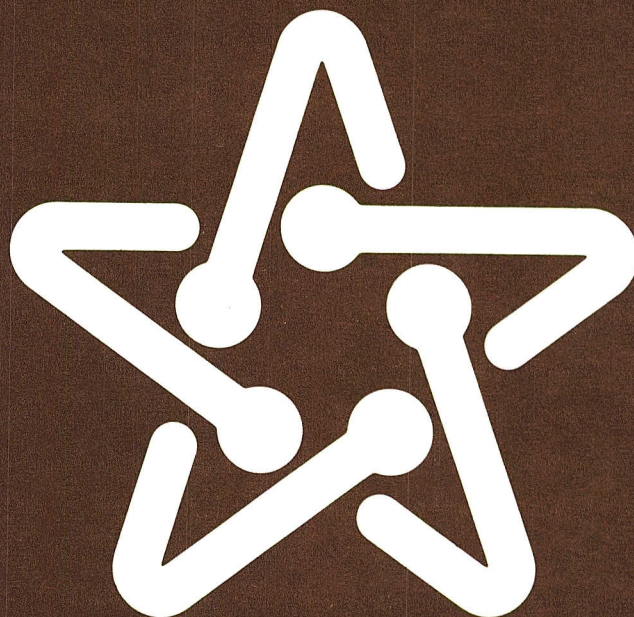


Monthly Energy Review

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November 1976



**Federal Energy
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Feature Articles appearing in previous issues:

Energy Consumption – March 1975

Nuclear Power – April 1975

The Price of Crude Oil – June 1975

U.S. Coal Resources and Reserves – July 1975

Propane, A National Energy Resource – September 1975

Short-Term Energy Supply and Demand Forecasting at FEA – October 1975

Curtailments of Natural Gas Service – January 1976

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

Trends in United States Petroleum Imports – September 1976

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Part 1

Overview

Primary energy production in the United States averaged 164 trillion Btu per day (the equivalent of 28 million barrels per day of crude oil) during the first 9 months of 1976, down only 0.2 percent from the average output level during the corresponding months in 1975. This small decline represents a significant departure from the previous 2-year period when domestic energy output dropped at an average annual rate of 1.8 percent. Crude oil production declined 2.9 percent from the level for the first three quarters of last year, and natural gas production was 1.5 percent lower. These decreases were almost entirely offset by a 3.7-percent rise in average daily coal output and a 6.9-percent increase in nuclear electric power production.

In spite of the diminishing rate of decline in domestic energy production, the United States imported 15.7 percent more fossil fuels during the first three quarters of the year than during the comparable 1975 period. Average daily imports of crude oil and natural gas increased 27.1 percent and 2.6 percent, respectively, while refined petroleum product imports declined 3.7 percent.

Domestic consumption of energy averaged 200 trillion Btu per day (the equivalent of 34 million barrels per day of crude oil) during the first 8 months of 1976, an increase of 3.1 percent over the average consumption level for the same period in 1975. Forty-seven percent of this consumption was refined petroleum products, 19 percent was coal, and 27 percent was natural gas. The balance of primary domestic energy requirements was met by hydroelectric and nuclear electric power.

Cooler than normal weather prevailed during September, and as a consequence, the continental United States collected 11.6 percent fewer cooling degree-days than the average for the month. Total cooling degree-days for the entire 1976 air-conditioning season (May through September) were 7.2 percent below average and 10.4 percent below the total accumulated during the 1975 cooling season.

Electric utilities produced 5.4 percent more power during the first three quarters of 1976 than during the comparable 1975 period. The increase was needed mainly to meet the growth in industrial electricity requirements.

Sales of electric power to industrial customers rose 10.2 percent during the first 7 months of the year. Commercial sales were also higher (by 4.9 percent), while sales to residential users increased only 0.8 percent.

Retail gasoline prices appeared to be leveling off in September. The average price of regular gasoline sold at full service retail outlets advanced only 0.1 cent during the month to 60.2 cents per gallon. The average dealer margin increased 0.2 cent to 7.6 cents per gallon, the first change since May.

In resource development, the number of rotary rigs drilling for oil and gas posted a 15-year high during September and October. Well completions totaled 29,327 during the first three quarters of the year, up 14.3 percent from the level for the corresponding period in 1975. Completions are expected to exceed 41,000 by the end of the year.

Total world crude oil production rose 780,000 barrels per day in August to 57.2 million barrels per day, the highest level since September 1973. Crude oil liftings in the nations belonging to the Organization of Petroleum Exporting Countries (OPEC) averaged 30.5 million barrels per day during the month, 540,000 barrels per day more than during July. These production increases are attributed to increased purchases of crude oil in anticipation of a probable OPEC price hike in January.

| | | Domestic Production of Energy* | Imports of Fossil Fuels** | Domestic Consumption of Energy*** |
|-------------------------------------|--------------|-----------------------------------|------------------------------|--------------------------------------|
| Quadrillion (10 ¹⁵) Btu | | | | |
| 1974 | January | 5.393 | 1.072 | 6.796 |
| | February | 4.979 | 0.945 | 6.205 |
| | March | 5.294 | 1.053 | 6.264 |
| | April | 5.199 | 1.142 | 5.759 |
| | May | 5.374 | 1.266 | 5.754 |
| | June | 4.945 | 1.197 | 5.535 |
| | July | 5.141 | 1.266 | 5.867 |
| | August | 5.157 | 1.237 | 5.900 |
| | September | 5.000 | 1.138 | 5.597 |
| | October | 5.264 | 1.210 | 6.066 |
| | November | 4.542 | 1.284 | 6.128 |
| | December | 4.849 | 1.305 | 6.732 |
| | TOTAL | 61.135 | 14.114 | 72.602 |
| 1975 | January | R5.195 | 1.330 | 6.955 |
| | February | 4.805 | 1.093 | 6.108 |
| | March | 5.130 | 1.128 | 6.297 |
| | April | 4.998 | 0.970 | 5.704 |
| | May | 5.123 | 1.023 | 5.384 |
| | June | 5.016 | 1.028 | 5.344 |
| | July | 4.862 | 1.169 | 5.581 |
| | August | 4.954 | 1.213 | 5.655 |
| | September | 4.897 | 1.273 | 5.413 |
| | October | 5.155 | 1.226 | 5.825 |
| | November | 4.894 | 1.200 | 5.767 |
| | December | 5.067 | 1.219 | 6.819 |
| | TOTAL | R60.095 | 13.870 | R70.853 |
| 1976 | January | 5.069 | R1.296 | R7.220 |
| | February | 4.850 | R1.209 | R6.167 |
| | March | 5.212 | 1.290 | R6.389 |
| | April | 4.955 | 1.232 | R5.733 |
| | May | R5.050 | R1.232 | R5.674 |
| | June | R5.052 | R1.394 | R5.739 |
| | July | R4.767 | R1.515 | R††5.890 |
| | August | R†5.020 | R†1.364 | ††5.889 |
| | September | †5.056 | †1.345 | NA |
| | TOTAL | 45.031 (9 months) | 11.876 (9 months) | 48.701 (8 months) |

*See Explanatory Note 1.

**See Explanatory Note 2.

***See Explanatory Note 3.

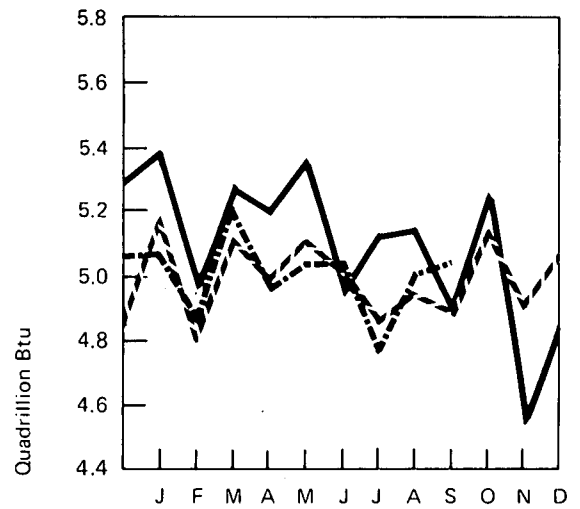
†Preliminary data.

††Partially estimated.

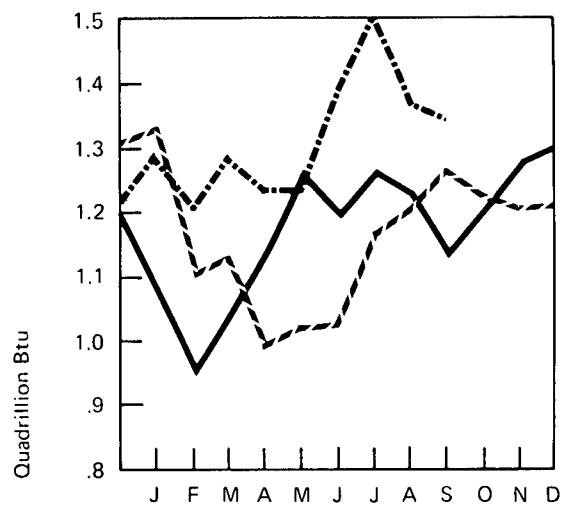
R=Revised data.

NA=Not available.

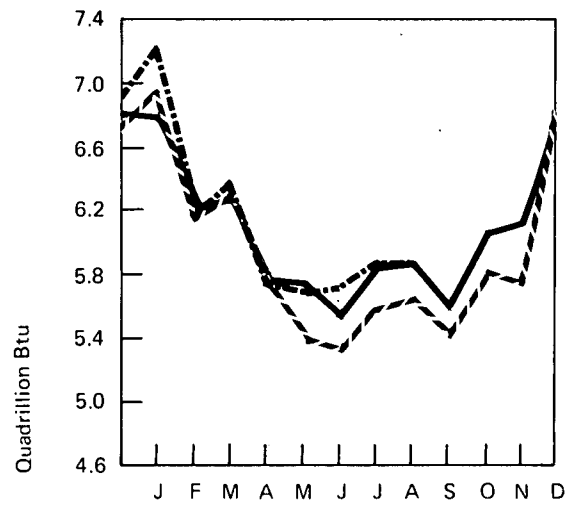
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



— 1974
 - - 1975
 - · - 1976

Part 2

Crude Oil and Refined Petroleum Products

Crude Oil and Refined Petroleum Products

Crude oil production during September amounted to 8.10 million barrels per day. The average for the first 9 months of 1976 was 8.15 million barrels per day, a decline of 0.24 million barrels per day (2.9 percent) from the level for the first 9 months of 1975.

Crude oil input to refineries remained high in September, averaging 13.53 million barrels per day. This was equivalent to 86 percent of operable capacity. The 9-month average was 13.16 million barrels per day, a 6.2 percent increase over the level for the first 9 months of 1975.

Crude oil imports during the first three quarters of 1976 averaged 5.05 million barrels per day, 1.08 million barrels per day more (27.1 percent) than during the similar period in 1975. According to Bureau of the Census data, Saudi Arabia and Nigeria were the major sources of crude oil imported in September, accounting for 23 percent and 17 percent of the total, respectively. Arab members of the Organization of Petroleum Exporting Countries (OPEC) provided 47 percent of the crude oil imported directly, and other OPEC members supplied 34 percent.

Crude oil inventories at the end of September were adequate for commercial purposes and were equal to 20.9 days of crude oil input to refineries.

Domestic demand averaged 16.94 million barrels per day during the first 9 months of 1976, exceeding demand for the same period in 1975 by 4.8 percent. The increase in demand during this period for selected major refined products was: residual fuel oil, 8.1 percent; motor gasoline, 4.1 percent; and distillate fuel oil, 3.7 percent.

Natural Gas Liquids

Domestic demand for natural gas liquids in June was 11.3 percent above June 1975 demand. Demand was 3.8 percent greater during the first 6 months of 1976 than it was during the same period of 1975.

Production of natural gas liquids during the first half of 1976 was approximately equal to production during the first half of 1975.

June imports of natural gas liquids were down 2.0 percent from the June 1975 level. However, imports for the period January through June were 11.9 percent higher than those for the same period of 1975.

Stocks of natural gas liquids at the end of June were 5.7 percent above June 1975 stocks.

