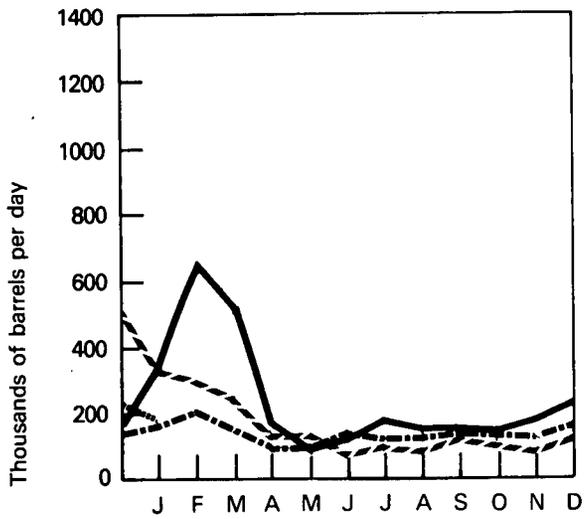
## Domestic Demand



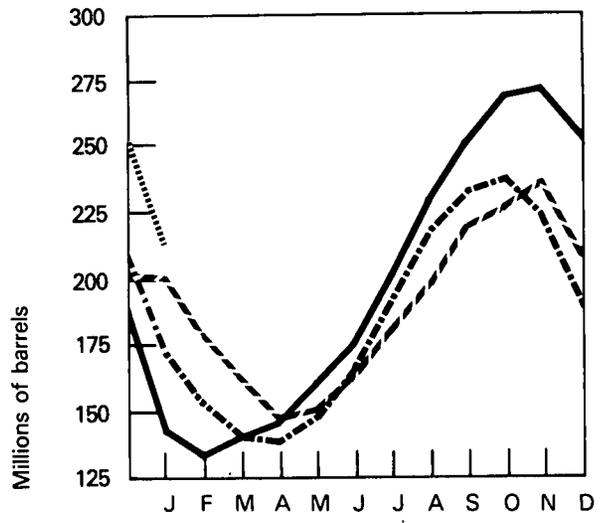
## Production



## Imports



## Stocks



- 1975 BOM
- - - 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

# Residual Fuel Oil

|             |                | Domestic<br>Demand           | Production    | Imports       | Stocks                  |
|-------------|----------------|------------------------------|---------------|---------------|-------------------------|
|             |                | Thousands of barrels per day |               |               | Thousands<br>of barrels |
| <b>1972</b> | <b>AVERAGE</b> | <b>2,529</b>                 | <b>799</b>    | <b>1,742</b>  | <b>*55,216</b>          |
| <b>1973</b> | <b>AVERAGE</b> | <b>2,822</b>                 | <b>971</b>    | <b>1,853</b>  | <b>*53,480</b>          |
| <b>1974</b> | <b>AVERAGE</b> | <b>2,639</b>                 | <b>1,070</b>  | <b>1,587</b>  | <b>*59,694</b>          |
| <b>1975</b> | January        | 3,253                        | 1,415         | 1,657         | **69,233                |
|             | February       | 2,849                        | 1,354         | 1,402         | 66,495                  |
|             | March          | 2,669                        | 1,299         | 1,293         | 64,148                  |
|             | April          | 2,232                        | 1,245         | 1,054         | 66,340                  |
|             | May            | 2,087                        | 1,151         | 1,160         | 73,498                  |
|             | June           | 2,177                        | 1,152         | 902           | 69,660                  |
|             | July           | 2,220                        | 1,155         | 1,125         | 71,526                  |
|             | August         | 2,157                        | 1,146         | 1,021         | 71,857                  |
|             | September      | 2,328                        | 1,183         | 1,311         | 76,938                  |
|             | October        | 2,268                        | 1,165         | 1,251         | 81,858                  |
|             | November       | 2,405                        | 1,214         | 1,225         | 83,131                  |
|             | December       | 2,912                        | 1,354         | 1,283         | 74,126                  |
|             | <b>AVERAGE</b> | <b>2,462</b>                 | <b>1,235</b>  | <b>1,223</b>  |                         |
| <b>1976</b> | January        | 3,069                        | 1,415         | 1,406         | 66,592                  |
|             | February       | 3,006                        | 1,394         | 1,703         | 68,859                  |
|             | March          | 2,779                        | 1,311         | 1,342         | 65,132                  |
|             | April          | 2,495                        | 1,283         | 1,258         | 66,458                  |
|             | May            | 2,439                        | 1,257         | 1,134         | 65,147                  |
|             | June           | 2,520                        | 1,241         | 1,240         | 64,272                  |
|             | July           | 2,555                        | 1,266         | 1,462         | 69,812                  |
|             | August         | 2,678                        | 1,321         | 1,307         | 68,490                  |
|             | September      | 2,517                        | 1,330         | 1,442         | 76,436                  |
|             | October        | 2,511                        | 1,351         | 1,234         | 79,117                  |
|             | November       | 3,253                        | 1,581         | 1,474         | 73,284                  |
|             | December       | 3,608                        | 1,772         | 1,791         | 72,344                  |
|             | <b>AVERAGE</b> | <b>2,786</b>                 | <b>1,377</b>  | <b>1,398</b>  |                         |
| <b>1977</b> | January        | 3,741                        | 1,889         | 1,596         | 64,749                  |
|             | February       | 3,662                        | 1,951         | 1,943         | 71,414                  |
|             | March          | 3,150                        | 1,715         | 1,417         | 71,186                  |
|             | April          | 2,855                        | 1,687         | 1,125         | 70,165                  |
|             | May            | 2,719                        | 1,671         | 1,145         | 73,376                  |
|             | June           | 2,954                        | 1,714         | 1,181         | 71,924                  |
|             | July           | 2,805                        | 1,729         | 1,271         | 77,770                  |
|             | August         | R3,046                       | R1,634        | R1,441        | R78,762                 |
|             | September      | 2,897                        | 1,742         | 1,455         | 87,547                  |
|             | October        | 2,662                        | 1,726         | 1,221         | 95,801                  |
|             | November       | R2,803                       | 1,696         | R1,094        | 95,098                  |
|             | December       | R3,319                       | R1,809        | R1,340        | R89,548                 |
|             | <b>AVERAGE</b> | <b>R3,048</b>                | <b>R1,746</b> | <b>R1,349</b> |                         |
| <b>1978</b> | January        | 3,306                        | 1,841         | 1,321         | 85,626                  |

\*Total as of December 31.

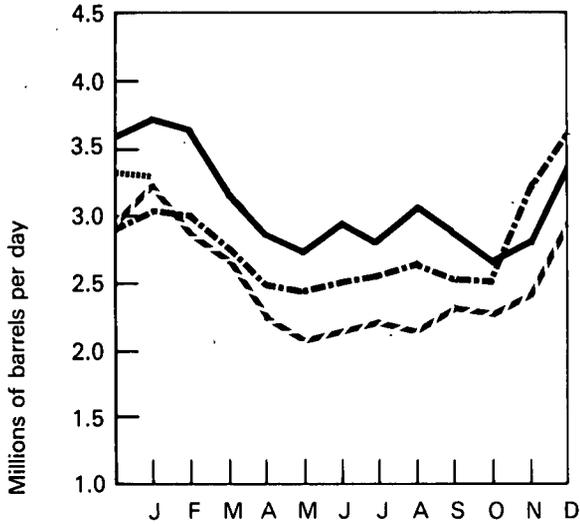
\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

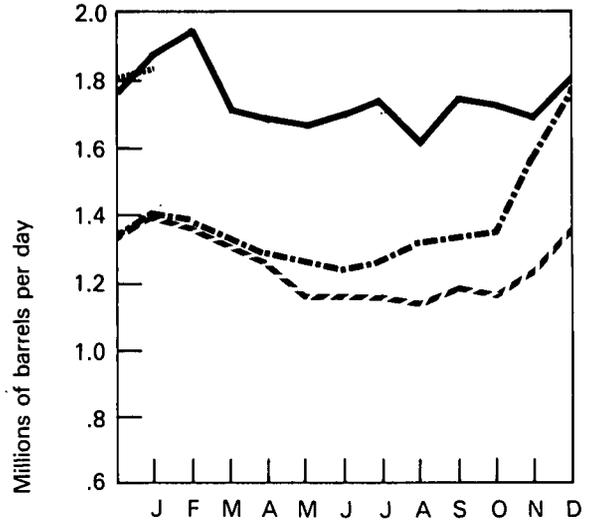
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly" for May through August 1977 and "Monthly Petroleum Statistics Report" for September through December 1977; January 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

# Residual Fuel Oil

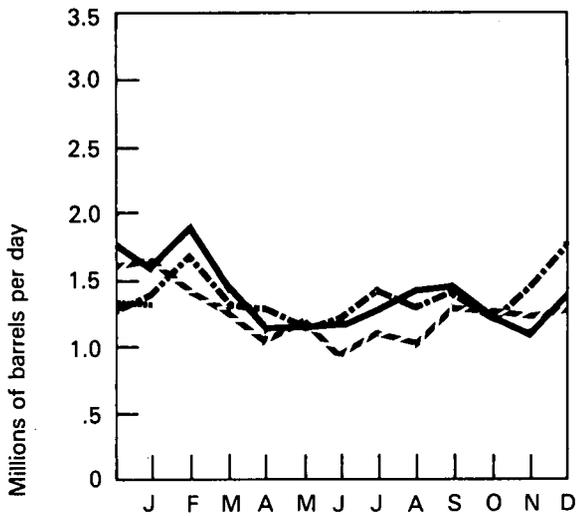
## Domestic Demand



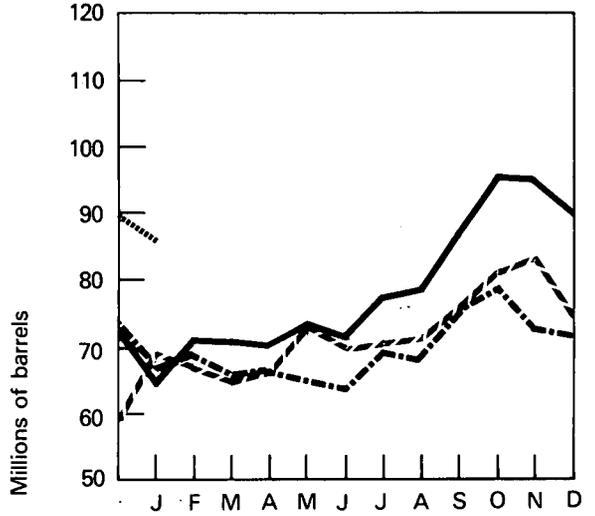
## Production



## Imports



## Stocks



- 1975 BOM
- - - 1976 BOM
- 1977 BOM, EIA
- ..... 1978 API

# Natural Gas Liquids

|                              |                | Domestic Demand*             | Production*          |               | Used at Refineries* | Imports    | Stocks*          |
|------------------------------|----------------|------------------------------|----------------------|---------------|---------------------|------------|------------------|
|                              |                |                              | At processing plants | At refineries |                     |            |                  |
| Thousands of barrels per day |                |                              |                      |               |                     |            |                  |
| Thousands of barrels         |                |                              |                      |               |                     |            |                  |
| 1972                         | <b>AVERAGE</b> | 1,420                        | 1,744                | 365           | 826                 | 174        | <b>**92,024</b>  |
| 1973                         | <b>AVERAGE</b> | 1,454                        | 1,738                | 375           | 815                 | 239        | <b>**106,659</b> |
| 1974                         | <b>AVERAGE</b> | 1,422                        | 1,688                | 338           | 746                 | 212        | <b>**120,175</b> |
| 1975                         | January        | 1,708                        | 1,630                | 307           | 756                 | 257        | 110,697          |
|                              | February       | 1,512                        | 1,646                | 296           | 734                 | 181        | 106,205          |
|                              | March          | 1,404                        | 1,658                | 280           | 731                 | 178        | 104,365          |
|                              | April          | 1,242                        | 1,635                | 273           | 667                 | 176        | 105,521          |
|                              | May            | 1,002                        | 1,607                | 299           | 628                 | 97         | 119,052          |
|                              | June           | 998                          | 1,646                | 323           | 659                 | 166        | 132,553          |
|                              | July           | 1,191                        | 1,621                | 336           | 701                 | 173        | 139,095          |
|                              | August         | 1,227                        | 1,650                | 357           | 690                 | 163        | 145,920          |
|                              | September      | 1,278                        | 1,577                | 326           | 703                 | 209        | 148,948          |
|                              | October        | 1,429                        | 1,643                | 310           | 729                 | 198        | 147,793          |
|                              | November       | 1,444                        | 1,635                | 309           | 759                 | 196        | 145,052          |
|                              | December       | 1,787                        | 1,646                | 310           | 768                 | 232        | 132,653          |
|                              |                | <b>AVERAGE</b>               | <b>1,352</b>         | <b>1,633</b>  | <b>311</b>          | <b>710</b> | <b>185</b>       |
| 1976                         | January        | 1,885                        | 1,585                | 305           | 728                 | 240        | 116,707          |
|                              | February       | 1,518                        | 1,640                | 316           | 793                 | 270        | 113,373          |
|                              | March          | 1,303                        | 1,615                | 333           | 674                 | 194        | 117,486          |
|                              | April          | 1,201                        | 1,616                | 349           | 716                 | 171        | 123,100          |
|                              | May            | 1,074                        | 1,588                | 376           | 695                 | 144        | 131,421          |
|                              | June           | 1,110                        | 1,606                | 356           | 718                 | 163        | 139,291          |
|                              | July           | 1,103                        | 1,592                | 354           | 710                 | 147        | 147,034          |
|                              | August         | 1,213                        | 1,596                | 362           | 695                 | 160        | 152,704          |
|                              | September      | 1,243                        | 1,602                | 352           | 713                 | 152        | 156,436          |
|                              | October        | 1,497                        | 1,601                | 309           | 709                 | 203        | 152,666          |
|                              | November       | 1,413                        | 1,621                | 331           | 726                 | 244        | 143,422          |
|                              | December       | 1,921                        | 1,589                | 341           | 853                 | 269        | 124,518          |
|                              |                | <b>AVERAGE</b>               | <b>1,407</b>         | <b>1,604</b>  | <b>340</b>          | <b>725</b> | <b>196</b>       |
| 1977                         | January        | 2,018                        | 1,549                | 323           | 730                 | 331        | 106,524          |
|                              | February       | 1,887                        | 1,589                | 336           | 693                 | 238        | 94,128           |
|                              | March          | 1,354                        | 1,687                | 331           | 688                 | 239        | 100,025          |
|                              | April          | 1,228                        | 1,664                | 337           | 672                 | 198        | 108,235          |
|                              | May            | 1,167                        | 1,620                | 397           | 614                 | 165        | 120,018          |
|                              | June           | 1,235                        | 1,616                | 364           | 622                 | 203        | 129,315          |
|                              | July           | 1,133                        | 1,609                | 381           | 594                 | 157        | 141,631          |
|                              | August         | 1,181                        | 1,593                | 360           | 659                 | 204        | 150,830          |
|                              |                | <b>AVERAGE</b><br>(8 months) | <b>1,400</b>         | <b>1,616</b>  | <b>354</b>          | <b>659</b> | <b>217</b>       |

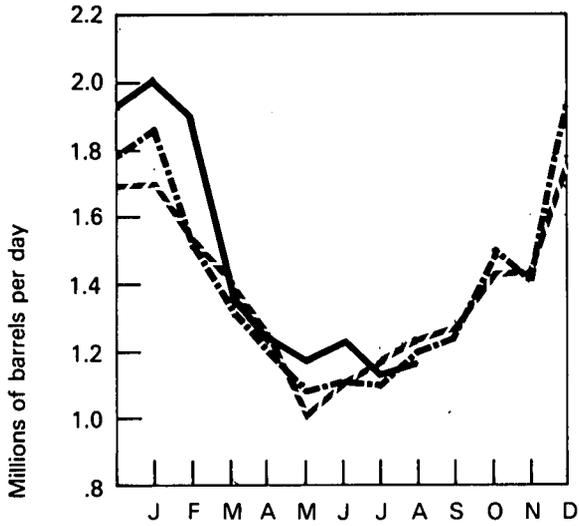
\*See Explanatory Note 4.

\*\*Total as of December 31.

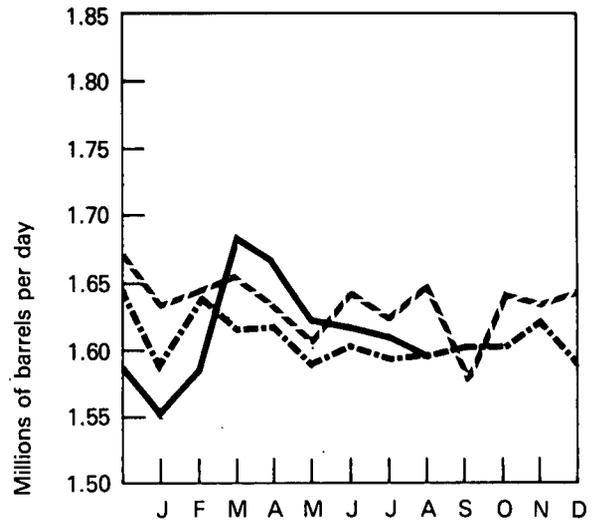
Source: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" through April 1977; and EIA *Energy Data Reports*, "Petroleum Statement, Monthly" for May 1977 forward.

# Natural Gas Liquids

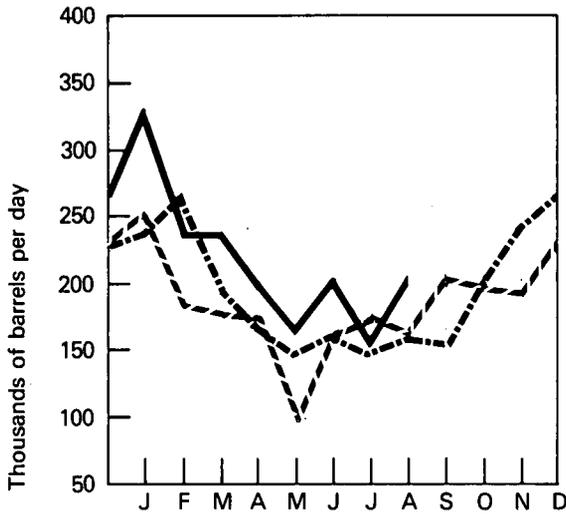
Domestic Demand



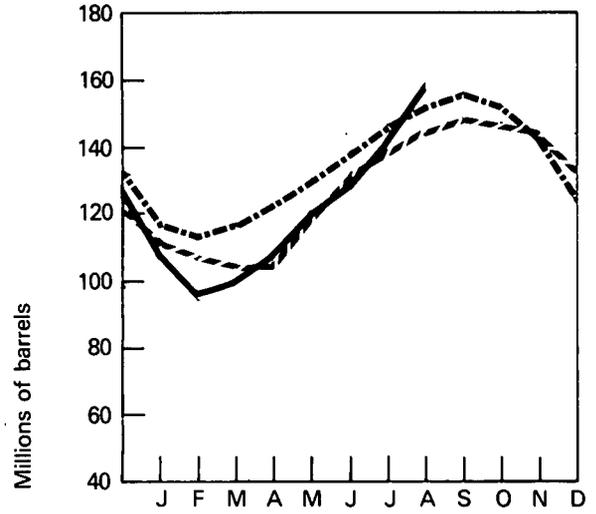
Production at Processing Plants



Imports



Stocks



- - - 1975 BOM  
 - · - · 1976 BOM  
 — 1977 BOM, EIA

# U.S. Petroleum Supply and Demand

|   | 1976<br>Actual               |               |               |               |               |
|---|------------------------------|---------------|---------------|---------------|---------------|
|   | 1st Qtr.                     | 2nd Qtr.      | 3rd Qtr.      | 4th Qtr.      | Year          |
|   | Thousands of barrels per day |               |               |               |               |
| <b>Supply</b>                             |                              |               |               |               |               |
| Crude oil and lease condensate production | 8,194                        | 8,131         | 8,120         | 8,033         | 8,119         |
| Natural gas plant liquids production      | 1,612                        | 1,604         | 1,597         | 1,604         | 1,604         |
| Other hydrocarbon supply                  | 37                           | 38            | 37            | 40            | 38            |
| Crude oil imports                         | 4,520                        | 5,023         | 5,740         | 5,856         | 5,287         |
| Refined products imports*                 | 2,140                        | 1,771         | 1,987         | 2,130         | 2,008         |
| Total new supply                          | <u>16,503</u>                | <u>16,567</u> | <u>17,481</u> | <u>17,663</u> | <u>17,056</u> |
| Processing gain                           | 485                          | 495           | 469           | 460           | 478           |
| Stock change—all oils                     | -797                         | +363          | +1,065        | -866          | -58           |
| Total net supply                          | <u>17,785</u>                | <u>16,699</u> | <u>16,885</u> | <u>18,989</u> | <u>17,592</u> |
| Unaccounted for crude oil**               | +204                         | +8            | +42           | +101          | +89           |
| <b>Demand</b>                             |                              |               |               |               |               |
| Crude oil and refined products exports    | 192                          | 204           | 220           | 274           | 223           |
| Crude oil losses                          | 14                           | 14            | 15            | 15            | 14            |
| Domestic demand for refined products***   | <u>17,783</u>                | <u>16,489</u> | <u>16,692</u> | <u>18,801</u> | <u>17,444</u> |
| Total demand                              | <u>17,989</u>                | <u>16,707</u> | <u>16,927</u> | <u>19,090</u> | <u>17,681</u> |

|   | 1977<br>Actual               |               |               |               |               |
|---|------------------------------|---------------|---------------|---------------|---------------|
|   | 1st Qtr.                     | 2nd Qtr.      | 3rd Qtr.      | 4th Qtr.      | Year          |
|   | Thousands of barrels per day |               |               |               |               |
| <b>Supply</b>                             |                              |               |               |               |               |
| Crude oil and lease condensate production | 7,956                        | 8,042         | 8,231         | 8,629         | 8,217         |
| Natural gas plant liquids production      | 1,609                        | 1,633         | 1,596         | 1,629         | 1,617         |
| Other hydrocarbon supply                  | 43                           | 54            | 52            | 52            | 50            |
| Crude oil imports                         | 6,520                        | 6,867         | 6,666         | 6,207         | 6,565         |
| Refined products imports*                 | 2,813                        | 1,836         | 2,078         | 1,857         | 2,143         |
| Total new supply                          | <u>18,941</u>                | <u>18,432</u> | <u>18,623</u> | <u>18,374</u> | <u>18,592</u> |
| Processing gain                           | 521                          | 450           | 552           | 526           | 512           |
| Stock change—all oils                     | -278                         | +1,190        | +1,095        | -57           | +543          |
| Total net supply                          | <u>19,740</u>                | <u>17,692</u> | <u>18,080</u> | <u>18,957</u> | <u>18,561</u> |
| Unaccounted for crude oil**               | +114                         | +88           | -16           | NA            | NA            |
| <b>Demand</b>                             |                              |               |               |               |               |
| Crude oil and refined products exports    | 210                          | 245           | 242           | NA            | NA            |
| Crude oil losses                          | 15                           | 15            | 16            | NA            | NA            |
| Domestic demand for refined products***   | <u>19,629</u>                | <u>17,520</u> | <u>17,806</u> | <u>18,751</u> | <u>18,422</u> |
| Total demand                              | <u>19,854</u>                | <u>17,780</u> | <u>18,064</u> | <u>NA</u>     | <u>NA</u>     |

\*Includes plant condensate and unfinished oils.

\*\*Balancing item resulting from statistical inconsistencies.

\*\*\*Includes international bunkers.

NA=Not available.

Note: 3rd and 4th Quarter and Year 1977 data are preliminary.

Sources: 1976—Bureau of Mines (BOM) *Mineral Industry Surveys*, "PAD Districts Supply/Demand;" 1st and 2nd Quarter 1977—BOM *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" 3rd and 4th Quarters 1977—BOM *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" EIA "Monthly Petroleum Statistics Report," and EIA estimates.

# Strategic Petroleum Reserve

|      |           | Crude Oil Deliveries* | Cumulative Deliveries | Average Delivered Price | Cumulative Average Delivered Price |
|------|-----------|-----------------------|-----------------------|-------------------------|------------------------------------|
|      |           | Barrels               |                       | Dollars per barrel      |                                    |
| 1977 | July      | 414,172               | 414,172               | 13.565                  | 13.565                             |
|      | August    | 0                     | 414,172               | —                       | —                                  |
|      | September | 674,961               | 1,089,133             | 13.59                   | 13.58                              |
|      | October   | 1,539,263             | 2,628,396             | 14.22                   | 13.95                              |
|      | November  | 2,434,463             | 5,062,859             | 14.50                   | 14.21                              |
|      | December  | 2,455,466             | 7,518,325             | 14.58                   | 14.33                              |
| 1978 | January   | 3,531,481             | 11,049,806            | 14.46                   | 14.37                              |

\*Does not include cargoes in transit at the end of the reporting month, nor cargoes that discharged into Caribbean transshipment terminals for eventual transfer to SPRO terminals.

Source: U.S. Department of Energy, Strategic Petroleum Reserve Office.

## Natural Gas

Consumption of natural gas in January 1978 was an estimated 1.0 percent less than that in January 1977 when record low temperatures were experienced in a number of areas east of the Rocky Mountains. (January 1978 heating degree-days, although 14 percent above normal, were 12 percent less than during January 1977.)

Marketed production of natural gas in January was an estimated 1.8 percent less than in January 1977. On the other hand, imports were an estimated 4.7 percent higher than for the previous January.

Net withdrawals of natural gas from underground storage reservoirs in January 1978 were slightly greater than the previous record high level of January 1977, but working gas\* in storage at the end of January exceeded that available a year earlier by 41.3 percent. This was the result of successful efforts to rebuild the level of underground storage following the heavy drawdown during the 1976-77 winter season. Net storage injections during the April-October 1977 storage injection season were 25.3 percent above those of the previous injection season, bringing the working gas storage inventory to a record high level (2.9 trillion cubic feet) at the beginning of the 1977-78 winter heating season (November 1, 1977). Net withdrawals during the first 2 months of the 1977-78 winter heating season were 38.3 percent lower than the previous year's withdrawals because of milder weather.

Domestic producer sales to major interstate pipeline companies in November 1977 were down 1.3 percent from those in November 1976. Sales during the first 11 months of 1977 were 2.9 percent below the level for the same period of 1976.

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\*Gas available for withdrawal.

# Natural Gas

|                    |              | Domestic<br>Consumption* | Marketed<br>Production* | Domestic Producer Sales to<br>Major Interstate Pipelines | Imports       |
|--------------------|--------------|--------------------------|-------------------------|--|---------------|
| Billion cubic feet |              |                          |                         |  |               |
| 1972               | <b>TOTAL</b> | <b>22,102</b>            | <b>22,532</b>           | <b>12,429</b>  | <b>1,019</b>  |
| 1973               | <b>TOTAL</b> | <b>22,049</b>            | <b>22,648</b>           | <b>12,067</b>  | <b>1,033</b>  |
| 1974               | <b>TOTAL</b> | <b>21,223</b>            | <b>21,601</b>           | <b>11,462</b>  | <b>959</b>    |
| 1975               | January      | 2,248                    | 1,778                   | 950  | 81            |
|                    | February     | 1,939                    | 1,640                   | 867  | 75            |
|                    | March        | 1,903                    | 1,740                   | 948  | 83            |
|                    | April        | 1,575                    | 1,677                   | 906  | 82            |
|                    | May          | 1,331                    | 1,689                   | 898  | 80            |
|                    | June         | 1,257                    | 1,634                   | 859  | 76            |
|                    | July         | 1,313                    | 1,677                   | 873  | 80            |
|                    | August       | 1,369                    | 1,677                   | 882  | 75            |
|                    | September    | 1,370                    | 1,603                   | 836  | 74            |
|                    | October      | 1,544                    | 1,646                   | 877  | 80            |
|                    | November     | 1,640                    | 1,618                   | 853  | 81            |
|                    | December     | 2,049                    | 1,730                   | 903  | 86            |
|                    | <b>TOTAL</b> | <b>19,538</b>            | <b>20,109</b>           | <b>10,652</b>  | <b>953</b>    |
| 1976               | January      | 2,291                    | 1,751                   | 894  | 84            |
|                    | February     | R1,938                   | 1,647                   | 850  | 78            |
|                    | March        | R1,721                   | 1,714                   | 894  | 85            |
|                    | April        | R1,508                   | 1,623                   | 849  | 86            |
|                    | May          | R1,434                   | 1,673                   | 860  | 82            |
|                    | June         | 1,335                    | 1,640                   | 815  | 76            |
|                    | July         | R1,372                   | 1,676                   | 822  | 73            |
|                    | August       | 1,317                    | 1,636                   | 810  | 77            |
|                    | September    | 1,302                    | 1,565                   | 793  | 74            |
|                    | October      | R1,621                   | 1,639                   | 840  | 85            |
|                    | November     | R1,875                   | 1,635                   | 841  | 81            |
|                    | December     | R2,232                   | 1,753                   | 872  | 83            |
|                    | <b>TOTAL</b> | <b>R19,946</b>           | <b>19,952</b>           | <b>10,140</b>  | <b>964</b>    |
| 1977               | January      | 2,394                    | 1,742                   | 848  | 85            |
|                    | February     | R1,793                   | R1,668                  | 807  | 85            |
|                    | March        | R1,693                   | R1,742                  | 910  | 106           |
|                    | April        | R1,408                   | R1,634                  | 830  | 82            |
|                    | May          | R1,355                   | R1,691                  | 830  | 84            |
|                    | June         | R1,311                   | R1,643                  | 789  | 76            |
|                    | July         | R1,304                   | R1,669                  | 801  | 74            |
|                    | August       | 1,343                    | 1,639                   | 784  | 78            |
|                    | September    | 1,403                    | 1,587                   | 741  | 78            |
|                    | October      | R1,496                   | 1,621                   | 831  | R85           |
|                    | November     | R1,660                   | R**1,590                | 830  | R86           |
|                    | December     | R2,080                   | R**1,700                | NA   | R**90         |
|                    | <b>TOTAL</b> | <b>R19,240</b>           | <b>R19,926</b>          | <b>9,001</b><br>(11 months)                              | <b>R1,009</b> |
| 1978               | January      | 2,370                    | **1,710                 | NA   | **89          |

\*See Explanatory Note 5.

\*\*Preliminary data.

R=Revised data.

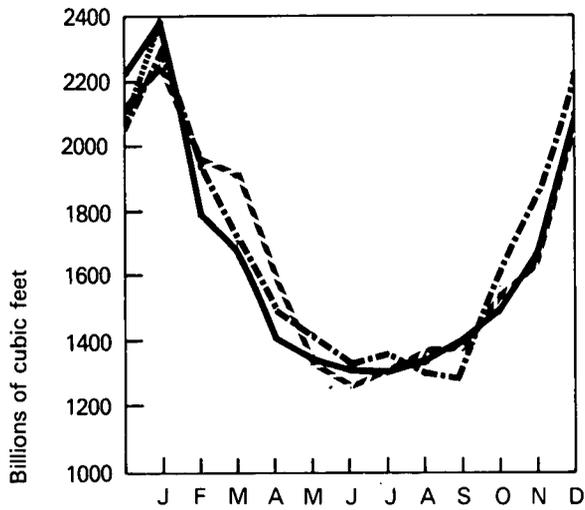
NA=Not available.

Note: All monthly Domestic Consumption data are estimated.

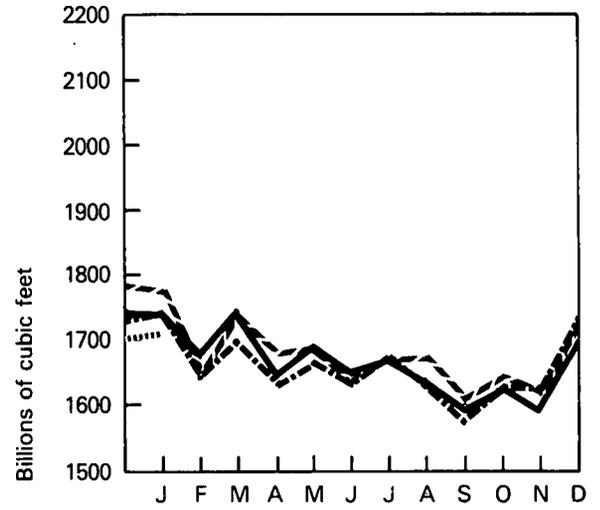
Sources: Domestic Consumption—Bureau of Mines, "Minerals and Materials/A Monthly Survey" (advance estimates are subject to revision prior to publication by BOM); Marketed Production and Imports—Bureau of Mines *Mineral Industry Surveys*, "Natural Gas, Monthly" through June 1977 and EIA *Energy Data Reports*, "Natural Gas, Monthly" for July 1977 forward; Domestic Producer Sales—Federal Power Commission Form 11, "Monthly Statement of Gas Operating Revenues, Sales."

# Natural Gas

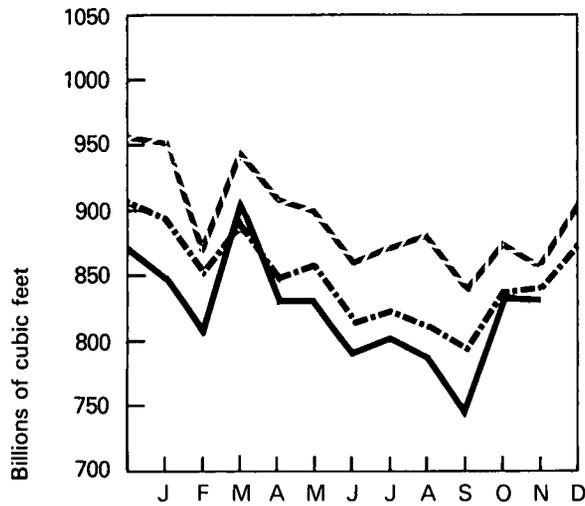
Domestic Consumption



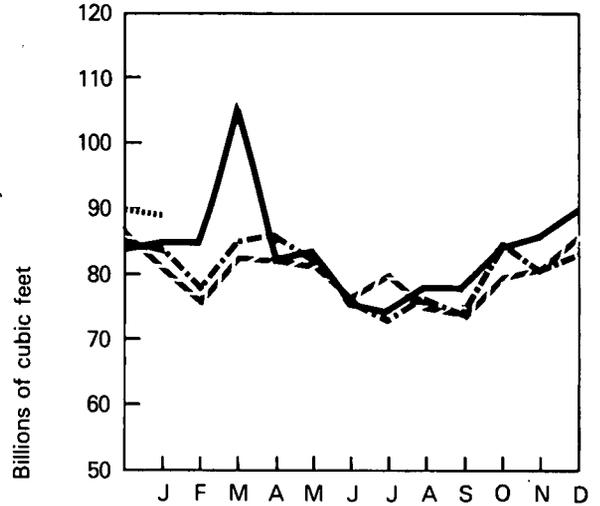
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



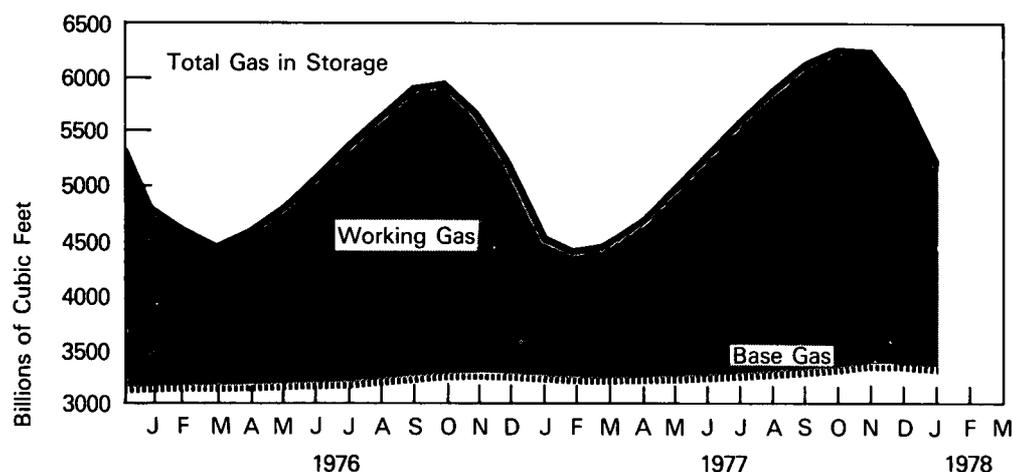
- 1975
- - - 1976
- 1977
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# Natural Gas (Continued)

## Natural Gas in Underground Storage\*

|                    |           | Total Gas<br>in<br>Storage | Base<br>Gas | Working<br>Gas | Storage<br>Injections | Storage<br>Withdrawals | Net<br>Storage<br>Injections |
|--------------------|-----------|----------------------------|-------------|----------------|-----------------------|------------------------|------------------------------|
| Billion cubic feet |           |                            |             |                |                       |                        |                              |
| <b>1975</b>        | September | 5,553                      | 3,085       | 2,468          | 220                   | 31                     | 189                          |
|                    | October   | 5,706                      | 3,107       | 2,599          | 190                   | 51                     | 139                          |
|                    | November  | 5,691                      | 3,150       | 2,541          | 98                    | 146                    | -48                          |
|                    | December  | 5,358                      | 3,150       | 2,208          | 38                    | 371                    | -333                         |
| <b>1976</b>        | January   | 4,817                      | 3,169       | 1,648          | 17                    | 526                    | -509                         |
|                    | February  | 4,617                      | 3,173       | 1,444          | 66                    | 265                    | -199                         |
|                    | March     | 4,496                      | 3,170       | 1,326          | 79                    | 200                    | -121                         |
|                    | April     | 4,607                      | 3,184       | 1,423          | 185                   | 75                     | 110                          |
|                    | May       | 4,827                      | 3,190       | 1,637          | 245                   | 24                     | 221                          |
|                    | June      | 5,116                      | 3,208       | 1,908          | 304                   | 27                     | 277                          |
|                    | July      | 5,412                      | 3,220       | 2,192          | 301                   | 6                      | 295                          |
|                    | August    | 5,698                      | 3,251       | 2,447          | 298                   | 17                     | 281                          |
|                    | September | 5,946                      | 3,296       | 2,650          | 259                   | 22                     | 237                          |
|                    | October   | 5,966                      | 3,302       | 2,664          | 135                   | 116                    | 19                           |
|                    | November  | 5,713                      | 3,305       | 2,408          | 40                    | 291                    | -251                         |
|                    | December  | 5,231                      | 3,310       | 1,921          | 23                    | 505                    | -482                         |
| <b>1977</b>        | January   | 4,580                      | 3,293       | 1,287          | 18                    | 670                    | -652                         |
|                    | February  | 4,446                      | 3,283       | 1,163          | 101                   | 235                    | -134                         |
|                    | March     | 4,501                      | 3,286       | 1,215          | 187                   | 132                    | 55                           |
|                    | April     | 4,713                      | 3,286       | 1,427          | 256                   | 43                     | 213                          |
|                    | May       | 5,024                      | 3,293       | 1,731          | 329                   | 17                     | 312                          |
|                    | June      | 5,330                      | 3,300       | 2,030          | 317                   | 12                     | 305                          |
|                    | July      | 5,665                      | 3,317       | 2,348          | 348                   | 15                     | 333                          |
|                    | August    | 5,945                      | 3,346       | 2,599          | 290                   | 21                     | 269                          |
|                    | September | 6,188                      | 3,364       | 2,824          | 262                   | 2                      | 260                          |
|                    | October   | 6,302                      | 3,373       | 2,929          | 157                   | 44                     | 113                          |
|                    | November  | 6,224                      | 3,403       | 2,821          | 84                    | 160                    | -76                          |
|                    | December  | 5,848                      | 3,390       | 2,458          | 41                    | 417                    | -376                         |
| <b>1978</b>        | January   | 5,192                      | 3,374       | 1,818          | 21                    | 677                    | -655                         |

### Gas in Storage



\*See Explanatory Note 6.

Sources: Federal Energy Administration Form G318-M-O and Federal Power Commission Form 8 "Underground Gas Storage Report."

## Coal

The labor strike by members of the United Mine Workers of America (UMWA) against the Bituminous Coal Operators of America (BCOA), which began on December 6, 1977, had been in effect for 85 days by the end of February 1978—the longest coal strike on record. Bituminous coal and lignite production continued to decline in January to 25.1 million tons from 32.1 million tons in December. Total coal production for December and January was approximately 46 percent below the output for the same months a year earlier. Production from mines not affected by the strike (mainly in the West) increased moderately during the first 3 weeks of February as weather conditions improved.

Domestic consumption of bituminous coal and lignite was 53.7 million tons in December, up 6.9 percent over consumption in November. Total coal consumption for 1977 was 619.6 million tons, 3.5 percent greater than in 1976. Electric utility coal consumption\* was 41.1 million tons in December 1977, down from 41.5 million tons in December 1976. Total utility coal consumption for the year, however, increased 6.2 percent from the 1976 level to 474.8 million tons. A decline in steel production in 1977 resulted in a decline in consumption for coking coal. Coal consumption at coke plants in 1977 totaled 77.4 million tons, down 6.9 million tons (8.2 percent). Coal consumption in the general industrial sector totaled 57.1 million tons in 1977, slightly below the 57.8 million tons consumed in 1976.

Stocks of bituminous coal and lignite, which were at record levels at the start of the strike, declined 20.5 million tons by the end of December. Electric utility stocks\* declined from 147.1 million tons on November 30 to 131.0 million tons on December 31. Coal stocks at steel company coke plants were depleted by 2.5 million tons during December—from 15.5 million tons to 13.0 million tons. Coal stocks held by general industry were reduced by 1.5 million tons. There were no reported shortages of coal during December that could be directly attributed to the strike.

Total coal exports in 1977 declined to 53.7 million tons from 59.4 million tons in 1976. In 1977, Canada replaced Japan as the principal

\*Does not include anthracite or coke consumption/stocks.

U.S. foreign market for coal with a 32.0-percent share of total U.S. coal exports. Shipments of coal to Japan and Europe accounted for 29.6 and 27.8 percent, respectively.

# Bituminous and Lignite

|                         |              | Domestic<br>Consumption* | Production*    | Exports        | Stocks**        |
|-------------------------|--------------|--------------------------|----------------|----------------|-----------------|
| Thousands of short tons |              |                          |                |                |                 |
| <b>1972</b>             | <b>TOTAL</b> | <b>516,776</b>           | <b>595,386</b> | <b>55,997</b>  | <b>R115,372</b> |
| <b>1973</b>             | <b>TOTAL</b> | <b>556,022</b>           | <b>591,738</b> | <b>R52,870</b> | <b>103,022</b>  |
| <b>1974</b>             | <b>TOTAL</b> | <b>552,709</b>           | <b>603,406</b> | <b>59,926</b>  | <b>95,528</b>   |
| <b>1975</b>             | January      | 49,841                   | 55,610         | 4,254          | 95,512          |
|                         | February     | 45,699                   | 51,135         | 4,470          | 97,028          |
|                         | March        | 47,202                   | 51,910         | 5,653          | 97,832          |
|                         | April        | 43,537                   | 56,330         | 6,159          | 102,663         |
|                         | May          | 42,658                   | 57,045         | 7,011          | 109,666         |
|                         | June         | 44,777                   | 55,730         | 6,269          | 114,857         |
|                         | July         | 47,454                   | 45,560         | 4,691          | 109,133         |
|                         | August       | 49,190                   | 51,160         | 5,859          | 108,522         |
|                         | September    | 44,032                   | 56,060         | 4,529          | 111,922         |
|                         | October      | 44,929                   | 60,030         | 4,647          | 120,344         |
|                         | November     | 45,946                   | 54,655         | 7,593          | 125,808         |
|                         | December     | 51,036                   | 53,213         | 4,534          | 127,115         |
|                         | <b>TOTAL</b> | <b>556,301</b>           | <b>648,438</b> | <b>65,669</b>  |                 |
| <b>1976</b>             | January      | R52,932                  | 52,568         | 3,697          | R119,220        |
|                         | February     | R46,832                  | 53,773         | 3,050          | R119,004        |
|                         | March        | R48,624                  | 60,918         | 3,979          | R123,471        |
|                         | April        | R46,415                  | 59,145         | 5,780          | R128,393        |
|                         | May          | R46,681                  | 57,934         | 5,667          | R136,013        |
|                         | June         | R48,445                  | 59,680         | 6,569          | R140,144        |
|                         | July         | R51,717                  | 44,318         | 4,880          | R129,661        |
|                         | August       | R52,082                  | 53,622         | 4,223          | R123,853        |
|                         | September    | R47,689                  | 60,634         | 5,614          | R129,878        |
|                         | October      | R49,312                  | 58,899         | 5,871          | R133,624        |
|                         | November     | R51,877                  | 58,780         | 5,451          | R135,019        |
|                         | December     | R56,144                  | 58,414         | 4,625          | R133,555        |
|                         | <b>TOTAL</b> | <b>R598,750</b>          | <b>678,685</b> | <b>59,406</b>  |                 |
| <b>1977</b>             | January      | R56,561                  | 44,555         | 2,143          | R118,116        |
|                         | February     | R50,033                  | 50,365         | 3,079          | R114,363        |
|                         | March        | R50,278                  | 65,020         | 3,390          | R122,593        |
|                         | April        | R46,290                  | 58,893         | 5,637          | R129,878        |
|                         | May          | R49,120                  | 60,799         | 5,673          | R137,673        |
|                         | June         | R51,690                  | 61,078         | 6,019          | R145,914        |
|                         | July         | R56,141                  | 47,785         | 5,158          | R137,463        |
|                         | August       | R54,758                  | 55,920         | 4,279          | 136,832         |
|                         | September    | R50,622                  | 65,505         | 5,037          | 144,953         |
|                         | October      | R50,191                  | 64,415         | 4,871          | 158,164         |
|                         | November     | R50,245                  | 65,545         | R4,491         | R173,063        |
|                         | December     | 53,687                   | 32,120         | 3,910          | 152,562         |
|                         | <b>TOTAL</b> | <b>619,616</b>           | <b>672,000</b> | <b>53,687</b>  |                 |
| <b>1978</b>             | January      | NA                       | 25,118         | NA             | NA              |

\*See Explanatory Note 7.

\*\*Total stocks held by utilities, industrial consumers, and retail dealers at end of year or month.

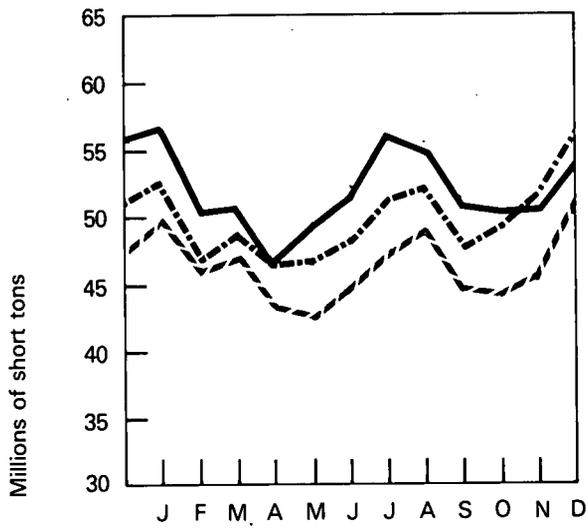
R=Revised data.

NA=Not available.

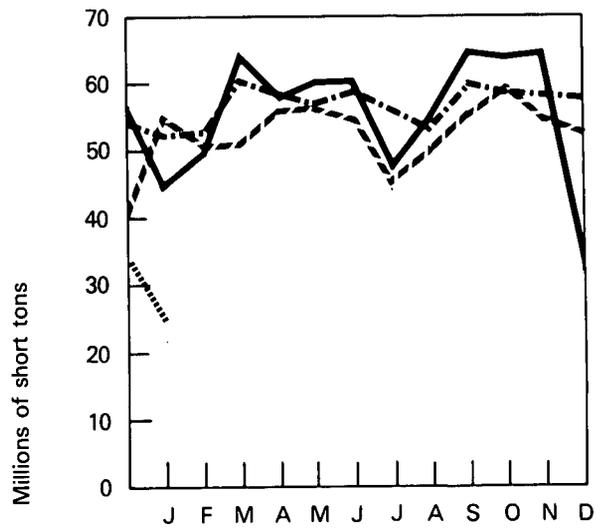
Source: Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report" through September 1977; and EIA *Energy Data Reports*, "Weekly Coal Report" for October 1977 forward.

# Bituminous and Lignite

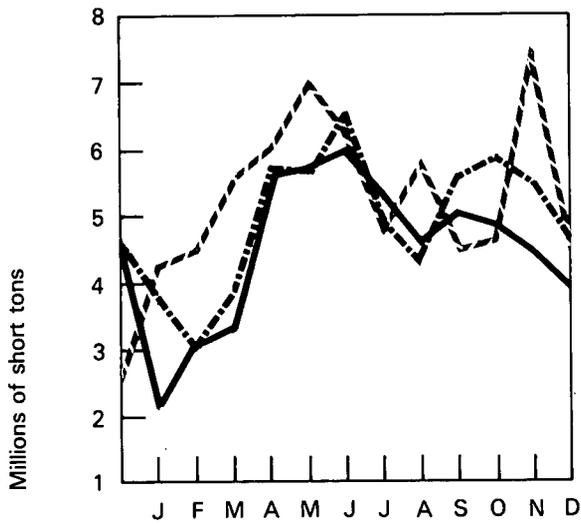
## Domestic Consumption



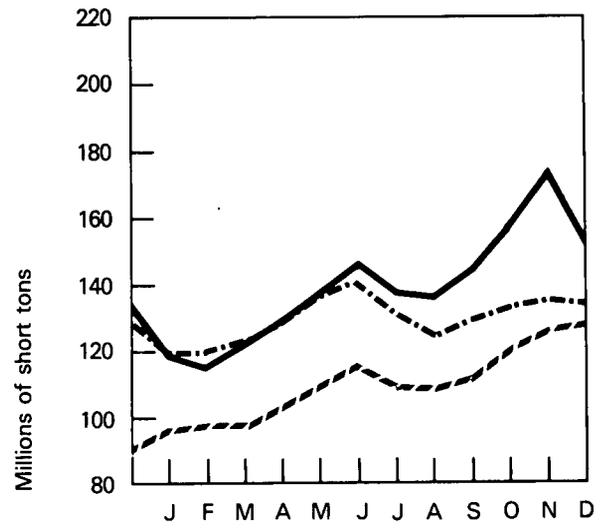
## Production



## Exports



## Stocks

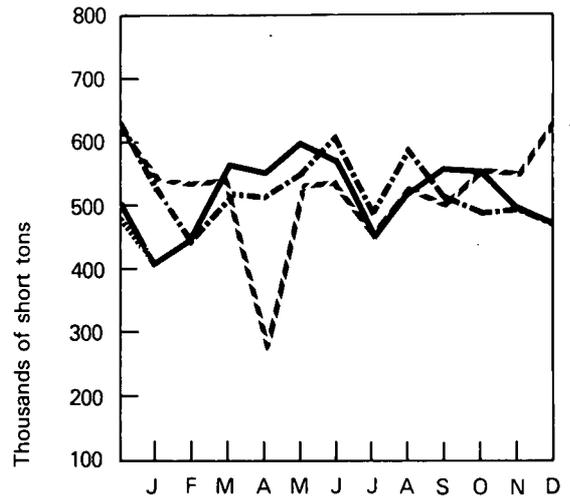


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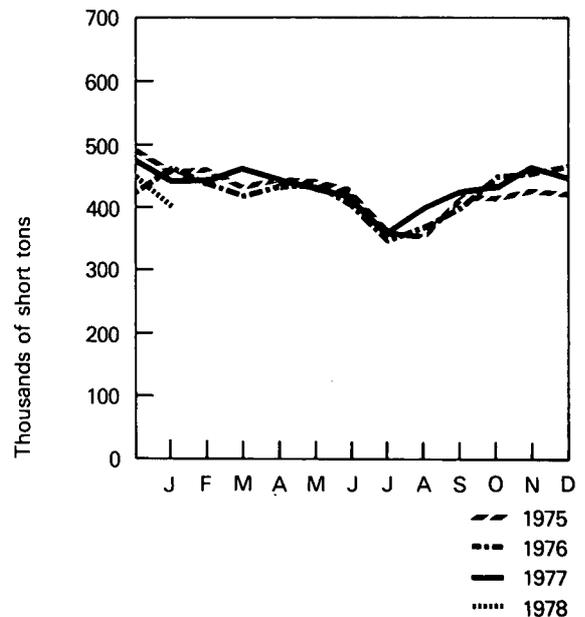
# Anthracite

|                         |              | Production    | Apparent Domestic Consumption |
|-------------------------|--------------|---------------|-------------------------------|
| Thousands of short tons |              |               |                               |
| <b>1972</b>             | <b>TOTAL</b> | <b>7,106</b>  | <b>5,915</b>                  |
| <b>1973</b>             | <b>TOTAL</b> | <b>6,830</b>  | <b>5,671</b>                  |
| <b>1974</b>             | <b>TOTAL</b> | <b>6,617</b>  | <b>5,448</b>                  |
| <b>1975</b>             | January      | 540           | 459                           |
|                         | February     | 535           | 465                           |
|                         | March        | 544           | 435                           |
|                         | April        | 270           | 450                           |
|                         | May          | 535           | 445                           |
|                         | June         | 544           | 430                           |
|                         | July         | 455           | 360                           |
|                         | August       | 535           | 356                           |
|                         | September    | 500           | 425                           |
|                         | October      | 560           | 420                           |
|                         | November     | 555           | 435                           |
|                         | December     | 630           | 428                           |
|                         | <b>TOTAL</b> | <b>6,203</b>  | <b>5,108</b>                  |
| <b>1976</b>             | January      | R525          | 460                           |
|                         | February     | 440           | 430                           |
|                         | March        | R525          | 420                           |
|                         | April        | R520          | 435                           |
|                         | May          | 555           | 440                           |
|                         | June         | R610          | 400                           |
|                         | July         | R490          | 350                           |
|                         | August       | R590          | 375                           |
|                         | September    | R515          | 400                           |
|                         | October      | R490          | 455                           |
|                         | November     | R493          | R400                          |
|                         | December     | R475          | 475                           |
|                         | <b>TOTAL</b> | <b>R6,228</b> | <b>R5,040</b>                 |
| <b>1977</b>             | January      | 400           | 440                           |
|                         | February     | 450           | 450                           |
|                         | March        | 570           | 470                           |
|                         | April        | 550           | 450                           |
|                         | May          | 600           | 440                           |
|                         | June         | 570           | 420                           |
|                         | July         | 450           | 360                           |
|                         | August       | 525           | 400                           |
|                         | September    | 560           | 430                           |
|                         | October      | 550           | 435                           |
|                         | November     | 500           | 470                           |
|                         | December     | 475           | 450                           |
|                         | <b>TOTAL</b> | <b>6,200</b>  | <b>5,215</b>                  |
| <b>1978</b>             | January      | 405           | 400                           |

Production



Apparent Domestic Consumption



Source: Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report" through September 1977; and EIA *Energy Data Reports*, "Weekly Coal Report" for October 1977 forward.

## Electric Utilities

December 1977 production of electricity by utilities totaled 183.9 billion kilowatt hours, about the same as production in December 1976. Total production during 1977 was 2.1 trillion kilowatt hours, 4.2 percent above the 1976 output. Edison Electric Institute has preliminarily estimated January 1978 electricity generation at 197.3 billion kilowatt hours.

Electric utility consumption of coal,\* oil, and gas during December 1977 was 41.2 million tons, 56.6 million barrels, and 221.0 billion cubic feet, which represents a decrease of 1.0 percent and 4.9 percent and an increase of 2.8 percent, respectively, when compared with consumption levels for the same month in 1976. During 1977, utility consumption of all fossil fuels increased; coal was up 6.4 percent, oil was up 12.2 percent, and natural gas was up 3.7 percent. The increase in natural gas consumption is significant, as it was the first since 1976. The increase occurred mainly in the Southwestern and Pacific Coast States where normal supplies of hydroelectric power were drastically reduced by the drought.

The coal strike that began on December 6, 1977, resulted in a curtailment of coal deliveries to powerplants; coal stocks at coal-fired plants\* on December 31, 1977, were diminished to 133.3 million tons from the record high 149.7-million-ton level of the previous month. This represented an increase of 13.5 percent over the stock level for the same period of 1976, however. Oil stocks on December 31, 1977, were 144.1 million barrels, up 18.4 percent from the stock level for the same month a year earlier.

Sales of electricity to ultimate industrial customers during October 1977 totaled 66.4 billion kilowatt hours, 3.8 percent above the level for October 1976. Sales to ultimate residential customers rose 8.8 percent to 48.7 billion kilowatt hours. Sales to ultimate commercial customers totaled 36.5 billion kilowatt hours, up 4.5 percent from the level 1 year earlier.

The primary causes of the increase in ultimate industrial sales of electricity are a 6.3-percent

increase in industrial production\*\* coupled with a 4.5-percent increase in the number of industrial customers reported by Class A and B utilities.\*\*\* The sharp increase in ultimate residential sales is largely due to an 8.3-percent rise in the number of Class A and B residential electricity customers. A major factor affecting the growth in ultimate commercial sales was a 4.8-percent increase in the number of Class A and B commercial electricity customers.

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\*Utility coal consumption/stocks include bituminous and anthracite coal, lignite, and coke.

\*\*Industrial production is based upon information obtained from the Federal Reserve Bulletin.

\*\*\*See Explanatory Note 8.

# Electric Utilities

## Net Electricity Production

|                            |              | Coal            | Oil             | Gas             | Nuclear         | Hydro-<br>electric | Other*        | Total             |
|----------------------------|--------------|-----------------|-----------------|-----------------|-----------------|--------------------|---------------|-------------------|
| Millions of kilowatt hours |              |                 |                 |                 |                 |                    |               |                   |
| <b>1971</b>                | <b>TOTAL</b> | <b>714,680</b>  | <b>218,622</b>  | <b>374,027</b>  | <b>38,105</b>   | <b>266,301</b>     | <b>859</b>    | <b>1,612,593</b>  |
| <b>1972</b>                | <b>TOTAL</b> | <b>772,857</b>  | <b>272,550</b>  | <b>375,735</b>  | <b>54,091</b>   | <b>272,612</b>     | <b>1,783</b>  | <b>1,749,629</b>  |
| <b>1973</b>                | <b>TOTAL</b> | <b>848,988</b>  | <b>312,940</b>  | <b>340,804</b>  | <b>83,334</b>   | <b>272,081</b>     | <b>2,294</b>  | <b>1,860,440</b>  |
| <b>1974</b>                | <b>TOTAL</b> | <b>829,973</b>  | <b>299,363</b>  | <b>320,055</b>  | <b>113,976</b>  | <b>301,032</b>     | <b>2,704</b>  | <b>1,867,103</b>  |
| <b>1975</b>                | January      | 74,860          | 30,608          | 19,689          | 13,938          | 25,011             | 219           | 164,325           |
|                            | February     | 67,301          | 24,905          | 18,049          | 12,733          | 23,886             | 206           | 147,080           |
|                            | March        | 69,188          | 23,111          | 20,099          | 14,882          | 27,970             | 231           | 155,481           |
|                            | April        | 64,465          | 21,246          | 20,323          | 13,327          | 26,624             | 231           | 146,217           |
|                            | May          | 64,749          | 21,04           | 25,707          | 13,764          | 27,713             | 255           | 153,231           |
|                            | June         | 70,362          | 23,047          | 28,830          | 12,745          | 27,143             | 316           | 162,442           |
|                            | July         | 76,314          | 25,113          | 34,181          | 15,372          | 25,522             | 313           | 176,815           |
|                            | August       | 78,895          | 27,944          | 34,041          | 15,880          | 22,612             | 341           | 179,714           |
|                            | September    | 68,575          | 21,410          | 30,020          | 14,396          | 20,519             | 302           | 155,223           |
|                            | October      | 69,057          | 21,980          | 26,296          | 14,626          | 22,639             | 346           | 154,944           |
|                            | November     | 70,440          | 21,598          | 21,830          | 14,164          | 24,429             | 333           | 152,794           |
|                            | December     | 78,762          | 26,904          | 20,706          | 16,679          | 25,978             | 345           | 169,372           |
|                            | <b>TOTAL</b> | <b>852,968</b>  | <b>288,908</b>  | <b>299,772</b>  | <b>172,506</b>  | <b>300,047</b>     | <b>3,437</b>  | <b>1,917,638</b>  |
| <b>1976</b>                | January      | 83,707          | 32,214          | 19,895          | 16,099          | 26,070             | 344           | 178,329           |
|                            | February     | 73,532          | 24,767          | 19,163          | 14,377          | 24,521             | 323           | 156,683           |
|                            | March        | 76,570          | 25,420          | 21,282          | 13,993          | 26,563             | 346           | 164,174           |
|                            | April        | 72,571          | 23,299          | 21,867          | 10,982          | 24,137             | 312           | 153,168           |
|                            | May          | 72,512          | 21,794          | 25,319          | 11,929          | 25,516             | 300           | 157,370           |
|                            | June         | 76,939          | 25,103          | R29,715         | 15,757          | 25,563             | 314           | R173,391          |
|                            | July         | 83,294          | 26,997          | 32,032          | 17,709          | 26,064             | 338           | 186,434           |
|                            | August       | 84,222          | 28,248          | 31,394          | 18,363          | 23,843             | 336           | 186,406           |
|                            | September    | 75,384          | 23,608          | 28,058          | 17,290          | 20,369             | 327           | 165,036           |
|                            | October      | 76,955          | 24,168          | 23,918          | 17,355          | 21,042             | 319           | 163,757           |
|                            | November     | 81,702          | 30,060          | 21,119          | 16,134          | 19,805             | 293           | 169,113           |
|                            | December     | 87,220          | 34,130          | 20,897          | 21,115          | 20,220             | 332           | 183,914           |
|                            | <b>TOTAL</b> | <b>944,608</b>  | <b>319,808</b>  | <b>R294,659</b> | <b>191,103</b>  | <b>283,713</b>     | <b>3,884</b>  | <b>R2,037,775</b> |
| <b>1977</b>                | January      | 89,846          | 43,363          | R19,951         | 22,107          | 20,700             | 359           | R196,326          |
|                            | February     | 78,752          | 29,429          | 19,480          | 19,601          | 15,150             | 322           | 162,734           |
|                            | March        | 77,521          | 28,344          | 22,464          | 20,672          | 19,801             | 356           | 169,158           |
|                            | April        | 70,898          | 25,840          | 21,305          | 19,863          | 18,642             | 319           | 156,867           |
|                            | May          | 77,071          | 27,936          | 24,705          | 20,479          | 18,677             | 341           | 169,209           |
|                            | June         | 83,152          | R28,961         | R29,615         | 21,268          | 17,226             | 335           | R180,557          |
|                            | July         | 92,408          | R34,867         | 32,712          | 21,825          | 16,797             | 328           | R198,937          |
|                            | August       | 90,764          | 32,302          | 33,292          | 22,739          | 16,712             | 317           | 196,126           |
|                            | September    | 82,593          | 26,348          | 30,945          | 19,588          | 16,455             | 342           | 176,271           |
|                            | October      | 79,401          | R23,066         | R27,361         | 18,967          | R17,220            | 360           | R166,375          |
|                            | November     | R79,496         | R24,848         | R22,525         | 18,840          | R20,428            | 347           | R166,484          |
|                            | December     | R83,413         | R32,512         | R21,138         | R23,771         | R22,759            | R337          | R183,930          |
|                            | <b>TOTAL</b> | <b>R985,315</b> | <b>R357,816</b> | <b>R305,493</b> | <b>R249,720</b> | <b>R220,567</b>    | <b>R4,063</b> | <b>R2,122,974</b> |
| <b>1978</b>                | January      | NA              | NA              | NA              | 25,605          | NA                 | NA            | 197,282           |

(See chart on page 37)

\*Includes electricity produced from geothermal power, wood, and waste.

R=Revised data.

NA=Not available.

Source: Federal Power Commission Form 4, "Monthly Powerplant Report" through December 1977; Edison Electric Institute for January 1978 Total and Nuclear Regulatory Commission for January 1978 Nuclear.

# Electric Utilities (Continued)

## Fuel Consumption

|      |              | Coal                          | Oil             |  |                 | Gas                          |
|------|--------------|-------------------------------|-----------------|--|-----------------|------------------------------|
|      |              | Thousands<br>of short<br>tons | Steam*          | Gas Turbine/<br>Internal<br>Combustion** | Total           | Millions<br>of cubic<br>feet |
|      |              |                               |                 | Thousands of barrels                     |                 |                              |
| 1971 | <b>TOTAL</b> | <b>327,887</b>                | <b>362,186</b>  | <b>34,282</b>                            | <b>396,468</b>  | <b>3,975,971</b>             |
| 1972 | <b>TOTAL</b> | <b>352,392</b>                | <b>440,229</b>  | <b>53,463</b>                            | <b>493,692</b>  | <b>3,976,770</b>             |
| 1973 | <b>TOTAL</b> | <b>389,707</b>                | <b>513,127</b>  | <b>47,020</b>                            | <b>560,147</b>  | <b>3,659,388</b>             |
| 1974 | <b>TOTAL</b> | <b>392,423</b>                | <b>482,524</b>  | <b>53,721</b>                            | <b>536,245</b>  | <b>3,443,293</b>             |
| 1975 | January      | 35,843                        | 48,678          | 5,370                                    | 54,048          | 205,095                      |
|      | February     | 32,097                        | 39,794          | 3,750                                    | 43,544          | 188,922                      |
|      | March        | 32,793                        | 37,408          | 3,007                                    | 40,415          | 211,184                      |
|      | April        | 30,547                        | 34,702          | 2,335                                    | 37,037          | 214,250                      |
|      | May          | 30,574                        | 33,720          | 3,266                                    | 36,986          | 275,097                      |
|      | June         | 33,457                        | 36,825          | 4,118                                    | 40,943          | 307,901                      |
|      | July         | 36,567                        | 40,520          | 3,893                                    | 44,413          | 362,088                      |
|      | August       | 37,967                        | 44,565          | 4,755                                    | 49,320          | 360,199                      |
|      | September    | 32,609                        | 35,124          | 1,917                                    | 37,041          | 315,877                      |
|      | October      | 32,853                        | 36,137          | 1,893                                    | 38,030          | 275,266                      |
|      | November     | 33,333                        | 35,743          | 1,794                                    | 37,537          | 227,748                      |
|      | December     | 37,390                        | 43,724          | 3,090                                    | 46,814          | 213,957                      |
|      | <b>TOTAL</b> | <b>406,030</b>                | <b>466,940</b>  | <b>39,188</b>                            | <b>506,128</b>  | <b>3,157,584</b>             |
| 1976 | January      | 39,986                        | 51,114          | 4,974                                    | 56,088          | 206,528                      |
|      | February     | 34,965                        | 40,452          | 2,676                                    | 43,128          | 199,441                      |
|      | March        | 36,099                        | 41,154          | 2,800                                    | 43,954          | 222,765                      |
|      | April        | 33,805                        | 37,663          | 2,489                                    | 40,152          | 227,826                      |
|      | May          | 33,944                        | 35,651          | 2,220                                    | 37,871          | 266,632                      |
|      | June         | 36,381                        | 40,065          | 3,574                                    | 43,639          | 313,369                      |
|      | July         | 39,841                        | 43,143          | 4,084                                    | 47,227          | 337,640                      |
|      | August       | 40,330                        | 45,627          | 3,443                                    | 49,070          | 329,737                      |
|      | September    | 35,895                        | 38,245          | 2,526                                    | 40,771          | 295,071                      |
|      | October      | 36,783                        | 39,101          | 3,106                                    | 42,207          | 250,046                      |
|      | November     | 38,845                        | 47,346          | 4,971                                    | 52,317          | 217,362                      |
|      | December     | 41,582                        | 53,949          | 5,564                                    | 59,513          | 214,869                      |
|      | <b>TOTAL</b> | <b>448,456</b>                | <b>513,510</b>  | <b>42,427</b>                            | <b>555,937</b>  | <b>3,081,286</b>             |
| 1977 | January      | 43,255                        | 66,250          | R9,646                                   | 75,896          | R205,071                     |
|      | February     | 37,645                        | 47,606          | 3,206                                    | 50,812          | R200,405                     |
|      | March        | 37,284                        | 46,069          | 2,600                                    | 48,669          | R231,789                     |
|      | April        | 33,982                        | 42,138          | 2,294                                    | 44,432          | 223,326                      |
|      | May          | 37,159                        | 44,714          | 3,911                                    | 48,625          | 259,841                      |
|      | June         | 40,151                        | R46,140         | 4,414                                    | R50,554         | R310,682                     |
|      | July         | 44,977                        | 54,527          | R7,896                                   | 62,423          | R347,097                     |
|      | August       | 44,172                        | 51,783          | 4,815                                    | 56,598          | 350,772                      |
|      | September    | 40,168                        | 43,192          | 2,631                                    | 45,823          | R324,681                     |
|      | October      | R38,379                       | R38,014         | 1,950                                    | R39,973         | R284,872                     |
|      | November     | R38,724                       | R40,569         | R2,555                                   | R43,124         | R234,263                     |
|      | December     | R41,184                       | R52,573         | R4,029                                   | R56,602         | R220,957                     |
|      | <b>TOTAL</b> | <b>R477,080</b>               | <b>R573,575</b> | <b>R49,956</b>                           | <b>R623,531</b> | <b>R3,193,756</b>            |

\*Primarily residual fuel oil.

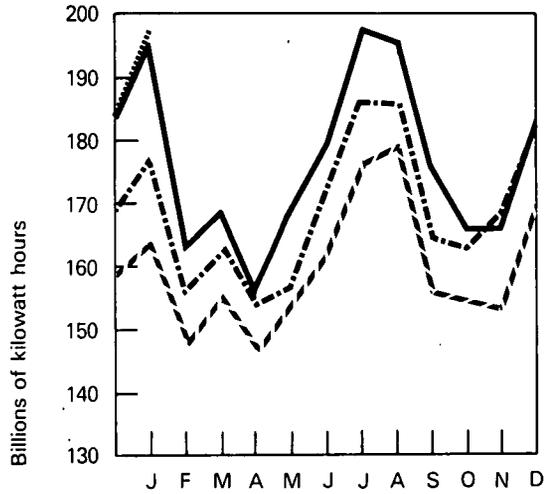
\*\*Primarily middle distillates.

R=Revised.

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

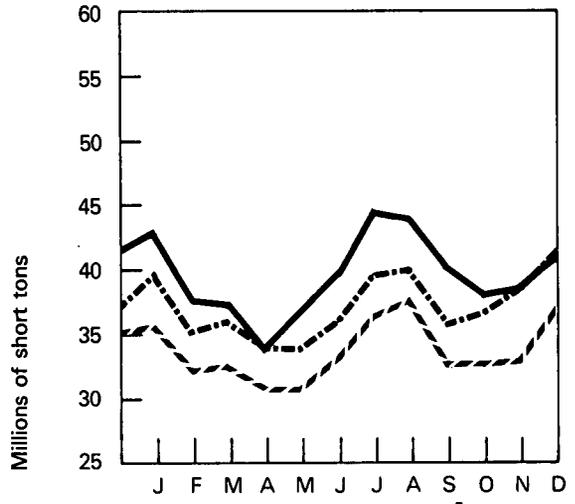
# Electric Utilities

Total Net Electricity Production

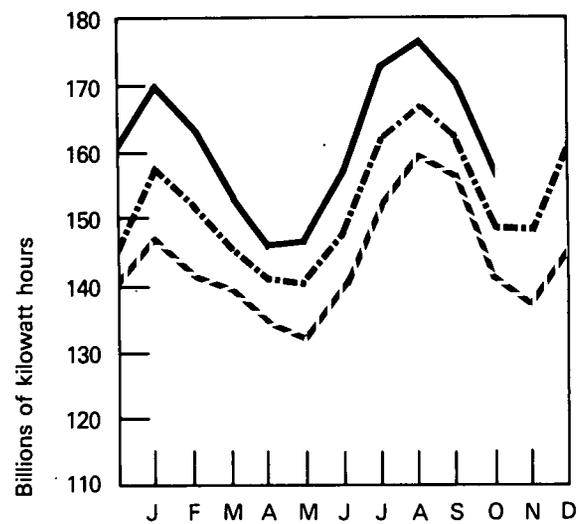


- 1975
- - - 1976
- 1977
- ..... 1978

Coal Consumption

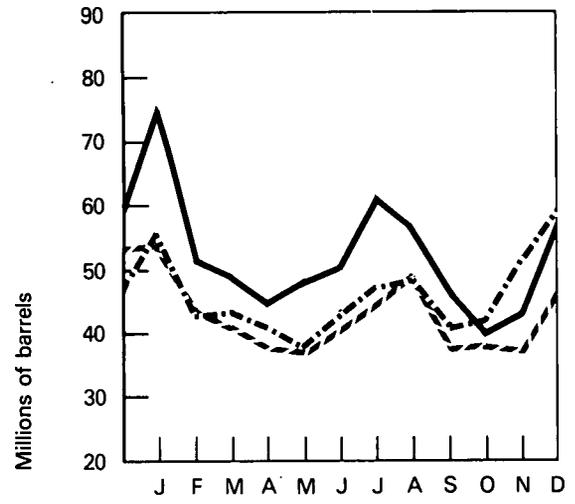


Total Electricity Sales

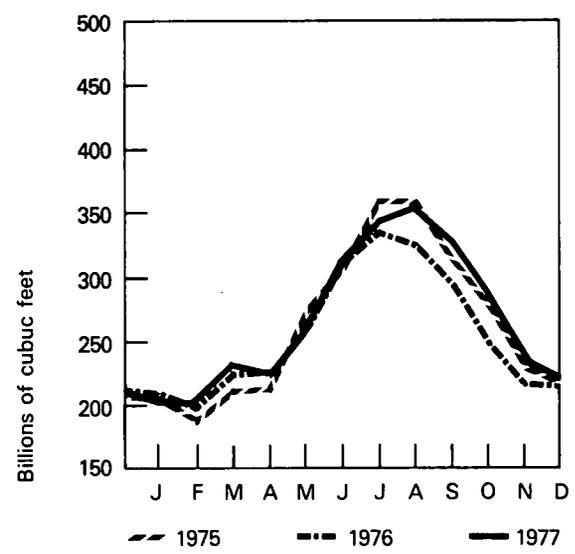


- 1975
- - - 1976
- 1977

Oil Consumption



Gas Consumption



- 1975
- - - 1976
- 1977

# Electric Utilities (Continued)

## Stocks at End of Month

|             |           | Coal                       | Oil                  |  |                   |
|-------------|-----------|----------------------------|----------------------|--|-------------------|
|             |           |                            | Steam*               | Gas Turbine/<br>Internal<br>Combustion** | Total             |
|             |           | Thousands<br>of short tons | Thousands of barrels |  |                   |
| <b>1971</b> |           | <b>***78,069</b>           | <b>***46,451</b>     | <b>***3,194</b>                          | <b>***49,645</b>  |
| <b>1972</b> |           | <b>***100,009</b>          | <b>***52,575</b>     | <b>***5,079</b>                          | <b>***57,654</b>  |
| <b>1973</b> |           | <b>***87,279</b>           | <b>***79,121</b>     | <b>***10,095</b>                         | <b>***89,216</b>  |
| <b>1974</b> |           | <b>***83,542</b>           | <b>***97,201</b>     | <b>***15,715</b>                         | <b>***112,916</b> |
| <b>1975</b> | January   | 82,088                     | 95,579               | 15,716                                   | 111,295           |
|             | February  | 80,972                     | 95,762               | 15,738                                   | 111,500           |
|             | March     | 81,885                     | 97,333               | 16,310                                   | 113,643           |
|             | April     | 86,829                     | 98,004               | 16,294                                   | 114,298           |
|             | May       | 93,869                     | 101,464              | 15,767                                   | 117,231           |
|             | June      | 98,031                     | 103,222              | 15,714                                   | 118,936           |
|             | July      | 94,278                     | 105,334              | 15,905                                   | 121,239           |
|             | August    | 94,213                     | 104,926              | 15,739                                   | 120,665           |
|             | September | 98,096                     | 109,678              | 16,635                                   | 126,313           |
|             | October   | 105,415                    | 112,107              | 16,774                                   | 128,881           |
|             | November  | 110,313                    | 113,231              | 17,110                                   | 130,341           |
|             | December  | 110,750                    | 108,358              | 16,886                                   | 125,244           |
| <b>1976</b> | January   | 105,518                    | 102,023              | 15,922                                   | 117,945           |
|             | February  | 104,874                    | 102,147              | 16,706                                   | 118,853           |
|             | March     | 108,450                    | 104,082              | 16,467                                   | 120,550           |
|             | April     | 112,862                    | 103,757              | 16,642                                   | 120,399           |
|             | May       | 119,611                    | 109,142              | 16,962                                   | 126,105           |
|             | June      | 123,048                    | 109,660              | 16,621                                   | 126,281           |
|             | July      | 115,204                    | 110,829              | 15,862                                   | 126,691           |
|             | August    | 110,752                    | 109,823              | 16,007                                   | 125,830           |
|             | September | 115,399                    | 112,965              | 17,059                                   | 130,024           |
|             | October   | 118,591                    | 114,437              | 16,954                                   | 131,391           |
|             | November  | 119,323                    | 111,137              | 15,517                                   | 126,655           |
|             | December  | R117,493                   | 106,744              | 14,980                                   | 121,724           |
| <b>1977</b> | January   | 106,183                    | 89,877               | 12,965                                   | 102,842           |
|             | February  | 103,262                    | 95,641               | 14,389                                   | R110,031          |
|             | March     | 109,620                    | 96,872               | R15,781                                  | R112,653          |
|             | April     | 115,915                    | 101,502              | 16,117                                   | 117,619           |
|             | May       | 122,834                    | 103,802              | R16,135                                  | 119,936           |
|             | June      | 128,817                    | R107,661             | 15,914                                   | R123,575          |
|             | July      | 123,367                    | 112,938              | R16,347                                  | 129,284           |
|             | August    | 123,856                    | 119,301              | 17,394                                   | 136,695           |
|             | September | 130,380                    | 125,065              | R18,161                                  | R143,226          |
|             | October   | R139,704                   | R128,158             | R19,420                                  | R147,579          |
|             | November  | R149,703                   | R129,813             | R19,273                                  | R149,085          |
|             | December  | 133,316                    | 124,752              | 19,391                                   | 144,143           |

\*Primarily residual fuel oil.