Crude Oil

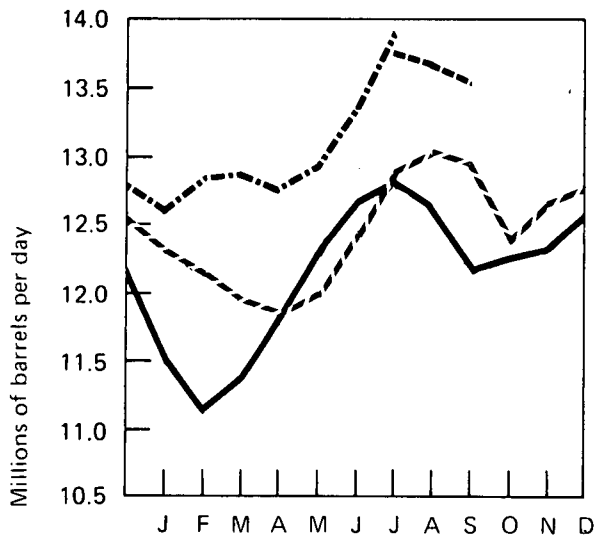
| | | Crude Input to Refineries | | Domestic Production | | Imports | | Stocks | |
|------|------------------------|------------------------------|---------|---------------------|--------|---------|-------|----------------------|---------|
| | | Thousands of barrels per day | | | | | | Thousands of barrels | |
| | | BOM | API | BOM | API | BOM | API | BOM | API |
| 1974 | January | 11,491 | | 8,934 | | 2,382 | | 233,035 | |
| | February | 11,102 | | 9,142 | | 2,248 | | 240,723 | |
| | March | 11,355 | | 8,965 | | 2,462 | | 244,665 | |
| | April | 11,823 | | 8,954 | | 3,267 | | 256,385 | |
| | May | 12,333 | | 8,911 | | 3,908 | | 269,455 | |
| | June | 12,697 | | 8,780 | | 3,925 | | 268,765 | |
| | July | 12,811 | | 8,780 | | 4,091 | | 268,686 | |
| | August | 12,644 | | 8,699 | | 3,924 | | 264,840 | |
| | September | 12,124 | | 8,443 | | 3,797 | | 266,726 | |
| | October | 12,286 | | 8,611 | | 3,810 | | 269,437 | |
| | November | 12,332 | | 8,569 | | 3,958 | | 271,144 | |
| | December | 12,519 | | 8,527 | | 3,869 | | 265,020 | |
| | AVERAGE | | 12,133 | | 8,774 | | 3,477 | | |
| 1975 | January | 12,297 | | 8,439 | | 4,029 | | 270,462 | |
| | February | 12,135 | | 8,575 | | 3,828 | | 276,755 | |
| | March | 11,905 | | 8,476 | | 3,656 | | 279,989 | |
| | April | 11,803 | | 8,440 | | 3,378 | | 284,990 | |
| | May | 11,983 | | 8,371 | | 3,486 | | 276,110 | |
| | June | 12,417 | | 8,409 | | 3,905 | | 276,132 | |
| | July | 12,915 | | 8,327 | | 4,193 | | 264,157 | |
| | August | 13,046 | | 8,237 | | 4,581 | | 256,616 | |
| | September | 12,945 | | 8,266 | | 4,689 | | 259,446 | |
| | October | 12,365 | | 8,310 | | 4,389 | | 269,584 | |
| | November | 12,689 | | 8,271 | | 4,623 | | 270,950 | |
| | December | 12,779 | | 8,239 | | 4,476 | | 271,354 | |
| | AVERAGE | | 12,442 | | 8,362 | | 4,105 | | |
| 1976 | January | 12,560 | | 8,211 | | 4,595 | | R289,296 | |
| | 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 | 13,351 | | 8,144 | | 5,621 | | 281,715 | |
| | July | 13,901 | 13,788 | 8,104 | R8,166 | 5,792 | 5,625 | 282,559 | 281,576 |
| | August | | R13,693 | | 8,165 | | 5,525 | | 278,801 |
| | September | | 13,529 | | 8,095 | | 5,488 | | 282,893 |
| | AVERAGE* (9 months) | | | 13,156 | | 8,149 | | 5,051 | |

*Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

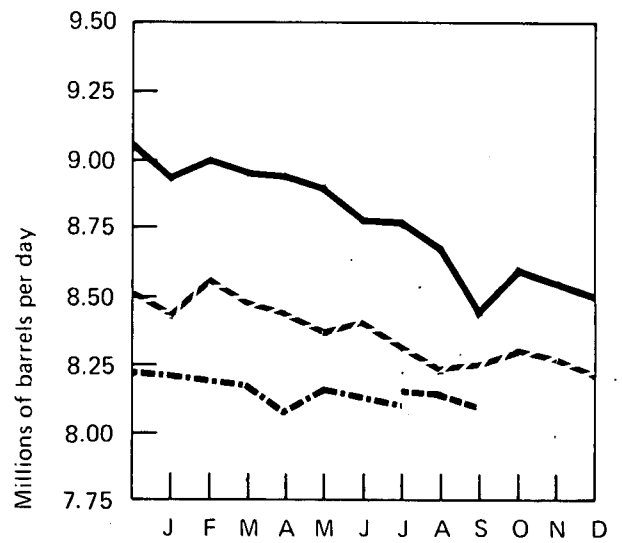
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

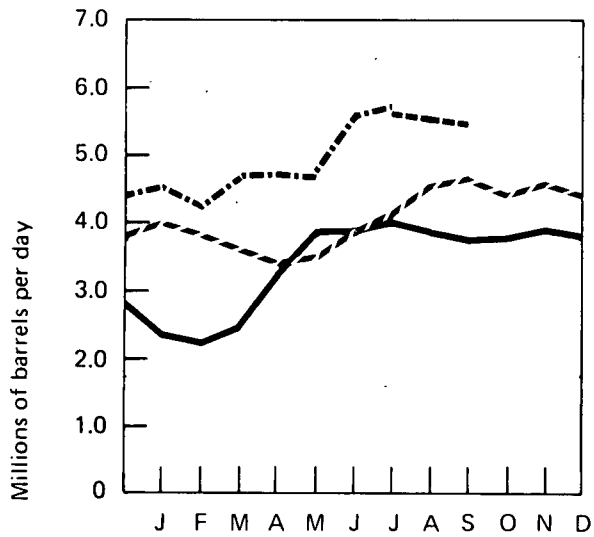
Crude Input to Refineries



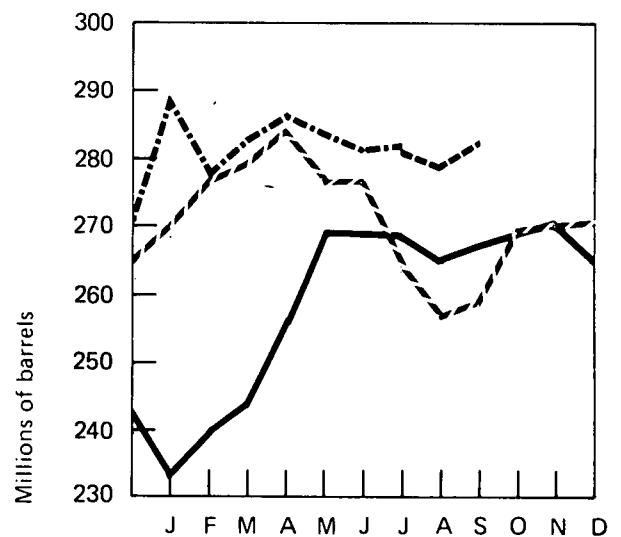
Domestic Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 ··· 1976 BOM
 - · 1976 API

Total Refined Petroleum Products

Total Petroleum Imports

| | | Domestic Demand | | Imports* | | | |
|------|---------------------------------|------------------------------|---------------|--------------|--------------|------------------------------|--------------|
| | | Thousands of barrels per day | | | | Thousands of barrels per day | |
| | | BOM | FEA** | BOM | FEA** | BOM | FEA** |
| 1974 | January | 17,286 | | 2,989 | | 5,371 | |
| | February | 17,366 | | 2,968 | | 5,216 | |
| | March | 16,104 | | 2,812 | | 5,274 | |
| | April | 15,929 | | 2,713 | | 5,980 | |
| | May | 15,726 | | 2,586 | | 6,494 | |
| | June | 16,117 | | 2,435 | | 6,360 | |
| | July | 16,349 | | 2,445 | | 6,536 | |
| | August | 16,550 | | 2,438 | | 6,362 | |
| | September | 16,024 | | 2,255 | | 6,052 | |
| | October | 17,050 | | 2,366 | | 6,176 | |
| | November | 17,351 | | 2,840 | | 6,798 | |
| | December | 18,013 | | 2,798 | | 6,667 | |
| | AVERAGE | 16,653 | | 2,635 | | 6,112 | |
| 1975 | January | 17,983 | | 2,811 | | 6,840 | |
| | February | 17,248 | | 2,348 | | 6,176 | |
| | March | 16,316 | | 2,074 | | 5,730 | |
| | April | 16,041 | | 1,655 | | 5,033 | |
| | May | 15,118 | | 1,690 | | 5,176 | |
| | June | 15,611 | | 1,502 | | 5,407 | |
| | July | 15,762 | | 1,789 | | 5,982 | |
| | August | 15,767 | | 1,681 | | 6,262 | |
| | September | 15,769 | | 2,116 | | 6,805 | |
| | October | 16,344 | | 1,907 | | 6,296 | |
| | November | 15,721 | | 1,739 | | 6,362 | |
| | December | 17,987 | | 1,751 | | 6,227 | |
| | AVERAGE | 16,291 | | 1,920 | | 6,025 | |
| 1976 | January | R18,599 | | R2,070 | | R6,665 | |
| | February | R17,419 | | R2,414 | | R6,622 | |
| | March | 17,239 | | 1,885 | | 6,623 | |
| | April | 16,597 | | 1,731 | | 6,521 | |
| | May | 15,977 | | 1,654 | | 6,323 | |
| | June | 16,836 | | 1,858 | | 7,479 | |
| | July | 16,613 | R16,386 | 2,098 | R1,761 | 7,890 | R7,386 |
| | August | | R16,441 | | R1,572 | | R7,097 |
| | September | | 16,792 | | 1,741 | | 7,229 |
| | AVERAGE*** (9 months) | | 16,944 | | 1,889 | | 6,940 |

*See definitions.

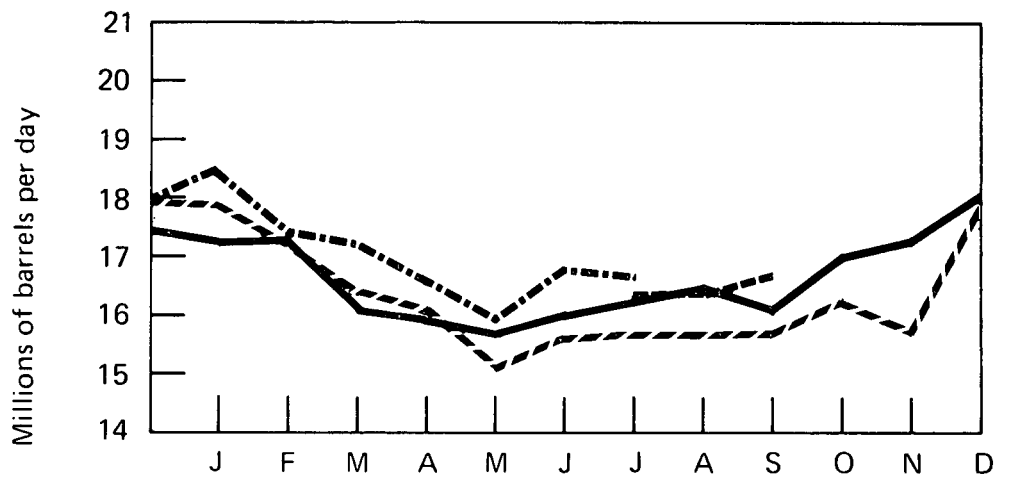
**Estimates.

***Nine-month average is based on Bureau of Mines data for January through July, and FEA estimates for August and September.