\*\*Primarily middle distillates.

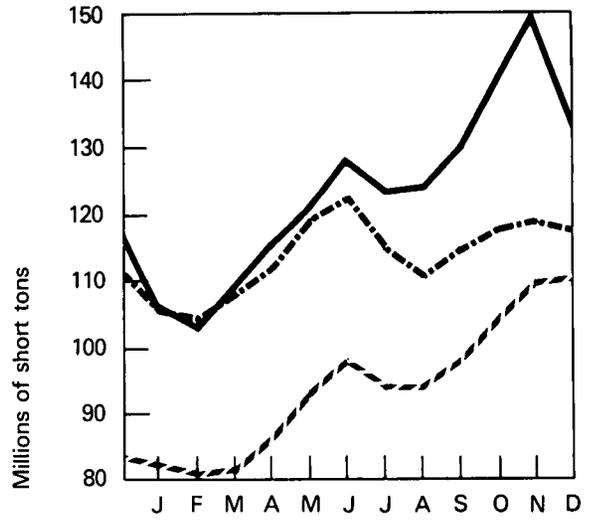
\*\*\*As of December 31.

R=Revised.

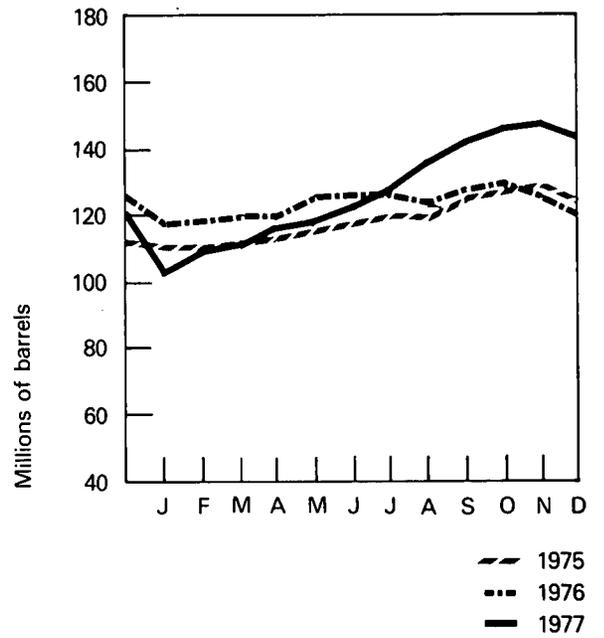
Source: Federal Power Commission Form 4, "Monthly Powerplant Report."

# Electric Utilities

## Coal Stocks



## Oil Stocks



# Electric Utilities (Continued)

## Electricity Sales\*

|                            |                             | Residential     | Commercial      | Industrial      | Other**        | Total             |
|----------------------------|-----------------------------|-----------------|-----------------|-----------------|----------------|-------------------|
| Millions of kilowatt hours |                             |                 |                 |                 |                |                   |
| <b>1972</b>                | <b>TOTAL</b>                | <b>538,609</b>  | <b>359,265</b>  | <b>640,978</b>  | <b>56,309</b>  | <b>1,595,161</b>  |
| <b>1973</b>                | <b>TOTAL</b>                | <b>579,231</b>  | <b>388,266</b>  | <b>686,085</b>  | <b>59,326</b>  | <b>1,712,909</b>  |
| <b>1974</b>                | <b>TOTAL</b>                | <b>578,184</b>  | <b>384,826</b>  | <b>684,875</b>  | <b>58,039</b>  | <b>1,705,924</b>  |
| <b>1975</b>                | January                     | 54,003          | 32,405          | 55,505          | 5,954          | 147,867           |
|                            | February                    | 50,219          | 31,459          | 54,328          | 5,544          | 141,550           |
|                            | March                       | 47,968          | 31,194          | 54,437          | 5,639          | 139,238           |
|                            | April                       | 44,762          | 30,473          | 53,910          | 5,269          | 134,414           |
|                            | May                         | 41,077          | 30,926          | 54,767          | 5,404          | 132,174           |
|                            | June                        | 45,766          | 35,210          | 55,369          | 5,384          | 141,729           |
|                            | July                        | 53,972          | 37,631          | 55,524          | 5,644          | 152,771           |
|                            | August                      | 57,291          | 38,576          | 57,868          | 5,709          | 159,444           |
|                            | September                   | 54,362          | 37,325          | 58,619          | 5,978          | 156,284           |
|                            | October                     | 43,024          | 32,817          | 58,815          | 5,745          | 140,401           |
|                            | November                    | 42,054          | 31,608          | 58,223          | 5,976          | 137,861           |
|                            | December                    | 50,213          | 32,596          | 57,433          | 5,907          | 146,149           |
|                            | <b>TOTAL</b>                | <b>584,711</b>  | <b>402,220</b>  | <b>674,798</b>  | <b>68,153</b>  | <b>1,729,882</b>  |
| <b>1976</b>                | January                     | 60,126          | 34,955          | 57,463          | 6,359          | 158,903           |
|                            | February                    | 54,264          | 33,809          | 58,064          | 5,855          | 151,992           |
|                            | March                       | 47,041          | 32,520          | 60,322          | 5,967          | 145,850           |
|                            | April                       | 43,563          | 31,813          | 59,967          | 5,386          | 140,729           |
|                            | May                         | 41,044          | 32,538          | 61,133          | 5,473          | 140,188           |
|                            | June                        | 44,131          | 35,325          | 62,654          | 5,371          | 147,481           |
|                            | July                        | 53,702          | 39,489          | 62,388          | 5,856          | 161,436           |
|                            | August                      | 57,349          | 39,933          | 63,921          | 5,829          | 167,032           |
|                            | September                   | R53,459         | R38,817         | R64,382         | R6,125         | R162,783          |
|                            | October                     | R44,751         | R34,981         | R64,028         | R5,649         | R149,408          |
|                            | November                    | 46,674          | 33,372          | 63,106          | 5,606          | 148,758           |
|                            | December                    | 56,750          | 35,579          | 62,842          | 5,626          | 160,797           |
|                            | <b>TOTAL</b>                | <b>R602,854</b> | <b>R423,131</b> | <b>R740,270</b> | <b>R69,102</b> | <b>R1,835,357</b> |
| <b>1977</b>                | January                     | 65,280          | 37,362          | 61,638          | 6,006          | 170,286           |
|                            | February                    | 61,492          | 35,969          | 60,687          | 5,549          | 163,697           |
|                            | March                       | 50,374          | 33,660          | 63,275          | 5,748          | 153,057           |
|                            | April                       | 44,564          | 33,051          | 63,583          | 5,078          | 146,276           |
|                            | May                         | 41,497          | 34,111          | 65,559          | 5,240          | 146,407           |
|                            | June                        | 49,438          | 37,601          | 66,073          | 5,595          | 158,707           |
|                            | July                        | 60,955          | 41,745          | 64,708          | 5,935          | 173,343           |
|                            | August                      | 62,440          | 42,433          | 66,521          | 5,837          | 177,231           |
|                            | September                   | 57,231          | 40,845          | 66,579          | 5,951          | 170,606           |
|                            | October                     | 48,696          | 36,547          | 66,442          | 5,979          | 157,664           |
|                            | <b>TOTAL</b><br>(10 months) | <b>541,967</b>  | <b>373,324</b>  | <b>645,065</b>  | <b>56,918</b>  | <b>1,617,274</b>  |

(See chart on page 37)

\*Electricity sales to ultimate consumers.

\*\*Includes street lighting and transportation uses.

R=Revised.

Source: Federal Power Commission Form 5, "Monthly Statement of Electric Operating Revenue and Income."

## Nuclear Power

The Nation's 65 fully operating nuclear power reactors (including two units owned by the U.S. Department of Energy but excluding three units in startup testing), with a maximum dependable capacity of 45,737 electrical megawatts, performed at 76 percent of capacity during January 1978 (an alltime high), 6 percentage points above the performance level for both the previous month and for January 1977. Total electricity generated by nuclear powerplants in January (including the two units owned by DOE and the units in start-up testing which generated electricity during the month) amounted to a record 25.6 billion net kilowatt hours, which was 13 percent of total net electricity production.

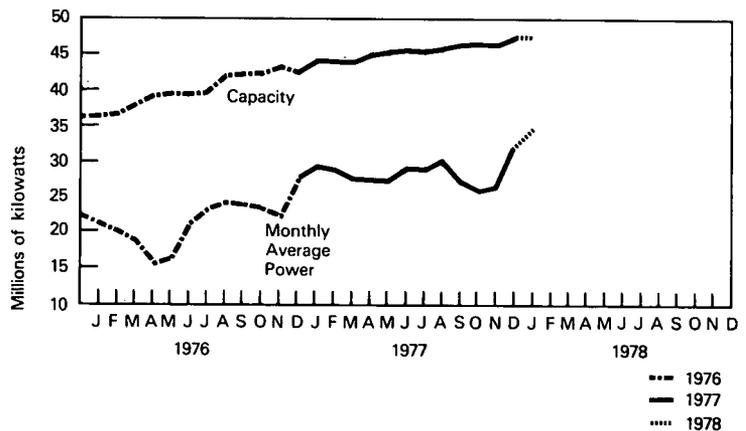
Construction permits were issued for a total of six reactors at two sites during January. Two of these permits were for Phipps Bend 1 and 2, owned by the Tennessee Valley Authority and located near Surgoinsville in eastern Tennessee. The remaining permits were for the four-unit Harris project at Bonsal, North Carolina, in the central portion of the State. Two reactor projects were cancelled during the month, Douglas Point 2 of the Potomac Electric Power Company, and Summit 1 of the Delmarva Power and Light Company.

The government-owned Shippingport reactor resumed full operation as a light-water breeder reactor during December. The full operation status followed an extended shutdown that began in 1974 for the purpose of installing a thorium/U-233 core. This plant, which originally began operating in December 1957 as a pressurized water reactor, was the first U.S. nuclear powerplant designed to provide commercial electric power. Although government-owned, the reactor is operated by the Duquesne Light Company of Pennsylvania.

# U.S. Nuclear Powerplant Operations\*

|                            | Maximum Dependable Capacity | Average Power  | Percent of Total Domestic Electricity Generation |
|----------------------------|-----------------------------|----------------|--|
| Thousands of net kilowatts |                             |                |  |
| <b>1972 AVERAGE</b>        | <b>7,726</b>                | <b>6,174</b>   | <b>3.1</b>                                       |
| <b>1973 AVERAGE</b>        | <b>13,850</b>               | <b>8,760</b>   | <b>4.5</b>                                       |
| <b>1974 AVERAGE</b>        | <b>29,921</b>               | <b>13,011</b>  | <b>6.1</b>                                       |
| <b>1975</b>                |                             |                |  |
| January                    | 35,691                      | 18,734         | 8.5  |
| February                   | 35,899                      | 18,948         | 8.7  |
| March                      | 35,686                      | 20,003         | 9.6  |
| April                      | 35,017                      | 18,510         | 9.1  |
| May                        | 35,017                      | 18,500         | 9.0  |
| June                       | 35,322                      | 17,701         | 7.8  |
| July                       | 35,596                      | 20,661         | 8.7  |
| August                     | 35,589                      | 21,344         | 8.8  |
| September                  | 35,540                      | 19,994         | 9.3  |
| October                    | 35,540                      | 19,659         | 9.4  |
| November                   | 36,752                      | 19,672         | 9.3  |
| December                   | 36,424                      | 22,418         | 9.9  |
| <b>AVERAGE</b>             | <b>35,671</b>               | <b>19,692</b>  | <b>9.0</b>                                       |
| <b>1976</b>                |                             |                |  |
| January                    | 36,750                      | 21,638         | 9.0  |
| February                   | 36,879                      | 20,657         | 9.2  |
| March                      | 38,072                      | 18,808         | 8.5  |
| April                      | 39,763                      | 15,142         | 7.2  |
| May                        | 39,902                      | 16,034         | 7.6  |
| June                       | 39,781                      | 21,885         | 9.1  |
| July                       | 40,168                      | 23,802         | 9.5  |
| August                     | 42,067                      | 24,681         | 9.8  |
| September                  | 42,896                      | 24,014         | 10.5   |
| October                    | 42,877                      | 23,327         | 10.6   |
| November                   | 43,673                      | 22,408         | 9.5  |
| December                   | 42,877                      | 28,380         | 11.5   |
| <b>AVERAGE</b>             | <b>40,642</b>               | <b>21,756</b>  | <b>9.4</b>                                       |
| <b>1977</b>                |                             |                |  |
| January                    | 44,316                      | 29,714         | 11.3   |
| February                   | 44,282                      | 29,168         | 12.0   |
| March                      | 44,289                      | 27,785         | 12.2   |
| April                      | 45,131                      | 27,625         | 12.7   |
| May                        | 45,222                      | 27,526         | 12.1   |
| June                       | 45,991                      | 29,539         | 11.8   |
| July                       | 45,984                      | 29,335         | 11.0   |
| August                     | 45,982                      | 30,563         | 11.6   |
| September                  | R46,051                     | 27,206         | 11.1   |
| October                    | R46,088                     | 25,459         | 11.4   |
| November                   | R46,088                     | 26,167         | 11.3   |
| December                   | R47,133                     | R31,950        | R12.9  |
| <b>AVERAGE</b>             | <b>R45,554</b>              | <b>R28,507</b> | <b>R11.8</b>                                     |
| <b>1978</b>                |                             |                |  |
| January                    | **47,184                    | **34,415       | 13.0   |

U.S. Nuclear Powerplants



\*Includes all units authorized to generate commercial electricity, including units in startup testing and those owned by the government.

\*\*Preliminary data.

R=Revised data.

Sources: Capacity data for units in commercial operation or startup testing from Nuclear Regulatory Commission. Remaining data from U.S. Department of Energy.

## Status of Nuclear Powerplants—January 31, 1978

| Status                          | Number of Plants       |                               |                            |           | Total      | Design Capacity          |
|---------------------------------|------------------------|-------------------------------|----------------------------|-----------|------------|--------------------------|
|                                 | Boiling Water Reactors | High Temperature Gas Reactors | Pressurized Water Reactors | Other*    |            | Net Electrical Megawatts |
| In operation or startup testing | 25                     | 1                             | 40                         | 2         | 68         | 50,000                   |
| Construction permit granted     | 29                     | 0                             | 57                         | 0         | 86         | 93,000                   |
| Construction permit pending     | 8                      | 0                             | 33                         | 3         | 44         | 49,000                   |
| Orders placed for plant         | 3                      | 0                             | 10                         | 0         | 13         | 16,000                   |
| Publicly announced              | —                      | —                             | —                          | 9         | 9          | 11,000                   |
| <b>TOTAL</b>                    | <b>65</b>              | <b>1</b>                      | <b>140</b>                 | <b>14</b> | <b>220</b> | <b>219,000</b>           |

\*Does not include the Indian Point 1 reactor which is in an indefinite shutdown status and was previously reported as licensed to operate.  
 \*\*Includes two dual-purpose Department of Energy-owned reactors, both operating and not previously reported. Also includes 1 Liquid Metal Fast Breeder Reactor and 12 announced intentions to order for which a reactor type has not been chosen.  
 Source: Department of Energy.

## Nuclear Power Generation by Non-Communist Countries—January 1978

| Country                 | Number of Reactors* | Capacity<br>Thousands of gross electrical kilowatts | Electricity Generation<br>Millions of gross kilowatt hours | Generation of Electricity<br>Percent of Design Capacity Used |           |            |           |
|-------------------------|---------------------|---|--|--|-----------|------------|-----------|
|                         |                     |   |  | January<br>1978  | Year**    |            |           |
|                         |                     |   |  |  | 1975      | 1976       | 1977      |
| <b>Asia</b>             |                     |   |  |  |           |            |           |
| Japan                   | 14                  | 7,990   | 2,910  | 49   | R46       | 57         | 41        |
| India                   | 3                   | 620   | 73   | 16   | 46        | 58         | 51        |
| Pakistan                | 1                   | 140   | 0  | 0  | 46        | 41         | 28        |
| Taiwan                  | 1                   | 640   | 173  | 37   | —         | —          | —         |
| <b>Europe</b>           |                     |   |  |  |           |            |           |
| Belgium                 | 3                   | 1,740   | 867  | 67   | 83        | 65         | 78        |
| England                 | 31                  | 8,100   | 3,383  | 62   | 57        | R62        | 55        |
| Finland                 | 1                   | 440   | 314  | 96   | —         | —          | 92        |
| France                  | 12                  | 4,930   | 2,508  | 68   | 68        | 59         | 52        |
| Germany (FR)            | 10                  | 6,410   | 3,095  | 65   | 72        | R57        | 64        |
| Italy                   | 3                   | 630   | 313  | 67   | 69        | 69         | 61        |
| Netherlands             | 2                   | 520   | 389  | 100  | 73        | 84         | 81        |
| Spain                   | 3                   | 1,120   | 685  | 82   | 77        | 77         | 67        |
| Sweden                  | 6                   | 3,880   | 2,618  | 91   | 44        | 55         | 59        |
| Switzerland             | 3                   | 1,060   | 797  | 101  | 84        | R85        | 87        |
| <b>North America</b>    |                     |   |  |  |           |            |           |
| Canada                  | 8                   | 4,790   | 3,418  | 85   | 64        | 80         | 76        |
| United States           | 66                  | 49,250  | 27,089   | 74   | R56       | R55        | 64        |
| <b>South America</b>    |                     |   |  |  |           |            |           |
| Argentina               | 1                   | 340   | 266  | 105  | 85        | 86         | 55        |
| <b>Total or Average</b> | <b>167</b>          | <b>92,610</b>                                       | <b>48,897</b>  | <b>71</b>  | <b>58</b> | <b>R59</b> | <b>62</b> |

\*Includes fully operational units and those in startup testing which generated electricity during, or prior to, the current month. Capacity and generation figures are shown as gross values, as opposed to net values shown in previous tables of this chapter.

\*\*Averages are computed for those units in operation, including startup units beginning with first month of electricity generation.

\*\*\*Figures are based on 5-week period.

†Figures for 21 units are based on 4-week period; figures for remaining units are for 31 days.

R=Revised data.

Source: *Nucleonics Week* magazine.

## U.S. Uranium Enrichment—January 1978

|   | Domestic Customers | Foreign Customers | Total   |
|---|--------------------|-------------------|---------|
| Separative work performed (in metric tons of separative work units) | 104.916            | 300.518           | 405.464 |
| Cost (in millions of dollars)                                       | 7.323              | 21.510            | 28.883  |
| Product quantity (in metric tons of uranium)                        | 19.449             | 71.485            | 90.934  |
| Feed requirement (in metric tons of uranium)                        | 126.793            | 383.042           | 509.835 |

Source: U.S. Department of Energy.

## Summary of Monthly Fuel Cycle—December 1977

| Fuel Cycle Activity  | Product  | Processed Material <sup>1</sup> | Percent Utilization of Industry Capacity | Energy Content of Processed Material <sup>2</sup> | Energy Consumed in Fuel Cycle Activity <sup>3</sup> | Cost Contribution to Electric Power <sup>4</sup> |
|----------------------|--|---------------------------------|--|---|---|--|
|                      |  | MTU except where noted          |  | Billion Btu                                       |   | Mills per kilowatt hour                          |
| Milling              | Yellowcake (U <sub>3</sub> O <sub>8</sub> ) Deliveries | NA                              | NA                                       | NA  | NA  | 1.27   |
| Conversion           | Uranium Hexafluoride (UF <sub>6</sub> ) Deliveries     | 723                             | <sup>5</sup> 50                          | 247,000   | 109   | 0.16   |
| Enrichment           | Enriched UF <sub>6</sub> Deliveries                    | 451<br>(1,737 MT-SWU)           | ( <sup>6</sup> )                         | 923,000   | 4,108   | 1.53   |
| Fabrication          | Finished Fuel Assemblies Shipped                       | 122                             | NA                                       | 249,000   | 34  | 0.47   |
| Powerplant Operation | Electricity Generated                                  | 23,596<br>(million kWhe)        | 69                                       | 260,000   | 1,188<br>(million kWhe)                             | 10.93  |
| Reprocessing         | Spent Fuel Discharged                                  | NA                              | —  | —   | —   | 71.57  |
|                      | Spent Fuel Received                                    | 3                               | —  | —   | —   |  |
|                      | Spent Fuel Reprocessed                                 | 0                               | —  | —   | —   |  |

<sup>1</sup> Units of measure are discussed in Explanatory Notes 9 and 10.

<sup>2</sup> Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6.1 feed to product ratio at the enrichment plant.

<sup>3</sup> Energy requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.

<sup>4</sup> Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWe reactor operating at 65 percent capacity factor. Because of the long lead time required for nuclear fuel processing, the sum of numbers in this column does not necessarily reflect the fuel cost of current electricity production.

<sup>5</sup> Figure for conversion utilization represents material shipped.

<sup>6</sup> ERDA's enrichment plants are presently operating at maximum utilization of available electric power, with the excess production being placed in the "Preproduction stockpile" in anticipation of high demand for enriched uranium in the 1980's.

<sup>7</sup> Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste disposition, exclusive of cost credits for recovered uranium and plutonium.

NA=Not available.

Source: DOE.

## Energy Consumption

Domestic energy consumption in December 1977 was 7.28 quadrillion Btu, 3.1 percent less than in December 1976, but 6.7 percent more than in December 1975. The sectoral breakdown for December is not yet available.

In November 1977, the combined residential/commercial sector consumed 2.19 quadrillion Btu, which was 7.5 percent less than in November 1976. To a considerable extent, this reflects warmer weather. Heating degree-days for November 1977 were about 27 percent less than in November 1976.

Industrial energy consumption for November 1977 was 2.46 quadrillion Btu, 5.1 percent less than in November 1976. Transportation consumption in November was 1.64 quadrillion Btu, about equal to consumption a year earlier.

There was a slight change in methodology made this month. A small amount of coal, which had previously been assigned to railroad transportation in 1975, 1976, and 1977, was reassigned to the industrial sector. Current information indicates that railroad consumption of coal is essentially zero.

## Heating Degree-Days

The period January 30 through February 26, 1978, was much colder than normal, and colder than last year. (Last year, the February period was about normal). National average population-weighted heating degree-days for the February period were 23 percent above normal and 22 percent above last year. New England accumulated 9.6 percent more degree-days than normal; the Middle Atlantic States, 18.7 percent more than normal; and the Lower Atlantic States, 37.0 percent more than normal. Degree-days in the Midwest were 28.8 percent above normal and in the South Central States, were 58.7 percent above normal. The Mountain States were about normal and the West Coast has 21.4 percent fewer degree-days than normal.

The heating season through February 26 has been significantly colder than normal, but warmer than last year. Heating degree-days were 8.7 percent above normal, but 8.2 percent lower than for the previous season.

# Energy Consumption

## Domestic Energy Consumption by Primary Energy Type

|                                     |              | Coal*          | Natural Gas<br>(dry) | Petroleum     | Hydroelectric<br>Power** | Nuclear<br>Electric<br>Power | Total          | Cumulative<br>Total |
|-------------------------------------|--------------|----------------|----------------------|---------------|--------------------------|------------------------------|----------------|---------------------|
| Quadrillion (10 <sup>15</sup> ) Btu |              |                |                      |               |                          |                              |                |                     |
| <b>1972</b>                         | <b>TOTAL</b> | <b>12.424</b>  | <b>22.984</b>        | <b>32.965</b> | <b>2.946</b>             | <b>0.567</b>                 | <b>71.895</b>  |                     |
| <b>1973</b>                         | <b>TOTAL</b> | <b>13.294</b>  | <b>22.512</b>        | <b>34.852</b> | <b>3.006</b>             | <b>0.888</b>                 | <b>74.553</b>  |                     |
| <b>1974</b>                         | <b>TOTAL</b> | <b>12.889</b>  | <b>21.732</b>        | <b>33.468</b> | <b>3.295</b>             | <b>1.215</b>                 | <b>72.600</b>  |                     |
| <b>1975</b>                         | January      | 1.148          | 2.295                | 3.067         | 0.268                    | 0.149                        | 6.927          | 6.927               |
|                                     | February     | 1.054          | 1.980                | 2.629         | 0.256                    | 0.136                        | 6.054          | 12.982              |
|                                     | March        | 1.087          | 1.943                | 2.780         | 0.299                    | 0.159                        | 6.267          | 19.249              |
|                                     | April        | 1.004          | 1.608                | 2.646         | 0.285                    | 0.142                        | 5.685          | 24.934              |
|                                     | May          | 0.984          | 1.359                | 2.582         | 0.296                    | 0.147                        | 5.368          | 30.301              |
|                                     | June         | 1.032          | 1.283                | 2.574         | 0.290                    | 0.136                        | 5.315          | 35.616              |
|                                     | July         | 1.091          | 1.341                | 2.682         | 0.273                    | 0.164                        | 5.550          | 41.167              |
|                                     | August       | 1.131          | 1.398                | 2.693         | 0.243                    | 0.169                        | 5.634          | 46.800              |
|                                     | September    | 1.015          | 1.399                | 2.600         | 0.221                    | 0.153                        | 5.388          | 52.188              |
|                                     | October      | 1.035          | 1.576                | 2.790         | 0.243                    | 0.156                        | 5.801          | 57.989              |
|                                     | November     | 1.059          | 1.674                | 2.601         | 0.262                    | 0.151                        | 5.747          | 63.736              |
|                                     | December     | 1.174          | 2.092                | 3.098         | 0.278                    | 0.178                        | 6.821          | 70.557              |
|                                     | <b>TOTAL</b> | <b>12.813</b>  | <b>19.948</b>        | <b>32.742</b> | <b>3.215</b>             | <b>1.839</b>                 | <b>70.557</b>  |                     |
| <b>1976</b>                         | January      | R1.219         | 2.339                | 3.169         | 0.281                    | 0.172                        | 7.179          | 7.179               |
|                                     | February     | R1.079         | R1.979               | 2.778         | 0.265                    | 0.153                        | R6.253         | 13.432              |
|                                     | March        | 1.119          | R1.757               | 2.947         | 0.286                    | 0.149                        | R6.259         | R19.691             |
|                                     | April        | R1.069         | R1.540               | 2.749         | 0.261                    | 0.117                        | R5.736         | 25.427              |
|                                     | May          | R1.076         | R1.464               | 2.722         | 0.275                    | 0.127                        | R5.664         | R31.091             |
|                                     | June         | 1.115          | 1.363                | 2.776         | 0.276                    | 0.168                        | R5.697         | R36.788             |
|                                     | July         | 1.188          | R1.401               | 2.830         | 0.281                    | 0.189                        | 5.889          | R42.677             |
|                                     | August       | 1.197          | 1.345                | 2.835         | 0.258                    | 0.196                        | R5.831         | R48.507             |
|                                     | September    | R1.097         | 1.329                | 2.774         | 0.222                    | 0.184                        | R5.607         | 54.114              |
|                                     | October      | R1.136         | R1.655               | 2.905         | 0.229                    | 0.185                        | 6.110          | 60.224              |
|                                     | November     | R1.194         | R1.914               | 3.107         | 0.216                    | 0.172                        | R6.604         | R66.828             |
|                                     | December     | R1.292         | R2.279               | 3.494         | 0.220                    | 0.225                        | R7.510         | R74.338             |
|                                     | <b>TOTAL</b> | <b>R13.781</b> | <b>R20.365</b>       | <b>35.087</b> | <b>3.068</b>             | <b>2.037</b>                 | <b>R74.338</b> |                     |
| <b>1977</b>                         | January      | R1.301         | 2.444                | 3.489         | 0.225                    | 0.236                        | R7.695         | R7.695              |
|                                     | February     | R1.152         | R1.831               | 3.143         | 0.168                    | 0.209                        | R6.503         | R14.198             |
|                                     | March        | R1.158         | R1.729               | 3.076         | 0.216                    | 0.220                        | R6.399         | R20.597             |
|                                     | April        | R1.067         | R1.438               | 2.897         | 0.204                    | 0.212                        | R5.817         | R26.413             |
|                                     | May          | R1.131         | R1.383               | 2.890         | 0.204                    | 0.218                        | R5.827         | R32.240             |
|                                     | June         | R1.189         | R1.339               | 2.976         | 0.189                    | 0.227                        | R5.919         | R38.159             |
|                                     | July         | R1.289         | R1.331               | 2.990         | 0.185                    | 0.233                        | R6.028         | R44.187             |
|                                     | August       | R1.259         | 1.371                | R3.068        | 0.184                    | 0.242                        | R6.125         | R50.312             |
|                                     | September    | R1.165         | 1.432                | 2.945         | 0.181                    | 0.209                        | R5.933         | R56.244             |
|                                     | October      | R1.155         | R1.527               | 3.048         | 0.189                    | 0.202                        | R6.122         | R62.366             |
|                                     | November     | R1.158         | R1.695               | R3.017        | 0.222                    | 0.201                        | R6.293         | R68.659             |
|                                     | December     | 1.235          | 2.124                | 3.416         | 0.247                    | 0.253                        | 7.275          | 75.934              |
|                                     | <b>TOTAL</b> | <b>14.260</b>  | <b>19.644</b>        | <b>36.956</b> | <b>2.413</b>             | <b>2.662</b>                 | <b>75.934</b>  |                     |

\*Includes bituminous coal, lignite, and anthracite coal.

\*\*Includes utility production, industrial production, and net imports.

R=Revised.

Source: EIA calculations based on data appearing elsewhere in this publication.

## Domestic Energy Consumption by Economic Sector\*

|                                     |                             | Residential/<br>Commercial | Industrial     | Transportation | Total          |
|-------------------------------------|-----------------------------|----------------------------|----------------|----------------|----------------|
| Quadrillion (10 <sup>15</sup> ) Btu |                             |                            |                |                |                |
| <b>1973**</b>                       | <b>TOTAL</b>                | <b>26.515</b>              | <b>29.161</b>  | <b>18.877</b>  | <b>74.553</b>  |
| <b>1974**</b>                       | <b>TOTAL</b>                | <b>25.853</b>              | <b>28.486</b>  | <b>18.261</b>  | <b>72.600</b>  |
| <b>1975</b>                         | January                     | 2.845                      | 2.489          | R1.593         | 6.927          |
|                                     | February                    | 2.583                      | 2.064          | R1.407         | 6.054          |
|                                     | March                       | 2.554                      | R2.177         | R1.536         | 6.267          |
|                                     | April                       | 2.302                      | 1.861          | R1.522         | 5.685          |
|                                     | May                         | 1.897                      | 1.934          | 1.537          | 5.368          |
|                                     | June                        | 1.811                      | 1.987          | 1.517          | 5.315          |
|                                     | July                        | 1.943                      | R2.058         | 1.550          | 5.550          |
|                                     | August                      | 1.925                      | 2.144          | 1.564          | 5.634          |
|                                     | September                   | 1.789                      | 2.125          | R1.473         | 5.388          |
|                                     | October                     | 1.860                      | R2.381         | R1.560         | 5.801          |
|                                     | November                    | 1.953                      | 2.343          | R1.451         | 5.747          |
|                                     | December                    | 2.649                      | 2.523          | R1.648         | 6.821          |
|                                     | <b>TOTAL</b>                | <b>26.111</b>              | <b>R26.088</b> | <b>R18.357</b> | <b>70.557</b>  |
| <b>1976</b>                         | January                     | R3.116                     | R2.435         | 1.629          | 7.179          |
|                                     | February                    | 2.681                      | 2.111          | R1.461         | R6.253         |
|                                     | March                       | 2.429                      | 2.204          | 1.626          | R6.259         |
|                                     | April                       | R2.083                     | R2.072         | R1.580         | R5.736         |
|                                     | May                         | R1.915                     | R2.196         | R1.553         | R5.664         |
|                                     | June                        | R1.864                     | R2.234         | R1.599         | R5.697         |
|                                     | July                        | 1.969                      | 2.283          | 1.637          | 5.889          |
|                                     | August                      | 1.974                      | 2.264          | R1.592         | R5.831         |
|                                     | September                   | 1.835                      | 2.215          | R1.557         | R5.607         |
|                                     | October                     | 1.942                      | 2.569          | 1.599          | 6.110          |
|                                     | November                    | R2.369                     | R2.593         | 1.642          | R6.604         |
|                                     | December                    | R2.998                     | R2.720         | 1.792          | R7.510         |
|                                     | <b>TOTAL</b>                | <b>R27.177</b>             | <b>R27.895</b> | <b>R19.266</b> | <b>R74.338</b> |
| <b>1977</b>                         | January                     | R3.425                     | R2.548         | R1.722         | R7.695         |
|                                     | February                    | R2.970                     | R1.953         | 1.580          | R6.503         |
|                                     | March                       | R2.496                     | 2.252          | 1.652          | R6.399         |
|                                     | April                       | R2.096                     | R2.097         | R1.624         | R5.817         |
|                                     | May                         | 1.920                      | R2.299         | R1.607         | R5.827         |
|                                     | June                        | R1.974                     | R2.297         | R1.648         | R5.919         |
|                                     | July                        | R2.120                     | R2.239         | R1.669         | R6.028         |
|                                     | August                      | R2.112                     | R2.325         | R1.688         | R6.125         |
|                                     | September                   | R1.971                     | R2.352         | R1.609         | R5.933         |
|                                     | October                     | R2.011                     | R2.463         | 1.648          | R6.122         |
|                                     | November                    | 2.193                      | 2.462          | 1.638          | 6.293          |
|                                     | <b>TOTAL</b><br>(11 months) | <b>25.287</b>              | <b>25.286</b>  | <b>18.086</b>  | <b>68.659</b>  |

\*See Explanatory Note 11 for definitions of the Residential/Commercial, Industrial, and Transportation sectors. The methodology used for sector calculations is provided in the footnotes of the next table.

\*\*Monthly data for 1973 and 1974 are published in the September 1977 issue of the *Monthly Energy Review*.

## Energy Consumption by Economic Sector and Primary Source—November 1977 [Quadrillion (10<sup>15</sup>) Btu]

| Sector <sup>1</sup>        | Primary Energy Source |                                |                        |                            |                      | Primary Energy Consumption | Electricity Distributed <sup>7</sup> | Net Energy Consumption | Electrical Energy Loss Distributed <sup>8</sup> | Ultimate Energy Disposition |
|----------------------------|-----------------------|--------------------------------|------------------------|----------------------------|----------------------|----------------------------|--------------------------------------|------------------------|---|-----------------------------|
|                            | Coal <sup>2</sup>     | Natural Gas (dry) <sup>3</sup> | Petroleum <sup>4</sup> | Hydroelectric <sup>5</sup> | Nuclear <sup>6</sup> |                            |                                      |                        |   |                             |
| Residential and Commercial | 0.025                 | 0.552                          | 0.602                  | —                          | —                    | 1.179                      | 0.302                                | 1.481                  | 0.712   | 2.193                       |
| Industrial                 | 0.303                 | 0.850                          | 0.585                  | 0.003                      | —                    | 1.741                      | 0.215                                | 1.956                  | 0.506   | 2.462                       |
| Transportation             | 0.000                 | 0.052                          | 1.567                  | —                          | ( <sup>9</sup> )     | 1.619                      | 0.006                                | 1.625                  | 0.013   | 1.638                       |
| Electric Utilities         | 0.829                 | 0.240                          | 0.264                  | 0.220                      | 0.201                | 1.754                      | —                                    | —                      | —   | —                           |
| <b>TOTAL</b>               | <b>1.158</b>          | <b>1.695</b>                   | <b>3.017</b>           | <b>0.222</b>               | <b>0.201</b>         | <b>6.293</b>               | <b>0.523</b>                         | <b>5.062</b>           | <b>1.231</b>                                    | <b>6.293</b>                |

<sup>1</sup> See Explanatory Note 11 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

<sup>2</sup> Data are from the Bureau of Mines. Includes anthracite and bituminous coal and lignite.

<sup>3</sup> Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. Data from the American Gas Association are used for the Residential and Commercial Sector, which includes 100 percent of the AGA "Other" category. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.6 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974, 1975, and 1976 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

<sup>4</sup> Aggregate petroleum data are from the Bureau of Mines. FPC provided data on oil consumed by electric

utilities. Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline—100 percent; naphtha jet fuel—100 percent; kerosene jet fuel—97 percent; distillate fuel oil—30.3 percent; residual fuel oil—11.2 percent; all other products—4.7 percent. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974, 1975, and 1976 Bureau of Mines data on consumption: Residential and Commercial—50.7 percent; Industrial—49.3 percent.

<sup>5</sup> FPC hydroelectric power production plus net imports of electricity. These imports are assumed to be from hydroelectric power sources and are estimated at 0.011 quadrillion Btu per month in 1974, 0.005 quadrillion Btu per month for 1975, and 0.007 quadrillion Btu per month for 1976 and 1977. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines

annual figure for 1976.

<sup>6</sup> FPC nuclear power production.

<sup>7</sup> Electricity was distributed using Edison Electric Institute data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation Sector. All "Other" sales, largely for use in government buildings, were distributed to the Residential and Commercial Sector.

<sup>8</sup> 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., ultimate energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

<sup>9</sup> Negligible.

# Energy Consumption (Continued)

## Percent Changes in Energy Consumption for November 1977 by Sources and Economic Sectors

|   | November 1977<br>Consumption | Percent Change<br>from<br>November 1976* | Cumulative Percent<br>Change from 1976<br>(January through<br>November)* |
|---|------------------------------|--|--|
|   | Quadrillion Btu              |  |  |
| <b>Refined Petroleum Products</b>                 | 3.017                        | -2.9                                     | +6.5   |
| Motor Gasoline                                    | 1.133                        | +2.2                                     | +2.8   |
| Jet Fuel  | 0.170                        | +3.8                                     | +4.8   |
| Distillate  | 0.597                        | -8.1                                     | +9.3   |
| Residual  | 0.529                        | -13.8                                    | +11.6  |
| Other Petroleum Products                          | 0.589                        | +0.2                                     | +7.9   |
| <b>Natural Gas (Dry)</b>                          | 1.695                        | -11.5                                    | -2.8   |
| <b>Coal (Anthracite, bituminous, and lignite)</b> | 1.158                        | -3.1                                     | +4.6   |
| <b>Hydroelectric and Nuclear Electric Power</b>   | 0.523                        | +3.0                                     | +6.1   |
| <b>TOTAL ENERGY USE</b>                           | <b>6.293</b>                 | <b>-4.7</b>                              | <b>+3.0</b>  |
| <b>Economic Sector Consumption</b>                |                              |  |  |
| Residential and Commercial                        | 2.193                        | -7.5                                     | +4.9   |
| Industrial  | 2.462                        | -5.1                                     | +0.7   |
| Transportation                                    | 1.638                        | -0.2                                     | +3.8   |

\*Computed on a daily average basis.

# Energy Consumption (Continued)

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

|                                     |                             | Coal         | Natural Gas (dry) | Petroleum <sup>2</sup> | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|-------------------------------------|-----------------------------|--------------|-------------------|------------------------|-------------------------|------------------------------------|------------------|-----------------------------|
| Quadrillion (10 <sup>15</sup> ) Btu |                             |              |                   |                        |                         |                                    |                  |                             |
| <b>1973</b>                         | <b>TOTAL</b>                | <b>0.295</b> | <b>7.577</b>      | <b>7.077</b>           | <b>3.445</b>            | <b>8.120</b>                       | <b>26.515</b>    |                             |
| <b>1974</b>                         | <b>TOTAL</b>                | <b>0.297</b> | <b>7.427</b>      | <b>6.484</b>           | <b>3.424</b>            | <b>8.222</b>                       | <b>25.853</b>    |                             |
| <b>1975</b>                         | January                     | 0.035        | 1.124             | 0.627                  | 0.310                   | 0.748                              | 2.845            | 2.845                       |
|                                     | February                    | 0.023        | 1.105             | 0.526                  | 0.292                   | 0.637                              | 2.583            | 5.427                       |
|                                     | March                       | 0.022        | 1.018             | 0.546                  | 0.284                   | 0.684                              | 2.554            | 7.981                       |
|                                     | April                       | 0.015        | 0.905             | 0.489                  | 0.270                   | 0.623                              | 2.302            | 10.283                      |
|                                     | May                         | 0.012        | 0.522             | 0.444                  | 0.259                   | 0.660                              | 1.897            | 12.180                      |
|                                     | June                        | 0.013        | 0.338             | 0.435                  | 0.290                   | 0.735                              | 1.811            | 13.991                      |
|                                     | July                        | 0.016        | 0.294             | 0.463                  | 0.327                   | 0.843                              | 1.943            | 15.934                      |
|                                     | August                      | 0.015        | 0.267             | 0.447                  | 0.342                   | 0.855                              | 1.925            | 17.859                      |
|                                     | September                   | 0.021        | 0.284             | 0.484                  | 0.328                   | 0.673                              | 1.789            | 19.648                      |
|                                     | October                     | 0.023        | 0.375             | 0.539                  | 0.273                   | 0.650                              | 1.860            | 21.509                      |
|                                     | November                    | 0.024        | 0.526             | 0.503                  | 0.266                   | 0.634                              | 1.953            | 23.462                      |
|                                     | December                    | 0.033        | 0.930             | 0.635                  | 0.297                   | 0.754                              | 2.649            | 26.111                      |
|                                     | <b>TOTAL</b>                | <b>0.255</b> | <b>7.688</b>      | <b>6.135</b>           | <b>3.538</b>            | <b>8.495</b>                       | <b>26.111</b>    |                             |
| <b>1976</b>                         | January                     | 0.031        | 1.254             | 0.656                  | 0.340                   | 0.834                              | R3.116           | R3.116                      |
|                                     | February                    | 0.020        | 1.090             | 0.575                  | 0.315                   | 0.681                              | 2.681            | R5.797                      |
|                                     | March                       | 0.018        | 0.856             | 0.571                  | 0.286                   | 0.698                              | 2.429            | R8.226                      |
|                                     | April                       | 0.021        | 0.671             | 0.500                  | 0.271                   | R0.621                             | R2.083           | R10.310                     |
|                                     | May                         | 0.016        | 0.488             | 0.506                  | 0.265                   | R0.641                             | R1.915           | R12.225                     |
|                                     | June                        | 0.015        | 0.333             | 0.489                  | 0.285                   | R0.743                             | R1.864           | R14.089                     |
|                                     | July                        | 0.011        | 0.281             | 0.487                  | 0.333                   | R0.857                             | 1.969            | R16.059                     |
|                                     | August                      | 0.015        | 0.259             | 0.506                  | 0.347                   | 0.847                              | 1.974            | R18.033                     |
|                                     | September                   | 0.017        | 0.272             | 0.517                  | 0.329                   | R0.699                             | 1.835            | R19.868                     |
|                                     | October                     | 0.020        | 0.395             | 0.566                  | 0.283                   | R0.677                             | 1.942            | R21.810                     |
|                                     | November                    | 0.025        | 0.723             | 0.622                  | 0.287                   | R0.712                             | R2.369           | R24.179                     |
|                                     | December                    | 0.037        | 1.083             | 0.726                  | 0.328                   | R0.824                             | R2.998           | R27.177                     |
|                                     | <b>TOTAL</b>                | <b>0.246</b> | <b>7.706</b>      | <b>6.722</b>           | <b>3.669</b>            | <b>R8.834</b>                      | <b>R27.177</b>   |                             |
| <b>1977</b>                         | January                     | 0.036        | 1.376             | 0.712                  | 0.365                   | R0.936                             | R3.425           | R3.425                      |
|                                     | February                    | 0.025        | 1.216             | 0.674                  | 0.346                   | R0.710                             | R2.970           | R6.395                      |
|                                     | March                       | 0.019        | 0.845             | 0.608                  | 0.301                   | 0.722                              | R2.496           | R8.890                      |
|                                     | April                       | 0.021        | 0.623             | 0.538                  | 0.277                   | 0.637                              | R2.096           | R10.986                     |
|                                     | May                         | 0.017        | 0.405             | 0.529                  | 0.271                   | R0.699                             | 1.920            | R12.906                     |
|                                     | June                        | 0.015        | 0.315             | 0.544                  | 0.311                   | R0.789                             | R1.974           | R14.880                     |
|                                     | July                        | 0.014        | 0.283             | 0.503                  | 0.366                   | R0.954                             | R2.120           | R17.000                     |
|                                     | August                      | 0.014        | 0.256             | R0.551                 | 0.373                   | R0.918                             | R2.112           | R19.112                     |
|                                     | September                   | 0.015        | 0.264             | 0.564                  | R0.350                  | R0.778                             | R1.971           | R21.083                     |
|                                     | October                     | 0.019        | 0.376             | 0.617                  | R0.306                  | R0.693                             | R2.011           | R23.094                     |
|                                     | November                    | 0.025        | 0.552             | 0.602                  | 0.302                   | 0.712                              | 2.193            | 25.287                      |
|                                     | <b>TOTAL</b><br>(11 months) | <b>0.220</b> | <b>6.510</b>      | <b>6.441</b>           | <b>3.567</b>            | <b>8.549</b>                       | <b>25.287</b>    |                             |

(See footnotes on page 52)

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

|                                     |                             | Coal          | Natural Gas (dry) | Petroleum <sup>3</sup> | Hydro-electric | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|-------------------------------------|-----------------------------|---------------|-------------------|------------------------|----------------|-------------------------|------------------------------------|------------------|-----------------------------|
| Quadrillion (10 <sup>15</sup> ) Btu |                             |               |                   |                        |                |                         |                                    |                  |                             |
| <b>1973</b>                         | <b>TOTAL</b>                | <b>4.370</b>  | <b>10.493</b>     | <b>6.403</b>           | <b>0.036</b>   | <b>2.341</b>            | <b>5.518</b>                       | <b>29.161</b>    |                             |
| <b>1974</b>                         | <b>TOTAL</b>                | <b>4.062</b>  | <b>10.137</b>     | <b>6.305</b>           | <b>0.036</b>   | <b>2.337</b>            | <b>5.609</b>                       | <b>28.486</b>    |                             |
| <b>1975</b>                         | January                     | R0.342        | 0.887             | 0.610                  | 0.003          | 0.189                   | 0.458                              | 2.489            | 2.489                       |
|                                     | February                    | 0.342         | 0.619             | 0.511                  | 0.003          | 0.185                   | 0.404                              | 2.064            | R4.554                      |
|                                     | March                       | R0.363        | 0.648             | 0.531                  | 0.003          | 0.186                   | 0.447                              | R2.177           | R6.731                      |
|                                     | April                       | R0.341        | 0.433             | 0.475                  | 0.003          | 0.184                   | 0.425                              | 1.861            | R8.592                      |
|                                     | May                         | 0.321         | 0.516             | 0.431                  | 0.003          | 0.187                   | 0.475                              | 1.934            | R10.526                     |
|                                     | June                        | R0.300        | 0.595             | 0.423                  | 0.003          | 0.189                   | 0.478                              | 1.987            | R12.514                     |
|                                     | July                        | 0.286         | 0.640             | 0.450                  | 0.003          | 0.189                   | 0.489                              | R2.058           | R14.571                     |
|                                     | August                      | R0.292        | 0.724             | 0.435                  | 0.003          | 0.197                   | 0.494                              | 2.144            | R16.716                     |
|                                     | September                   | R0.293        | 0.725             | 0.470                  | 0.003          | 0.199                   | 0.408                              | 2.125            | R18.841                     |
|                                     | October                     | 0.303         | 0.872             | 0.524                  | 0.003          | 0.201                   | 0.478                              | R2.381           | R21.222                     |
|                                     | November                    | 0.316         | 0.863             | 0.489                  | 0.003          | 0.199                   | 0.473                              | 2.343            | R23.565                     |
|                                     | December                    | R0.335        | 0.875             | 0.617                  | 0.003          | 0.196                   | 0.498                              | 2.523            | R26.088                     |
|                                     | <b>TOTAL</b>                | <b>R3.834</b> | <b>8.425</b>      | <b>5.966</b>           | <b>0.035</b>   | <b>2.302</b>            | <b>5.527</b>                       | <b>R26.088</b>   |                             |
| <b>1976</b>                         | January                     | R0.321        | 0.796             | 0.638                  | 0.003          | 0.196                   | R0.481                             | R2.435           | R2.435                      |
|                                     | February                    | R0.303        | R0.620            | 0.559                  | 0.003          | 0.198                   | 0.428                              | 2.111            | R4.546                      |
|                                     | March                       | 0.321         | R0.618            | 0.555                  | 0.003          | 0.206                   | 0.501                              | 2.204            | R6.750                      |
|                                     | April                       | 0.320         | R0.588            | 0.487                  | 0.003          | 0.205                   | 0.470                              | R2.072           | R8.822                      |
|                                     | May                         | R0.328        | R0.660            | 0.492                  | 0.003          | 0.209                   | R0.505                             | R2.196           | R11.018                     |
|                                     | June                        | 0.312         | 0.671             | 0.475                  | 0.003          | 0.214                   | 0.558                              | R2.234           | R13.251                     |
|                                     | July                        | 0.311         | R0.735            | 0.473                  | 0.003          | 0.213                   | 0.547                              | 2.283            | R15.534                     |
|                                     | August                      | R0.305        | 0.711             | 0.492                  | 0.003          | 0.219                   | 0.535                              | 2.264            | R17.798                     |
|                                     | September                   | 0.303         | 0.717             | 0.503                  | 0.003          | 0.220                   | 0.468                              | 2.215            | R20.013                     |
|                                     | October                     | R0.319        | R0.953            | 0.551                  | 0.003          | 0.219                   | R0.524                             | 2.569            | R22.582                     |
|                                     | November                    | R0.328        | R0.907            | 0.605                  | 0.003          | 0.215                   | R0.535                             | R2.593           | R25.167                     |
|                                     | December                    | R0.358        | R0.902            | 0.706                  | 0.003          | 0.214                   | R0.538                             | R2.720           | R27.895                     |
|                                     | <b>TOTAL</b>                | <b>R3.829</b> | <b>R8.878</b>     | <b>6.536</b>           | <b>0.033</b>   | <b>2.528</b>            | <b>R6.091</b>                      | <b>R27.895</b>   |                             |
| <b>1977</b>                         | January                     | R0.326        | 0.777             | 0.693                  | 0.003          | 0.210                   | R0.540                             | R2.548           | R2.548                      |
|                                     | February                    | R0.312        | R0.351            | 0.655                  | 0.003          | 0.207                   | R0.425                             | R1.953           | R4.501                      |
|                                     | March                       | R0.332        | R0.592            | 0.591                  | 0.003          | 0.216                   | 0.518                              | 2.252            | R6.753                      |
|                                     | April                       | R0.313        | R0.542            | 0.523                  | 0.003          | 0.217                   | R0.499                             | R2.097           | R8.850                      |
|                                     | May                         | R0.310        | R0.672            | 0.514                  | 0.003          | 0.224                   | R0.577                             | R2.299           | R11.148                     |
|                                     | June                        | R0.301        | R0.668            | 0.529                  | 0.003          | 0.225                   | R0.571                             | R2.297           | R13.446                     |
|                                     | July                        | R0.292        | R0.657            | 0.489                  | 0.003          | 0.221                   | R0.576                             | R2.239           | R15.684                     |
|                                     | August                      | R0.280        | 0.719             | R0.536                 | 0.003          | 0.227                   | R0.559                             | R2.325           | R18.009                     |
|                                     | September                   | R0.273        | 0.796             | 0.548                  | 0.003          | R0.227                  | R0.505                             | R2.352           | R20.362                     |
|                                     | October                     | R0.305        | R0.815            | 0.600                  | 0.003          | R0.227                  | R0.514                             | R2.463           | R22.824                     |
|                                     | November                    | 0.303         | 0.850             | 0.585                  | 0.003          | 0.215                   | 0.506                              | 2.462            | 25.286                      |
|                                     | <b>TOTAL</b><br>(11 months) | <b>3.348</b>  | <b>7.439</b>      | <b>6.263</b>           | <b>0.030</b>   | <b>2.416</b>            | <b>5.790</b>                       | <b>25.286</b>    |                             |

(See footnotes on page 52)

# Energy Consumption (Continued)

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

|                                     |                             | Coal         | Natural Gas (dry) | Petroleum <sup>2</sup> | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|-------------------------------------|-----------------------------|--------------|-------------------|------------------------|-------------------------|------------------------------------|------------------|-----------------------------|
| Quadrillion (10 <sup>15</sup> ) Btu |                             |              |                   |                        |                         |                                    |                  |                             |
| <b>1973</b>                         | <b>TOTAL</b>                | <b>0.009</b> | <b>0.733</b>      | <b>17.940</b>          | <b>0.058</b>            | <b>0.137</b>                       | <b>18.877</b>    |                             |
| <b>1974</b>                         | <b>TOTAL</b>                | <b>0.009</b> | <b>0.656</b>      | <b>17.392</b>          | <b>0.060</b>            | <b>0.144</b>                       | <b>18.261</b>    |                             |
| <b>1975</b>                         | January                     | —            | 0.075             | 1.499                  | 0.006                   | 0.013                              | R1.593           | R1.593                      |
|                                     | February                    | —            | 0.064             | 1.325                  | 0.005                   | 0.012                              | R1.407           | R3.000                      |
|                                     | March                       | —            | 0.062             | 1.456                  | 0.005                   | 0.013                              | R1.536           | R4.537                      |
|                                     | April                       | —            | 0.050             | 1.455                  | 0.005                   | 0.012                              | R1.522           | R6.059                      |
|                                     | May                         | —            | 0.039             | 1.481                  | 0.005                   | 0.012                              | 1.537            | R7.595                      |
|                                     | June                        | —            | 0.035             | 1.465                  | 0.005                   | 0.012                              | 1.517            | R9.112                      |
|                                     | July                        | —            | 0.035             | 1.497                  | 0.005                   | 0.012                              | 1.550            | R10.661                     |
|                                     | August                      | —            | 0.037             | 1.510                  | 0.005                   | 0.012                              | 1.564            | R12.225                     |
|                                     | September                   | —            | 0.039             | 1.419                  | 0.005                   | 0.010                              | R1.473           | R13.698                     |
|                                     | October                     | —            | 0.047             | 1.495                  | 0.005                   | 0.013                              | R1.560           | R15.258                     |
|                                     | November                    | —            | 0.052             | 1.380                  | 0.006                   | 0.013                              | R1.451           | R16.709                     |
|                                     | December                    | —            | 0.067             | 1.560                  | 0.006                   | 0.015                              | R1.648           | R18.357                     |
|                                     | <b>TOTAL</b>                | <b>—</b>     | <b>0.602</b>      | <b>17.544</b>          | <b>0.062</b>            | <b>0.149</b>                       | <b>R18.357</b>   |                             |
| <b>1976</b>                         | January                     | —            | 0.077             | 1.532                  | 0.006                   | 0.015                              | 1.629            | 1.629                       |
|                                     | February                    | —            | 0.064             | 1.380                  | 0.006                   | 0.012                              | R1.461           | R3.090                      |
|                                     | March                       | —            | 0.055             | 1.552                  | 0.005                   | 0.013                              | 1.626            | R4.715                      |
|                                     | April                       | —            | 0.047             | 1.516                  | 0.005                   | 0.012                              | R1.580           | R6.295                      |
|                                     | May                         | —            | 0.043             | 1.493                  | 0.005                   | 0.012                              | R1.553           | R7.848                      |
|                                     | June                        | —            | 0.037             | 1.545                  | 0.005                   | 0.012                              | R1.599           | R9.447                      |
|                                     | July                        | —            | 0.038             | 1.581                  | 0.005                   | 0.013                              | 1.637            | R11.084                     |
|                                     | August                      | —            | 0.036             | 1.538                  | 0.005                   | 0.013                              | R1.592           | R12.676                     |
|                                     | September                   | —            | 0.037             | 1.504                  | 0.005                   | 0.011                              | R1.557           | R14.233                     |
|                                     | October                     | —            | 0.050             | 1.530                  | 0.006                   | 0.013                              | 1.599            | R15.832                     |
|                                     | November                    | —            | 0.061             | 1.561                  | 0.006                   | 0.014                              | 1.642            | R17.474                     |
|                                     | December                    | —            | 0.074             | 1.697                  | 0.006                   | 0.015                              | 1.792            | R19.266                     |
|                                     | <b>TOTAL</b>                | <b>—</b>     | <b>R0.619</b>     | <b>18.428</b>          | <b>0.064</b>            | <b>0.154</b>                       | <b>R19.266</b>   |                             |
| <b>1977</b>                         | January                     | —            | 0.080             | 1.620                  | 0.006                   | 0.016                              | R1.722           | R1.722                      |
|                                     | February                    | —            | 0.059             | 1.503                  | 0.006                   | 0.012                              | 1.580            | R3.302                      |
|                                     | March                       | —            | 0.054             | 1.580                  | 0.005                   | 0.012                              | 1.652            | R4.954                      |
|                                     | April                       | —            | 0.044             | 1.564                  | 0.005                   | 0.011                              | R1.624           | R6.578                      |
|                                     | May                         | —            | 0.040             | 1.549                  | 0.005                   | 0.013                              | R1.607           | R8.185                      |
|                                     | June                        | —            | 0.037             | 1.594                  | 0.005                   | 0.012                              | R1.648           | R9.833                      |
|                                     | July                        | —            | 0.035             | 1.616                  | 0.005                   | 0.013                              | R1.669           | R11.502                     |
|                                     | August                      | —            | 0.036             | R1.635                 | 0.005                   | 0.012                              | R1.688           | R13.190                     |
|                                     | September                   | —            | 0.040             | 1.553                  | 0.005                   | 0.011                              | R1.609           | R14.799                     |
|                                     | October                     | —            | 0.044             | 1.586                  | 0.005                   | 0.012                              | 1.648            | R16.447                     |
|                                     | November                    | —            | 0.052             | 1.567                  | 0.006                   | 0.013                              | 1.638            | 18.086                      |
|                                     | <b>TOTAL</b><br>(11 months) | <b>—</b>     | <b>0.521</b>      | <b>17.369</b>          | <b>0.058</b>            | <b>0.138</b>                       | <b>18.086</b>    |                             |

<sup>1</sup> See Explanatory Note 11 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the footnotes of the previous table. Printed totals may differ slightly from the sum of their row/column components due to independent rounding.

<sup>2</sup> The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 50.7 percent for 1974, 1975, 1976, and 1977.

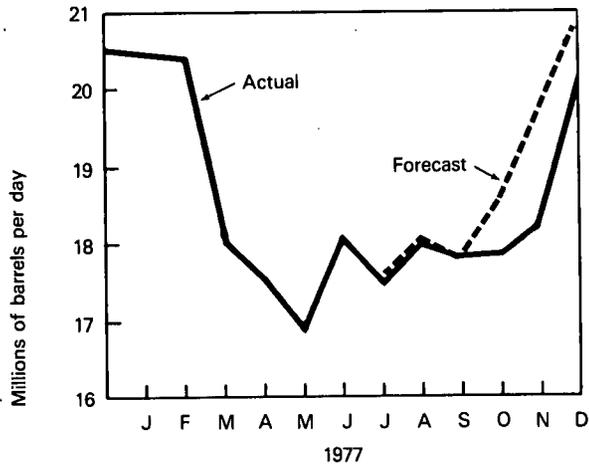
<sup>3</sup> The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 49.3 percent for 1974, 1975, 1976, and 1977.

<sup>4</sup> The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.6 percent for 1974, 1975, 1976, and 1977.

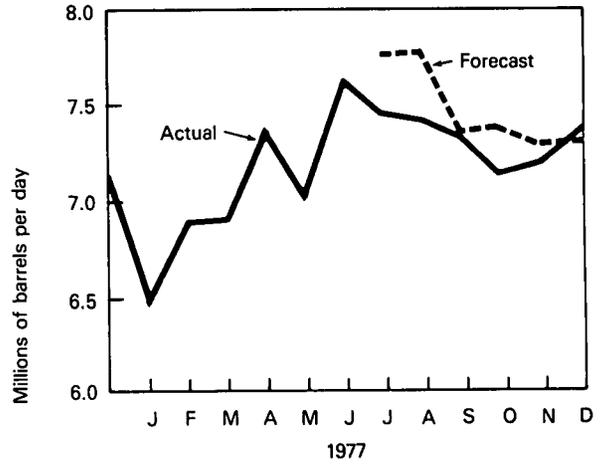
R=Revised data.

# Petroleum Consumption and Forecast

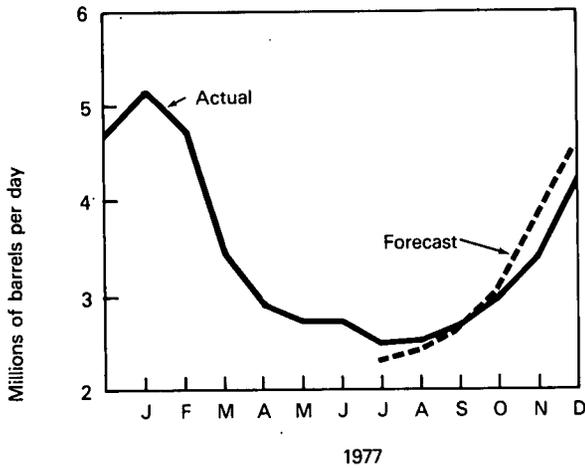
Total Domestic Demand for Petroleum Products



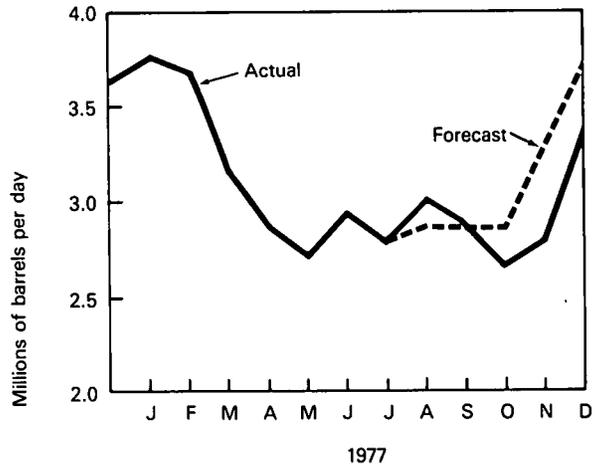
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Sources: Actual—Monthly figures are based on Bureau of Mines data for December 1976 and January through April 1977, EIA data for May through December 1977.  
 Forecast—The EIA forecast is shown for July through December 1977. See Explanatory Note 12 for discussion of basic assumptions of forecast.

# Heating Degree-Days\*

| Petroleum Administration<br>For Defense (PAD) Districts  | January 30, 1978 through<br>February 26, 1978 |              |               |                    |               | Cumulative July 1, 1977 through<br>February 26, 1978 |                |               |                    |              |
|--|---|--------------|---------------|--------------------|---------------|--|----------------|---------------|--------------------|--------------|
|  | 1978  | 1977**       |               | Normal (1941-70)** |               | 1977-78  | 1976-77**      |               | Normal (1941-70)** |              |
| PAD District I   | 980.8   | 860.3        | (14.0)        | 812.2              | (20.7)        | 3,636.3  | 4,059.7        | (-10.4)       | 3,344.8            | (8.7)        |
| New England<br>Conn., Maine, Mass.,<br>N.H., R.I., Vt.   | 1,147.3                                       | 1,075.2      | (6.7)         | 1,047.1            | (9.6)         | 4,472.3  | 4,945.1        | (-9.6)        | 4,382.0            | (2.1)        |
| Middle Atlantic<br>Del., Md., N.J.,<br>N.Y., Pa.   | 1,132.2                                       | 993.8        | (13.9)        | 953.8              | (18.7)        | 4,239.4  | 4,711.3        | (-10.0)       | 3,920.3            | (8.1)        |
| Lower Atlantic<br>Fla., Ga., N.C.,<br>S.C., Va., W. Va.  | 679.7   | 565.0        | (20.3)        | 496.2              | (37.0)        | 2,361.6  | 2,690.4        | (-12.2)       | 2,024.0            | (16.7)       |
| PAD District II<br>Ill., Ind., Iowa, Kans.,<br>Ky., Mich., Minn., Mo.,<br>Nebr., N. Dak., Ohio,<br>Okla., S. Dak., Tenn.,<br>Wisc. | 1,317.1                                       | 1,037.4      | (27.0)        | 1,022.2            | (28.8)        | 5,026.7  | 5,389.9        | (-6.7)        | 4,412.5            | (13.9)       |
| PAD District III<br>Ala., Ark., La., Miss.,<br>N. Mex., Tex.   | 690.1   | 443.4        | (55.7)        | 435.0              | (58.7)        | 2,270.2  | 2,498.1        | (-9.1)        | 1,845.7            | (23.0)       |
| PAD District IV<br>Colo., Idaho, Mont.,<br>Utah, Wyo.  | 948.3   | 830.6        | (14.2)        | 944.4              | (0.4)         | 4,356.4  | 4,493.9        | (-3.1)        | 4,550.0            | (-4.3)       |
| PAD District V<br>Ariz., Calif., Nev.,<br>Oreg., Wash.   | 318.6   | 288.9        | (10.3)        | 405.3              | (-21.4)       | 1,507.5  | 1,578.4        | (-4.5)        | 1,981.0            | (-23.9)      |
| <b>U.S. AVERAGE</b>  | <b>961.4</b>                                  | <b>787.2</b> | <b>(22.1)</b> | <b>781.9</b>       | <b>(23.0)</b> | <b>3,644.8</b>                                       | <b>3,968.5</b> | <b>(-8.2)</b> | <b>3,353.2</b>     | <b>(8.7)</b> |

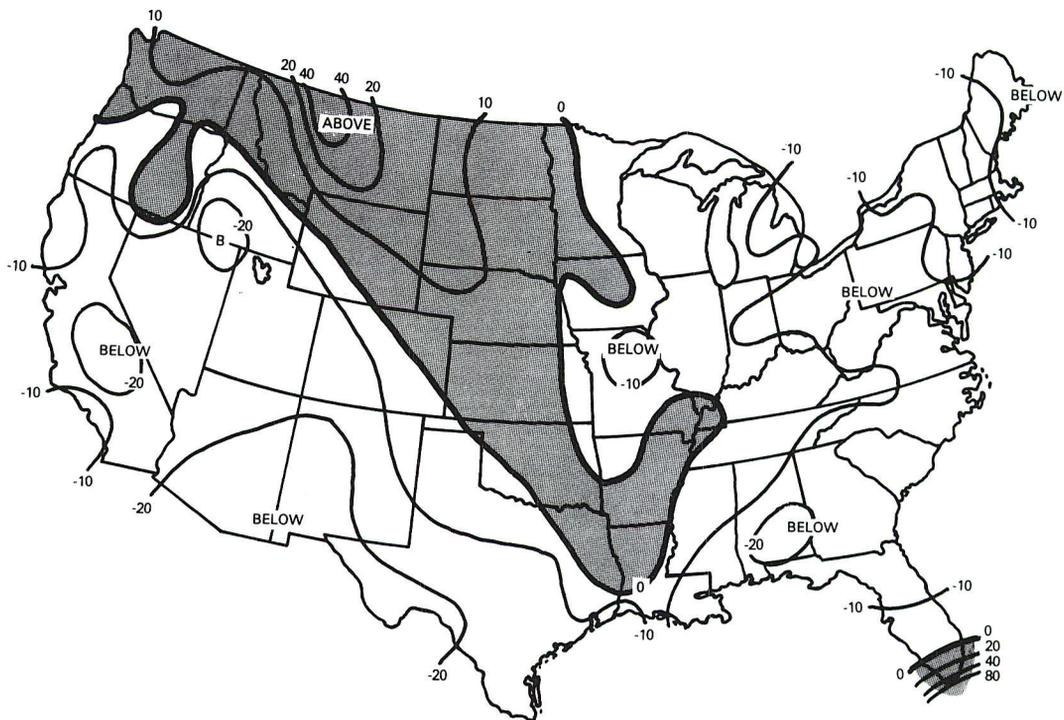
\*See Explanatory Note 13 for explanation of degree-days.

\*\*Percentage change in parentheses.

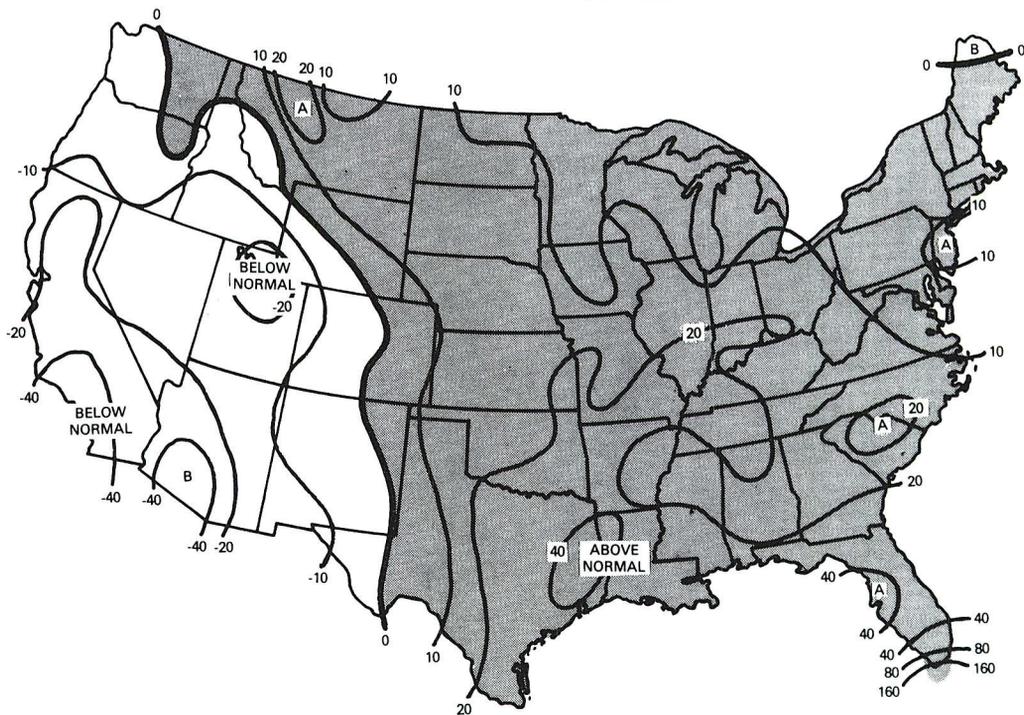
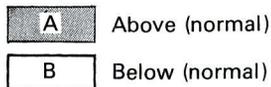
# Heating Degree-Days (Continued)

Heating Degree-Days Accumulated from July 1, 1977, through February 26, 1978

Percent Departure from 1976-1977



Percent Departure from Normal (1941-70)



Note: Above normal heating-days correspond to below normal temperatures.

Source: Department of Commerce—NOAA.

# Part 8

# Resource Development

## Oil and Gas Exploration and Development

An average of 2,131 rotary drilling rigs were in use during January and February 1978, 15 percent more than for the same period in 1977. Well completions, however, were 1 percent lower in January 1978 than in January 1977, the first decline in nearly a year. Oil well completions were down 15 percent, but gas well completions and dry holes increased by 7 percent and 13 percent, respectively. Total footage of wells drilled was up 6 percent.

Seismic petroleum exploration activity was strong in January, with an average of 328 crews (302 land, 26 marine) at work in the United States and its territorial waters. In comparison, last January 280 crews were active.