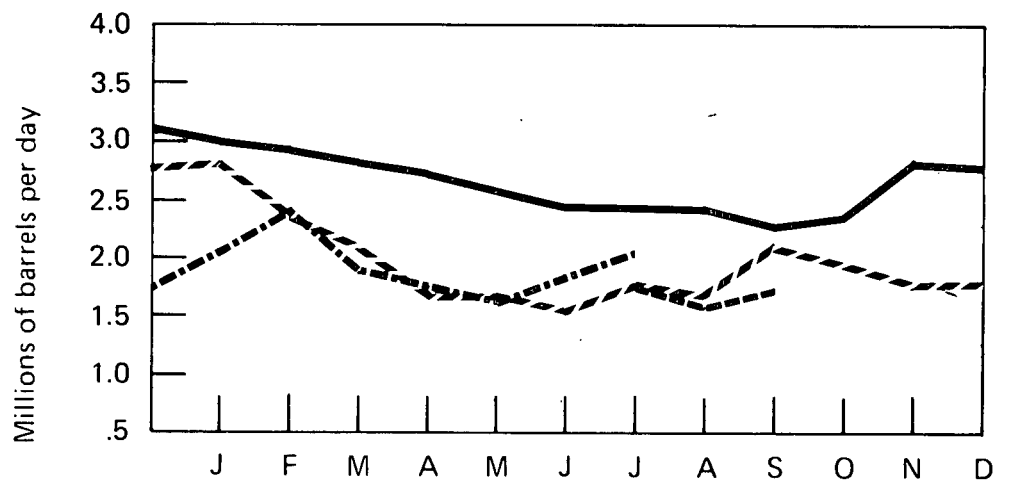
R=Revised data.

Sources: Bureau of Mines (BOM), American Petroleum Institute, and FEA.

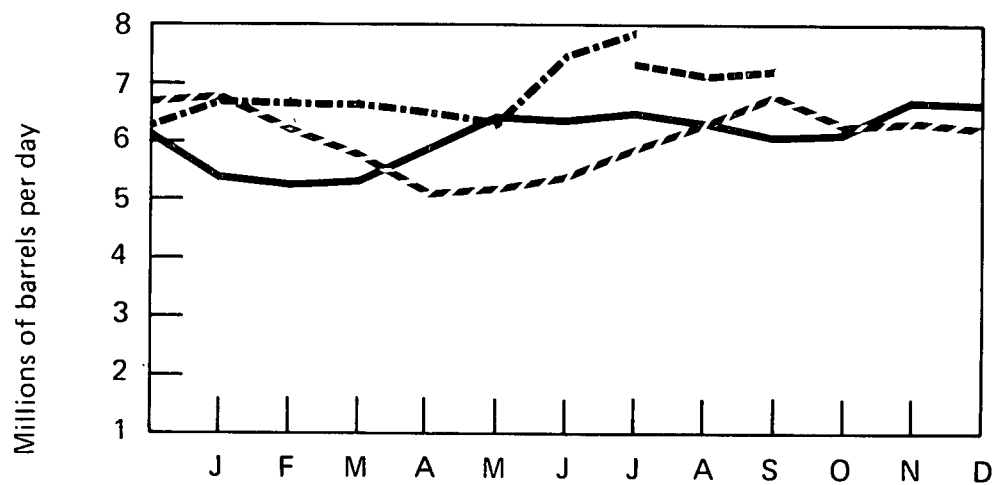
Total Refined Product Domestic Demand



Refined Product Imports



Total Petroleum Imports



— 1974 BOM
 - - 1975 BOM
 - . - 1976 BOM
 - - - 1976 FEA

Motor Gasoline

| | | Domestic Demand | | Production* | | Imports | | Stocks* | |
|------|------------|------------------------------|-------|-------------|--------|---------|-----|----------------------|---------|
| | | Thousands of barrels per day | | | | | | Thousands of barrels | |
| | | BOM | API | BOM | API | BOM | API | BOM | API |
| 1974 | January | 5,804 | | 5,900 | | 163 | | 217,463 | |
| | February | 6,100 | | 5,969 | | 184 | | 219,058 | |
| | March | 6,162 | | 5,982 | | 225 | | 220,307 | |
| | April | 6,457 | | 6,311 | | 260 | | 223,752 | |
| | May | 6,745 | | 6,329 | | 250 | | 218,670 | |
| | June | 6,919 | | 6,663 | | 211 | | 217,381 | |
| | July | 6,959 | | 6,793 | | 212 | | 218,838 | |
| | August | 7,061 | | 6,815 | | 253 | | 218,951 | |
| | September | 6,388 | | 6,453 | | 202 | | 227,031 | |
| | October | 6,712 | | 6,336 | | 171 | | 220,748 | |
| | November | 6,547 | | 6,292 | | 174 | | 218,385 | |
| | December | 6,558 | | 6,419 | | 141 | | 224,719 | |
| | AVERAGE | 6,537 | | 6,358 | | 204 | | | |
| 1975 | 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 | | 6,822 | | 269 | | 226,447 | |
| | October | 6,778 | | 6,409 | | 207 | | 221,493 | |
| | November | 6,389 | | 6,602 | | 139 | | 232,091 | |
| | December | 6,808 | | 6,786 | | 119 | | 234,925 | |
| | AVERAGE | 6,674 | | 6,518 | | 184 | | | |
| 1976 | 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 | | 6,774 | | 112 | | 225,037 | |
| | June | 7,482 | | 7,303 | | 188 | | 225,365 | |
| | July | 7,354 | 7,226 | 7,218 | R7,216 | 190 | 107 | 229,405 | 224,690 |
| | August | | 7,071 | | 7,115 | | 104 | | 229,187 |
| | September | | 7,064 | | 6,856 | | 104 | | 225,970 |
| | AVERAGE** | | 6,950 | | 6,806 | | 122 | | |
| | (9 months) | | | | | | | | |

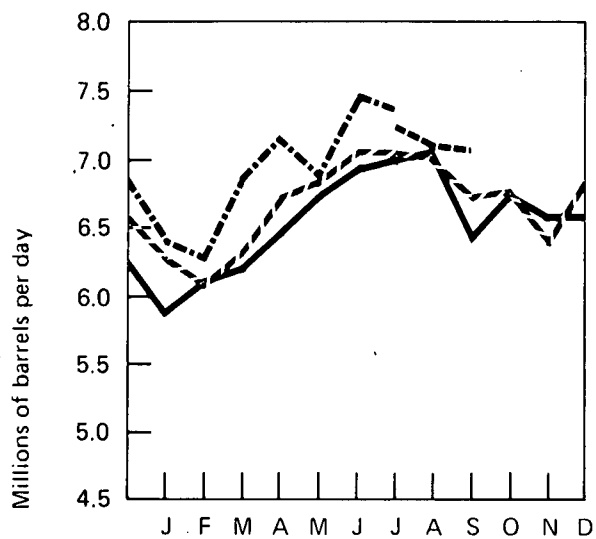
*See definitions.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

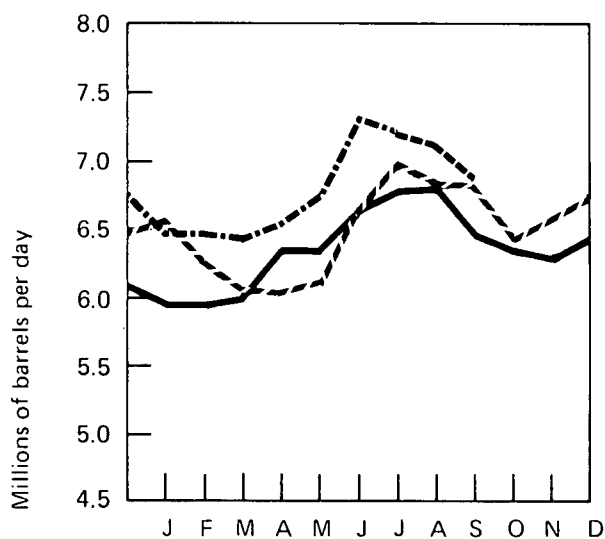
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

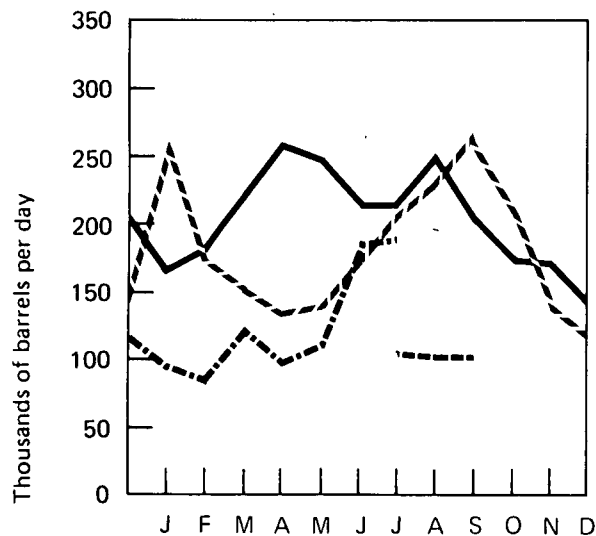
Domestic Demand



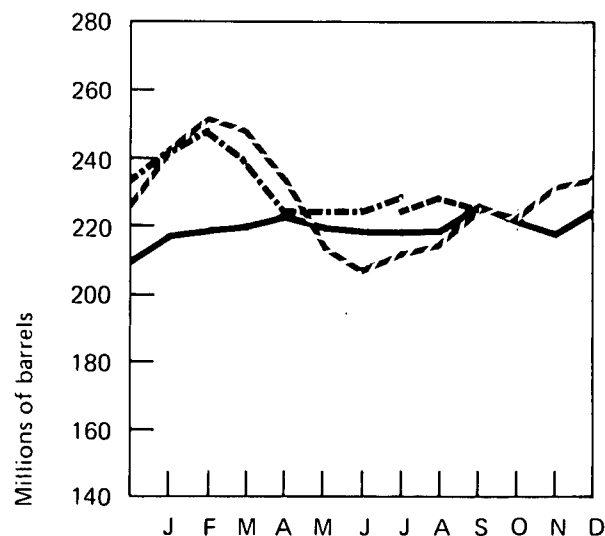
Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 . . . 1976 BOM
 - . - 1976 API

Jet Fuel

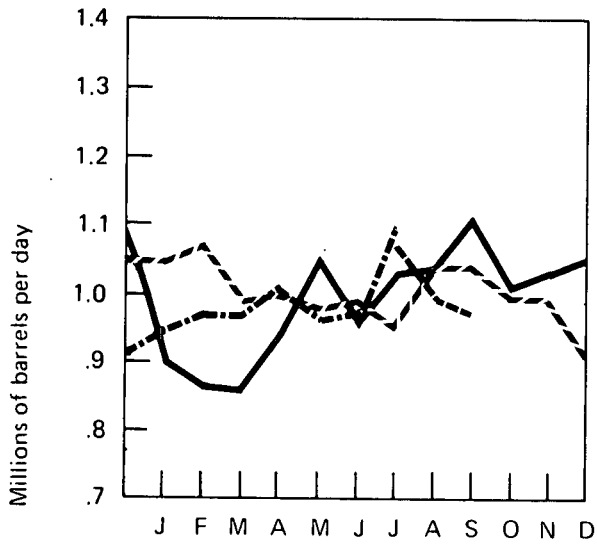
| | | Domestic Demand | | Production | | Imports | | Stocks | |
|------|-----------|------------------------------|--------|------------|-----|---------|-----|----------------------|--------|
| | | Thousands of barrels per day | | | | | | Thousands of barrels | |
| | | BOM | API | BOM | API | BOM | API | BOM | API |
| 1974 | January | 895 | | 800 | | 136 | | 29,732 | |
| | February | 860 | | 783 | | 75 | | 29,617 | |
| | March | 956 | | 832 | | 139 | | 29,996 | |
| | April | 941 | | 868 | | 132 | | 31,725 | |
| | May | 1,053 | | 868 | | 205 | | 32,324 | |
| | June | 952 | | 810 | | 141 | | 32,200 | |
| | July | 1,028 | | 802 | | 214 | | 31,671 | |
| | August | 1,031 | | 805 | | 206 | | 30,989 | |
| | September | 1,109 | | 867 | | 217 | | 30,186 | |
| | October | 1,011 | | 868 | | 161 | | 30,564 | |
| | November | 1,032 | | 863 | | 140 | | 29,616 | |
| | December | 1,043 | | 861 | | 178 | | 29,776 | |
| | | AVERAGE | 993 | | 836 | | 163 | | |
| 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 | | 138 | | 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 | | 863 | | 106 | | 30,410 | |
| | November | 999 | | 864 | | 89 | | 28,977 | |
| | December | 911 | | 849 | | 109 | | 30,380 | |
| | | AVERAGE | 1,001 | | 871 | | 133 | | |
| 1976 | January | 948 | | 889 | | 69 | | 30,618 | |
| | February | 966 | | 918 | | 72 | | 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 | R1,071 | 933 | 953 | 130 | 78 | 32,732 | 31,118 |
| | August | | 990 | | 948 | | 59 | | 31,500 |
| | September | | 970 | | 932 | | 48 | | 31,751 |
| | | AVERAGE* | | 987 | | 917 | | 83 | |
| | | (9 months) | | | | | | | |

*Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

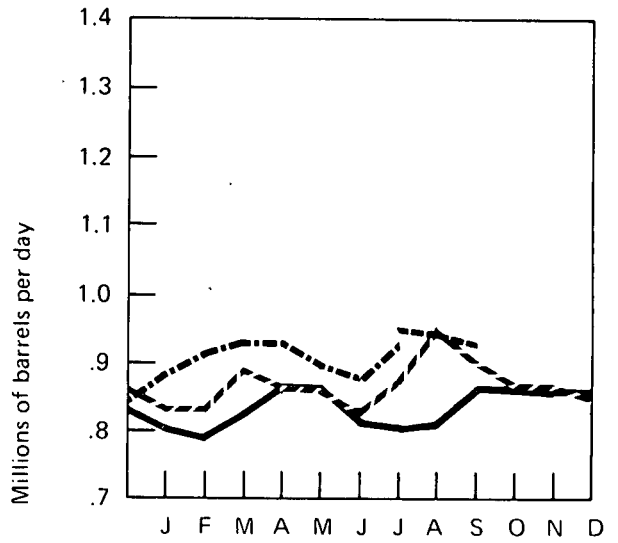
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

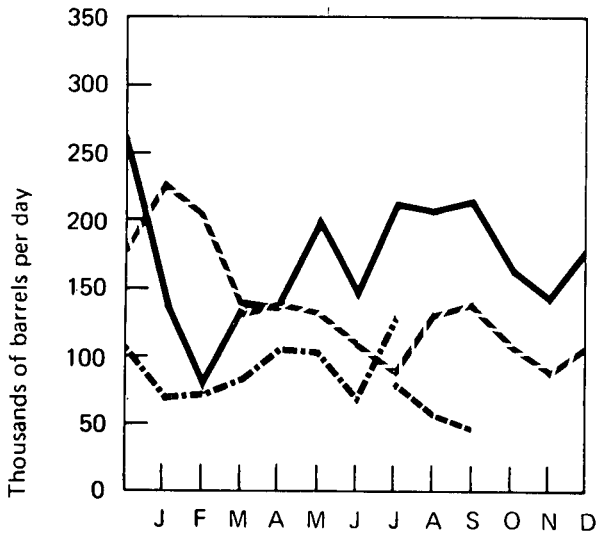
Domestic Demand



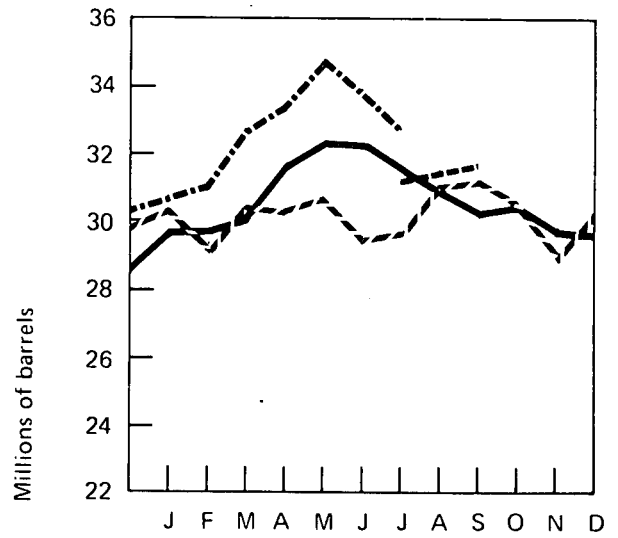
Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 . . . 1976 BOM
 - . 1976 API

Distillate Fuel Oil

| | | Domestic Demand | | Production* | | Imports | | Stocks* | |
|------|-----------|------------------------------|-------|-------------|-------|---------|-----|----------------------|---------|
| | | Thousands of barrels per day | | | | | | Thousands of barrels | |
| | | BOM | API | BOM | API | BOM | API | BOM | API |
| 1974 | January | 3,835 | | 2,880 | | 464 | | 181,179 | |
| | February | 3,849 | | 2,399 | | 306 | | 149,125 | |
| | March | 3,164 | | 2,226 | | 287 | | 128,822 | |
| | April | 2,852 | | 2,522 | | 220 | | 125,553 | |
| | May | 2,450 | | 2,704 | | 268 | | 141,806 | |
| | June | 2,377 | | 2,783 | | 220 | | 160,645 | |
| | July | 2,309 | | 2,792 | | 221 | | 182,458 | |
| | August | 2,309 | | 2,705 | | 125 | | 198,673 | |
| | September | 2,385 | | 2,552 | | 152 | | 208,269 | |
| | October | 2,887 | | 2,700 | | 237 | | 209,908 | |
| | November | 3,157 | | 2,801 | | 454 | | 212,875 | |
| | December | 3,853 | | 2,924 | | 515 | | 223,717 | |
| | | AVERAGE | 2,948 | | 2,668 | | 289 | | |
| 1975 | January | 3,953 | | 2,852 | | 324 | | 199,715 | |
| | February | 3,967 | | 2,679 | | 302 | | 176,696 | |
| | March | 3,293 | | 2,531 | | 256 | | 161,111 | |
| | April | 3,094 | | 2,486 | | 110 | | 146,214 | |
| | May | 2,382 | | 2,431 | | 136 | | 152,027 | |
| | June | 2,266 | | 2,574 | | 68 | | 163,306 | |
| | July | 2,112 | | 2,589 | | 106 | | 181,472 | |
| | August | 2,173 | | 2,592 | | 92 | | 197,323 | |
| | September | 2,163 | | 2,812 | | 129 | | 220,732 | |
| | October | 2,675 | | 2,744 | | 103 | | 226,113 | |
| | November | 2,544 | | 2,767 | | 96 | | 235,749 | |
| | December | 3,778 | | 2,783 | | 124 | | 208,787 | |
| | | AVERAGE | 2,849 | | 2,653 | | 153 | | |
| 1976 | January | R4,298 | | 2,734 | | R164 | | 165,428 | |
| | February | R3,687 | | 2,961 | | R207 | | 150,439 | |
| | March | 3,333 | | 2,793 | | 148 | | 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 | 2,224 | 2,959 | 2,895 | 126 | 52 | 190,861 | 188,953 |
| | August | | 2,354 | | 2,900 | | 58 | | 207,757 |
| | September | | 2,604 | | 2,881 | | 75 | | 218,343 |
| | | AVERAGE** | | 2,917 | | 2,833 | | 124 | |
| | | (9 months) | | | | | | | |

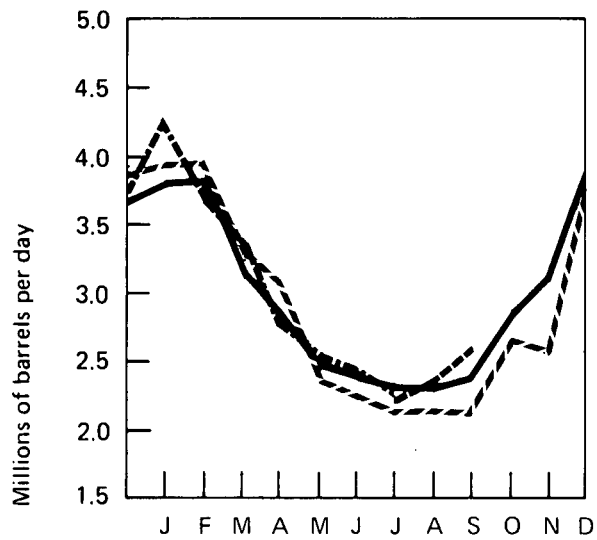
*See definitions.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

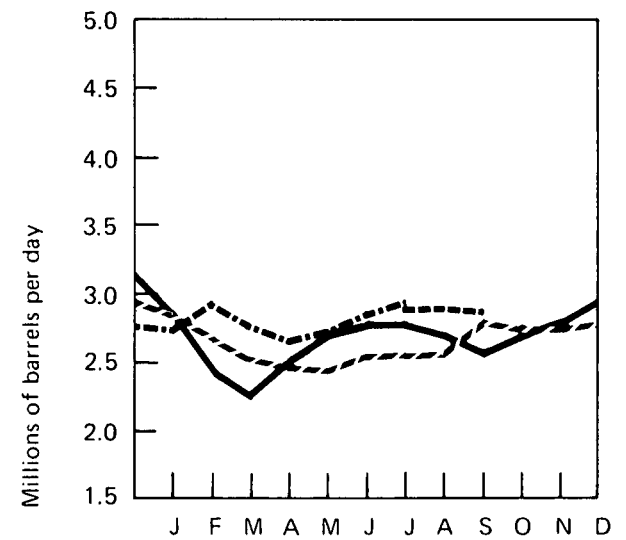
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

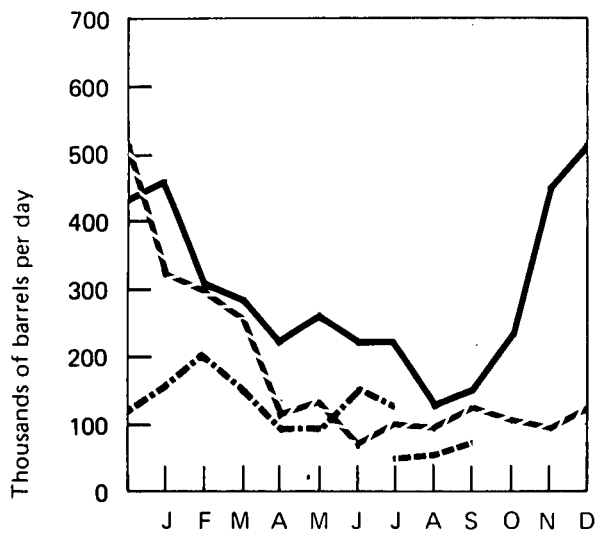
Domestic Demand



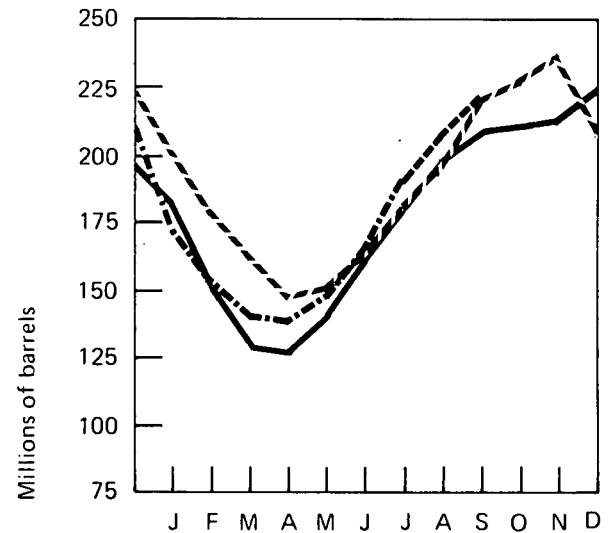
Production



Imports



Stocks



— 1974 BOM
 --- 1975 BOM
 - - - 1976 BOM
 - . - 1976 API

Residual Fuel Oil

| | | Domestic Demand | | Production | | Imports | | Stocks | |
|------|------------------|-----------------|--------------|------------------------------|--------------|--------------|--------------|----------------------|--------|
| | | | | Thousands of barrels per day | | | | Thousands of barrels | |
| | | BOM | FEA * | BOM | API | BOM | FEA * | BOM | API |
| 1974 | January | 3,035 | | 1,072 | | 1,733 | | 46,548 | |
| | February | 2,991 | | 1,029 | | 1,904 | | 45,004 | |
| | March | 2,556 | | 912 | | 1,713 | | 47,222 | |
| | April | 2,437 | | 985 | | 1,593 | | 51,339 | |
| | May | 2,260 | | 995 | | 1,362 | | 54,356 | |
| | June | 2,405 | | 1,026 | | 1,500 | | 57,891 | |
| | July | 2,473 | | 1,056 | | 1,474 | | 59,787 | |
| | August | 2,529 | | 1,067 | | 1,520 | | 60,988 | |
| | September | 2,475 | | 1,032 | | 1,421 | | 60,251 | |
| | October | 2,611 | | 1,099 | | 1,465 | | 58,679 | |
| | November | 2,935 | | 1,229 | | 1,753 | | 60,363 | |
| | December | 2,983 | | 1,335 | | 1,630 | | 74,939 | |
| | AVERAGE | 2,639 | | 1,070 | | 1,587 | | | |
| 1975 | January | 3,242 | | 1,415 | | 1,647 | | 60,233 | |
| | February | 2,849 | | 1,354 | | 1,402 | | 66,495 | |
| | March | 2,668 | | 1,299 | | 1,292 | | 64,148 | |
| | April | 2,225 | | 1,245 | | 1,047 | | 66,340 | |
| | May | 2,049 | | 1,151 | | 1,123 | | 73,498 | |
| | June | 2,179 | | 1,152 | | 904 | | 69,660 | |
| | July | 2,239 | | 1,155 | | 1,144 | | 71,526 | |
| | August | 2,118 | | 1,146 | | 982 | | 71,857 | |
| | September | 2,329 | | 1,183 | | 1,312 | | 76,938 | |
| | October | 2,238 | | 1,165 | | 1,221 | | 81,858 | |
| | November | 2,349 | | 1,214 | | 1,169 | | 83,131 | |
| | December | 2,728 | | 1,354 | | 1,099 | | 74,126 | |
| | AVERAGE | 2,433 | | 1,235 | | 1,194 | | | |
| 1976 | January | 3,016 | | 1,415 | | R1,406 | | 66,592 | |
| | February | 2,929 | | 1,394 | | R1,694 | | 68,859 | |
| | March | 2,722 | | 1,311 | | 1,285 | | 65,132 | |
| | April | 2,421 | | 1,283 | | 1,183 | | 66,458 | |
| | May | 2,439 | | 1,257 | | 1,134 | | 65,147 | |
| | June | 2,520 | | 1,241 | | 1,240 | | 64,272 | |
| | July | 2,555 | R2,499 | 1,266 | 1,229 | 1,460 | R1,316 | 69,812 | 68,609 |
| | August | | R2,432 | | 1,226 | | R1,169 | | 67,111 |
| | September | | 2,508 | | 1,219 | | 1,360 | | 69,355 |
| | AVERAGE** | | 2,628 | | 1,290 | | 1,324 | | |
| | (9 months) | | | | | | | | |