# Oil and Gas Exploration and Development

|             |                              | Rotary Rigs<br>in Operation | Exploratory and Development<br>Wells Drilled* |               |               |               | Total Footage<br>of Wells Drilled |                |
|-------------|------------------------------|-----------------------------|---|---------------|---------------|---------------|-----------------------------------|----------------|
|             |                              |                             | Monthly Average                               | Oil           | Gas           | Dry           |                                   | Total          |
| <b>1972</b> | <b>AVERAGE</b>               | <b>1,107</b>                | <b>TOTAL</b>                                  | <b>11,306</b> | <b>4,928</b>  | <b>11,057</b> | <b>27,291</b>                     | <b>134,602</b> |
| <b>1973</b> | <b>AVERAGE</b>               | <b>1,194</b>                | <b>TOTAL</b>                                  | <b>9,902</b>  | <b>6,385</b>  | <b>10,305</b> | <b>26,592</b>                     | <b>136,391</b> |
| <b>1974</b> | <b>AVERAGE</b>               | <b>1,475</b>                | <b>TOTAL</b>                                  | <b>12,784</b> | <b>7,240</b>  | <b>11,674</b> | <b>31,698</b>                     | <b>150,551</b> |
| <b>1975</b> | January                      | 1,615                       |   | 1,299         | 655           | 1,040         | 2,994                             | 13,189         |
|             | February                     | 1,611                       |   | 1,097         | 458           | 933           | 2,488                             | 12,071         |
|             | March                        | 1,651                       |   | 1,341         | 658           | 1,091         | 3,090                             | 15,472         |
|             | April                        | 1,604                       |   | 1,181         | 506           | 1,071         | 2,758                             | 13,545         |
|             | May                          | 1,592                       |   | 1,100         | 451           | 891           | 2,442                             | 12,054         |
|             | June                         | 1,613                       |   | 1,246         | 509           | 1,022         | 2,777                             | 13,540         |
|             | July                         | 1,616                       |   | 1,229         | 557           | 920           | 2,706                             | 12,545         |
|             | August                       | 1,645                       |   | 1,272         | 587           | 1,122         | 2,981                             | 14,221         |
|             | September                    | 1,699                       |   | 1,504         | 831           | 1,165         | 3,500                             | 15,636         |
|             | October                      | 1,716                       |   | 1,633         | 682           | 1,310         | 3,625                             | 16,689         |
|             | November                     | 1,757                       |   | 1,619         | 776           | 1,270         | 3,665                             | 15,788         |
|             | December                     | 1,793                       |   | 1,817         | 832           | 1,424         | 4,073                             | 17,556         |
|             | <b>AVERAGE</b>               | <b>1,660</b>                | <b>TOTAL**</b>                                | <b>16,408</b> | <b>7,580</b>  | <b>13,247</b> | <b>37,235</b>                     | <b>174,434</b> |
| <b>1976</b> | January                      | 1,710                       |   | 1,465         | 772           | 1,055         | 3,292                             | 14,517         |
|             | February                     | 1,594                       |   | 1,341         | 652           | 1,159         | 3,152                             | 14,888         |
|             | March                        | 1,540                       |   | 1,726         | 821           | 1,301         | 3,848                             | 18,126         |
|             | April                        | 1,480                       |   | 1,237         | 672           | 994           | 2,903                             | 13,765         |
|             | May                          | 1,496                       |   | 1,501         | 658           | 1,104         | 3,263                             | 14,196         |
|             | June                         | 1,546                       |   | 1,500         | 709           | 1,123         | 3,332                             | 14,780         |
|             | July                         | 1,597                       |   | 1,312         | 730           | 916           | 2,958                             | 13,716         |
|             | August                       | 1,691                       |   | 1,265         | 711           | 1,140         | 3,116                             | 14,697         |
|             | September                    | 1,744                       |   | 1,474         | 909           | 1,199         | 3,582                             | 16,777         |
|             | October                      | 1,794                       |   | 1,396         | 750           | 1,123         | 3,269                             | 14,542         |
|             | November                     | 1,840                       |   | 1,291         | 698           | 1,222         | 3,211                             | 14,642         |
|             | December                     | 1,860                       |   | 1,512         | 926           | 1,414         | 3,852                             | 17,093         |
|             | <b>AVERAGE</b>               | <b>1,656</b>                | <b>TOTAL**</b>                                | <b>17,059</b> | <b>9,085</b>  | <b>13,621</b> | <b>39,765</b>                     | <b>181,780</b> |
| <b>1977</b> | January                      | 1,850                       |   | 1,391         | 732           | 1,096         | 3,219                             | 14,517         |
|             | February                     | 1,856                       |   | 1,321         | 705           | 999           | 3,025                             | 14,443         |
|             | March                        | 1,887                       |   | 1,817         | 958           | 1,297         | 4,072                             | 19,400         |
|             | April                        | 1,907                       |   | 1,405         | 818           | 1,059         | 3,282                             | 15,523         |
|             | May                          | 1,982                       |   | 1,382         | 877           | 1,150         | 3,409                             | 16,702         |
|             | June                         | 2,008                       |   | 1,720         | 952           | 1,270         | 3,942                             | 18,767         |
|             | July                         | 2,023                       |   | 1,304         | 724           | 1,022         | 3,050                             | 14,529         |
|             | August                       | 2,066                       |   | 1,400         | 961           | 1,179         | 3,540                             | 16,838         |
|             | September                    | 2,084                       |   | 1,924         | 1,105         | 1,288         | 4,317                             | 19,333         |
|             | October                      | 2,101                       |   | 1,562         | 1,024         | 1,254         | 3,840                             | 18,000         |
|             | November                     | 2,113                       |   | 1,785         | 1,091         | 1,447         | 4,323                             | 19,537         |
|             | December                     | 2,141                       |   | 1,875         | 1,387         | 1,569         | 4,831                             | 21,365         |
|             | <b>AVERAGE</b>               | <b>2,001</b>                | <b>TOTAL**</b>                                | <b>18,889</b> | <b>11,363</b> | <b>14,642</b> | <b>44,894</b>                     | <b>210,038</b> |
| <b>1978</b> | January                      | 2,128                       |   | 1,184         | 783           | 1,233         | 3,200                             | 15,394         |
|             | February                     | 2,135                       |   | NA            | NA            | NA            | NA                                | NA             |
|             | <b>AVERAGE</b><br>(2 months) | <b>2,131</b>                |   |               |               |               |                                   |                |

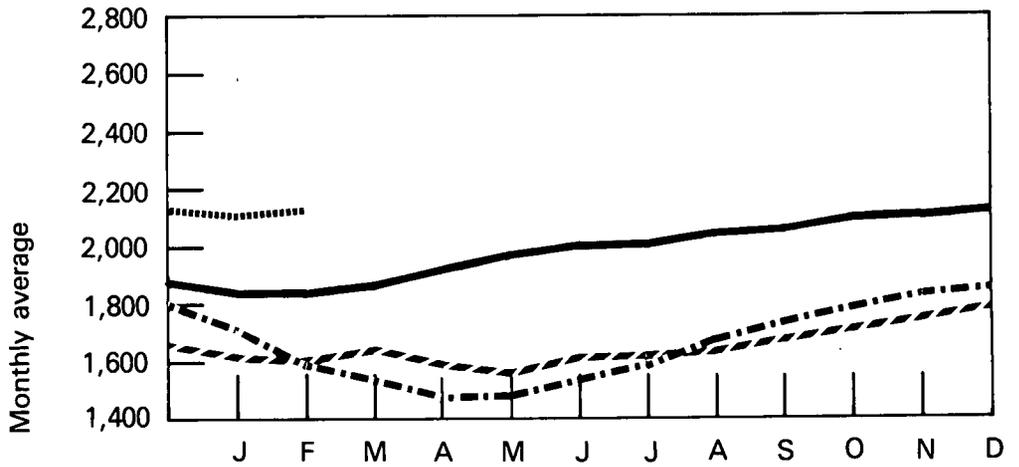
\*Excludes service wells and stratigraphic and core tests.

\*\*Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.

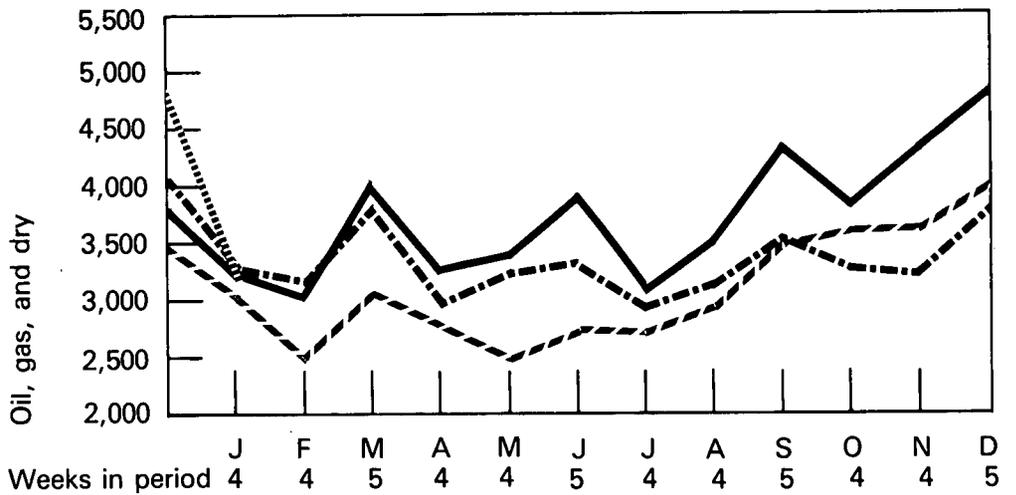
NA=Not available.

Sources: Rotary Rigs: Hughes Tool Company "Rotary Rigs Running - By State;" Wells: American Petroleum Institute "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

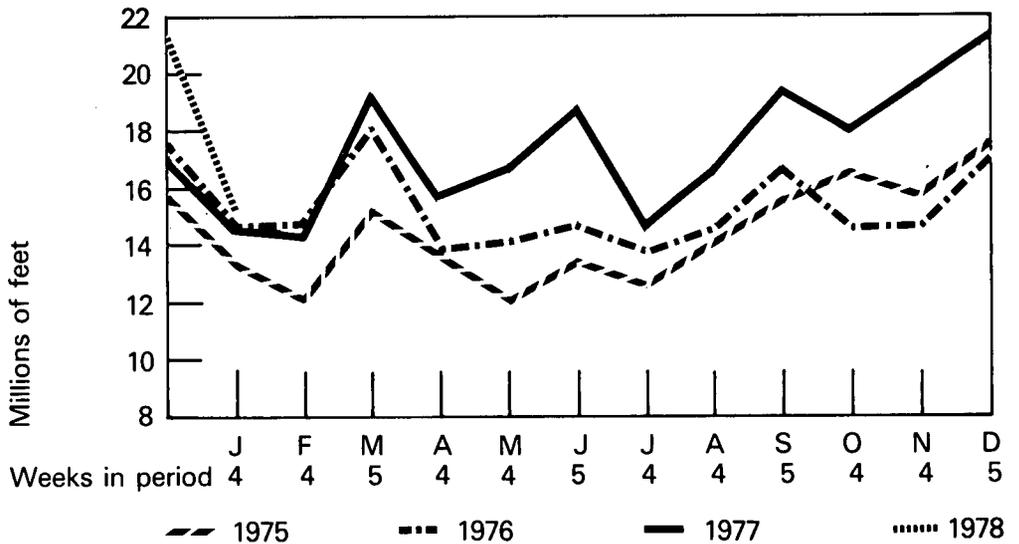
### Rotary Rigs in Operation



### Total Wells Drilled



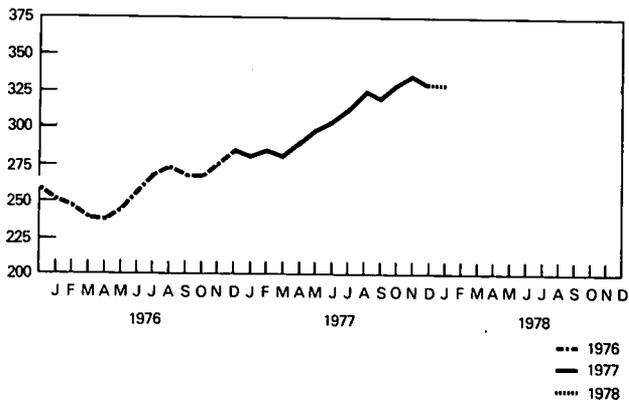
### Total Footage of Wells Drilled



# Oil and Gas Exploration and Development (Continued)

|             |                | Crews Engaged in Seismic Exploration |            |            | Line Miles of Seismic Exploration |               |               |
|-------------|----------------|--------------------------------------|------------|------------|-----------------------------------|---------------|---------------|
|             |                | Offshore                             | Onshore    | Total      | Offshore                          | Onshore       | Total         |
|             |                | Monthly average                      |            |            | Monthly average                   |               |               |
| <b>1972</b> | <b>Year</b>    | <b>12</b>                            | <b>239</b> | <b>251</b> | <b>10,306</b>                     | <b>9,333</b>  | <b>19,639</b> |
| <b>1973</b> | <b>Year</b>    | <b>23</b>                            | <b>227</b> | <b>250</b> | <b>21,579</b>                     | <b>10,597</b> | <b>32,175</b> |
| <b>1974</b> | <b>Year</b>    | <b>31</b>                            | <b>274</b> | <b>305</b> | <b>28,482</b>                     | <b>13,219</b> | <b>41,701</b> |
| <b>1975</b> | <b>Year</b>    | <b>30</b>                            | <b>254</b> | <b>284</b> | <b>25,773</b>                     | <b>12,558</b> | <b>38,331</b> |
| <b>1976</b> | <b>Year</b>    | <b>25</b>                            | <b>237</b> | <b>262</b> | <b>18,859</b>                     | <b>11,910</b> | <b>30,769</b> |
| <b>1977</b> | <b>Year</b>    | <b>27</b>                            | <b>281</b> | <b>308</b> | <b>NA</b>                         | <b>NA</b>     | <b>NA</b>     |
| <b>1975</b> | January        | 27                                   | 274        | 301        |                                   |               |               |
|             | February       | 24                                   | 278        | 302        |                                   |               |               |
|             | March          | 23                                   | 276        | 299        |                                   |               |               |
|             | April          | 23                                   | 260        | 283        |                                   |               |               |
|             | May            | 32                                   | 254        | 286        |                                   |               |               |
|             | June           | 38                                   | 251        | 289        |                                   |               |               |
|             | July           | 37                                   | 249        | 286        |                                   |               |               |
|             | August         | 40                                   | 249        | 289        |                                   |               |               |
|             | September      | 40                                   | 234        | 274        |                                   |               |               |
|             | October        | 29                                   | 241        | 270        |                                   |               |               |
|             | November       | 27                                   | 238        | 265        |                                   |               |               |
|             | December       | 26                                   | 233        | 259        |                                   |               |               |
| <b>1976</b> | January        | 20                                   | 232        | 252        |                                   |               |               |
|             | February       | 17                                   | 232        | 249        |                                   |               |               |
|             | March          | 18                                   | 222        | 240        |                                   |               |               |
|             | April          | 17                                   | 221        | 238        |                                   |               |               |
|             | May            | 21                                   | 226        | 247        |                                   |               |               |
|             | June           | 29                                   | 229        | 258        |                                   |               |               |
|             | July           | 30                                   | 240        | 270        |                                   |               |               |
|             | August         | 33                                   | 242        | 275        |                                   |               |               |
|             | September      | 28                                   | 240        | 268        |                                   |               |               |
|             | October        | 21                                   | 246        | 267        |                                   |               |               |
|             | November       | 25                                   | 250        | 275        |                                   |               |               |
|             | December       | 27                                   | 259        | 286        |                                   |               |               |
| <b>1977</b> | January        | 26                                   | 254        | 280        |                                   |               |               |
|             | February       | 27                                   | 259        | 286        |                                   |               |               |
|             | March          | 22                                   | 260        | 282        |                                   |               |               |
|             | April          | 26                                   | 266        | 292        |                                   |               |               |
|             | May            | 29                                   | 272        | 301        |                                   |               |               |
|             | June           | 31                                   | 274        | 305        |                                   |               |               |
|             | July           | 30                                   | 285        | 315        |                                   |               |               |
|             | August         | 31                                   | 295        | 326        |                                   |               |               |
|             | September      | 29                                   | 291        | 320        |                                   |               |               |
|             | October        | 28                                   | 302        | 330        |                                   |               |               |
|             | November       | 26                                   | 309        | 335        |                                   |               |               |
|             | December       | 26                                   | 303        | 329        |                                   |               |               |
|             | <b>AVERAGE</b> | <b>28</b>                            | <b>279</b> | <b>307</b> |                                   |               |               |
| <b>1978</b> | January        | 26                                   | 302        | 328        |                                   |               |               |

Total Seismic Crews



NA=Not available.

Source: Society of Exploration Geophysicists "Monthly Seismic Crew Count" and annual reports published in *Geophysics*.

## Price

December, 13 cents more than the cost in November.

## Motor Gasoline

No motor gasoline price information is available for January as yet.

The composite price of domestic and imported crude oil purchased by refiners (including transportation costs) was \$12.25 per barrel in December, 7 cents more than the revised November price.

## Heating Oil

The average retail price of heating oil sold to residential customers increased in December by 0.3 cent from its November level to 47.9 cents per gallon. This price is 4.9 cents per gallon higher than it was 1 year earlier.

## Residual Fuel Oil

The average retail price of residual fuel oil decreased in December by 0.7 cent to 30.2 cents per gallon. This price is 0.6 cent more than the price in December 1976.

## Aviation Fuels

The average retail price for kerosene-type aviation fuel increased slightly (0.3 cent) in December to 37.8 cents per gallon. This brings the increase since December 1976 to 5.6 cents per gallon.

## Natural Gas

The average price for natural gas sold to residential customers for heating use increased 4.3 cents in January to 241.6 cents per thousand cubic feet.

## Crude Oil

The average price paid by first purchasers for upper tier crude oil was \$11.76 per barrel in December, up 13 cents from the price paid in November. The lower tier crude oil price increased by 1 cent in December to \$5.25 per barrel. The average stripper oil price (\$13.98 per barrel) and the average Alaskan North Slope crude oil price (\$5.73 per barrel) were unchanged in December from the November price. The average price paid for all first purchases of domestic crude oil was \$8.76 per barrel in December, an increase of 4 cents from the November average.

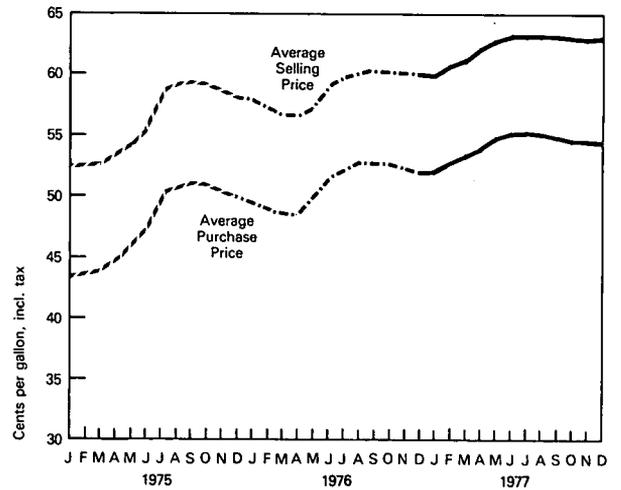
The average cost of imported crude oil purchased by refiners was \$14.74 per barrel in

# Motor Gasoline

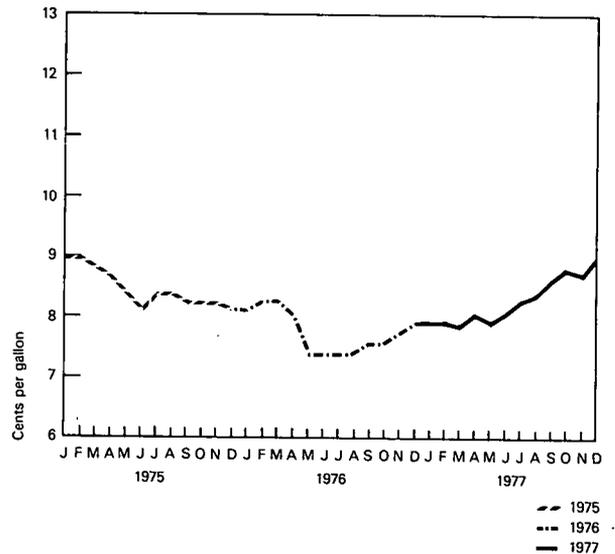
## Regular Gasoline at Full Service Retail Outlets

|                                  |                | Average<br>Selling<br>Price | Average<br>Purchase<br>Price | Average<br>Dealer<br>Margin |
|----------------------------------|----------------|-----------------------------|------------------------------|-----------------------------|
| Cents per gallon, including tax* |                |                             |                              |                             |
| <b>1974</b>                      | <b>AVERAGE</b> | <b>52.8</b>                 | <b>43.1</b>                  |                             |
| <b>1975</b>                      | January        | 52.4                        | 43.4                         | 9.0                         |
|                                  | February       | 52.5                        | 43.5                         | 9.0                         |
|                                  | March          | 52.6                        | 43.8                         | 8.8                         |
|                                  | April          | 53.5                        | 44.9                         | 8.6                         |
|                                  | May            | 54.3                        | 46.0                         | 8.3                         |
|                                  | June           | 55.6                        | 47.5                         | 8.1                         |
|                                  | July           | 58.7                        | 50.3                         | 8.4                         |
|                                  | August         | 59.2                        | 50.8                         | 8.4                         |
|                                  | September      | 59.3                        | 51.1                         | 8.2                         |
|                                  | October        | 58.9                        | 50.7                         | 8.2                         |
|                                  | November       | 58.4                        | 50.2                         | 8.2                         |
|                                  | December       | 58.0                        | 49.9                         | 8.1                         |
|                                  | <b>AVERAGE</b> | <b>56.2</b>                 | <b>47.8</b>                  |                             |
| <b>1976</b>                      | January        | 57.7                        | 49.6                         | 8.1                         |
|                                  | February       | 57.1                        | 48.8                         | 8.3                         |
|                                  | March          | 56.6                        | 48.3                         | 8.3                         |
|                                  | April          | 56.6                        | 48.6                         | 8.0                         |
|                                  | May            | 57.4                        | 50.0                         | 7.4                         |
|                                  | June           | 59.0                        | 51.6                         | 7.4                         |
|                                  | July           | 59.6                        | 52.2                         | 7.4                         |
|                                  | August         | 60.1                        | 52.7                         | 7.4                         |
|                                  | September      | 60.2                        | 52.6                         | 7.6                         |
|                                  | October        | 60.2                        | 52.6                         | 7.6                         |
|                                  | November       | 60.0                        | 52.2                         | 7.8                         |
|                                  | December       | 59.9                        | 52.0                         | 7.9                         |
|                                  | <b>AVERAGE</b> | <b>58.7</b>                 | <b>51.0</b>                  |                             |
| <b>1977</b>                      | January        | 59.9                        | 52.0                         | 7.9                         |
|                                  | February       | 60.7                        | 52.8                         | 7.9                         |
|                                  | March          | 61.3                        | 53.5                         | 7.8                         |
|                                  | April          | 62.2                        | 54.1                         | 8.1                         |
|                                  | May            | 62.9                        | 55.0                         | 7.9                         |
|                                  | June           | 63.4                        | 55.3                         | 8.1                         |
|                                  | July           | 63.4                        | 55.1                         | 8.3                         |
|                                  | August         | 63.4                        | 55.0                         | 8.4                         |
|                                  | September      | 63.3                        | 54.7                         | 8.6                         |
|                                  | October        | 63.2                        | 54.4                         | 8.8                         |
|                                  | November       | 63.1                        | 54.4                         | 8.7                         |
|                                  | December       | 63.3                        | 54.3                         | 9.0                         |

Average Retail Prices for Regular



Average Margins for Regular



\*To derive prices excluding taxes, 12.2 cents per gallon may be deducted for 1974 and 1975, and 12.5 cents per gallon may be deducted for 1976 and 1977.

Sources: FEA for 1974; Lundberg Survey, Inc., for January 1975 forward.

## Regular Gasoline at Self Service Retail Outlets

|             |           | Average<br>Selling<br>Price        | Average<br>Dealer<br>Margin |
|-------------|-----------|------------------------------------|-----------------------------|
|             |           | Cents per gallon,<br>including tax |                             |
| <b>1975</b> | November  | 55.4                               | 5.5                         |
|             | December  | 54.9                               | 5.3                         |
| <b>1976</b> | January   | 54.7                               | 5.4                         |
|             | February  | 53.8                               | 5.4                         |
|             | March     | 53.2                               | 5.3                         |
|             | April     | 53.2                               | 4.9                         |
|             | May       | 54.4                               | 4.5                         |
|             | June      | 56.3                               | 4.8                         |
|             | July      | 56.6                               | 4.6                         |
|             | August    | 56.7                               | 4.4                         |
|             | September | 56.5                               | 4.3                         |
|             | October   | 56.5                               | 4.4                         |
|             | November  | 56.4                               | 4.5                         |
|             | December  | 56.1                               | 4.5                         |
| <b>1977</b> | January   | 56.2                               | 4.5                         |
|             | February  | 57.1                               | 4.4                         |
|             | March     | 57.7                               | 4.4                         |
|             | April     | 58.4                               | 4.4                         |
|             | May       | 58.9                               | 4.2                         |
|             | June      | 59.3                               | 4.3                         |
|             | July      | 59.2                               | 4.4                         |
|             | August    | 58.8                               | 4.2                         |
|             | September | 58.5                               | 4.2                         |
|             | October   | 58.2                               | 4.2                         |
|             | November  | 58.1                               | 4.0                         |
|             | December  | 58.2                               | 4.2                         |

Source: Lundberg Survey, Inc.

## Motor Gasoline (Continued)

### Average Selling Prices for Premium and Unleaded Gasoline at Full Service Retail Outlets

|      |           | Premium                            | Unleaded<br>(Regular) |
|------|-----------|------------------------------------|-----------------------|
|      |           | Cents per gallon,<br>including tax |                       |
| 1975 | January   | 57.1                               | NA                    |
|      | February  | 57.3                               | 56.1                  |
|      | March     | 57.5                               | 56.2                  |
|      | April     | 58.2                               | 57.1                  |
|      | May       | 59.0                               | 57.9                  |
|      | June      | 60.3                               | 58.8                  |
|      | July      | 63.1                               | 61.5                  |
|      | August    | 63.6                               | 62.0                  |
|      | September | 63.8                               | 62.1                  |
|      | October   | 63.4                               | 62.1                  |
|      | November  | 63.2                               | 62.0                  |
|      | December  | 62.9                               | 61.4                  |
| 1976 | January   | 62.7                               | 61.2                  |
|      | February  | 62.1                               | 60.6                  |
|      | March     | 61.6                               | 60.1                  |
|      | April     | 61.6                               | 60.4                  |
|      | May       | 62.4                               | 61.1                  |
|      | June      | 63.9                               | 62.9                  |
|      | July      | 64.6                               | 63.2                  |
|      | August    | 65.2                               | 63.9                  |
|      | September | 65.3                               | 64.0                  |
|      | October   | 65.2                               | 64.0                  |
|      | November  | 65.2                               | 63.9                  |
|      | December  | 65.0                               | 63.9                  |
| 1977 | January   | 65.2                               | 64.0                  |
|      | February  | 66.1                               | 65.0                  |
|      | March     | 66.8                               | 65.4                  |
|      | April     | 67.6                               | 66.1                  |
|      | May       | 68.4                               | 66.7                  |
|      | June      | 68.9                               | 67.2                  |
|      | July      | 68.9                               | 67.3                  |
|      | August    | 68.9                               | 67.0                  |
|      | September | 68.9                               | 67.0                  |
|      | October   | 68.9                               | 67.0                  |
|      | November  | 68.9                               | 67.0                  |
|      | December  | 69.1                               | 67.2                  |

NA=Not available.

Source: Lundberg Survey, Inc.

## Average Selling Prices and Margins for Major and Independent Retail Dealers—December 1977

### Regular Gasoline—Full Service

|                  | Cents per gallon, including tax |        |
|------------------|---------------------------------|--------|
|                  | Selling Price                   | Margin |
| Major            | 64.4                            | 9.3    |
| Independent      | 58.4                            | 7.0    |
| National Average | 63.3                            | 9.0    |

### Unleaded Gasoline (Regular)—Full Service

|                  | Cents per gallon, including tax |        |
|------------------|---------------------------------|--------|
|                  | Selling Price                   | Margin |
| Major            | 68.1                            | 10.2   |
| Independent      | 62.0                            | 8.1    |
| National Average | 67.2                            | 9.9    |

### Regular Gasoline—Self Service

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 59.1          | 4.1    |
| Independent      | 55.8          | 4.5    |
| National Average | 58.2          | 4.2    |

### Unleaded Gasoline (Regular)—Self Service

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 64.8          | 6.9    |
| Independent      | 59.8          | 5.9    |
| National Average | 63.6          | 6.7    |

### Premium Gasoline—Full Service

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 69.9          | 10.4   |
| Independent      | 63.5          | 9.1    |
| National Average | 69.1          | 10.2   |

### Unleaded Gasoline (Premium)—Full Service

|                  | Selling Price |
|------------------|---------------|
| Major            | 71.6          |
| Independent      | 63.6          |
| National Average | 70.6          |

### Premium Gasoline—Self Service

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 66.9          | 7.4    |
| Independent      | 61.6          | 7.3    |
| National Average | 65.8          | 7.4    |

## Average Regional Selling Prices and Dealer Margins for Regular Gasoline at Full Service Outlets—December 1977

| Region                  | Selling Price                   | Margin     |
|-------------------------|---------------------------------|------------|
|                         | Cents per gallon, including tax |            |
| 1A New England          | 61.2                            | 6.6        |
| 1B Mid-Atlantic         | 63.8                            | 7.9        |
| 1C Lower Atlantic       | 63.1                            | 9.0        |
| 2 Mid-Continent         | 63.4                            | 8.8        |
| 3 Gulf Coast            | 61.7                            | 11.1       |
| 4 Rocky Mountain        | 64.0                            | 10.2       |
| 5 West Coast            | 65.1                            | 8.7        |
| <b>National Average</b> | <b>63.3</b>                     | <b>9.0</b> |

# Diesel Fuel

## Average Selling Prices and Margins for No. 2 Diesel Fuel\*

|                                 |           | Selling Price |                  | Margin     |                  |
|---------------------------------|-----------|---------------|------------------|------------|------------------|
|                                 |           | Truckstops    | Service Stations | Truckstops | Service Stations |
| Cents per gallon, including tax |           |               |                  |            |                  |
| <b>1975</b>                     | January   | NA            | 50.6             | NA         | 6.8              |
|                                 | February  | 49.7          | 50.2             | 7.0        | 7.3              |
|                                 | March     | 50.1          | 50.2             | 7.5        | 7.4              |
|                                 | April     | 50.5          | 50.6             | 7.4        | 7.5              |
|                                 | May       | 50.3          | 51.0             | 7.0        | 7.7              |
|                                 | June      | 51.4          | 51.4             | 7.5        | 7.9              |
|                                 | July      | 51.2          | 52.4             | 7.3        | 8.2              |
|                                 | August    | 52.1          | 52.6             | 8.1        | 8.9              |
|                                 | September | 52.1          | 52.7             | 7.4        | 8.7              |
|                                 | October   | 51.8          | 53.0             | 6.2        | 7.7              |
|                                 | November  | 52.0          | 53.0             | 5.3        | 6.5              |
|                                 | December  | 51.7          | 52.4             | 5.3        | 6.7              |
| <b>1976</b>                     | January   | 52.0          | 52.5             | 5.6        | 7.2              |
|                                 | February  | 52.1          | 52.0             | 6.0        | 7.3              |
|                                 | March     | 51.4          | 52.4             | 5.6        | 7.1              |
|                                 | April     | 51.1          | 52.8             | 5.8        | 7.8              |
|                                 | May       | 51.4          | 52.9             | 6.9        | 7.8              |
|                                 | June      | 52.0          | 53.3             | 7.0        | 7.7              |
|                                 | July      | 52.1          | 53.1             | 6.4        | 7.1              |
|                                 | August    | 52.3          | 53.2             | 6.0        | 7.0              |
|                                 | September | 52.2          | 53.1             | 5.7        | 6.8              |
|                                 | October   | 52.4          | 53.1             | 5.8        | 6.5              |
|                                 | November  | 52.9          | 53.3             | 6.1        | 6.4              |
|                                 | December  | 53.1          | 53.5             | 5.7        | 5.9              |
| <b>1977</b>                     | January   | 53.9          | 54.3             | 4.9        | 5.3              |
|                                 | February  | 55.3          | 55.6             | 5.5        | 5.9              |
|                                 | March     | 56.0          | 56.4             | 5.7        | 6.2              |
|                                 | April     | 56.6          | 56.7             | 6.5        | 6.7              |
|                                 | May       | 56.9          | 57.1             | 6.5        | 6.8              |
|                                 | June      | 57.3          | 57.4             | 7.1        | 7.2              |
|                                 | July      | 57.3          | 57.3             | 7.2        | 7.2              |
|                                 | August    | 57.0          | 57.2             | 6.7        | 7.2              |
|                                 | September | 56.8          | 57.3             | 6.5        | 7.1              |
|                                 | October   | 56.9          | 57.2             | 6.4        | 6.9              |
|                                 | November  | 56.9          | 57.3             | 6.5        | 6.7              |
|                                 | December  | 57.4          | 57.5             | 6.6        | 6.9              |

\*See Explanatory Note 14.

NA=Not available.

Source: Lundberg Survey, Inc.

## Average Selling Prices and Margins for Major and Independent No. 2 Diesel Fuel Retail Dealers—December 1977

Cents per gallon, including tax

### Truckstops

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 58.4          | 5.9    |
| Independent      | 56.8          | 7.3    |
| National Average | 57.4          | 6.6    |

### Service Stations

|                  | Selling Price | Margin |
|------------------|---------------|--------|
| Major            | 59.0          | 5.9    |
| Independent      | 56.4          | 7.5    |
| National Average | 57.5          | 6.9    |

Source: Lundberg Survey, Inc.

## No. 1 Diesel Fuel Prices

Wholesale      Retail  
Cents per gallon, excluding tax

|             |           |      |      |
|-------------|-----------|------|------|
| <b>1975</b> | July      | 30.1 | 37.7 |
|             | August    | 30.8 | 38.2 |
|             | September | 31.5 | 36.9 |
|             | October   | 33.1 | 35.4 |
|             | November  | 33.3 | 35.0 |
|             | December  | 34.2 | 35.5 |
| <b>1976</b> | January   | 33.8 | 37.1 |
|             | February  | 33.6 | 35.3 |
|             | March     | 33.9 | 34.8 |
|             | April     | 34.2 | 35.4 |
|             | May       | 34.5 | 37.5 |
|             | June      | 34.7 | 37.9 |
|             | July      | 35.0 | 38.1 |
|             | August    | 36.0 | 38.2 |
|             | September | 35.3 | 37.7 |
|             | October   | 36.3 | 36.4 |
|             | November  | 35.7 | 37.0 |
|             | December  | 35.5 | 36.7 |
| <b>1977</b> | January   | 37.1 | 37.8 |
|             | February  | 38.4 | 39.2 |
|             | March     | 39.0 | 39.6 |
|             | April     | 39.7 | 40.6 |
|             | May       | 39.5 | 41.7 |
|             | June      | 40.2 | 41.2 |
|             | July      | 40.3 | 41.3 |
|             | August    | 40.9 | 41.3 |
|             | September | 39.0 | 41.1 |
|             | October   | 40.1 | 39.8 |
|             | November* | 40.9 | 40.4 |
|             | December* | 39.4 | 35.6 |

\*Preliminary.

NA=Not available.

Note: 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 consumers.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

# Heating Oil

## Residential Heating Oil Prices

|             |                | Average<br>Selling<br>Price* | Average<br>Purchase<br>Price* | Average<br>Dealer<br>Margin* |
|-------------|----------------|------------------------------|-------------------------------|------------------------------|
|             |                | ↓ Cents per gallon           |                               |                              |
| <b>1974</b> | <b>AVERAGE</b> | <b>34.7</b>                  | <b>26.9</b>                   |                              |
| <b>1975</b> | January        | 37.4                         | 29.1                          | 8.3                          |
|             | February       | 37.0                         | 28.7                          | 8.3                          |
|             | March          | 36.6                         | 28.4                          | 8.2                          |
|             | April          | 36.1                         | 29.3                          | 6.8                          |
|             | May            | 36.7                         | 30.0                          | 6.7                          |
|             | June           | 37.1                         | 30.3                          | 6.8                          |
|             | July           | 37.2                         | 30.6                          | 6.6                          |
|             | August         | 38.0                         | 31.2                          | 6.8                          |
|             | September      | 38.4                         | 31.0                          | 7.4                          |
|             | October        | 39.3                         | 31.8                          | 7.5                          |
|             | November       | 39.4                         | 32.1                          | 7.3                          |
|             | December       | 40.1                         | 32.4                          | 7.7                          |
|             | <b>AVERAGE</b> | <b>37.7</b>                  | <b>31.2</b>                   |                              |
| <b>1976</b> | January        | 40.1                         | 32.4                          | 7.7                          |
|             | February       | 40.1                         | 32.4                          | 7.7                          |
|             | March          | 39.4                         | NA                            | NA                           |
|             | April          | 39.0                         | NA                            | NA                           |
|             | May            | 39.0                         | NA                            | NA                           |
|             | June           | 39.3                         | NA                            | NA                           |
|             | July           | 39.3                         | NA                            | NA                           |
|             | August         | 39.8                         | NA                            | NA                           |
|             | September      | 40.2                         | NA                            | NA                           |
|             | October        | 40.7                         | NA                            | NA                           |
|             | November       | 41.9                         | NA                            | NA                           |
|             | December       | 43.0                         | NA                            | NA                           |
| <b>1977</b> | January        | 44.4                         | NA                            | NA                           |
|             | February       | 45.3                         | NA                            | NA                           |
|             | March          | 45.8                         | NA                            | NA                           |
|             | April          | 45.9                         | NA                            | NA                           |
|             | May            | 45.7                         | NA                            | NA                           |
|             | June           | 45.7                         | NA                            | NA                           |
|             | July           | 45.8                         | NA                            | NA                           |
|             | August         | 46.0                         | NA                            | NA                           |
|             | September      | 46.2                         | NA                            | NA                           |
|             | October        | 46.7                         | NA                            | NA                           |
|             | November       | 47.6                         | NA                            | NA                           |
|             | December       | 47.9                         | NA                            | NA                           |

\*Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.

NA=Not available.

Sources: 1974 through February 1976—Form CLC-92 "No. 2 Heating Oil Monthly Price Adjustment Report;" June 1976 forward—FEA Form P112-M-1 "No. 2 Heating Oil Supply/Price Monitoring Report."

## Residential Heating Oil Prices by Region

|                  |           | New<br>England | Mid-<br>Atlantic | South<br>Atlantic | East<br>North<br>Central | East<br>South<br>Central | West<br>North<br>Central | West<br>South<br>Central | Mountain | Pacific |
|------------------|-----------|----------------|------------------|-------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------|---------|
| Cents per gallon |           |                |                  |                   |                          |                          |                          |                          |          |         |
| <b>1975</b>      | January   | 40.2           | 38.9             | 36.5              | 33.2                     | 34.7                     | 34.0                     | NA                       | 37.5     | 38.0    |
|                  | February  | 39.2           | 38.4             | 36.8              | 33.4                     | 34.7                     | 33.3                     | NA                       | 36.6     | 37.7    |
|                  | March     | 38.0           | 37.8             | 36.4              | 34.2                     | 33.2                     | 34.3                     | NA                       | NA       | 36.8    |
|                  | April     | 37.4           | 36.8             | 36.8              | 33.2                     | 33.7                     | 34.5                     | NA                       | 38.9     | 36.8    |
|                  | May       | 37.6           | 36.9             | 36.4              | 35.1                     | 34.7                     | 35.4                     | NA                       | 37.0     | 37.8    |
|                  | June      | 37.7           | 37.7             | 36.4              | 35.8                     | NA                       | 35.9                     | NA                       | 37.6     | 37.6    |
|                  | July      | 37.9           | 36.9             | 36.9              | 36.4                     | 34.7                     | 36.8                     | NA                       | NA       | 38.8    |
|                  | August    | 38.8           | 38.2             | 37.9              | 36.3                     | 35.7                     | 36.3                     | NA                       | 41.3     | 39.3    |
|                  | September | 39.4           | 38.7             | 37.6              | 36.5                     | 35.7                     | 36.8                     | NA                       | 38.9     | 40.1    |
|                  | October   | 40.3           | 39.9             | 38.3              | 37.4                     | 36.6                     | 37.9                     | NA                       | 39.0     | 41.0    |
|                  | November  | 41.0           | 39.6             | 38.7              | 37.9                     | NA                       | 38.1                     | NA                       | 40.2     | 41.3    |
|                  | December  | 41.0           | 41.1             | 39.0              | 38.5                     | 34.1                     | 38.0                     | NA                       | 44.8     | 40.9    |
| <b>1976</b>      | January   | 41.5           | 40.0             | 39.6              | 38.3                     | 37.8                     | 38.2                     | 35.0                     | 41.2     | 41.6    |
|                  | February  | 41.4           | 40.3             | 39.4              | 38.0                     | 37.7                     | 38.3                     | 34.4                     | 41.0     | 42.1    |
|                  | March     | 41.5           | 39.8             | 39.2              | 37.0                     | 36.7                     | 37.6                     | 34.5                     | 40.4     | 41.9    |
|                  | April     | 41.2           | 40.0             | 38.9              | 37.1                     | 35.9                     | 37.3                     | 34.6                     | 40.3     | 40.8    |
|                  | May       | 41.1           | 39.7             | 38.2              | 37.1                     | 35.6                     | 37.3                     | 34.0                     | 40.4     | 42.1    |
|                  | June      | 40.9           | 41.1             | 39.1              | 37.7                     | 37.2                     | 37.3                     | 34.3                     | 40.3     | 42.8    |
|                  | July      | 40.7           | 39.8             | 39.1              | 37.9                     | 36.9                     | 37.3                     | 34.4                     | 40.1     | 45.0    |
|                  | August    | 41.5           | 40.3             | 39.5              | 38.2                     | 37.2                     | 37.7                     | 34.3                     | 39.7     | 44.7    |
|                  | September | 41.9           | 40.8             | 37.5              | 38.3                     | 38.0                     | 38.8                     | 34.8                     | 41.1     | 46.0    |
|                  | October   | 42.3           | 41.4             | 40.4              | 39.0                     | 38.5                     | 38.7                     | 35.1                     | 42.1     | 46.0    |
|                  | November  | 43.3           | 42.4             | 42.1              | 40.1                     | 39.8                     | 39.5                     | 36.3                     | 42.8     | 46.5    |
|                  | December  | 44.4           | 43.6             | 42.9              | 41.5                     | 41.0                     | 41.9                     | 36.3                     | 42.7     | 43.8    |
| <b>1977</b>      | January   | 45.8           | 44.9             | 44.2              | 43.2                     | 43.1                     | 43.0                     | 36.9                     | 43.4     | 44.6    |
|                  | February  | 46.6           | 45.8             | 45.7              | 43.9                     | 43.4                     | 44.0                     | 38.8                     | 44.2     | 45.2    |
|                  | March     | 47.1           | 46.3             | 45.5              | 44.4                     | 43.8                     | 44.6                     | 40.2                     | 44.7     | 45.9    |
|                  | April     | 47.2           | 46.5             | 45.5              | 44.8                     | 43.3                     | 44.2                     | 40.8                     | 44.8     | 46.4    |
|                  | May       | 47.0           | 46.4             | 45.6              | 44.7                     | 43.7                     | 43.7                     | 40.7                     | 44.8     | 46.5    |
|                  | June      | 47.1           | 46.4             | 45.7              | 44.7                     | 44.0                     | 43.3                     | 41.2                     | 45.8     | 46.8    |
|                  | July      | 47.1           | 46.4             | 45.7              | 44.7                     | 44.2                     | 44.2                     | 41.2                     | 44.2     | 47.9    |
|                  | August    | 47.4           | 46.6             | 45.6              | 44.7                     | 43.7                     | 44.5                     | 41.0                     | 44.9     | 48.2    |
|                  | September | 47.7           | 46.7             | 45.8              | 45.0                     | 44.2                     | 44.9                     | 41.1                     | 44.9     | 47.2    |
|                  | October   | 48.0           | 47.3             | 46.4              | 45.3                     | 43.9                     | 45.4                     | 41.1                     | 45.4     | 47.4    |

NA=Not available.

Note: Data for West South Central Region are based on a sample of less than four reporting firms. Average regional distributor purchase prices for heating oil for the period January 1975 through February 1976 are published on page 70 of the October 1977 issue of the *Monthly Energy Review*. Sources: January through December 1975—Form CLC-92 "No. 2 Heating Oil Monthly Price Adjustment Report;" January 1976 forward—FEA Form P112-M-1 "No. 2 Heating Oil Supply/Price Monitoring Report."

|      |           | RESIDUAL FUEL OIL<br>(Dollars per barrel) |        |                              |        |                               |        |                                    |        |                |        |                |        |        |
|------|-----------|---|--------|------------------------------|--------|-------------------------------|--------|------------------------------------|--------|----------------|--------|----------------|--------|--------|
|      |           | NO. 5                                     |        | NO. 6                        |        |                               |        |                                    |        | BUNKER "C"     |        | TOTAL          |        |        |
|      |           |   |        | 0.0 to 0.3<br>percent sulfur |        | 0.31 to 1.0<br>percent sulfur |        | Greater than 1.0<br>percent sulfur |        | Total          |        |                |        |        |
|      |           | Whole-<br>sale                            | Retail | Whole-<br>sale               | Retail | Whole-<br>sale                | Retail | Whole-<br>sale                     | Retail | Whole-<br>sale | Retail | Whole-<br>sale | Retail |        |
| 1975 | July      | 10.19                                     | 11.28  | 11.57                        | 12.86  | 10.90                         | 12.05  | 10.25                              | 10.59  | 10.66          | 11.70  | 7.88           | 10.54  | 11.27  |
|      | August    | 10.19                                     | 11.04  | 11.53                        | 13.22  | 10.85                         | 12.34  | 9.72                               | 10.53  | 10.49          | 11.89  | 8.76           | 10.43  | 11.32  |
|      | September | 10.58                                     | 11.07  | 11.75                        | 12.94  | 10.63                         | 11.65  | 9.87                               | 10.52  | 10.48          | 11.52  | 8.93           | 10.29  | 11.09  |
|      | October   | 10.15                                     | 11.12  | 11.50                        | 12.98  | 10.37                         | 12.09  | 9.75                               | 10.38  | 10.30          | 11.69  | 8.88           | 10.31  | 11.13  |
|      | November  | 10.90                                     | 11.27  | 12.21                        | 12.96  | 10.33                         | 12.03  | 9.90                               | 10.34  | 10.47          | 11.68  | 9.01           | 10.43  | 11.24  |
|      | December  | 10.83                                     | 11.64  | 11.89                        | 12.87  | 10.37                         | 11.83  | 9.65                               | 10.06  | 10.24          | 11.42  | 9.07           | 10.15  | 10.97  |
| 1976 | January   | 11.08                                     | 11.63  | 12.13                        | 12.39  | 10.62                         | 11.61  | 9.57                               | 10.23  | 10.53          | 11.35  | 8.75           | 10.35  | 11.02  |
|      | February  | 10.55                                     | 11.57  | 12.42                        | 12.78  | 10.87                         | 11.84  | 9.70                               | 10.35  | 10.73          | 11.52  | 8.53           | 10.27  | 11.15  |
|      | March     | 10.41                                     | 11.89  | 12.36                        | 12.81  | 11.05                         | 11.80  | 9.56                               | 10.21  | 10.74          | 11.43  | 8.59           | 10.35  | 11.12  |
|      | April     | 10.21                                     | 11.58  | 11.44                        | 12.34  | 10.86                         | 11.77  | 9.53                               | 10.28  | 10.38          | 11.43  | 8.66           | 10.12  | 11.02  |
|      | May       | 9.87                                      | 11.49  | 11.71                        | 11.87  | 10.80                         | 11.40  | 9.47                               | 9.89   | 10.11          | 10.95  | 8.75           | 10.65  | 10.63  |
|      | June      | 9.91                                      | 11.23  | 11.71                        | 12.24  | 10.33                         | 11.36  | 9.73                               | 10.03  | 10.12          | 11.04  | 8.57           | 10.10  | 10.70  |
|      | July      | 10.06                                     | 11.70  | 11.73                        | 12.12  | 10.22                         | 11.36  | 9.83                               | 10.04  | 10.25          | 11.04  | 9.23           | 10.34  | 10.74  |
|      | August    | 9.78                                      | 11.48  | 11.85                        | 12.29  | 10.45                         | 11.46  | 9.61                               | 10.22  | 10.20          | 11.20  | 8.93           | 9.98   | 10.82  |
|      | September | 10.36                                     | 11.37  | 11.85                        | 12.50  | 10.33                         | 11.55  | 10.04                              | 10.28  | 10.35          | 11.30  | 9.22           | 10.05  | 10.90  |
|      | October   | 10.40                                     | 11.86  | 11.96                        | 12.85  | 11.08                         | 11.99  | 10.00                              | 10.73  | 10.75          | 11.82  | 9.57           | 10.81  | 11.38  |
|      | November  | 11.04                                     | 12.04  | 12.41                        | 13.15  | 11.57                         | 12.21  | 10.40                              | 10.99  | 11.16          | 11.95  | 10.31          | 10.88  | 11.61  |
|      | December  | 11.49                                     | 12.64  | 13.18                        | 13.29  | 11.80                         | 12.76  | 11.04                              | 11.48  | 11.87          | 12.44  | 9.95           | 11.24  | 12.16  |
| 1977 | January   | 12.00                                     | 13.20  | 14.06                        | 14.34  | 12.79                         | 13.68  | 11.51                              | 12.32  | 12.45          | 13.32  | 10.34          | 11.89  | 12.94  |
|      | February  | 12.28                                     | 13.63  | 14.00                        | 14.60  | 12.91                         | 14.06  | 12.04                              | 12.74  | 12.69          | 13.71  | 10.24          | 12.00  | 13.21  |
|      | March     | 12.15                                     | 13.76  | 14.00                        | 14.58  | 13.47                         | 14.51  | 11.62                              | 12.70  | 12.68          | 13.84  | 9.97           | 11.74  | 13.27  |
|      | April     | 11.62                                     | 13.26  | 12.88                        | 14.63  | 13.05                         | 14.10  | 11.27                              | 12.50  | 12.04          | 13.61  | 10.14          | 11.75  | 12.92  |
|      | May       | 11.54                                     | 12.69  | 13.56                        | 14.48  | 11.90                         | 13.73  | 11.05                              | 12.15  | 11.64          | 13.42  | 9.97           | 11.41  | 12.67  |
|      | June      | 11.25                                     | 13.10  | 13.12                        | 14.28  | 11.88                         | 13.27  | 11.10                              | 11.93  | 11.72          | 13.02  | 10.30          | 11.39  | 12.47  |
|      | July      | 11.24                                     | 12.67  | 13.31                        | 14.38  | 11.73                         | 13.12  | 11.02                              | 12.06  | 11.62          | 13.01  | 10.91          | 11.44  | 12.47  |
|      | August    | 11.61                                     | 12.75  | 13.32                        | 14.15  | 11.83                         | 13.08  | 11.89                              | 12.01  | 12.06          | 13.00  | 11.08          | 11.58  | 12.56  |
|      | September | 11.70                                     | 12.84  | 13.35                        | 14.33  | 11.79                         | 13.11  | 11.78                              | 12.19  | 12.03          | 12.94  | 11.20          | 11.72  | 12.59  |
|      | October   | R11.52                                    | R13.14 | R13.38                       | R14.30 | R11.69                        | R13.15 | R11.71                             | R12.33 | 12.10          | 13.15  | R10.98         | R11.87 | 12.63  |
|      | November* | R11.27                                    | R13.17 | R12.90                       | 14.24  | R11.67                        | R12.93 | R11.44                             | 12.15  | 11.76          | 12.96  | R10.42         | R11.66 | R12.28 |
|      | December* | 11.71                                     | 13.75  | 13.02                        | 13.93  | 11.27                         | 12.60  | 10.77                              | 12.00  | 11.28          | 12.70  | 11.27          | 11.37  | 12.15  |

\*Preliminary.

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, institutional, commercial, and residential accounts.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

# Aviation Fuels

## AVIATION FUELS (Cents per gallon)

|      |            | Aviation Gasoline |        | Naphtha-Type* | Kerosene-Type |        |
|------|------------|-------------------|--------|---------------|---------------|--------|
|      |            | Wholesale         | Retail | Retail        | Wholesale     | Retail |
| 1975 | July       | 40.6              | 40.6   | 31.4          | 29.8          | 29.2   |
|      | August     | 41.3              | 42.1   | 30.8          | 32.1          | 29.5   |
|      | September  | 41.2              | 39.9   | 30.3          | 31.5          | 29.6   |
|      | October    | 41.1              | 41.2   | 30.2          | 31.7          | 30.0   |
|      | November   | 39.7              | 42.1   | 30.6          | 31.6          | 30.2   |
|      | December   | 40.9              | 40.9   | 30.7          | 31.9          | 30.5   |
| 1976 | January    | 41.4              | 41.2   | 31.0          | 30.6          | 31.3   |
|      | February   | 41.2              | 42.0   | 31.1          | 31.1          | 31.2   |
|      | March      | 41.1              | 41.9   | 30.9          | 31.2          | 30.7   |
|      | April      | 41.2              | 42.5   | 30.5          | 31.9          | 30.5   |
|      | May        | 42.1              | 43.1   | 30.6          | 33.0          | 30.2   |
|      | June       | 42.6              | 42.3   | 31.5          | 32.1          | 30.3   |
|      | July       | 43.6              | 44.2   | 31.3          | 32.9          | 30.8   |
|      | August     | 43.7              | 44.1   | 31.7          | 32.1          | 31.1   |
|      | September  | 43.6              | 44.7   | 32.1          | 32.5          | 31.4   |
|      | October    | 43.6              | 43.8   | 32.1          | 32.5          | 31.9   |
|      | November   | 43.4              | 43.9   | 32.8          | 33.4          | 32.4   |
|      | December   | 43.5              | 43.7   | 32.9          | 34.7          | 32.2   |
| 1977 | January    | 43.4              | 44.1   | 33.4          | 34.6          | 33.2   |
|      | February   | 44.7              | 45.0   | 34.0          | 37.1          | 34.1   |
|      | March      | 45.0              | 45.7   | 34.5          | 35.9          | 34.6   |
|      | April      | 46.0              | 47.2   | 34.3          | 35.9          | 34.9   |
|      | May        | 46.6              | 47.8   | 34.3          | 36.3          | 35.1   |
|      | June       | 46.7              | 47.6   | 35.1          | 36.8          | 35.7   |
|      | July       | 47.0              | 48.7   | 35.6          | 37.1          | 35.8   |
|      | August     | 47.9              | 50.1   | 35.5          | 36.6          | 36.0   |
|      | September  | 47.9              | 49.1   | 35.6          | 37.1          | 37.0   |
|      | October    | 48.1              | 49.0   | 35.7          | 37.3          | 37.3   |
|      | November** | 48.3              | 48.2   | R35.8         | 37.9          | 37.5   |
|      | December** | 47.8              | 48.1   | 36.2          | 37.2          | 37.8   |

\*Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.

\*\*Preliminary.

R=Revised data.

Note: Wholesale refers to the price of aviation fuel sold to refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

# Propane and Butane

## Wholesale Propane and Butane Prices\*

|                |                              | Propane          | Butane      |
|----------------|------------------------------|------------------|-------------|
|                |                              | Cents per gallon |             |
| <b>1975</b>    | July                         | 17.9             | 17.5        |
|                | August                       | 18.8             | 18.2        |
|                | September                    | 19.8             | 19.7        |
|                | October                      | 19.9             | 20.4        |
|                | November                     | 20.2             | 20.5        |
|                | December                     | 20.6             | 20.2        |
|                | <b>AVERAGE</b><br>(6 months) | <b>19.7</b>      | <b>19.4</b> |
| <b>1976</b>    | January                      | 21.2             | 20.6        |
|                | February                     | 21.0             | 21.6        |
|                | March                        | 20.1             | 21.3        |
|                | April                        | 19.4             | 20.9        |
|                | May                          | 19.0             | 21.6        |
|                | June                         | 19.5             | 21.4        |
|                | July                         | 19.9             | 22.2        |
|                | August                       | 20.2             | 22.3        |
|                | September                    | 20.6             | 22.0        |
|                | October                      | 20.9             | 22.7        |
|                | November                     | 21.4             | 22.4        |
|                | December                     | 22.1             | 23.6        |
| <b>AVERAGE</b> | <b>20.6</b>                  | <b>21.9</b>      |             |
| <b>1977</b>    | January                      | 22.9             | 23.0        |
|                | February                     | 24.0             | 24.3        |
|                | March                        | 23.7             | 24.9        |
|                | April                        | 23.6             | 24.2        |
|                | May                          | 24.5             | 25.8        |
|                | June                         | 24.5             | 25.6        |
|                | July                         | 24.9             | 26.2        |
|                | August                       | 25.5             | 26.1        |
|                | September                    | 25.9             | 27.4        |
|                | October                      | 26.8             | 26.3        |
|                | November**                   | 26.5             | 25.8        |
|                | December**                   | 26.7             | 25.8        |

\*Wholesale refers to the price at which refiners, resellers, retailers, and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.

\*\*Preliminary data.

Source: FEA Form P302-M-1.

Domestic Crude Petroleum Prices at the Wellhead<sup>1</sup>

|                    |             |                               |                               | Lower Tier <sup>2</sup> | Upper Tier <sup>2</sup> | Actual Stripper <sup>3</sup>  | Actual Domestic Average <sup>4</sup> | Imputed Domestic Average <sup>4</sup> |  |   |  |   |      |
|--------------------|-------------|-------------------------------|-------------------------------|-------------------------|-------------------------|-------------------------------|--------------------------------------|---------------------------------------|--|---|--|---|------|
| Dollars per barrel |             |                               |                               | Dollars per barrel      |                         |                               |                                      |                                       |  |   |  |   |      |
| <b>1974</b>        | <b>AVG.</b> | <b>5.03</b>                   | <b>10.13</b>                  | <b>6.87</b>             |                         |                               |                                      |                                       |  |   |  |   |      |
| <b>1975</b>        | January     | 5.05                          | 11.28                         | 7.61                    | <b>1976</b>             | September                     | 5.17                                 | 11.65                                 | 13.21                                  | 8.39  | 8.19                                       |   |      |
|                    | February    | 5.03                          | 11.39                         | 7.47                    |                         | October                       | 5.15                                 | 11.62                                 | 13.35                                  | 8.46  | 8.23                                       |   |      |
|                    | March       | 5.03                          | 11.47                         | 7.57                    |                         | November                      | 5.17                                 | 11.62                                 | 13.31                                  | 8.62  | 8.40                                       |   |      |
|                    | April       | 5.03                          | 11.64                         | 7.55                    |                         | December                      | 5.17                                 | 11.64                                 | 13.30                                  | 8.62  | 8.40                                       |   |      |
|                    | May         | 5.03                          | 11.69                         | 7.52                    | <b>1977</b>             | January                       | 5.17                                 | 11.44                                 | 13.27                                  | 8.50  | 8.28                                       |   |      |
|                    | June        | 5.03                          | 11.73                         | 7.49                    |                         | February                      | 5.18                                 | 11.39                                 | 13.32                                  | 8.57  | 8.33                                       |   |      |
|                    | July        | 5.03                          | 12.30                         | 7.75                    |                         | March                         | 5.15                                 | 11.03                                 | 13.31                                  | 8.45  | 8.19                                       |   |      |
|                    | August      | 5.03                          | 12.38                         | 7.73                    |                         | April                         | 5.15                                 | 10.97                                 | 13.28                                  | 8.40  | 8.14                                       |   |      |
|                    | September   | 5.04                          | 12.46                         | 7.75                    |                         | May                           | 5.18                                 | 10.98                                 | 13.26                                  | 8.49  | 8.23                                       |   |      |
|                    | October     | 5.03                          | 12.73                         | 7.83                    |                         | June                          | 5.16                                 | 10.92                                 | 13.28                                  | 8.44  | 8.17                                       |   |      |
|                    | November    | 5.03                          | 12.89                         | 7.80                    |                         |                               |                                      |                                       |  |   |  |   |      |
|                    | December    | 5.03                          | 12.95                         | 7.93                    |                         |                               |                                      |                                       |  |   |  |   |      |
|                    | <b>AVG.</b> | <b>5.03</b>                   | <b>12.03</b>                  | <b>7.67</b>             |                         |                               |                                      |                                       |  |   |  |   |      |
| <b>1976</b>        | January     | 5.02                          | 12.99                         | 8.63                    |                         |                               |                                      |                                       |  |   |  |   |      |
|                    |             | <b>Lower Tier<sup>2</sup></b> | <b>Upper Tier<sup>2</sup></b> | <b>Domestic Average</b> |                         | <b>Lower Tier<sup>2</sup></b> | <b>Upper Tier<sup>2</sup></b>        | <b>Actual Stripper<sup>3</sup></b>    | <b>Alaskan North Slope<sup>5</sup></b> | <b>Naval Petroleum Reserves<sup>6</sup></b> | <b>Actual Domestic Average<sup>4</sup></b> | <b>Imputed Domestic Average<sup>4</sup></b> |      |
|                    |             | Dollars per barrel            |                               |                         |                         |                               |                                      |                                       |  |   |  |   |      |
| <b>1976</b>        | February    | 5.05                          | 11.47                         | 7.87                    |                         | July                          | 5.16                                 | 11.00                                 | 13.31                                  | 6.84  | 12.21                                      | 8.48  | 8.21 |
|                    | March       | 5.07                          | 11.39                         | 7.79                    |                         | August                        | 5.18                                 | 10.93                                 | 13.95                                  | 6.91  | 12.29                                      | 8.62  | 8.25 |
|                    | April       | 5.07                          | 11.52                         | 7.86                    |                         | September                     | 5.20                                 | 11.20                                 | 14.01                                  | 6.98  | 12.33                                      | 8.63  | 8.26 |
|                    | May         | 5.13                          | 11.55                         | 7.89                    |                         | October                       | 5.23                                 | 11.42                                 | 14.01                                  | 6.66  | 12.38                                      | 8.72  | 8.36 |
|                    | June        | 5.15                          | 11.60                         | 7.99                    |                         | November                      | 5.24                                 | 11.63                                 | 13.98                                  | 5.73  | 12.40                                      | 8.72  | 8.35 |
|                    | July        | 5.19                          | 11.59                         | 8.04                    |                         | December <sup>7</sup>         | 5.25                                 | 11.76                                 | 13.98                                  | 5.73  | 12.36                                      | 8.76  | 8.40 |
|                    | August      | 5.18                          | 11.62                         | 8.03                    |                         |                               |                                      |                                       |  |   |  |   |      |

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

<sup>2</sup> See Definitions.

<sup>3</sup> Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976 stripper oil was subject to upper tier price ceilings.

<sup>4</sup> The actual domestic average price represents the average price at which all domestic crude oil is purchased. The imputed domestic average price is the average price used to establish ceiling prices for domestic crude oil in accordance with the provisions of the Energy Conservation and Production Act. It is calculated as the weighted average of lower tier, upper tier, and an imputed stripper crude oil price. The imputed stripper crude oil price is equal to \$11.63 per barrel plus the difference between the composite price of crude oil in August 1976 (excluding stripper oil) and the composite price of crude oil in the month of measurement (excluding stripper oil).

<sup>5</sup> Alaskan North Slope (ANS) crude oil prices are treated as Upper Tier for determining the applicable wellhead ceiling prices. ANS is included in both the Actual Domestic Average and the Imputed Domestic Average price determinations.

<sup>6</sup> The Naval Petroleum Reserves (NPR) are exempt from pricing regulations but have been reported here as Upper Tier prior to July 1977. NPR is included in the Actual Domestic Average price determinations, but not in the Imputed Domestic Average.

<sup>7</sup> Preliminary data based on early reports.

Sources: 1974 through January 1976—Form FEA-90 "Crude Petroleum Production Monthly Report;" February 1976 forward—FEA Form P124-M-O "Domestic Crude Oil Purchasers Report."

# Crude Oil (Continued)

## Percentages of Domestic Production Sold at the Wellhead

|          |                | Old Oil           | New Oil           | Released          | Stripper        |                              |                                  |
|----------|----------------|-------------------|-------------------|-------------------|-----------------|------------------------------|----------------------------------|
| 1975     | January*       | 58                | 19                | 10                | 12              |                              |                                  |
|          | February*      | 61                | 17                | 9                 | 12              |                              |                                  |
|          | March          | 60                | 18                | 10                | 12              |                              |                                  |
|          | April          | 61                | 17                | 9                 | 12              |                              |                                  |
|          | May            | 62                | 17                | 8                 | 13              |                              |                                  |
|          | June           | 63                | 16                | 8                 | 13              |                              |                                  |
|          | July           | 62                | 16                | 8                 | 14              |                              |                                  |
|          | August         | 63                | 16                | 7                 | 14              |                              |                                  |
|          | September*     | 63                | 15                | 7                 | 14              |                              |                                  |
|          | October        | 63                | 16                | 7                 | 14              |                              |                                  |
|          | November       | 64                | 15                | 7                 | 14              |                              |                                  |
|          | December       | 63                | 16                | 7                 | 14              |                              |                                  |
|          | <b>AVERAGE</b> | <b>62</b>         | <b>16</b>         | <b>8</b>          | <b>13</b>       |                              |                                  |
| 1976     | January        | 54                | 21                | 10                | 15              |                              |                                  |
|          |                | <b>Lower Tier</b> |                   | <b>Upper Tier</b> |                 |                              |                                  |
|          | February       | 56                | 30                | —                 | 14              |                              |                                  |
|          | March          | 57                | 29                | —                 | 14              |                              |                                  |
|          | April          | 57                | 29                | —                 | 14              |                              |                                  |
|          | May            | 57                | 29                | —                 | 14              |                              |                                  |
|          | June           | 56                | 29                | —                 | 15              |                              |                                  |
|          | July           | 56                | 30                | —                 | 14              |                              |                                  |
|          | August         | 56                | 30                | —                 | 14              |                              |                                  |
|          |                | <b>Lower Tier</b> | <b>Upper Tier</b> |                   | <b>Stripper</b> |                              |                                  |
|          | September      | 53.4              | 33.7              |                   | 12.9            |                              |                                  |
|          | October        | 52.4              | 34.7              |                   | 12.9            |                              |                                  |
|          | November       | 49.9              | 36.6              |                   | 13.4            |                              |                                  |
| December | 50.1           | 36.4              |                   | 13.6              |                 |                              |                                  |
| 1977     | January        | 50.6              | 36.7              |                   | 12.7            |                              |                                  |
|          | February       | 49.5              | 37.2              |                   | 13.3            |                              |                                  |
|          | March          | 49.2              | 37.2              |                   | 13.6            |                              |                                  |
|          | April          | 49.5              | 36.9              |                   | 13.6            |                              |                                  |
|          | May            | 48.4              | 37.6              |                   | 14.0            |                              |                                  |
|          | June           | 48.8              | 37.0              |                   | 14.2            |                              |                                  |
|          |                | <b>Lower Tier</b> | <b>Upper Tier</b> |                   | <b>Stripper</b> | <b>Alaskan North Slope**</b> | <b>Naval Petroleum Reserve**</b> |
|          | July           | 46.75             | 36.59             |                   | 13.30           | 2.58                         | 0.75                             |
|          | August         | 43.31             | 36.65             |                   | 13.32           | 5.79                         | 0.91                             |
|          | September      | 42.78             | 34.07             |                   | 13.14           | 9.06                         | 0.91                             |
|          | October        | 42.23             | 34.58             |                   | 12.92           | 9.09                         | 1.15                             |
|          | November       | R41.41            | R34.67            |                   | R13.00          | R9.84                        | R1.05                            |
|          | December***    | 40.43             | 34.61             |                   | 12.99           | 10.92                        | 1.03                             |

\*Totals do not add to 100 due to rounding.

\*\*See footnotes 5 and 6 of previous table.

\*\*\*Preliminary.

Sources: January 1975 through January 1976—Form FEA-90 "Crude Petroleum Production Monthly Report;" February 1976 through August 1976—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report" for Lower Tier percentages and EIA estimates for Upper Tier percentages; September 1976 forward—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report."

|             |             | <b>Entitlement<br/>Price*<br/>(Dollars)</b> | <b>National Old Oil<br/>Supply Ratio*</b>                   | <b>Crude Oil<br/>Entitlement<br/>Benefit*<br/>(Dollars)</b> |
|-------------|-------------|---|---|---|
| <b>1974</b> | November    | 5.00  | .411  | 2.06  |
|             | December    | 5.00  | .400  | 2.00  |
| <b>1975</b> | January     | 6.00  | .352  | 2.11  |
|             | February    | 6.75  | .373  | 2.52  |
|             | March       | 7.31  | .359  | 2.62  |
|             | April       | 7.29  | .390  | 2.84  |
|             | May         | 7.39  | .383  | 2.83  |
|             | June        | 7.82  | .360  | 2.82  |
|             | July        | 8.13  | .354  | 2.88  |
|             | August      | 8.31  | .352  | 2.93  |
|             | September   | 8.31  | .355  | 2.95  |
|             | October     | 8.62  | .356  | 3.07  |
|             | November    | 8.94  | .343  | 3.07  |
|             | December    | 8.55  | .363  | 3.10  |
| <b>1976</b> | January     | 8.09  | .309  | 2.50  |
|             |             |   | <b>National<br/>Domestic<br/>Crude Oil<br/>Supply Ratio</b> |   |
| <b>1976</b> | February    | 7.85  | .352  | 2.76  |
|             | March       | 7.89  | .358  | 2.82  |
|             | April       | 7.85  | .356  | 2.79  |
|             | May         | 7.82  | .356  | 2.78  |
|             | June        | 7.91  | .328  | 2.59  |
|             | July        | 7.80  | .314  | 2.45  |
|             | August      | 8.02  | .319  | 2.56  |
|             | September   | 7.80  | .296  | 2.31  |
|             | October     | 7.84  | .293  | 2.30  |
|             | November    | 7.90  | .273  | 2.16  |
|             | December    | 7.97  | .263  | 2.10  |
|             | <b>1977</b> | January                                     | 8.30  | .266  |
| February    |             | 8.53  | .267  | 2.28  |
| March       |             | 8.71  | .273  | 2.38  |
| April       |             | 8.69  | .285  | 2.48  |
| May         |             | 8.77  | .280  | 2.46  |
| June        |             | 8.65  | .273  | 2.36  |
| July        |             | 8.77  | .258  | 2.26  |
| August      |             | 8.65  | .266  | 2.30  |
| September   |             | 8.75  | .250  | 2.19  |
| October     |             | 8.75  | .250  | 2.19  |
| November    |             | 8.75  | .239  | 2.09  |
| December    |             | 8.78  | .253  | 2.22  |

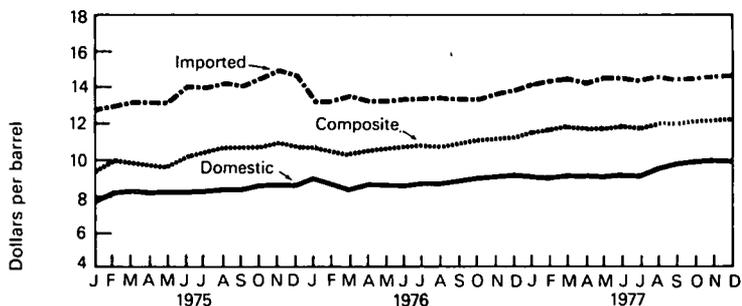
\*See Definitions.  
Source: DOE.

# Crude Oil (Continued)

## Refiner Acquisition Cost of Crude Petroleum\*

|             |                | Domestic           | Imported     | Composite    |
|-------------|----------------|--------------------|--------------|--------------|
|             |                | Dollars per barrel |              |              |
| <b>1974</b> | <b>AVERAGE</b> | <b>7.18</b>        | <b>12.52</b> | <b>9.07</b>  |
| <b>1975</b> | January        | 7.78               | 12.77        | 9.48         |
|             | February       | 8.29               | 13.05        | 10.09        |
|             | March          | 8.38               | 13.28        | 9.91         |
|             | April          | 8.23               | 13.26        | 9.83         |
|             | May            | 8.33               | 13.27        | 9.79         |
|             | June           | 8.33               | 14.15        | 10.33        |
|             | July           | 8.37               | 14.03        | 10.57        |
|             | August         | 8.48               | 14.25        | 10.81        |
|             | September      | 8.49               | 14.04        | 10.79        |
|             | October        | 8.68               | 14.66        | 10.85        |
|             | November       | 8.67               | 15.04        | 11.05        |
|             | December       | 8.66               | 14.81        | 10.98        |
|             | <b>AVERAGE</b> | <b>8.39</b>        | <b>13.93</b> | <b>10.38</b> |
| <b>1976</b> | January        | 9.14               | 13.27        | 10.76        |
|             | February       | 8.67               | 13.26        | 10.54        |
|             | March          | 8.48               | 13.51        | 10.44        |
|             | April          | 8.66               | 13.39        | 10.63        |
|             | May            | 8.62               | 13.41        | 10.66        |
|             | June           | 8.60               | 13.48        | 10.88        |
|             | July           | 8.72               | 13.51        | 10.97        |
|             | August         | 8.65               | 13.58        | 10.78        |
|             | September      | 8.95               | 13.47        | 11.08        |
|             | October        | 9.13               | 13.49        | 11.20        |
|             | November       | 9.23               | 13.58        | 11.26        |
|             | December       | 9.25               | 13.71        | 11.32        |
|             | <b>AVERAGE</b> | <b>8.84</b>        | <b>13.48</b> | <b>10.89</b> |
| <b>1977</b> | January        | 9.23               | 14.11        | 11.64        |
|             | February       | 9.24               | 14.50        | 11.80        |
|             | March          | 9.32               | 14.54        | 11.88        |
|             | April          | 9.21               | 14.36        | 11.75        |
|             | May            | 9.21               | 14.62        | 11.87        |
|             | June           | 9.34               | 14.63        | 11.98        |
|             | July           | 9.32               | 14.44        | 11.90        |
|             | August         | 9.54               | 14.68        | 12.01        |
|             | September      | 9.75               | 14.50        | 12.01        |
|             | October        | 9.95               | 14.56        | 12.12        |
|             | November       | R10.17             | 14.61        | R12.18       |
|             | December**     | 10.13              | 14.74        | 12.25        |

Crude Oil Refiner Acquisition Cost



\*See Explanatory Note 16.

\*\*Preliminary data.

R=Revised data.

Sources: 1974 through January 1976—Form FEO-96 "Monthly Cost Allocation Report;" February 1976 forward—FEA Form P110-M-1 "Refiners' Monthly Cost Allocation Report."