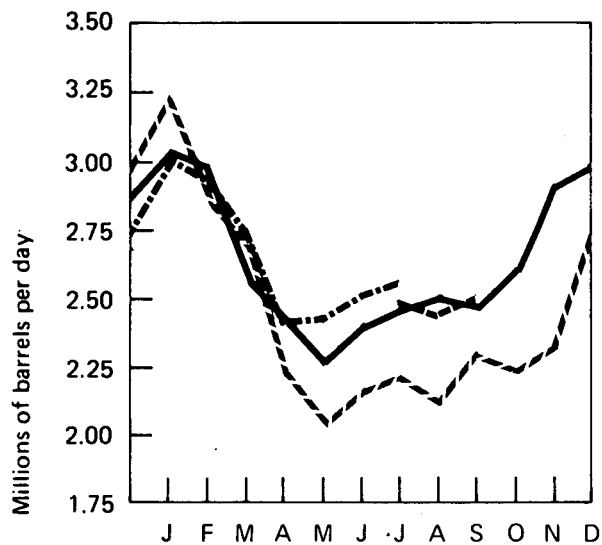
*Estimates.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data (or FEA estimates) for August and September.

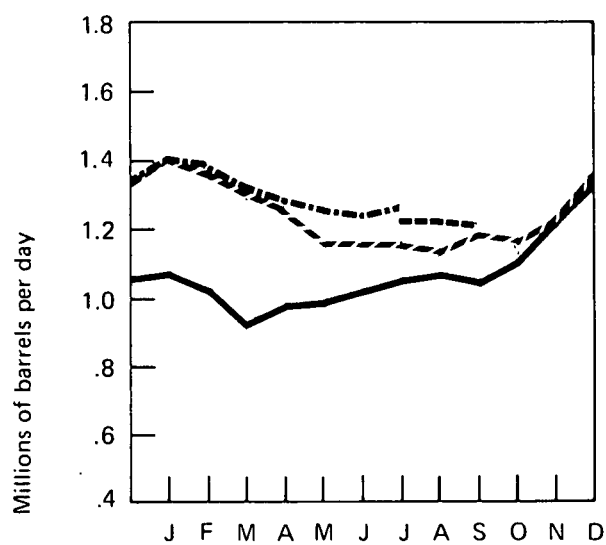
R=Revised data.

Sources: Bureau of Mines (BOM), American Petroleum Institute (API), and FEA.

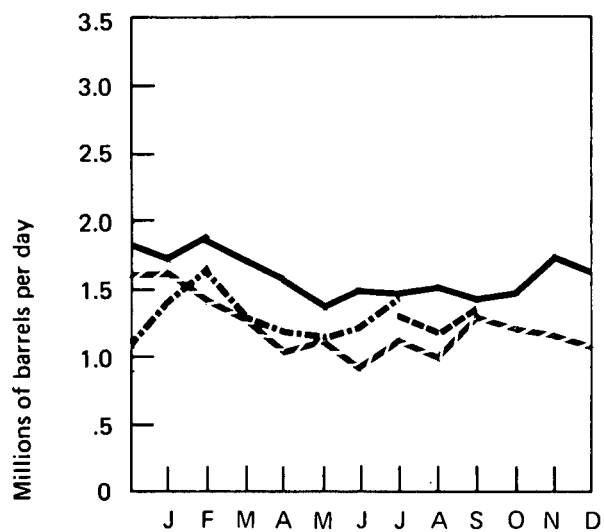
Domestic Demand



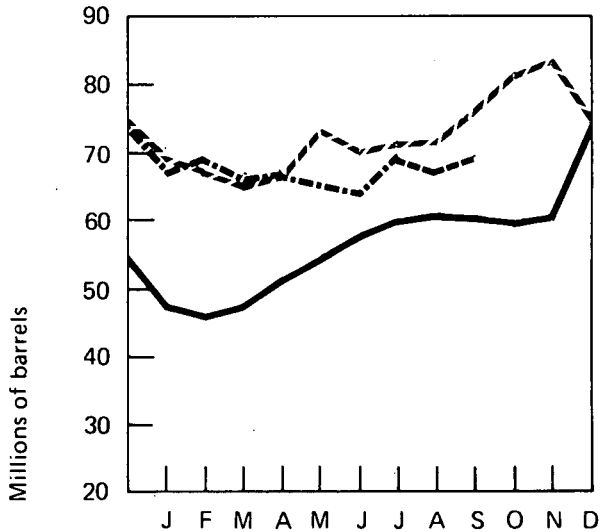
Production



Imports



Stocks



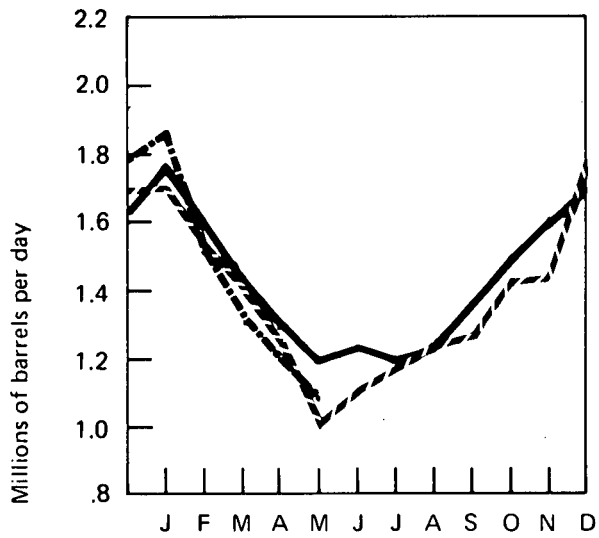
— 1974 BOM
 - - 1975 BOM
 - - 1976 BOM
 - . 1976 API(or FEA)

Natural Gas Liquids

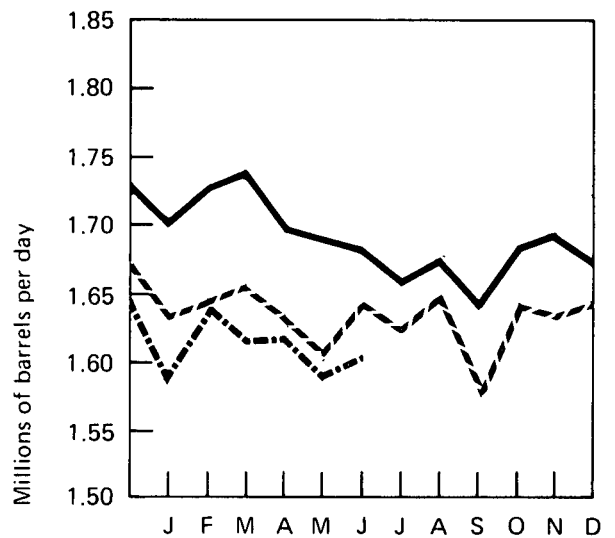
| | | Domestic Demand* | Production* | | Used at Refineries* | Imports | Stocks* |
|------|------------------------------|---------------------|------------------------------|------------------|------------------------|------------|-------------------------|
| | | | At processing plants | At refineries | | | |
| | | | Thousands of barrels per day | | | | Thousands of barrels |
| 1974 | January | 1,778 | 1,699 | 327 | 794 | 304 | 91,210 |
| | February | 1,593 | 1,728 | 337 | 777 | 294 | 90,145 |
| | March | 1,408 | 1,741 | 341 | 720 | 224 | 94,817 |
| | April | 1,321 | 1,696 | 353 | 690 | 215 | 101,352 |
| | May | 1,180 | 1,690 | 340 | 678 | 182 | 110,881 |
| | June | 1,242 | 1,684 | 368 | 718 | 199 | 117,915 |
| | July | 1,187 | 1,657 | 364 | 723 | 163 | 125,427 |
| | August | 1,221 | 1,676 | 361 | 742 | 163 | 131,675 |
| | September | 1,360 | 1,638 | 348 | 738 | 166 | 133,215 |
| | October | 1,493 | 1,686 | 330 | 788 | 200 | 130,557 |
| | November | 1,604 | 1,694 | 301 | 795 | 208 | 124,447 |
| | December | 1,692 | 1,670 | 286 | 796 | 230 | 114,295 |
| | AVERAGE | 1,422 | 1,688 | 338 | 746 | 212 | |
| 1975 | January | 1,708 | 1,630 | 307 | 756 | 257 | 105,400 |
| | February | 1,512 | 1,646 | 296 | 734 | 181 | 100,945 |
| | March | 1,404 | 1,658 | 280 | 731 | 178 | 99,168 |
| | April | 1,242 | 1,635 | 273 | 667 | 176 | 100,408 |
| | May | 1,002 | 1,607 | 299 | 628 | 97 | 112,737 |
| | June | 998 | 1,646 | 323 | 659 | 166 | 125,215 |
| | July | 1,191 | 1,621 | 336 | 701 | 173 | 131,359 |
| | August | 1,227 | 1,650 | 357 | 690 | 163 | 137,074 |
| | September | 1,278 | 1,577 | 326 | 703 | 209 | 140,278 |
| | October | 1,429 | 1,643 | 310 | 729 | 198 | 138,981 |
| | November | 1,444 | 1,635 | 309 | 759 | 196 | 135,976 |
| | December | 1,787 | 1,646 | 310 | 768 | 232 | 124,278 |
| | AVERAGE | 1,352 | 1,633 | 311 | 710 | 186 | |
| 1976 | January | 1,885 | 1,585 | 305 | 728 | 240 | 109,450 |
| | February | 1,518 | 1,640 | 316 | 793 | 270 | 106,647 |
| | March | 1,303 | 1,615 | 333 | 674 | 194 | 111,483 |
| | April | 1,201 | 1,616 | 349 | 716 | 171 | 116,788 |
| | May | 1,074 | 1,588 | 376 | 695 | 144 | 124,369 |
| | June | 1,110 | 1,606 | 356 | 718 | 163 | 132,359 |
| | AVERAGE (6 months) | 1,360 | 1,608 | 339 | 716 | 197 | |

*See Explanatory Note 4.
Source: Bureau of Mines.