## Estimated Landed Cost of Imported Crude Petroleum From Selected Countries\*

|             |                | Algeria            | Canada       | Indonesia    | Iran         | Libya        | Nigeria      | Saudi Arabia | U.A. Emirates | Venezuela    |
|-------------|----------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|
|             |                | Dollars per barrel |              |              |              |              |              |              |               |              |
| <b>1975</b> | January        | 12.72              | 12.43        | 13.30        | 12.11        | 12.56        | 12.07        | 12.07        | 13.14         | 11.37        |
|             | February       | 12.11              | 12.15        | 13.52        | 11.86        | 11.80        | 12.18        | 11.94        | 12.67         | 11.56        |
|             | March          | 12.46              | 12.79        | 13.94        | 12.08        | 12.47        | 12.56        | 11.78        | 13.40         | 11.66        |
|             | April          | 12.36              | 12.95        | 13.71        | 12.34        | 11.98        | 12.46        | 12.16        | 12.55         | 11.61        |
|             | May            | 12.41              | 12.08        | 13.71        | 11.93        | 11.85        | 12.34        | 12.27        | 13.29         | 11.54        |
|             | June           | 12.37              | 11.90        | 13.73        | 12.51        | 12.25        | 12.49        | 11.93        | 12.48         | 11.51        |
|             | July           | 12.69              | 12.15        | 13.98        | 11.83        | 11.96        | 12.37        | 12.08        | 12.78         | 11.46        |
|             | August         | 12.68              | 12.27        | 13.85        | 12.17        | 12.01        | 12.32        | 12.10        | 12.60         | 11.44        |
|             | September      | 12.52              | 12.63        | 13.75        | 11.97        | 12.08        | 12.42        | 12.17        | 12.49         | 11.42        |
|             | October        | 13.45              | 13.02        | 14.00        | 12.27        | 12.64        | 13.18        | 12.64        | 12.85         | 12.08        |
|             | November       | 13.28              | 14.00        | 13.81        | 12.47        | 13.17        | 13.37        | 12.58        | 13.23         | 12.38        |
|             | December       | 13.46              | 13.96        | 13.92        | 13.01        | 13.27        | 13.57        | 12.93        | 13.21         | 12.31        |
|             | <b>AVERAGE</b> | <b>12.72</b>       | <b>12.72</b> | <b>13.79</b> | <b>12.21</b> | <b>12.35</b> | <b>12.62</b> | <b>12.30</b> | <b>12.87</b>  | <b>11.65</b> |
| <b>1976</b> | January        | 13.56              | 12.95        | 13.89        | 13.01        | 13.52        | 13.61        | 13.18        | 13.50         | 11.60        |
|             | February       | 13.57              | 13.24        | 13.94        | 12.87        | 13.45        | 13.52        | 13.21        | 13.36         | 12.09        |
|             | March          | 13.83              | 13.30        | 13.94        | 12.77        | 13.36        | 13.62        | 13.18        | 13.37         | 11.71        |
|             | April          | 13.73              | 13.61        | 13.78        | 12.91        | 13.38        | 13.60        | 13.11        | 13.18         | 11.95        |
|             | May            | 13.47              | 13.62        | 13.84        | 12.82        | 13.59        | 13.62        | 13.05        | 13.39         | 11.61        |
|             | June           | 13.75              | 14.19        | 13.84        | 13.00        | 13.38        | 13.78        | 13.14        | 13.09         | 11.55        |
|             | July           | 13.77              | 13.79        | 13.80        | 12.76        | 13.53        | 13.81        | 13.02        | 13.45         | 11.44        |
|             | August         | 13.91              | 13.78        | 13.78        | 13.09        | 13.51        | 13.87        | 13.03        | 13.23         | 11.77        |
|             | September      | 14.03              | 13.70        | 13.80        | 12.78        | 13.72        | 13.82        | 12.87        | 13.44         | 11.98        |
|             | October        | 13.81              | 13.71        | 13.84        | 12.73        | 13.83        | 13.99        | 12.87        | 13.22         | 11.84        |
|             | November       | 13.84              | 13.59        | 13.77        | 12.58        | 13.73        | 13.95        | 13.01        | 13.18         | 12.01        |
|             | December       | 14.14              | 13.52        | 13.75        | 12.69        | 13.79        | 14.11        | 13.02        | 13.29         | 12.19        |
|             | <b>AVERAGE</b> | <b>13.81</b>       | <b>13.57</b> | <b>13.82</b> | <b>12.82</b> | <b>13.58</b> | <b>13.80</b> | <b>13.04</b> | <b>13.30</b>  | <b>11.80</b> |
| <b>1977</b> | January        | 14.80              | 13.92        | 14.42        | 13.16        | 14.64        | 14.97        | 13.22        | 13.56         | 13.29        |
|             | February       | 15.18              | 13.74        | 14.57        | 13.56        | 15.12        | 15.12        | 13.32        | 13.46         | 13.76        |
|             | March          | 15.08              | 14.34        | 14.64        | 13.94        | 14.88        | 15.13        | 13.50        | 13.80         | 13.41        |
|             | April          | 15.21              | 14.02        | 14.70        | 13.95        | 15.12        | 15.37        | 13.41        | 13.78         | 13.19        |
|             | May            | 15.20              | 14.94        | 14.59        | 13.94        | 14.91        | 15.40        | 13.49        | 13.85         | 13.10        |
|             | June           | 15.34              | 14.49        | 14.63        | 13.81        | 14.92        | 15.37        | 13.39        | 13.72         | 13.06        |
|             | July           | 15.29              | 13.91        | 14.75        | 13.84        | 14.88        | 15.39        | 13.64        | 14.20         | 13.02        |
|             | August         | 15.24              | 14.24        | 14.65        | 13.99        | 14.70        | 15.25        | 13.72        | 14.36         | 12.82        |
|             | September      | 15.29              | 14.14        | 14.62        | 13.77        | 14.99        | 15.34        | 14.01        | 14.41         | 13.08        |
|             | October        | 15.41              | 14.00        | 14.67        | 13.83        | 14.81        | 15.31        | 13.85        | 14.56         | 13.16        |
|             | November       | 15.05              | 14.52        | 14.73        | 13.88        | 14.73        | 15.23        | 13.94        | 14.19         | 13.11        |
|             | December       | 15.25              | 14.27        | 14.58        | 13.95        | 14.81        | 15.21        | 13.49        | 14.48         | 12.99        |

\*See Explanatory Note 17.

Source: FEA Form F701-M-O "Transfer Pricing Report."

# Crude Oil (Continued)

## Estimated FOB Cost of Imported Crude Petroleum from Selected Countries\*

|             |           | Algeria            | Canada | Indonesia | Iran  | Libya | Nigeria | Saudi Arabia | U.A. Emirates | Venezuela |
|-------------|-----------|--------------------|--------|-----------|-------|-------|---------|--------------|---------------|-----------|
|             |           | Dollars per barrel |        |           |       |       |         |              |               |           |
| <b>1975</b> | January   | 12.09              | 10.10  | 11.98     | 10.78 | 11.93 | 11.51   | 10.63        | 11.26         | 10.91     |
|             | February  | 11.83              | 9.05   | 12.20     | 10.62 | 11.60 | 11.57   | 10.55        | 11.43         | 11.15     |
|             | March     | 12.02              | 11.28  | 12.55     | 10.81 | 11.94 | 11.77   | 10.78        | 11.13         | 11.11     |
|             | April     | 11.82              | 10.49  | 12.60     | 10.85 | 11.36 | 11.77   | 10.78        | 11.05         | 11.06     |
|             | May       | 11.69              | 10.79  | 12.64     | 10.62 | 11.10 | 11.63   | 10.93        | 10.90         | 10.91     |
|             | June      | 11.52              | 10.05  | 12.59     | 10.90 | 11.02 | 11.64   | 10.66        | 10.74         | 10.89     |
|             | July      | 11.80              | 9.93   | 12.44     | 10.67 | 11.08 | 11.49   | 10.70        | 11.04         | 10.87     |
|             | August    | 11.72              | 10.20  | 12.56     | 10.80 | 11.17 | 11.60   | 10.64        | 10.87         | 10.78     |
|             | September | 11.78              | 10.33  | 12.48     | 10.59 | 11.23 | 11.59   | 10.96        | 11.04         | 10.82     |
|             | October   | 12.63              | 10.86  | 12.73     | 10.97 | 11.81 | 12.45   | 11.17        | 11.14         | 11.49     |
|             | November  | 12.59              | 11.17  | 12.72     | 11.54 | 12.34 | 12.69   | 11.50        | 11.67         | 11.59     |
|             | December  | 12.74              | NA     | 12.76     | 11.61 | 12.32 | 12.81   | 11.48        | 11.88         | 11.67     |
| <b>1976</b> | January   | 12.96              | NA     | 12.77     | 11.61 | 12.34 | 12.85   | 11.67        | 11.91         | 11.15     |
|             | February  | 12.89              | NA     | 12.77     | 11.48 | 12.34 | 12.85   | 11.64        | 11.93         | 11.61     |
|             | March     | 12.93              | NA     | 12.78     | 11.45 | 12.34 | 12.94   | 11.71        | 11.91         | 11.26     |
|             | April     | 12.98              | NA     | 12.74     | 11.58 | 12.39 | 12.95   | 11.72        | 11.94         | 11.38     |
|             | May       | 13.01              | NA     | 12.76     | 11.58 | 12.45 | 12.97   | 11.61        | 11.85         | 11.10     |
|             | June      | 13.02              | NA     | 12.74     | 11.62 | 12.40 | 12.97   | 11.64        | 11.92         | 11.03     |
|             | July      | 13.06              | NA     | 12.79     | 11.64 | 12.64 | 13.11   | 11.58        | 11.89         | 10.87     |
|             | August    | 13.06              | NA     | 12.75     | 11.61 | 12.52 | 13.08   | 11.58        | 11.92         | 11.19     |
|             | September | 13.12              | NA     | 12.73     | 11.66 | 12.66 | 13.06   | 11.55        | 11.97         | 11.53     |
|             | October   | 13.09              | NA     | 12.79     | 11.63 | 12.70 | 13.25   | 11.65        | 11.92         | 11.41     |
|             | November  | 13.12              | NA     | 12.71     | 11.62 | 12.74 | 13.25   | 11.62        | 11.96         | 11.58     |
|             | December  | 13.21              | NA     | 12.82     | 11.78 | 12.83 | 13.36   | 11.65        | 12.16         | 11.77     |
| <b>1977</b> | January   | 14.03              | NA     | 13.41     | 12.03 | 13.64 | 14.11   | 11.92        | 12.53         | 12.91     |
|             | February  | 14.31              | NA     | 13.43     | 12.36 | 13.89 | 14.24   | 12.04        | 12.33         | 13.30     |
|             | March     | 14.29              | NA     | 13.58     | 12.79 | 13.87 | 14.32   | 12.24        | 12.51         | 12.98     |
|             | April     | 14.34              | NA     | 13.55     | 12.79 | 13.98 | 14.51   | 12.23        | 12.53         | 12.62     |
|             | May       | 14.31              | NA     | 13.57     | 12.78 | 13.93 | 14.56   | 12.23        | 12.56         | 12.60     |
|             | June      | 14.35              | NA     | 13.55     | 12.68 | 13.94 | 14.55   | 12.21        | 12.44         | 12.53     |
|             | July      | 14.43              | NA     | 13.61     | 12.78 | 13.99 | 14.52   | 12.40        | 12.70         | 12.48     |
|             | August    | 14.48              | NA     | 13.63     | 12.80 | 13.95 | 14.54   | 12.56        | 13.15         | 12.37     |
|             | September | 14.43              | NA     | 13.64     | 12.73 | 13.99 | 14.56   | 12.72        | 13.20         | 12.55     |
|             | October   | 14.43              | NA     | 13.65     | 12.79 | 13.93 | 14.48   | 12.70        | 13.22         | 12.72     |
|             | November  | 14.37              | NA     | 13.65     | 12.75 | 13.88 | 14.53   | 12.73        | 13.33         | 12.71     |
|             | December  | 14.44              | NA     | 13.61     | 12.71 | 13.85 | 14.45   | 12.77        | 13.27         | 12.56     |

\*The FOB cost excludes all costs related to insurance and transportation. See Explanatory Note 18.  
Source: FEA Form F701-M-0 "Transfer Pricing Report."

## Unrecouped Costs for Refined Products for 30 Largest Refiners

|                     |             | Distillate* | Motor<br>Gasoline | Aviation<br>Jet<br>Fuel** | Other<br>Products | Total  |
|---------------------|-------------|-------------|-------------------|---------------------------|-------------------|--------|
| Millions of dollars |             |             |                   |                           |                   |        |
| 1975                | January     | 254         | 431               | —                         | 672               | 1,357  |
|                     | February    | 300         | 418               | —                         | 790               | 1,508  |
|                     | March       | 282         | 452               | —                         | 966               | 1,700  |
|                     | April       | 302         | 485               | —                         | 807               | 1,594  |
|                     | May         | 292         | 370               | —                         | 771               | 1,433  |
|                     | June        | 284         | 266               | —                         | 785               | 1,334  |
|                     | July        | 233         | 219               | —                         | 624               | 1,075  |
|                     | August      | 280         | 344               | —                         | 583               | 1,208  |
|                     | September   | 347         | 335               | —                         | 661               | 1,342  |
|                     | October     | 338         | 245               | —                         | 673               | 1,255  |
|                     | November    | 426         | 275               | —                         | 796               | 1,497  |
|                     | December    | 446         | 211               | —                         | 826               | 1,483  |
| 1976                | January     | 336         | 242               | 131                       | 515               | 1,224  |
|                     | February    | 279         | 336               | 145                       | 456               | 1,216  |
|                     | March       | 263         | 316               | 163                       | 456               | 1,198  |
|                     | April       | 237         | 398               | 180                       | 524               | 1,339  |
|                     | May         | 264         | 632               | 161                       | 446               | 1,503  |
|                     | June        | —           | 628               | 135                       | 349               | 1,112  |
|                     | July        | —           | 587               | 129                       | 384               | 1,100  |
|                     | August      | —           | 679               | 125                       | 352               | 1,156  |
|                     | September   | —           | 619               | 134                       | 340               | 1,093  |
|                     | October     | —           | 733               | 151                       | 372               | 1,256  |
|                     | November    | —           | 796               | 168                       | 368               | 1,332  |
|                     | December    | —           | 723               | 139                       | 317               | 1,179  |
| 1977                | January     | —           | 901               | 166                       | 325               | 1,392  |
|                     | February    | —           | 1,038             | 187                       | 303               | 1,528  |
|                     | March       | —           | 956               | 180                       | 287               | 1,423  |
|                     | April       | —           | 1,029             | 194                       | 343               | 1,566  |
|                     | May         | —           | 968               | 199                       | 328               | 1,495  |
|                     | June        | —           | 956               | 232                       | 347               | 1,535  |
|                     | July        | —           | 869               | 210                       | 387               | 1,466  |
|                     | August      | —           | 735               | 208                       | 454               | 1,397  |
|                     | September   | —           | 746               | 182                       | 494               | 1,422  |
|                     | October     | —           | 833               | 243                       | 504               | 1,580  |
|                     | November    | —           | R857              | R213                      | R534              | R1,604 |
|                     | December*** | —           | 766               | 193                       | 471               | 1,430  |

\*Includes No. 2 heating oil and No. 2 diesel fuel only. After May 1976, reporting of the distillate bank is no longer required due to decontrol of middle distillates.

\*\*Prior to January 1976 refiners were not required to maintain separate banks for aviation jet fuel.

\*\*\*Preliminary.

R=Revised data.

Source: FEA Form P110-M-1 "Refiners' Monthly Cost Allocation Report."

# Natural Gas

## Natural Gas Prices Reported by Major Interstate Pipeline Companies

|                               |           | PURCHASES                     |  |                    | SALES                      |                   |                |
|-------------------------------|-----------|-------------------------------|--|--------------------|----------------------------|-------------------|----------------|
|                               |           | From<br>Domestic<br>Producers | From<br>Canadian<br>and Mexican<br>Sources | Total<br>Purchases | To<br>Industrial<br>Users* | To<br>Resellers** | Total<br>Sales |
| Cents per thousand cubic feet |           |                               |  |                    |                            |                   |                |
| 1975                          | January   | 30.4                          | 104.0                                      | 35.8               | 67.8                       | 70.9              | 71.2           |
|                               | February  | 29.5                          | 105.9                                      | 35.2               | 70.1                       | 74.0              | 74.3           |
|                               | March     | 33.5                          | 102.5                                      | 38.8               | 70.4                       | 77.7              | 77.8           |
|                               | April     | 32.8                          | 102.8                                      | 38.3               | 71.1                       | 82.3              | 81.9           |
|                               | May       | 34.7                          | 100.6                                      | 39.8               | 71.1                       | 83.7              | 82.8           |
|                               | June      | 35.3                          | 98.9                                       | 40.2               | 72.2                       | 85.1              | 83.9           |
|                               | July      | 36.7                          | 101.1                                      | 41.7               | 73.9                       | 84.6              | 83.6           |
|                               | August    | 35.5                          | 141.0                                      | 43.3               | 73.4                       | 86.5              | 85.1           |
|                               | September | 36.5                          | 141.1                                      | 44.4               | 72.8                       | 85.9              | 84.7           |
|                               | October   | 36.0                          | 140.1                                      | 44.3               | 77.2                       | 85.9              | 85.4           |
|                               | November  | 36.5                          | 162.5                                      | 46.7               | 77.8                       | 86.9              | 86.6           |
|                               | December  | 35.9                          | 161.8                                      | 46.0               | 81.1                       | 79.6              | 80.1           |
| 1976                          | January   | 38.6                          | 164.0                                      | 48.6               | 87.5                       | 88.7              | 89.2           |
|                               | February  | 39.5                          | 165.3                                      | 49.5               | 87.7                       | 92.3              | 92.7           |
|                               | March     | 39.5                          | 164.5                                      | 49.7               | 86.4                       | 89.8              | 90.2           |
|                               | April     | 40.6                          | 164.3                                      | 51.2               | 88.6                       | 100.2             | 99.7           |
|                               | May       | 42.4                          | 165.1                                      | 52.5               | 86.9                       | 98.3              | 97.6           |
|                               | June      | 43.7                          | 166.6                                      | 53.7               | 89.5                       | 98.2              | 98.5           |
|                               | July      | 43.6                          | 168.4                                      | 53.2               | 94.3                       | 101.8             | 101.1          |
|                               | August    | 56.4                          | 167.7                                      | 65.3               | 97.8                       | 104.8             | 104.1          |
|                               | September | 68.5                          | 183.7                                      | 77.7               | 103.5                      | 92.5              | 94.1           |
|                               | October   | 57.4                          | 190.1                                      | 68.8               | 106.4                      | 105.4             | 105.7          |
|                               | November  | 52.6                          | 182.4                                      | 63.3               | 112.9                      | 106.1             | 106.9          |
|                               | December  | 54.0                          | 189.4                                      | 65.2               | 131.3                      | 117.3             | 118.8          |
| 1977                          | January   | 58.8                          | 201.8                                      | 71.5               | 143.1                      | 124.4             | 125.4          |
|                               | February  | 63.5                          | 199.0                                      | 76.5               | 131.0                      | 130.0             | 130.7          |
|                               | March     | 69.8                          | 200.4                                      | 83.4               | 129.8                      | 132.2             | 132.5          |
|                               | April     | 65.2                          | 190.7                                      | 76.4               | R128.4                     | 130.9             | 131.4          |
|                               | May       | 69.1                          | 191.3                                      | 80.4               | 128.4                      | 133.9             | 133.6          |
|                               | June      | 69.2                          | 189.1                                      | 79.6               | 125.6                      | 135.1             | 134.2          |
|                               | July      | 72.1                          | 187.7                                      | 81.8               | 134.5                      | 135.9             | 135.8          |
|                               | August    | 71.1                          | 185.5                                      | 81.5               | 133.9                      | 134.0             | 134.0          |
|                               | September | 71.8                          | 194.7                                      | 84.0               | 131.8                      | 135.7             | 135.2          |
|                               | October   | 74.2                          | 211.9                                      | 87.4               | 133.9                      | 135.6             | 135.6          |

\*Represents direct sales by pipeline companies to industrial users. Does not include sales to industrial users by resellers.

\*\*Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt.

R=Revised.

Source: Federal Power Commission Form 11, "Natural Gas Pipeline Company Monthly Statement."

## Intrastate Natural Gas Prices for Selected States by Type of Contract\*

|                               | California    |                                 | Kansas        |                                 | Louisiana     |                                 | Oklahoma      |                                 | Texas         |                                 |
|-------------------------------|---------------|---------------------------------|---------------|---------------------------------|---------------|---------------------------------|---------------|---------------------------------|---------------|---------------------------------|
|                               | New Contracts | Renego-<br>tiated or<br>Amended |
| Cents per thousand cubic feet |               |                                 |               |                                 |               |                                 |               |                                 |               |                                 |
| <b>1975</b>                   |               |                                 |               |                                 |               |                                 |               |                                 |               |                                 |
| January                       | 75.00         | 76.89                           | 55.30         | —                               | 98.04         | 102.96                          | 95.99         | 76.03                           | 139.90        | 164.04                          |
| February                      | —             | —                               | —             | —                               | 128.68        | 113.06                          | 97.30         | 64.49                           | 154.72        | 163.11                          |
| March                         | —             | —                               | —             | —                               | 115.78        | 125.89                          | 107.70        | 55.05                           | 96.66         | 97.50                           |
| April                         | —             | —                               | 64.65         | 45.24                           | 149.78        | 134.81                          | 132.58        | 87.79                           | 160.09        | 176.32                          |
| May                           | —             | —                               | —             | —                               | 126.80        | 123.53                          | 129.31        | 106.56                          | 156.72        | 158.59                          |
| June                          | —             | 53.68                           | 65.00         | —                               | 130.91        | 129.57                          | 94.22         | 120.29                          | 165.00        | 187.54                          |
| July                          | —             | 65.51                           | —             | —                               | 117.22        | 125.63                          | 133.87        | 114.62                          | 183.22        | 178.22                          |
| August                        | —             | 75.00                           | 198.24        | —                               | 132.87        | 114.20                          | 136.77        | 121.21                          | 151.87        | 132.50                          |
| September                     | —             | 86.00                           | 152.89        | 70.38                           | 121.89        | 141.23                          | 143.73        | 106.69                          | 169.87        | 180.77                          |
| October                       | 135.53        | —                               | —             | —                               | 75.16         | 117.60                          | 143.09        | 144.14                          | 168.10        | 187.30                          |
| November                      | —             | —                               | 157.95        | 139.02                          | 138.42        | 71.65                           | 140.61        | 133.15                          | 149.43        | 182.17                          |
| December                      | —             | —                               | —             | 80.00                           | 139.64        | 131.92                          | 132.50        | 153.86                          | 187.20        | 140.90                          |
| <b>1976</b>                   |               |                                 |               |                                 |               |                                 |               |                                 |               |                                 |
| January                       | —             | 83.97                           | 103.81        | 84.54                           | 138.75        | 131.23                          | 149.87        | 109.39                          | 181.05        | 193.31                          |
| February                      | —             | 40.00                           | —             | 109.68                          | 125.00        | 145.30                          | 133.72        | 146.71                          | 176.63        | 191.54                          |
| March                         | —             | —                               | 150.36        | —                               | 145.66        | 155.39                          | 162.83        | 168.57                          | 178.70        | 176.44                          |
| April                         | 195.00        | —                               | 150.00        | —                               | 142.99        | 154.05                          | 162.12        | 148.30                          | 202.60        | 152.95                          |
| May                           | 122.00        | 60.39                           | 180.39        | 149.84                          | 125.54        | 106.05                          | 156.35        | 164.02                          | 154.00        | 197.22                          |
| June                          | —             | —                               | 114.45        | 150.82                          | 147.11        | 137.67                          | 169.56        | 168.14                          | 178.01        | 192.98                          |
| July                          | —             | 117.15                          | 137.57        | 150.83                          | 127.55        | 141.71                          | 148.20        | 95.00                           | 151.19        | 176.23                          |
| August                        | —             | 97.38                           | —             | —                               | 138.70        | 164.23                          | 151.81        | 171.49                          | 157.98        | 198.81                          |
| September                     | —             | —                               | —             | 125.68                          | 164.10        | 156.39                          | 164.85        | 172.00                          | 184.07        | 197.66                          |
| October                       | —             | —                               | —             | 111.72                          | 144.64        | 149.91                          | 163.48        | 161.16                          | 196.58        | 188.80                          |
| November                      | —             | —                               | 150.82        | 144.21                          | —             | 131.91                          | 162.57        | 90.73                           | 186.80        | 182.82                          |
| December                      | —             | 97.47                           | 160.73        | —                               | 194.51        | 152.45                          | 167.55        | 175.98                          | 198.71        | 202.54                          |
| <b>1977</b>                   |               |                                 |               |                                 |               |                                 |               |                                 |               |                                 |
| January                       | —             | 105.58                          | 155.49        | —                               | 155.82        | 137.65                          | 172.35        | 167.49                          | 193.36        | 204.06                          |
| February                      | —             | 107.27                          | 121.66        | —                               | 141.33        | 120.84                          | 147.86        | 131.27                          | 185.55        | 203.22                          |
| March                         | 119.79        | 116.28                          | 148.18        | —                               | 219.43        | 208.97                          | 168.57        | 168.28                          | 197.14        | 190.83                          |
| April                         | —             | —                               | 137.10        | 156.38                          | 216.41        | 150.35                          | 165.61        | 167.89                          | 192.22        | 205.44                          |
| May                           | —             | 107.20                          | 119.00        | —                               | 197.53        | 158.97                          | 156.52        | 171.09                          | 204.06        | 201.27                          |
| June                          | —             | 112.21                          | 91.49         | —                               | 180.21        | 169.61                          | 166.69        | 169.51                          | 194.54        | 206.41                          |
| July                          | —             | 139.02                          | 88.57         | 174.53                          | 174.90        | 169.64                          | 172.95        | 168.25                          | 206.96        | 202.46                          |
| August                        | —             | —                               | 131.97        | 90.49                           | 177.99        | 166.66                          | 164.33        | 158.46                          | 188.96        | 183.57                          |
| September                     | —             | —                               | —             | 136.66                          | 163.72        | 162.49                          | 171.78        | 172.70                          | 167.14        | 212.44                          |

\*Prices are for FERC jurisdictional natural gas companies selling more than 1 billion cubic feet per year in interstate commerce. Source: Federal Power Commission Form 45, "Summary of Intrastate Natural Gas Prices."

# Natural Gas (Continued)

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## Average Retail Prices for Natural Gas Sold to Residential Customers for Heating Use

|      |                | Cents per<br>thousand<br>cubic feet |
|------|----------------|-------------------------------------|
| 1975 | January        | 141.2                               |
|      | February       | 144.7                               |
|      | March          | 146.1                               |
|      | April          | 150.6                               |
|      | May            | 153.7                               |
|      | June           | 155.7                               |
|      | July           | 154.7                               |
|      | August         | 155.4                               |
|      | September      | 159.4                               |
|      | October        | 160.6                               |
|      | November       | 166.2                               |
|      | December       | 170.2                               |
| 1976 | January        | 171.4                               |
|      | February       | 175.2                               |
|      | March          | 177.0                               |
|      | April          | 178.4                               |
|      | May            | 180.8                               |
|      | June           | 183.2                               |
|      | July           | 184.5                               |
|      | August         | 185.8                               |
|      | September      | 191.2                               |
|      | October        | 195.0                               |
|      | November       | 198.3                               |
|      | December       | 208.3                               |
|      | <b>AVERAGE</b> | <b>185.8</b>                        |
| 1977 | January        | 213.8                               |
|      | February       | 217.0                               |
|      | March          | 219.9                               |
|      | April          | 223.7                               |
|      | May            | 227.0                               |
|      | June           | 227.3                               |
|      | July           | 229.9                               |
|      | August         | 230.1                               |
|      | September      | 230.4                               |
|      | October        | 235.1                               |
|      | November       | 238.4                               |
|      | December       | 237.3                               |
| 1978 | January        | 241.6                               |

Source: Bureau of Labor Statistics.

# Utility ~~Fossil~~ Fuels

## U.S. Average Delivered Prices of Coal at Utilities

|             |           | <b>Contract</b>       | <b>Spot</b> |
|-------------|-----------|-----------------------|-------------|
|             |           | Dollars per short ton |             |
| <b>1975</b> | January   | 14.57                 | 28.12       |
|             | February  | 15.71                 | 25.93       |
|             | March     | 15.68                 | 25.02       |
|             | April     | 15.88                 | 24.52       |
|             | May       | 16.45                 | 23.78       |
|             | June      | 16.40                 | 23.36       |
|             | July      | 16.06                 | 22.35       |
|             | August    | 16.65                 | 22.39       |
|             | September | 16.76                 | 22.46       |
|             | October   | 16.72                 | 22.52       |
|             | November  | 16.79                 | 22.50       |
|             | December  | 16.90                 | 22.40       |
| <b>1976</b> | January   | 16.53                 | 21.75       |
|             | February  | 17.04                 | 21.23       |
|             | March     | 17.65                 | 21.36       |
|             | April     | 17.76                 | 21.43       |
|             | May       | 18.12                 | 21.17       |
|             | June      | 18.05                 | 20.88       |
|             | July      | 17.93                 | 21.00       |
|             | August    | 18.19                 | 21.35       |
|             | September | 18.55                 | 21.46       |
|             | October   | 18.49                 | 21.28       |
|             | November  | 18.26                 | 21.56       |
|             | December  | 18.15                 | 21.49       |
| <b>1977</b> | January   | 17.87                 | 21.93       |
|             | February  | 18.28                 | 22.71       |
|             | March     | 18.75                 | 23.27       |
|             | April     | 18.82                 | 22.41       |
|             | May       | 18.97                 | 23.73       |
|             | June      | 19.03                 | 24.62       |
|             | July      | 19.35                 | 25.13       |
|             | August    | 18.95                 | 24.73       |

Source: Federal Power Commission Form 423.

# Utility Fossil Fuels (Continued)

## COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

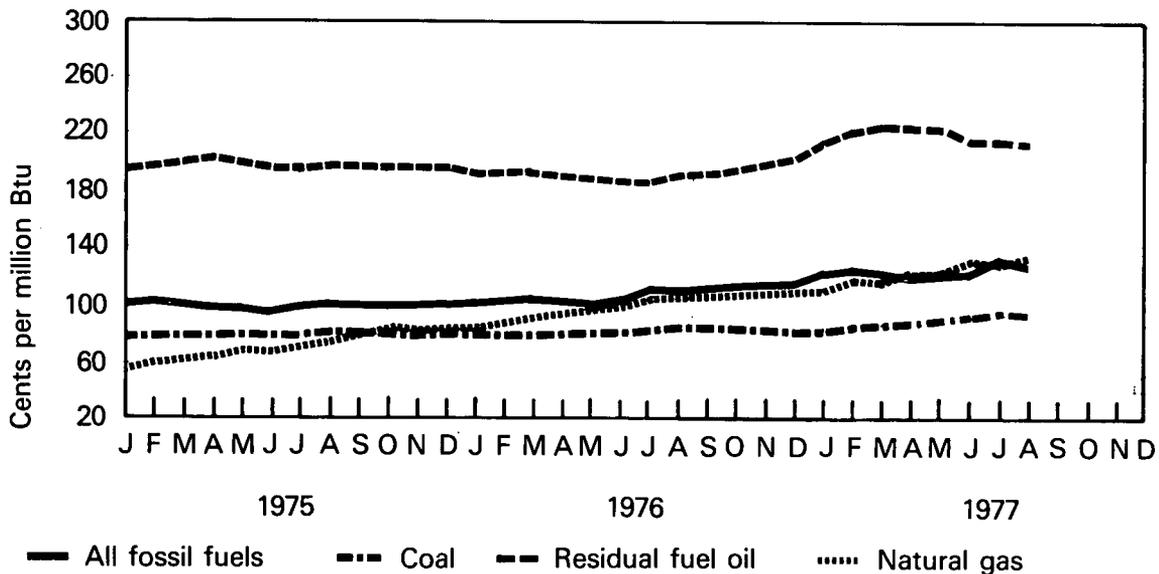
### All Fossil Fuels\*

| Region               | 1976                  |              |              |              |              | 1977         |              |              |              |              |              |              |              |
|----------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                      | AUG                   | SEPT         | OCT          | NOV          | DEC          | JAN          | FEB          | MAR          | APR          | MAY          | JUNE         | JULY         | AUG          |
|                      | Cents per million Btu |              |              |              |              |              |              |              |              |              |              |              |              |
| New England          | 173.7                 | 176.6        | 184.0        | 186.9        | 197.0        | 207.7        | 211.4        | 225.3        | 213.9        | 215.1        | 213.3        | 209.9        | 206.7        |
| Middle Atlantic      | 140.2                 | 135.2        | 136.8        | 139.8        | 146.5        | 161.8        | 162.1        | 152.2        | 149.9        | 149.4        | 152.1        | 167.9        | 158.8        |
| East North Central   | 97.6                  | 95.2         | 95.8         | 96.8         | 94.4         | 104.1        | 102.7        | 104.0        | 102.6        | 103.9        | 107.3        | 109.7        | 105.2        |
| West North Central   | 75.1                  | 76.1         | 73.5         | 76.1         | 78.5         | 85.4         | 85.3         | 82.0         | 79.0         | 82.5         | 84.0         | 87.9         | 86.2         |
| South Atlantic       | 126.2                 | 125.6        | 127.2        | 129.1        | 134.7        | 146.5        | 142.5        | 137.3        | 132.7        | 133.8        | 137.9        | 148.9        | 146.6        |
| East South Central   | 94.6                  | 94.4         | 93.8         | 92.3         | 96.7         | 99.8         | 101.8        | 100.1        | 100.3        | 102.3        | 104.5        | 110.4        | 106.6        |
| West South Central   | 102.9                 | 102.4        | 101.6        | 106.2        | 106.9        | 113.6        | 119.8        | 116.9        | 117.5        | 117.2        | 124.3        | 123.2        | 122.5        |
| Mountain             | 57.9                  | 55.3         | 55.4         | 54.2         | 53.9         | 53.0         | 55.2         | 60.4         | 64.3         | 68.8         | 69.9         | 71.8         | 72.6         |
| Pacific              | 195.7                 | 195.9        | 199.1        | 214.5        | 218.9        | 219.2        | 213.6        | 209.8        | 217.6        | 219.0        | 212.6        | 221.2        | 223.8        |
| <b>NATIONAL AVG.</b> | <b>112.9</b>          | <b>110.7</b> | <b>111.1</b> | <b>115.2</b> | <b>118.6</b> | <b>126.8</b> | <b>128.4</b> | <b>123.5</b> | <b>122.0</b> | <b>123.1</b> | <b>125.1</b> | <b>133.2</b> | <b>129.4</b> |

\*See Explanatory Note 19.

Source: Federal Power Commission Form 423.