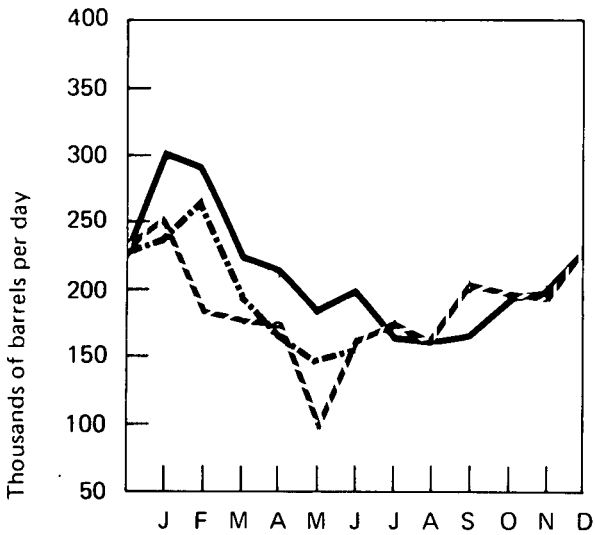
Domestic Demand



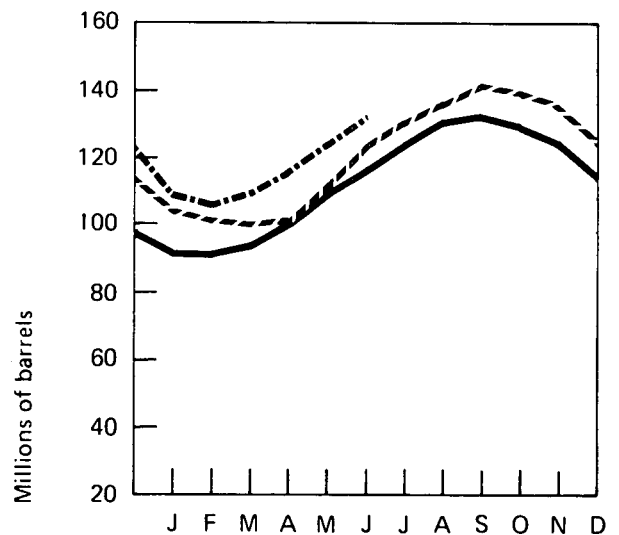
Production at Processing Plants



Imports



Stocks



— 1974
 - - 1975
 . . 1976

U.S. Petroleum Supply and Demand—1976

| | Actual* | | | Forecast** |
|---|---------------|---------------|---------------|---------------|
| | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
| Thousands of barrels per day | | | | |
| Supply | | | | |
| Crude oil and lease condensate production | 8,194 | 8,131 | 8,122 | 7,972 |
| Natural gas plant liquids production | 1,612 | 1,604 | 1,578 | 1,592 |
| Other hydrocarbon supply | 37 | 38 | 37 | 36 |
| Crude oil imports | 4,520 | 5,023 | 5,547 | 5,587 |
| Refined products imports*** | 2,073 | 1,746 | 1,804 | 2,161 |
| Total new supply | <u>16,436</u> | <u>16,542</u> | <u>17,088</u> | <u>17,348</u> |
| Processing gain | 485 | 495 | 500 | 475 |
| Stock change—all oils | -797 | +363 | +842 | -395 |
| Total net supply | <u>17,718</u> | <u>16,674</u> | <u>16,746</u> | <u>18,218</u> |
| Unaccounted for crude oil† | +203 | +9 | 0 | 0 |
| Demand | | | | |
| Crude oil and refined products exports | 192 | 204 | 200 | 195 |
| Crude oil losses | 14 | 14 | 14 | 13 |
| Domestic demand for refined products†† | <u>17,715</u> | <u>16,465</u> | <u>16,532</u> | <u>18,010</u> |
| Total demand | <u>17,921</u> | <u>16,683</u> | <u>16,746</u> | <u>18,218</u> |

*Partially estimated.

**See Explanatory Note 5 for discussion of basic assumptions for forecast.

***Includes plant condensate and unfinished oils.

†Balancing item resulting from statistical inconsistencies.

††Includes international bunkers.

Note: 2nd and 3rd Quarter figures have been revised.

Sources: 1st and 2nd Quarters—BOM; 3rd Quarter—BOM, API, FEA estimates; 4th Quarter—FEA forecast.

Natural Gas

Estimated marketed production of natural gas in September was approximately 0.4 percent above the volume produced in September 1975. Production for the first 9 months of 1976, however, was estimated to be 1.5 percent below production for the same period of 1975.

Estimated imports of natural gas in September were 1.4 percent above the September 1975 level. Imports for the first 9 months of 1976 were estimated to be 2.6 percent above the amount imported during the same period of 1975.

Domestic consumption of natural gas during the first three quarters of 1976 was estimated at about the same level as for the corresponding period of 1975.

At the end of August, 2,487 billion cubic feet of working gas were in underground natural gas storage reservoirs. Net storage injections during the month totaled 281 billion cubic feet.

Natural Gas

| | | Domestic Consumption* | Marketed Production* | Domestic Producer Sales to Major Interstate Pipelines | Imports |
|--------------------|----------------------------|--------------------------|-------------------------|--|------------|
| Billion cubic feet | | | | | |
| 1974 | January | 2,230 | 1,928 | 1,033 | 86 |
| | February | 2,054 | 1,759 | 941 | 79 |
| | March | 2,003 | 1,886 | 1,027 | 85 |
| | April | 1,691 | 1,793 | 987 | 83 |
| | May | 1,608 | 1,846 | 981 | 80 |
| | June | 1,439 | 1,740 | 928 | 74 |
| | July | 1,514 | 1,818 | 947 | 74 |
| | August | 1,510 | 1,790 | 932 | 76 |
| | September | 1,537 | 1,755 | 870 | 70 |
| | October | 1,706 | 1,767 | 936 | 83 |
| | November | 1,827 | 1,729 | 921 | 82 |
| | December | 2,104 | 1,790 | 959 | 87 |
| | TOTAL | 21,223 | 21,601 | 11,462 | 959 |
| 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 |
| | TOTAL | 19,538 | 20,109 | 10,652 | 953 |
| 1976 | January | R2,297 | 1,745 | 894 | 83 |
| | February | R1,823 | 1,641 | 850 | 79 |
| | March | R1,822 | 1,709 | 894 | 85 |
| | April | R1,504 | 1,633 | 849 | 85 |
| | May | R1,434 | R1,668 | 860 | 83 |
| | June | R1,330 | R**1,637 | 815 | ***80 |
| | July | R1,330 | R***1,650 | NA | ***81 |
| | August | R1,350 | R***1,650 | NA | ***76 |
| | September | 1,370 | ***1,610 | NA | ***75 |
| | TOTAL (9 months) | 14,260 | 14,943 | 5,162 (6 months) | 727 |

*See Explanatory Note 6.

**Preliminary data.

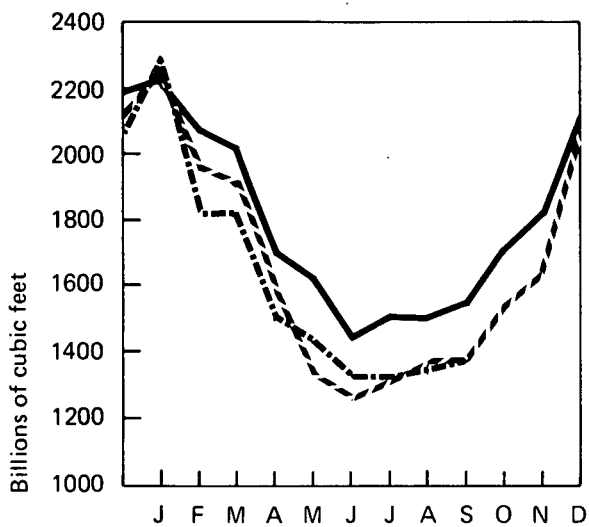
***Projected data.

R=Revised data. NA=Not available.

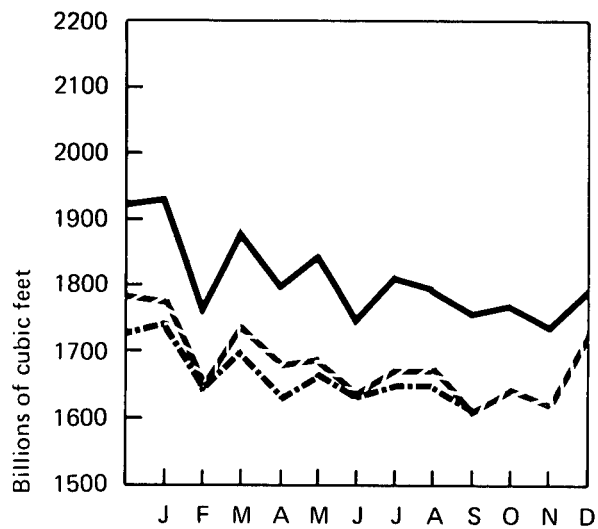
Note: All monthly Domestic Consumption data are estimated.

Sources: Consumption, Marketed Production, and Imports—Bureau of Mines; Domestic Producer Sales—Federal Power Commission.

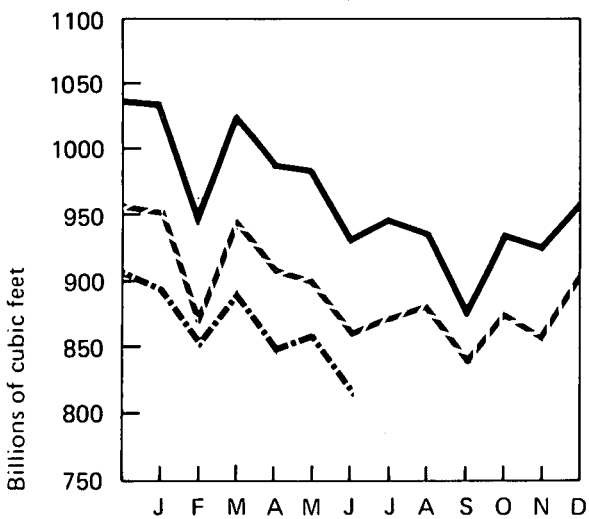
Domestic Consumption



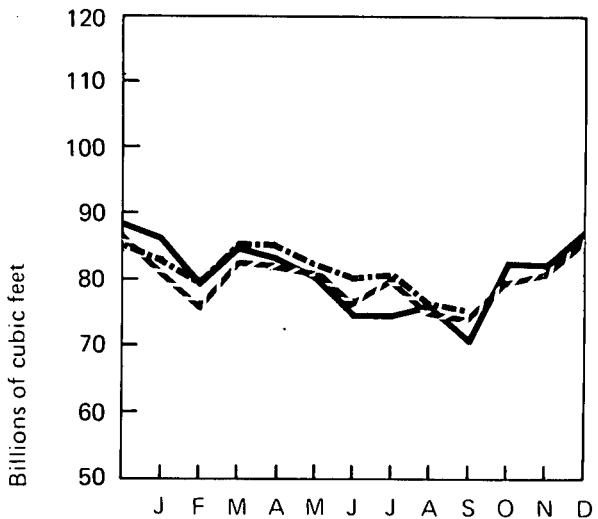
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



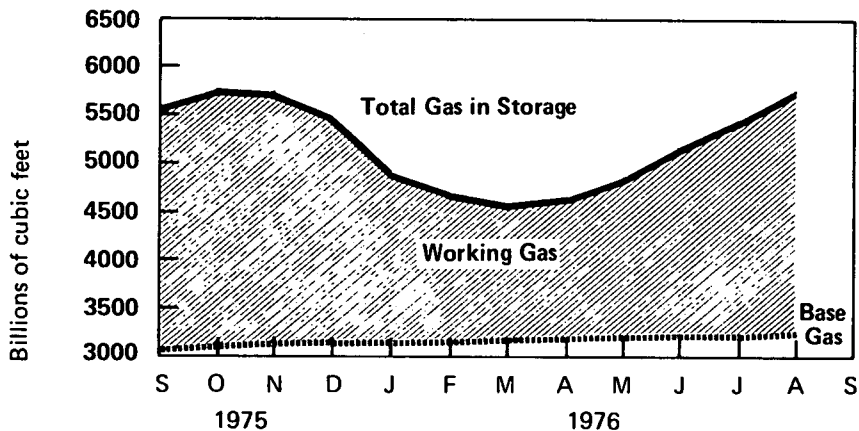
— 1974
 - - 1975
 ... 1976

Natural Gas (Continued)

Natural Gas in Underground Storage*

| | | Total Gas in Storage | Base Gas | Working Gas | Storage Injections | Storage Withdrawals | Net Storage Injections |
|--------------------|-----------|----------------------------|-------------|----------------|-----------------------|------------------------|------------------------------|
| Billion cubic feet | | | | | | | |
| 1974 | October** | 5,445 | 3,042 | 2,403 | *** | *** | *** |
| 1975 | September | 5,558 | 3,084 | 2,474 | 232 | 38 | 194 |
| | October | 5,770 | 3,128 | 2,642 | 185 | 51 | 134 |
| | November | 5,760 | 3,172 | 2,588 | 99 | 150 | -51 |
| | December | 5,423 | 3,173 | 2,250 | 41 | 394 | -353 |
| 1976 | January | 4,868 | 3,194 | 1,674 | 19 | 630 | -611 |
| | February | 4,660 | 3,197 | 1,463 | 73 | 292 | -219 |
| | March | 4,543 | 3,195 | 1,348 | 85 | 217 | -132 |
| | April | 4,650 | 3,208 | 1,443 | 181 | 68 | 113 |
| | May | 4,878 | 3,214 | 1,664 | 248 | 23 | 225 |
| | June | 5,163 | 3,220 | 1,943 | 308 | 19 | 289 |
| | July | 5,476 | 3,244 | 2,232 | 318 | 19 | 299 |
| | August | 5,759 | 3,272 | 2,487 | 296 | 15 | 281 |

Gas in Storage



*See Explanatory Note 7.