### National Average



## Coal

| Region               | 1976                  |             |             |             |             | 1977        |             |             |             |             |             |             |             |
|----------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                      | AUG                   | SEPT        | OCT         | NOV         | DEC         | JAN         | FEB         | MAR         | APR         | MAY         | JUNE        | JULY        | AUG         |
|                      | Cents per million Btu |             |             |             |             |             |             |             |             |             |             |             |             |
| New England          | 127.8                 | 125.4       | 125.6       | 125.6       | 124.4       | 127.6       | 126.8       | 127.5       | 127.9       | 128.1       | 130.1       | 130.6       | 133.1       |
| Middle Atlantic      | 103.3                 | 102.6       | 102.6       | 100.2       | 101.2       | 105.9       | 101.2       | 100.8       | 102.5       | 103.1       | 107.4       | 111.7       | 107.0       |
| East North Central   | 90.9                  | 89.8        | 89.2        | 90.2        | 90.7        | 90.7        | 91.5        | 94.1        | 93.9        | 94.3        | 95.5        | 99.8        | 97.3        |
| West North Central   | 70.1                  | 71.0        | 69.3        | 69.6        | 67.6        | 66.5        | 68.4        | 71.5        | 72.5        | 75.5        | 77.0        | 77.9        | 77.4        |
| South Atlantic       | 103.5                 | 103.4       | 105.4       | 103.8       | 104.1       | 105.4       | 106.5       | 108.1       | 108.4       | 110.9       | 113.9       | 119.2       | 115.9       |
| East South Central   | 85.7                  | 87.2        | 88.3        | 87.4        | 90.6        | 91.2        | 94.1        | 93.6        | 96.5        | 95.8        | 95.0        | 99.9        | 98.4        |
| West South Central   | 36.4                  | 42.4        | 43.7        | 51.5        | 56.6        | 58.8        | 61.1        | 64.3        | 60.2        | 60.3        | 63.9        | 59.2        | 62.1        |
| Mountain             | 36.8                  | 36.2        | 38.2        | 39.1        | 38.1        | 37.6        | 38.9        | 41.1        | 42.4        | 46.3        | 47.4        | 43.0        | 50.1        |
| Pacific              | 75.7                  | 75.7        | 76.0        | 75.6        | 74.5        | 77.6        | 80.5        | 74.0        | 70.8        | 70.9        | 71.2        | 71.7        | 71.1        |
| <b>NATIONAL AVG.</b> | <b>86.4</b>           | <b>86.9</b> | <b>86.9</b> | <b>86.6</b> | <b>86.6</b> | <b>85.9</b> | <b>88.0</b> | <b>89.9</b> | <b>90.1</b> | <b>91.8</b> | <b>93.3</b> | <b>96.2</b> | <b>94.3</b> |

## Residual Fuel Oil\*

| Region               | 1976                  |              |              |              |              | 1977         |              |              |              |              |              |              |              |
|----------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                      | AUG                   | SEPT         | OCT          | NOV          | DEC          | JAN          | FEB          | MAR          | APR          | MAY          | JUNE         | JULY         | AUG          |
|                      | Cents per million Btu |              |              |              |              |              |              |              |              |              |              |              |              |
| New England          | 182.8                 | 179.5        | 188.1        | 192.0        | 198.9        | 213.6        | 223.5        | 231.7        | 218.5        | 223.4        | 216.2        | 212.5        | 211.3        |
| Middle Atlantic      | 189.3                 | 190.0        | 199.5        | 200.5        | 208.3        | 220.5        | 235.8        | 237.2        | 230.8        | 227.7        | 223.1        | 220.5        | 218.5        |
| East North Central   | 222.8                 | 221.4        | 225.8        | 223.9        | 227.9        | 247.5        | 267.7        | 257.8        | 256.3        | 250.9        | 248.6        | 247.1        | 241.6        |
| West North Central   | 148.4                 | 149.6        | 156.8        | 167.9        | 191.5        | 201.0        | 210.3        | 205.5        | 298.7        | 193.6        | 186.6        | 179.0        | 185.0        |
| South Atlantic       | 176.6                 | 180.4        | 184.1        | 189.2        | 197.0        | 212.4        | 213.7        | 222.8        | 217.8        | 211.7        | 210.1        | 207.2        | 199.2        |
| East South Central   | 171.3                 | 163.8        | 166.6        | 167.8        | 166.4        | 166.2        | 182.7        | 180.4        | 180.5        | 175.7        | 177.7        | 175.9        | 178.3        |
| West South Central   | 178.6                 | 166.4        | 176.6        | 180.3        | 179.9        | 192.0        | 198.1        | 201.9        | 200.3        | 198.3        | 194.3        | 187.6        | 188.5        |
| Mountain             | 224.8                 | 213.0        | 221.9        | 209.3        | 181.2        | 201.0        | 210.9        | 220.9        | 220.6        | 224.9        | 215.3        | 232.5        | 230.7        |
| Pacific              | 228.8                 | 230.2        | 231.2        | 234.1        | 233.4        | 231.3        | 231.0        | 232.1        | 235.8        | 235.2        | 235.7        | 240.0        | 240.1        |
| <b>NATIONAL AVG.</b> | <b>191.8</b>          | <b>191.9</b> | <b>198.8</b> | <b>203.5</b> | <b>207.5</b> | <b>217.2</b> | <b>223.3</b> | <b>228.0</b> | <b>226.2</b> | <b>227.7</b> | <b>217.8</b> | <b>217.0</b> | <b>213.0</b> |

## Natural Gas\*\*

| Region               | 1976                  |              |              |              |              | 1977         |              |              |              |              |              |              |              |
|----------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                      | AUG                   | SEPT         | OCT          | NOV          | DEC          | JAN          | FEB          | MAR          | APR          | MAY          | JUNE         | JULY         | AUG          |
|                      | Cents per million Btu |              |              |              |              |              |              |              |              |              |              |              |              |
| New England          | 153.9                 | 154.4        | 155.4        | 185.2        | 186.1        | 200.1        | 200.1        | 200.1        | 200.1        | 195.9        | 193.9        | 185.8        | 187.2        |
| Middle Atlantic      | 114.5                 | 122.7        | 125.2        | 111.9        | 127.8        | 211.3        | 349.8        | 155.9        | 155.4        | 154.7        | 144.2        | 165.5        | 162.4        |
| East North Central   | 147.8                 | 148.4        | 153.0        | 168.8        | 188.9        | 186.5        | 174.7        | 170.6        | 184.7        | 176.7        | 177.3        | 183.5        | 185.9        |
| West North Central   | 81.4                  | 81.9         | 80.8         | 84.1         | 84.0         | 86.1         | 93.4         | 88.8         | 96.0         | 102.9        | 104.8        | 106.7        | 106.8        |
| South Atlantic       | 82.9                  | 88.3         | 89.3         | 89.1         | 90.4         | 80.4         | 112.1        | 93.6         | 85.7         | 76.2         | 74.4         | 91.1         | 100.9        |
| East South Central   | 132.5                 | 137.7        | 158.5        | 162.2        | 160.8        | 165.1        | 170.3        | 157.8        | 154.7        | 139.7        | 134.3        | 148.5        | 149.9        |
| West South Central   | 101.6                 | 101.8        | 101.0        | 106.6        | 106.8        | 108.1        | 114.6        | 111.2        | 113.7        | 116.5        | 122.1        | 122.5        | 123.7        |
| Mountain             | 101.7                 | 104.3        | 112.2        | 118.2        | 136.0        | 133.3        | 115.0        | 129.1        | 134.9        | 134.4        | 132.9        | 133.3        | 130.7        |
| Pacific              | 155.3                 | 166.5        | 169.0        | 177.5        | 188.7        | 196.8        | 189.2        | 181.0        | 204.5        | 208.9        | 200.5        | 211.0        | 218.8        |
| <b>NATIONAL AVG.</b> | <b>106.5</b>          | <b>109.8</b> | <b>109.9</b> | <b>113.1</b> | <b>111.3</b> | <b>111.1</b> | <b>123.5</b> | <b>121.1</b> | <b>125.6</b> | <b>125.6</b> | <b>130.5</b> | <b>131.7</b> | <b>135.4</b> |

\*See Explanatory Note 19.

\*\*Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.

Source: Federal Power Commission Form 423.

## **International**

### **Petroleum Consumption**

Petroleum consumption figures for all 12 months of 1977 are available for Japan, France, and Italy. Consumption in Japan increased by 4.6 percent, while France and Italy showed reduced consumption levels (4.7 percent and 1.8 percent, respectively) compared with 1976 rates. During the January-November period, petroleum use in West Germany decreased 2.1 percent from the level for the same period of 1976; consumption in Canada and the United Kingdom, on the other hand, was 4.5 percent and 3.3 percent greater, respectively. The International Energy Agency as a whole showed a 4.4-percent increase in petroleum use during the first 11 months of 1977.

### **Crude Oil Production**

World crude oil production in December rose 1.3 million barrels per day (MMBD) to 62.1 MMBD. Production by the Organization of Petroleum Exporting Countries (OPEC) increased 1.2 MMBD to 32.9 MMBD; production gains in Saudi Arabia, Kuwait, Iran, the U.A.E., Iraq, Indonesia, and Ecuador totaling 1.5 MMBD were slightly offset by minor declines in other OPEC nations. World crude oil output for the year averaged 59.6 MMBD, up 3.8 percent from the 1976 production rate.

# Petroleum Consumption

## Petroleum Consumption for Major Free World Industrialized Countries

|             |                | Total IEA*                   | Japan**      | West Germany | France***    | United Kingdom | Canada       | Italy†       | Other IEA††  |
|-------------|----------------|------------------------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|
|             |                | Thousands of barrels per day |              |              |              |                |              |              |              |
| <b>1973</b> | <b>AVG.</b>    | <b>33,600</b>                | <b>5,000</b> | <b>2,693</b> | <b>2,219</b> | <b>1,974</b>   | <b>1,597</b> | <b>1,525</b> | <b>3,467</b> |
| <b>1974</b> | <b>AVG.</b>    | <b>32,390</b>                | <b>4,872</b> | <b>2,408</b> | <b>2,094</b> | <b>1,857</b>   | <b>1,630</b> | <b>1,521</b> | <b>3,449</b> |
| <b>1975</b> | Jan            | 34,100                       | 4,729        | 2,183        | 2,190        | 1,981          | 1,691        | 1,792        | 3,741        |
|             | Feb            | 34,100                       | 5,191        | 2,455        | 2,243        | 1,907          | 1,872        | 1,767        | 3,825        |
|             | Mar            | 31,600                       | 4,918        | 2,234        | 1,952        | 1,731          | 1,558        | 1,558        | 3,285        |
|             | Apr            | 31,200                       | 4,202        | 2,431        | 2,202        | 1,826          | 1,592        | 1,530        | 3,578        |
|             | May            | 28,600                       | 4,041        | 2,253        | 1,640        | 1,482          | 1,471        | 1,174        | 3,058        |
|             | June           | 29,300                       | 4,135        | 2,106        | 1,642        | 1,416          | 1,550        | 1,289        | 3,195        |
|             | July           | 29,400                       | 4,265        | 2,319        | 1,491        | 1,322          | 1,493        | 1,234        | 2,961        |
|             | Aug            | 29,200                       | 4,234        | 2,360        | 1,300        | 1,208          | 1,449        | 1,105        | 3,032        |
|             | Sept           | 30,400                       | 4,543        | 2,309        | 1,785        | 1,501          | 1,469        | 1,465        | 3,338        |
|             | Oct            | 31,000                       | 4,409        | 2,328        | 1,917        | 1,707          | 1,555        | 1,679        | 2,981        |
|             | Nov            | 31,000                       | 4,747        | 2,361        | 2,077        | 1,723          | 1,577        | 1,448        | 3,423        |
|             | Dec            | 35,100                       | 5,447        | 2,502        | 2,658        | 1,821          | 1,880        | 1,600        | 3,863        |
|             | <b>AVG.</b>    | <b>31,235</b>                | <b>4,568</b> | <b>2,319</b> | <b>1,925</b> | <b>1,633</b>   | <b>1,595</b> | <b>1,468</b> | <b>3,382</b> |
| <b>1976</b> | Jan            | 35,100                       | 4,941        | 2,464        | 2,432        | 1,679          | 1,785        | 1,775        | 3,943        |
|             | Feb            | 34,400                       | 5,246        | 2,497        | 2,492        | 1,865          | 1,754        | 1,743        | 3,991        |
|             | Mar            | 34,300                       | 5,165        | 2,747        | 2,372        | 1,879          | 1,747        | 1,641        | 3,907        |
|             | Apr            | 31,500                       | 4,526        | 2,339        | 2,116        | 1,716          | 1,518        | 1,423        | 3,457        |
|             | May            | 29,900                       | 4,218        | 2,320        | 1,795        | 1,417          | 1,509        | 1,253        | 3,221        |
|             | June           | 31,300                       | 4,429        | 2,393        | 1,603        | 1,416          | 1,560        | 1,236        | 3,479        |
|             | July           | 31,100                       | 4,416        | 2,624        | 1,624        | 1,346          | 1,531        | 1,355        | 3,331        |
|             | Aug            | 31,100                       | 4,461        | 2,515        | 1,668        | 1,276          | 1,585        | 1,372        | 3,401        |
|             | Sept           | 32,200                       | 4,517        | 2,521        | 1,966        | 1,477          | 1,514        | 1,604        | 3,818        |
|             | Oct            | 32,300                       | 4,523        | 2,391        | 1,908        | 1,544          | 1,560        | 1,464        | 3,780        |
|             | Nov            | 35,900                       | 5,160        | 2,700        | 2,204        | 1,750          | 1,822        | 1,393        | 4,233        |
|             | Dec            | 39,100                       | 5,846        | 2,571        | 2,687        | 1,869          | 2,008        | 1,779        | 4,593        |
|             | <b>AVG.</b>    | <b>33,180</b>                | <b>4,786</b> | <b>2,507</b> | <b>2,071</b> | <b>1,601</b>   | <b>1,658</b> | <b>1,503</b> | <b>3,761</b> |
| <b>1977</b> | Jan            | R37,700                      | R5,434       | 2,389        | 2,518        | 1,830          | 1,797        | R1,696       | R4,073       |
|             | Feb            | R38,600                      | R6,025       | 2,441        | 2,386        | 1,844          | 1,919        | R1,822       | R4,122       |
|             | Mar            | R35,000                      | R5,548       | R2,519       | 2,109        | 1,818          | 1,664        | R1,573       | R3,822       |
|             | Apr            | 32,800                       | R4,715       | 2,425        | 2,044        | 1,670          | 1,526        | R1,326       | R3,568       |
|             | May            | 31,300                       | R4,315       | 2,359        | 1,846        | 1,545          | 1,523        | R1,268       | R3,330       |
|             | June           | R32,900                      | R4,485       | 2,495        | 1,715        | 1,477          | 1,633        | R1,340       | R3,422       |
|             | July           | 31,800                       | R4,717       | 2,381        | 1,348        | 1,321          | 1,530        | R1,251       | R3,047       |
|             | Aug            | R33,000                      | R4,709       | 2,468        | 1,390        | 1,371          | 1,724        | R1,140       | R3,298       |
|             | Sept           | R34,700                      | R4,742       | 2,566        | 1,781        | 1,580          | 1,767        | R1,453       | 4,707        |
|             | Oct            | 33,700                       | 4,669        | 2,324        | R1,882       | R1,570         | 1,821        | R1,452       | 3,653        |
|             | Nov.           | 34,400                       | 5,100        | 2,571        | R2,181       | 1,925          | 1,827        | 1,605        | 3,910        |
|             | Dec.           | NA                           | 5,832        | NA           | 2,519        | NA             | NA           | 1,817        | NA           |
|             | <b>AVG.</b>    | <b>34,139</b>                | <b>5,019</b> | <b>2,448</b> | <b>1,974</b> | <b>1,630</b>   | <b>1,701</b> | <b>1,476</b> | <b>3,717</b> |
|             | (Year to date) |                              |              |              |              |                |              |              |              |

\*The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United States, inland consumption excludes bunkers, refinery fuel, and losses.

\*\*Excludes liquefied petroleum gases and condensates.

\*\*\*Not a member of IEA.

†Principal products only.

††Excludes the United States.

NA=Not available.

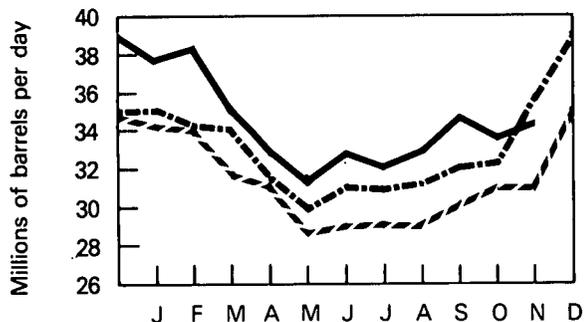
R=Revised data.

Note: All Total IEA, Other IEA, and recent figures are estimates.

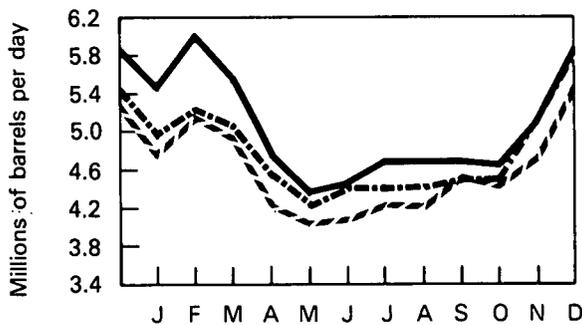
Source: Central Intelligence Agency, National Foreign Assessment Center, *International Energy Biweekly Statistical Review*, 22 February 1978.

# Petroleum Consumption

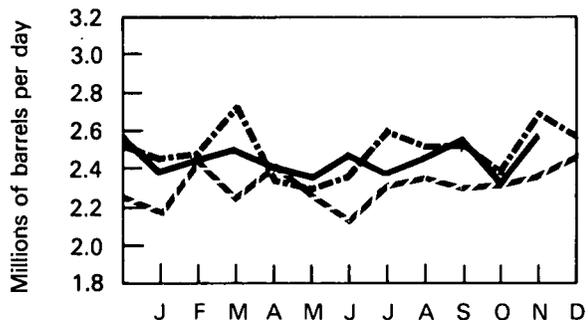
**Total IEA**



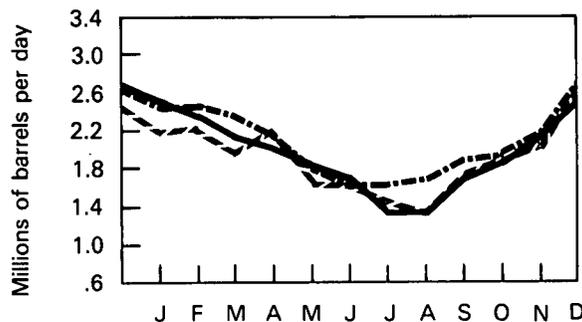
**Japan\***



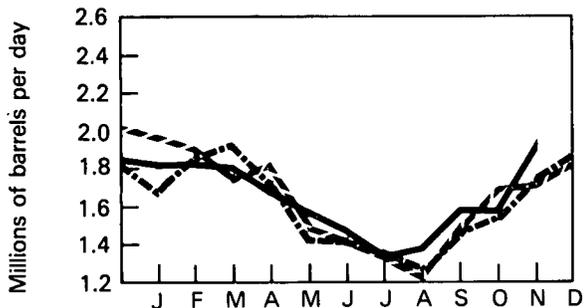
**West Germany**



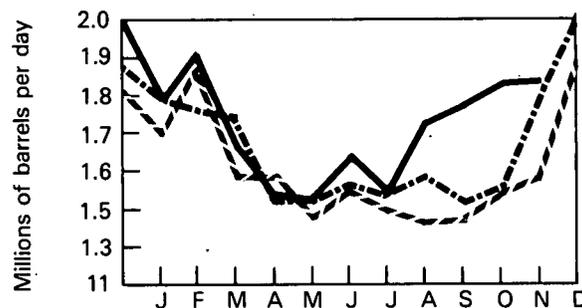
**France\*\***



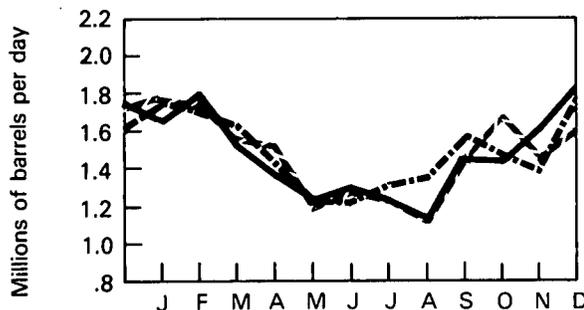
**United Kingdom**



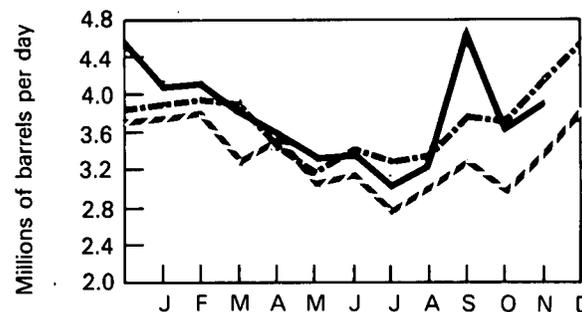
**Canada**



**Italy\*\*\***



**Other IEA†**



\*Excludes liquefied petroleum gases and condensates.

\*\*Not a member of IEA.

\*\*\*Principal products only.

†Excludes the United States.

--- 1975  
 - - - 1976  
 ——— 1977

# Crude Oil Production

## Crude Oil Production for Major Petroleum Exporting Countries—December 1977

| Country                           | Production    |               |               |               |               |                 | Production Capacity | Production Shut in |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------------|--------------------|
|                                   | 1972 Year     | 1973 Year     | 1974 Year     | 1975 Year     | 1976 Year     | 1977 December** | December            | December           |
| Thousands of barrels per day      |               |               |               |               |               |                 |                     |                    |
| Algeria                           | 1,040         | 1,070         | 960           | 960           | 990           | 950             | R1,080              | 12.0               |
| Iraq                              | 1,465         | 2,020         | 1,970         | 2,260         | 2,415         | 2,900           | 3,000               | 3.3                |
| Kuwait*                           | 3,283         | 3,020         | 2,545         | 2,085         | 2,145         | 2,670           | 3,300               | 19.1               |
| Libya                             | 2,239         | 2,175         | 1,520         | 1,480         | 1,935         | 1,960           | 2,300               | 14.8               |
| Qatar                             | 482           | 570           | 520           | 440           | 495           | 470             | 600                 | 21.6               |
| Saudi Arabia*                     | 6,016         | 7,595         | 8,480         | 7,075         | 8,575         | 9,620           | 10,500              | 8.4                |
| United Arab Emirates              | 1,202         | 1,535         | 1,680         | 1,665         | 1,935         | 2,000           | R2,290              | 12.6               |
| <b>Subtotal: Arab OPEC</b>        | <b>15,727</b> | <b>17,985</b> | <b>17,675</b> | <b>15,965</b> | <b>18,490</b> | <b>R20,570</b>  | <b>R23,070</b>      | <b>10.8</b>        |
| Ecuador                           | 78            | 210           | 175           | 160           | 185           | 200             | 225                 | 11.1               |
| Gabon                             | 125           | 150           | 200           | 225           | 225           | 230             | 250                 | 8.0                |
| Indonesia                         | 1,080         | 1,340         | 1,375         | 1,305         | 1,505         | ***1,720        | R1,700              | —                  |
| Iran                              | 5,023         | 5,860         | 6,020         | 5,350         | 5,885         | ***6,380        | R6,000              | —                  |
| Nigeria                           | 1,815         | 2,055         | 2,255         | 1,785         | 2,070         | 1,850           | 2,300               | 16.5               |
| Venezuela                         | 3,219         | 3,365         | 2,975         | 2,345         | 2,295         | 1,960           | 2,600               | 20.4               |
| <b>Subtotal: Non-Arab OPEC</b>    | <b>11,340</b> | <b>12,980</b> | <b>13,000</b> | <b>11,170</b> | <b>12,165</b> | <b>12,340</b>   | <b>R13,075</b>      | <b>5.6</b>         |
| <b>TOTAL OPEC</b>                 | <b>27,067</b> | <b>30,965</b> | <b>30,675</b> | <b>27,135</b> | <b>30,655</b> | <b>32,910</b>   | <b>R36,145</b>      | <b>8.9</b>         |
| Canada                            | 1,540         | 1,800         | 1,695         | 1,460         | 1,300         | 1,447           | 1,800               | 19.6               |
| Mexico                            | 440           | 465           | 580           | 720           | 850           | 1,080           | 1,100               | 2.0                |
| <b>TOTAL OPEC, Canada, Mexico</b> | <b>29,047</b> | <b>33,230</b> | <b>32,950</b> | <b>29,315</b> | <b>32,805</b> | <b>35,437</b>   | <b>R39,045</b>      | <b>9.2</b>         |
| <b>TOTAL WORLD</b>                | <b>50,550</b> | <b>55,755</b> | <b>55,875</b> | <b>52,990</b> | <b>57,350</b> | <b>62,100</b>   |                     |                    |

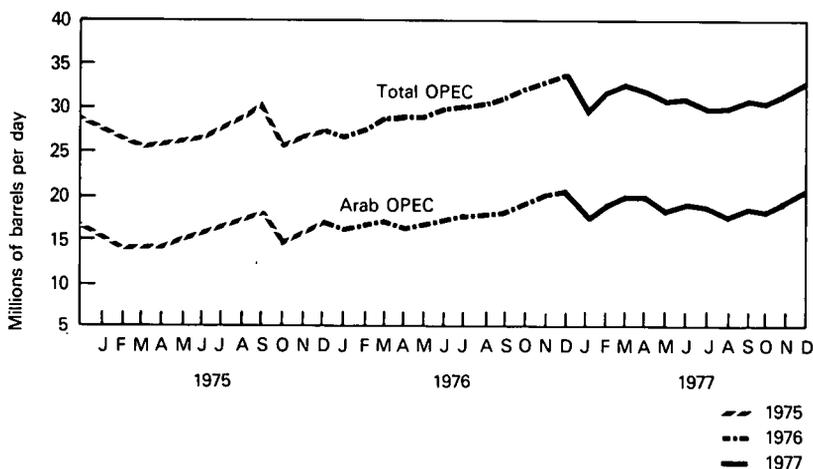
\*Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in December 1977 amounted to approximately 540,000 barrels per day.

\*\*Estimated.

\*\*\*It is possible to produce above capacity for a brief period of time.

Sources: Central Intelligence Agency, National Foreign Assessment Center, *International Energy Biweekly Statistical Review*, 22 February 1978, and National Energy Board of Canada.

OPEC Countries Crude Oil Production



# Definitions

## Base Production Control Level

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold from a particular property in the same month of 1972. If domestic crude oil was not produced and sold from that property in every month of 1972, the total number of barrels of domestic crude oil produced and sold from that property in 1972, divided by 12.

2. Effective February 1, 1976: the total number of barrels of old crude oil produced and sold from the property during calendar year 1975, divided by 365, and multiplied by the number of days in the particular month during 1975. A producer may elect to use the total number of barrels of crude oil produced and sold from the property during calendar year 1972, divided by 366, and multiplied by the number of days in the particular month during 1972.

## Branded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products pursuant to (1) an agreement or contract with a refiner (or a firm which controls, is controlled by, or is under common control with such refiner) to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner (or any such firm), or (2) an agreement or contract under which any such firm engaged in the marketing or distribution of refined petroleum products is granted authority to occupy premises owned, leased, or in any way controlled by a refiner (or firm which controls, is controlled by, or is under common control with such refiner), but which is not affiliated with, controlled by, or under common control with any refiner (other than by means of a supply contract, or an agreement or contract described in parts (1) and (2) of this definition), and which does not control such refiner.

## Ceiling Price

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

## Controlled Crude Oil

Crude oil that was domestically produced prior to February 1, 1976, subject to the ceiling price for crude oil. For a particular property which is not a stripper well lease, the volume of controlled oil equals the base production control level minus an amount of released oil equal to the new oil production from that property.

## Crude Oil Domestic Production

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

## Crude Oil Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil.

It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976 and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

## Crude Oil Imports

The volume of crude oil imported into the 50 States and the District of Columbia, including imports from U.S. territories, but excluding imports of crude oil into the Hawaiian Foreign Trade Zone.

## Crude Oil Input to Refineries

Total crude oil input to crude oil distillation units and other units for processing.

## Crude Oil Stocks

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

## Cumulative Deficiency

A measure of the cumulative deficit of production below the base production control level after the first month in which new oil was produced and sold from a specific property.

## Dealer Tankwagon (DTW) Price

The price at which a dealer purchases gasoline from a distributor or a jobber.

## Distillate Fuel Oil

The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel. Minor quantities of distillate fuel oils produced and/or held as stocks at natural gas processing plants are not included in this series.

## Domestic Demand for Specific Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net increase in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies. (See definition for Domestic Demand for Total Refined Petroleum Products.)

## Domestic Demand for Total Refined Petroleum Products

Total domestic demand for petroleum products is calculated as inputs to refineries, plus estimated refinery gain, plus hydrogen input, plus natural gas plant liquids production, plus direct use of crude as fuel, plus product imports, less product exports, plus or minus stock change of products. (See definition for Domestic Demand for Specific Refined Petroleum Products.)

### **Electricity Production**

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

### **Entitlement Position**

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

### **Entitlement Price**

The price of an entitlement, fixed by ERA, is the exact differential as reported for the month between the weighted average delivered cost per barrel to refiners of both imported crude oil and stripper crude oil, and the weighted average delivered cost per barrel to refiners of "old oil," less 21 cents.

### **Firm Natural Gas Service**

High priority gas service in which the pipeline company is under contract to deliver a specified volume of gas to the customer on a non-interruptible basis. Residential and small commercial facilities usually fall into this category.

### **Interruptible Natural Gas Service**

Low priority gas service in which the pipeline company has the contractual option to temporarily terminate deliveries to customers by reason of claim of firm service customers or higher priority users. Large commercial facilities, industrial users, and electric utilities usually fall into this category.

### **Jet Fuel**

Includes both naphtha-type and kerosene-type fuels meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes, such as for generating electricity in gas turbines.

### **Jobber**

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

### **Jobber Margin**

The difference between the price at which a jobber purchases refined product from a refiner or terminal operator and the price at which the jobber sells to retail outlets. This does not reflect margins obtained by jobbers through retail sales or commercial accounts.

### **Jobber Price**

The price at which a petroleum jobber purchases refined product from a refiner or terminal operator.

### **Landed Cost**

The cost of imported crude oil equal to actual cost of the crude oil at point of origin plus transportation cost to the United States.

### **Limited Work Authorization**

A Limited Work Authorization (LWA) may be granted by the Atomic Safety and Licensing Board of the Nuclear Regulatory Commission to an applicant who wants to construct a nuclear powerplant providing that the project has been cleared for all requirements of the National Environmental Protection Act and that the geologic and topographic suitability of the reactor site has been found satisfactory. The LWA allows an applicant to proceed with site excavation, install temporary construction and service facilities, construct service roads, and erect structures and components not subject to normal quality assurance inspections. It may save a utility from 6 to 8 months in total construction time. However, because the ultimate approval of a construction permit is based on all evidence revealed during the licensing hearings, the successful award of an LWA is no guarantee that a construction permit will also be granted.

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

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

### **Lower Tier Crude Oil**

Old crude oil.

### **Lower Tier Ceiling Price Determination**

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; and (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the *Federal Energy Guidelines* (Part 212.77-13847 Appendix).

### **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.

### **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 Stocks**

Primary motor gasoline stocks held by gasoline producers. Stocks at natural gas processing plants are not included.

### **National Domestic Crude Oil Supply Ratio**

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

### **National Old Oil Supply Ratio**

Old oil receipts, adjusted for small refiner bias and exemptions, divided by crude runs to stills adjusted for entitlements issued for imported refined products.

### **Natural Gas Liquids (NGL)**

Products obtained from natural gasoline plants, cycling plants and fractionators after processing the natural gas. Included are ethane, liquefied petroleum (LP) gases (propane, butane, and propane-butane mixtures), natural gasoline, plant condensate, and minor quantities of finished products such as gasoline, special naphthas, jet fuel, kerosene, and distillate fuel oil.

### **New Crude Oil**

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the base production control for that month and less the current cumulative deficiency.
2. Effective February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the property's base production control level for that month and less the current cumulative deficiency since February 1, 1976.

### **Nonbranded Independent Marketer**

A firm which is engaged in the marketing or distribution of refined petroleum products, but which (1) is not a refiner, (2) is not a firm which controls, is controlled by, is under common control with, or is affiliated with a refiner (other than by means of a supply contract), and (3) is not a branded independent marketer.

### **Old Crude Oil**

1. Prior to February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month and less the total number of barrels of released crude oil for that property in that month.
2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

### **Primary Stocks of Refined Petroleum Products**

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage

facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

### **Property**

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

### **Refined Petroleum Products Imports**

Imports (into the 50 States and the District of Columbia) of motor gasoline, naphtha-type jet fuel, kerosene type jet fuel, kerosene, distillate fuel oil, residual fuel oil, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, waxes, asphalt, plant condensate, and unfinished oils. Included are imports of refined products for bonded and military use, and imports from U.S. territories and the Hawaiian Foreign Trade Zone.

### **Refiner Acquisition Cost**

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

### **Released Crude Oil**

An amount of crude oil produced from a property in a particular month prior to February 1, 1976, which is equal to the total number of barrels of new crude oil produced and sold from that property in that month. The amount of released crude oil for a property in a particular month shall not exceed the base production control level for that property in that month.

### **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 ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy Special Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

### **Rotary Rig**

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

### **Separative Work Unit (SWU)**

The measure of work required to produce enriched uranium from natural uranium. Enrichment plants separate natural uranium feed material into two groups, an enriched product group with a higher percentage of U-235 than the feed material and a depleted tails group with a lower percentage of U-235 than the feed material. To produce 1 kilogram of enriched uranium containing 2.8 percent U-235, and a depleted tails assay containing 0.3 percent U-235, it requires 6 kilograms of natural uranium feed and 3 kilograms of separative work units (3 SWU).

### **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.

### **Stripper Well Property**

A property whose average daily production of crude oil per well (excluding condensate recovered in nonassociated production) did not exceed 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972.

### **Synthetic Natural Gas (SNG)**

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

### **Uncontrolled Crude Oil**

That portion of domestic crude oil production including new, released, and stripper oil which, before February 1, 1976, could be sold at a price exceeding the ceiling price.

### **Unrecouped Costs**

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

### **Upper Tier Crude Oil**

Effective February 1, 1976, upper tier crude oil included new crude oil and crude oil produced from a stripper well lease. Effective September 1, 1976, upper tier crude oil includes new crude oil only.

### **Upper Tier Ceiling Price Determination**

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of

domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the *Federal Energy Guidelines* (Part 212.77 .13847 Appendix).

### **Well**

A hole drilled for the purpose 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. This is a standard definition of the American Petroleum Institute.

## Explanatory Notes

1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear powerplants and industrial hydroelectric power production. The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.

2. U.S. imports of fossil fuels include imports of crude oil, refined petroleum products, and natural gas (dry).

3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and net imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1977 electricity imports were estimated on the basis of the import level for 1976.

4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced 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). NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

5. 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.

6. 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.

7. Bituminous coal and lignite consumption is calculated by EIA from information provided by the Federal Power Commission, Department of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

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

8. Class A and B utilities are the only utilities required to report their number of customers on Form 5. Class A and B investor-owned utilities are defined, respectively, as those with annual sales that exceed \$2.5 million, and those with annual sales that are between \$1 million and \$2.5 million. In 1976 there were 212 Class A and B utilities; collectively they represented 80 percent of the total industry kilowatt-hour sales. In the month of June 1977 Class A and B utilities accounted for 77.9 percent of ultimate industrial sales, 74.7 percent of ultimate residential sales, and 85.2 percent of ultimate commercial sales.

9. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of  $U_3O_8$ . After the conversion stage, the units of measure are either metric tons (MT) of  $UF_6$  or metric tons of uranium (MTU). The later designation expresses only the elemental uranium content of  $UF_6$ .

Following the enrichment stage, the same units are used, but the U-235 content has been enhanced at the expense of loss of material. At the fabrication stage,  $UF_6$  is changed to  $UO_2$ , and the standard unit of measure is the MTU. We have chosen to present all uranium quantities as MTU; conversion factors to other units are given in the Units of Measure section.

10. The units used to describe power generation at nuclear plants are based on the watt, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The thermal rating (expressed in thermal megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed either as megawatt hours (MWh) or kilowatt hours

(KWh). Tables in the nuclear section show generated electricity as average electrical power. This enables a more direct comparison to design capacity and to previous months' performances. To obtain the quantity of electricity generated during a given time period (in kilowatt hours), multiply the average power level (in kilowatts) by the number of hours during that period.

The energy extracted from uranium fuel is expressed as thermal megawatt days per metric ton of uranium (MWD/MTU). The production of plutonium in the fuel rods is expressed as kilograms of plutonium per metric ton of discharged uranium (kg/MTU).

11. 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.

12. The petroleum short-term demand forecasting model uses historical consumption data to construct regression equations for each of eight major petroleum products on a regional level. Each equation attempts to capture the relationship between final demand for that product and the factors influencing that demand. The explanatory factors used in predicting product demand include (1) macroeconomic variables such as real adjusted gross income, (2) real product prices, (3) variables representing the effects of weather and other seasonal variations in demand, and (4) other factors relevant to a particular product.

Assumptions underlying the current short-term forecast are: normal weather and a level of economic activity producing real GNP growth rates 5.8, 5.4, and 5.1 percent for 1977, 1978, and 1979, respectively.

The supply model includes an assumed level of domestic crude oil and NGL production and inventory changes. Imports are determined as the incremental supply required to meet total demand for refined products not satisfied by domestic production or inventory drawdown.

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

There are two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather

stations around the country. Monthly data are based on readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

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

14. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected truckstops plus additional retail gasoline dealers that sold diesel fuel. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.

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

16. The refiner acquisition cost of domestic crude petroleum is the price paid by refiners for domestic crude petroleum, unfinished oils, and natural gas liquids and includes transportation costs from the wellhead to the refinery. The refiner acquisition cost of imported crude petroleum is the average landed cost of imported crude petroleum to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States.

17. The estimated landed cost of imported crude petroleum 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 petroleum 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.

18. 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.

19. The weighted average utility fuel cost for the total United States includes distillate fuel oil delivered to utilities whereas the regional breakdown for residual fuel oil prices represents only No. 6 fuel oil prices.

# Units of Measure

## Weight

|              |                 |                  |
|--------------|-----------------|------------------|
| 1 metric ton | <i>contains</i> | 1.102 short tons |
| 1 long ton   | <i>contains</i> | 1.120 short tons |

## Conversion Factors for Crude Oil

### Average gravity

|              |                 |                                      |
|--------------|-----------------|--------------------------------------|
| 1 barrel     | <i>contains</i> | 42 gallons                           |
| 1 barrel     | <i>weighs</i>   | 0.136 metric tons (0.150 short tons) |
| 1 metric ton | <i>contains</i> | 7.33 barrels                         |
| 1 short ton  | <i>contains</i> | 6.65 barrels                         |

## Conversion Factors for Uranium

|  |                 |                              |
|--|-----------------|------------------------------|
| 1 short ton (U <sub>3</sub> O <sub>8</sub> ) | <i>contains</i> | 0.769 metric tons of uranium |
| 1 short ton (UF <sub>6</sub> )               | <i>contains</i> | 0.613 metric tons of uranium |
| 1 metric ton (UF <sub>6</sub> )              | <i>contains</i> | 0.676 metric tons of uranium |

## Approximate Heat Content of Various Fuels

### Petroleum

|                      |                           |
|----------------------|---------------------------|
| Crude Oil            | 5.800 million Btu/barrel  |
| Refined products     |                           |
| Imports, average     | 6.000 million Btu/barrel  |
| Consumption, average | 5.4959 million Btu/barrel |
| Gasoline             | 5.248 million Btu/barrel  |
| Jet Fuel, average    | 5.604 million Btu/barrel  |
| Naphtha-type         | 5.355 million Btu/barrel  |
| Kerosene-type        | 5.670 million Btu/barrel  |
| Distillate fuel oil  | 5.825 million Btu/barrel  |
| Residual fuel oil    | 6.287 million Btu/barrel  |

Natural gas liquids 4.023 million Btu/barrel

### Natural gas

|     |                      |
|-----|----------------------|
| Wet | 1,095 Btu/cubic foot |
| Dry | 1,021 Btu/cubic foot |

### Coal

|                        |                             |
|------------------------|-----------------------------|
| Bituminous and lignite |                             |
| Production             | 23.50 million Btu/short ton |
| Consumption            | 22.80 million Btu/short ton |
| Anthracite             | 25.40 million Btu/short ton |

## Electricity Conversion Heat Rates

### Fossil fuel steam-electric

|      |                          |
|------|--------------------------|
| Coal | 10,280 Btu/kilowatt hour |
| Gas  | 10,784 Btu/kilowatt hour |
| Oil  | 10,804 Btu/kilowatt hour |

Nuclear steam electric 10,660 Btu/kilowatt hour

Hydroelectric 10,383 Btu/kilowatt hour

Electricity Consumption 3,412 Btu/kilowatt hour



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