**Data reported as of November 1, 1974.

***Between November 1, 1974, and August 31, 1975, a total of 1,658 billion cubic feet of gas was injected into storage and 1,686 billion cubic feet was withdrawn, for net storage injections of -28 billion cubic feet.

R=Revised data.

Sources: Federal Energy Administration and Federal Power Commission.

Coal

Production of bituminous coal and lignite during the first 9 months of 1976 totaled 493.4 million tons, an increase of 4.0 percent over the amount produced during the same period in 1975.

Domestic consumption of bituminous coal and lignite was 342.8 million tons during the first 7 months of 1976, up 6.8 percent from the level for the corresponding months in 1975. Electric utility consumption (253.8 million tons) increased 10.4 percent. Coal usage by the other consuming sectors declined 2.4 percent.

Coal exports during August 1976 were 4.2 million tons, 27.9 percent lower than exports during August 1975. Exports during the first 8 months of the year were down 15.0 percent from the level for the corresponding months in 1975.

Bituminous and Lignite

| | | Domestic Consumption* | Production* | Exports | Stocks |
|-------------------------|----------------|------------------------------|------------------------------|-----------------------------|-------------|
| Thousands of short tons | | | | | |
| 1974 | January | 50,046 | 53,712 | 2,813 | 97,836 |
| | February | 44,929 | 50,053 | 4,627 | 95,812 |
| | March | 45,858 | 51,278 | 3,179 | 101,568 |
| | April | 43,595 | 54,402 | 4,944 | 107,167 |
| | May | 44,951 | 57,662 | 6,032 | 112,882 |
| | June | 44,315 | 48,065 | 6,369 | 111,935 |
| | July | 48,605 | 49,392 | 5,307 | 106,160 |
| | August | 48,579 | 51,808 | 5,088 | 105,478 |
| | September | 43,844 | 52,686 | 4,893 | 109,173 |
| | October | 45,868 | 60,495 | 7,342 | 118,670 |
| | November | 44,598 | 33,702 | 6,744 | 109,192 |
| | December | 47,521 | 40,151 | 2,587 | 95,528 |
| | TOTAL** | 552,709 | 603,406 | 59,926 | |
| 1975 | January | 49,841 | 54,885 | 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 | 53,135 | 6,159 | 102,663 |
| | May | 42,658 | 55,370 | 7,011 | 109,666 |
| | June | 44,698 | 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 | 55,560 | 4,529 | 111,922 |
| | October | 44,929 | 61,000 | 4,647 | 120,344 |
| | November | 45,946 | 53,035 | 7,593 | 125,808 |
| | December | 51,036 | 51,520 | 4,534 | 127,115 |
| | TOTAL** | 556,222 | 640,000 | 65,669 | |
| 1976 | January | 53,144 | 51,495 | 3,697 | 119,402 |
| | February | 47,105 | 52,630 | 3,050 | 119,232 |
| | March | 48,967 | 60,050 | 3,979 | 123,697 |
| | April | 45,894 | 57,850 | 5,780 | 128,601 |
| | May | 45,993 | 56,605 | 5,667 | 134,901 |
| | June | R***49,234 | 58,430 | 6,569 | R***140,070 |
| | July | ***52,442 | 43,250 | R4,879 | ***130,814 |
| | August | NA | 53,440 | 4,223 | NA |
| | September | NA | †59,675 | NA | NA |
| | TOTAL** | 342,779 (7 months) | 493,425 (9 months) | 37,845 (8 months) | |

*See Explanatory Note 8.

**Totals may not add due to rounding.

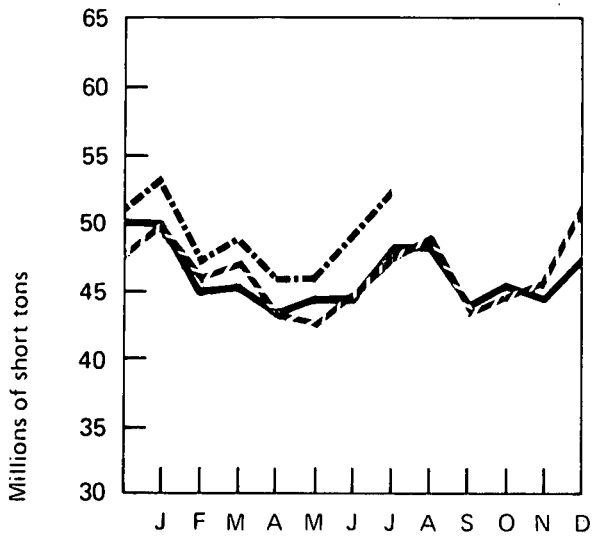
***FEA estimate based on data provided by Bureau of Mines and Federal Power Commission.

†Preliminary data.

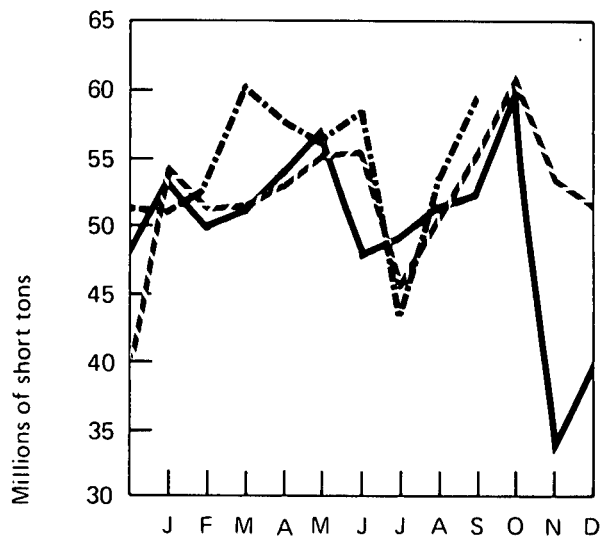
R=Revised data. NA=Not available.

Source: Bureau of Mines.

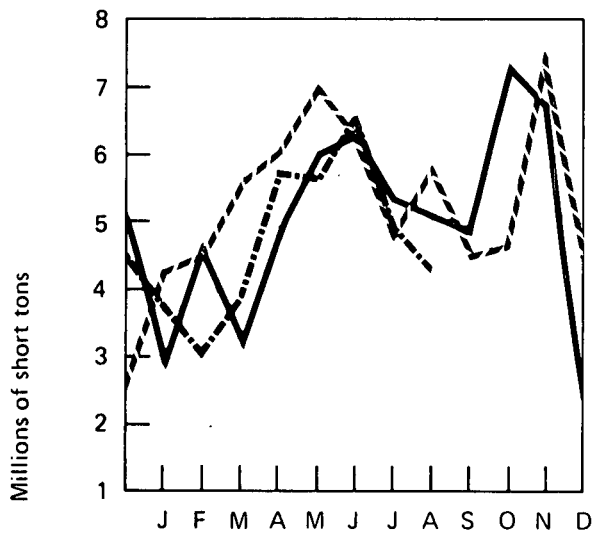
Domestic Consumption



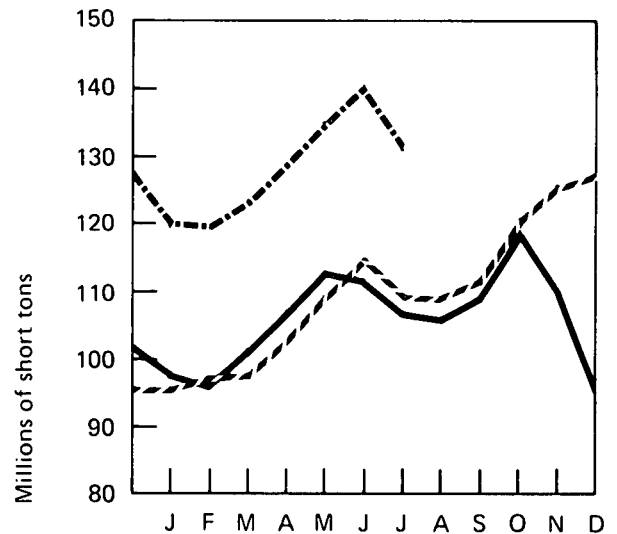
Production



Exports



Stocks

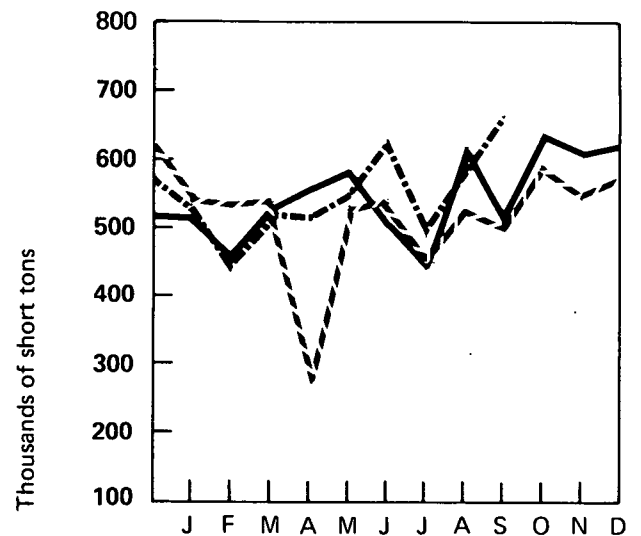


— 1974
 - - 1975
 - · - 1976

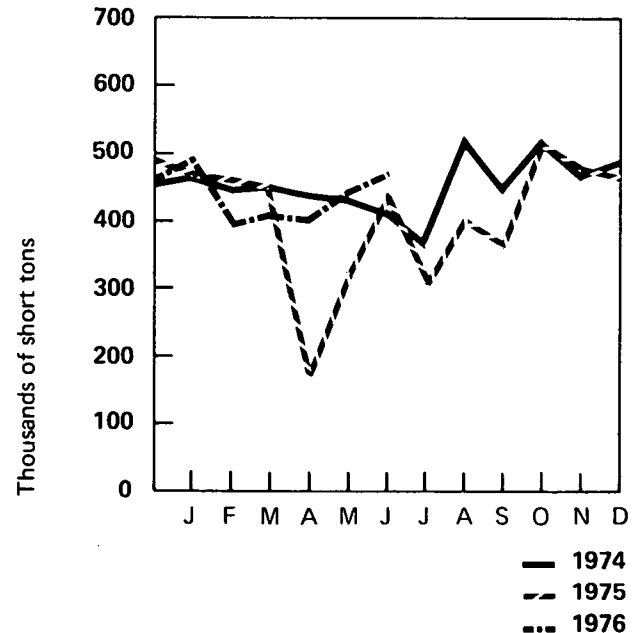
Anthracite

| | | Production | Apparent Domestic Consumption |
|------|--------------|-------------------------|-------------------------------|
| | | Thousands of short tons | |
| 1974 | January | 516 | 466 |
| | February | 458 | 441 |
| | March | 531 | 457 |
| | April | 563 | 437 |
| | May | 589 | 435 |
| | June | 505 | 412 |
| | July | 443 | 360 |
| | August | 620 | 526 |
| | September | 516 | 441 |
| | October | 641 | 522 |
| | November | 610 | 463 |
| | December | 625 | 488 |
| | TOTAL | 6,617 | 5,488 |
| 1975 | January | R540 | R475 |
| | February | R535 | R466 |
| | March | R544 | R457 |
| | April | 270 | 164 |
| | May | R535 | R326 |
| | June | R544 | R450 |
| | July | 455 | 305 |
| | August | 535 | 414 |
| | September | R500 | R365 |
| | October | 595 | 513 |
| | November | 550 | 479 |
| | December | 575 | 461 |
| | TOTAL | R6,178 | R4,875 |
| 1976 | January | 530 | 493 |
| | February | 440 | 390 |
| | March | 525 | 416 |
| | April | 520 | 403 |
| | May | 555 | 452 |
| | June | 630 | 478 |
| | July | 490 | NA |
| | August | R590 | NA |
| | September | 665 | NA |
| | TOTAL | 4,945 | 2,632 |
| | | (9 months) | (6 months) |

Production



Apparent Domestic Consumption



*Preliminary.

NA=Not available.

Sources: Production data are from Bureau of Mines; consumption data are FEA estimates based on figures provided by Bureau of Mines.

Electric Utilities

September 1976 production of electricity by utilities was preliminarily estimated at 165.0 billion kilowatt hours, 6.4 percent above the level for September 1975. Estimated production during the first 9 months of the year totaled 1.52 trillion kilowatt hours, a 5.4-percent increase over the amount produced during the same period last year.

Electric utilities consumed 9.9 percent more coal, 4.7 percent more oil, and 0.2 percent more natural gas during the first 7 months of 1976 than during the same period in 1975.

Sales of electricity to residential and commercial customers during the first 7 months of the year totaled 584.2 billion kilowatt hours, an increase over sales during the corresponding period in 1975 of 0.8 percent for residential customers and 4.9 percent for commercial customers. Sales to industrial customers, at 421.4 billion kilowatt hours, were 10.2 percent higher.

Cooling Degree-Days

During September, the continental United States accumulated 11.6 percent fewer cooling degree-days than the normal for the month (reflecting cooler than average weather), but 6.5 percent more than last September (when temperatures averaged nearly 17.0 percent below normal).

Total cooling degree-days for the 1976 cooling season (May through September) were 7.2 percent below the normal for the period and 10.4 percent below the number accumulated during the 1975 cooling season.

Electric Utilities

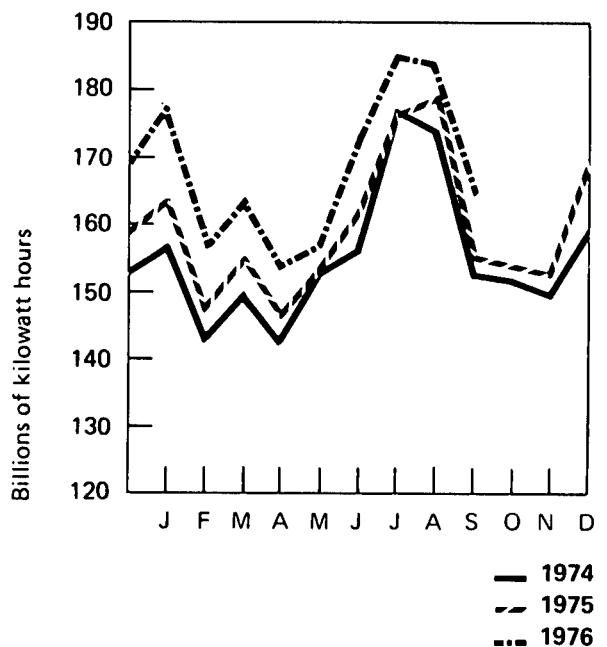
| | | Total Net Production | Percentage Produced from Each Source | | | | | |
|------|----------------------------|-------------------------------|--------------------------------------|-------------|-------------|------------|--------------------|------------|
| | | Millions of kilowatt hours | Coal | Oil | Gas | Nuclear | Hydro- electric | Other* |
| 1974 | January | 157,235 | 46.9 | 16.6 | 13.2 | 4.8 | 18.4 | 0.1 |
| | February | 142,469 | 46.5 | 15.8 | 13.3 | 5.7 | 18.6 | 0.1 |
| | March | 150,036 | 45.2 | 14.7 | 15.7 | 5.9 | 18.4 | 0.1 |
| | April | 142,019 | 44.3 | 14.0 | 16.9 | 5.0 | 19.6 | 0.2 |
| | May | 153,501 | 44.2 | 14.7 | 18.5 | 4.3 | 18.2 | 0.1 |
| | June | 156,140 | 43.3 | 14.7 | 20.3 | 4.6 | 17.0 | 0.1 |
| | July | 177,925 | 43.0 | 15.5 | 20.9 | 5.7 | 14.8 | 0.1 |
| | August | 173,819 | 43.1 | 15.6 | 20.3 | 7.1 | 13.8 | 0.1 |
| | September | 152,170 | 42.9 | 16.4 | 19.3 | 7.2 | 14.0 | 0.2 |
| | October | 151,885 | 44.2 | 16.8 | 18.6 | 7.1 | 13.2 | 0.1 |
| | November | 149,749 | 44.9 | 18.4 | 15.2 | 7.3 | 14.1 | 0.1 |
| | December | 159,616 | 45.5 | 19.2 | 12.4 | 8.3 | 14.4 | 0.2 |
| | TOTAL | 1,866,564 | AVG. 44.5 | 16.0 | 17.1 | 6.1 | 16.1 | 0.2 |
| 1975 | January | 164,228 | 45.6 | 18.6 | 12.0 | 8.5 | 15.2 | 0.1 |
| | February | 147,002 | 45.8 | 16.9 | 12.3 | 8.6 | 16.3 | 0.1 |
| | March | 155,430 | 44.5 | 14.9 | 12.9 | 9.5 | 18.0 | 0.2 |
| | April | 146,194 | 44.1 | 14.5 | 13.9 | 9.1 | 18.2 | 0.2 |
| | May | 153,183 | 42.3 | 13.7 | 16.8 | 8.9 | 18.1 | 0.2 |
| | June | 162,707 | 43.3 | 14.1 | 17.7 | 8.0 | 16.7 | 0.2 |
| | July | 176,791 | 43.2 | 14.2 | 19.3 | 8.7 | 14.4 | 0.2 |
| | August | 179,459 | 44.0 | 15.5 | 19.0 | 8.7 | 12.6 | 0.2 |
| | September | 155,150 | 44.2 | 13.8 | 19.4 | 9.2 | 13.2 | 0.2 |
| | October | 154,817 | 44.6 | 14.2 | 17.0 | 9.4 | 14.6 | 0.2 |
| | November | 152,751 | 46.1 | 14.2 | 14.3 | 9.2 | 16.0 | 0.2 |
| | December | 169,313 | 46.5 | 15.9 | 12.2 | 9.8 | 15.4 | 0.2 |
| | TOTAL | 1,917,025 | AVG. 44.5 | 15.0 | 15.6 | 9.0 | 15.7 | 0.2 |
| 1976 | January | 178,140 | 47.0 | 18.1 | 11.1 | 8.9 | 14.7 | 0.2 |
| | February | 156,703 | 46.9 | 15.8 | 12.2 | 9.2 | 15.7 | 0.2 |
| | March | 164,159 | 46.6 | 15.5 | 13.0 | 8.5 | 16.2 | 0.2 |
| | April | 153,174 | 47.4 | 15.2 | 14.2 | 7.2 | 15.8 | 0.2 |
| | May | 157,216 | 46.1 | 13.8 | 16.1 | 7.5 | 16.3 | 0.2 |
| | June | 173,154 | 44.4 | 14.5 | 17.1 | 9.0 | 14.8 | 0.2 |
| | July | 185,928 | 44.7 | 14.5 | 17.1 | 9.5 | 14.0 | 0.2 |
| | August | 184,661 | NA | NA | NA | 9.9 | NA | NA |
| | September | 164,999 | NA | NA | NA | 10.5 | NA | NA |
| | TOTAL (9 months) | 1,518,134 | | | | | | |

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

NA=Not available.

Sources: Federal Power Commission; data for latest 2 months are from Edison Electric Institute and U.S. Nuclear Regulatory Commission.

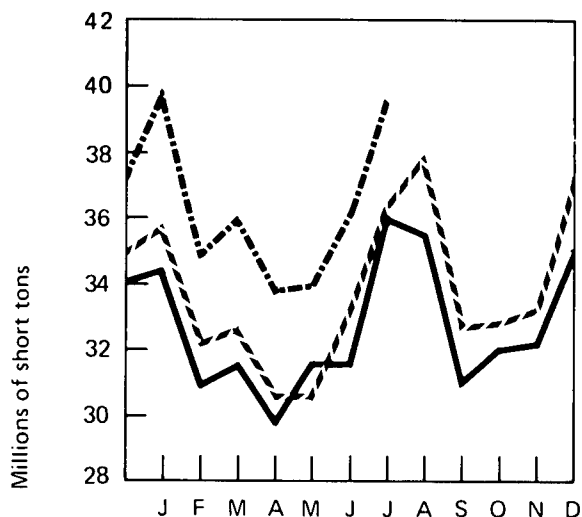
Total Net Production



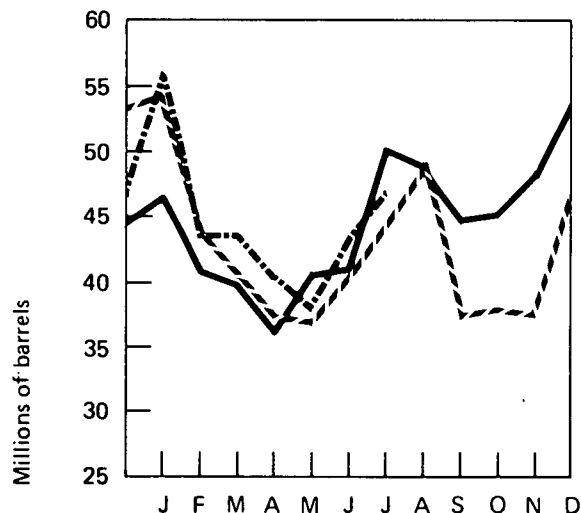
Fuel Consumption

| | | Coal | Oil | Gas |
|------|----------------------------|----------------------------|-------------------------|---------------------------|
| | | Thousands of short tons | Thousands of barrels | Millions of cubic feet |
| 1974 | January | 34,599 | 46,727 | 219,318 |
| | February | 30,857 | 40,657 | 201,611 |
| | March | 31,638 | 39,633 | 253,833 |
| | April | 29,680 | 35,953 | 359,308 |
| | May | 31,701 | 40,816 | 306,985 |
| | June | 31,720 | 41,233 | 346,617 |
| | July | 36,113 | 50,160 | 403,455 |
| | August | 35,552 | 48,981 | 380,651 |
| | September | 30,976 | 44,549 | 313,015 |
| | October | 32,124 | 45,260 | 298,327 |
| | November | 32,210 | 48,558 | 238,888 |
| | December | 35,177 | 53,644 | 207,070 |
| | TOTAL | 392,347 | 536,171 | 3,429,079 |
| 1975 | January | 35,835 | 54,174 | 204,591 |
| | February | 32,089 | 43,663 | 188,446 |
| | March | 32,785 | 40,536 | 210,202 |
| | April | 30,543 | 37,125 | 213,740 |
| | May | 30,571 | 37,067 | 273,920 |
| | June | 33,450 | 41,020 | 306,798 |
| | July | 36,560 | 44,440 | 360,534 |
| | August | 37,959 | 49,306 | 359,273 |
| | September | 32,605 | 37,112 | 315,122 |
| | October | 32,845 | 38,109 | 274,224 |
| | November | 33,326 | 37,619 | 227,101 |
| | December | 37,384 | 46,928 | 212,923 |
| | TOTAL | 405,952 | 507,099 | 3,146,874 |
| 1976 | January | 39,978 | 56,186 | 204,944 |
| | February | 34,958 | 43,230 | 198,117 |
| | March | 36,079 | 43,946 | 221,152 |
| | April | 33,799 | 40,262 | 226,433 |
| | May | 33,943 | 37,930 | 264,941 |
| | June | 36,374 | 43,532 | 310,186 |
| | July | 39,672 | 47,070 | 335,021 |
| | TOTAL (7 months) | 254,803 | 312,156 | 1,760,794 |

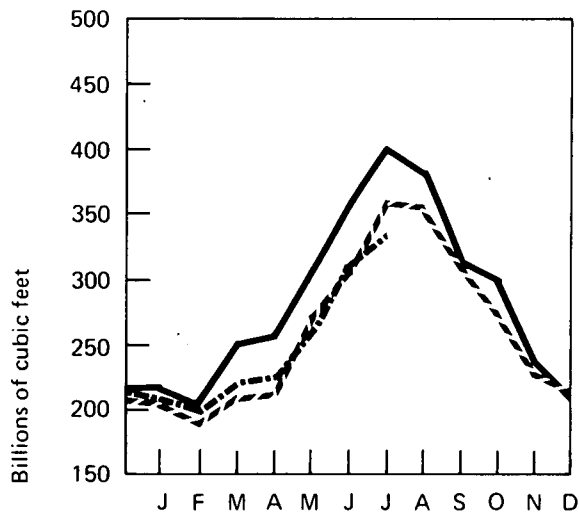
Coal Consumption



Oil Consumption



Gas Consumption



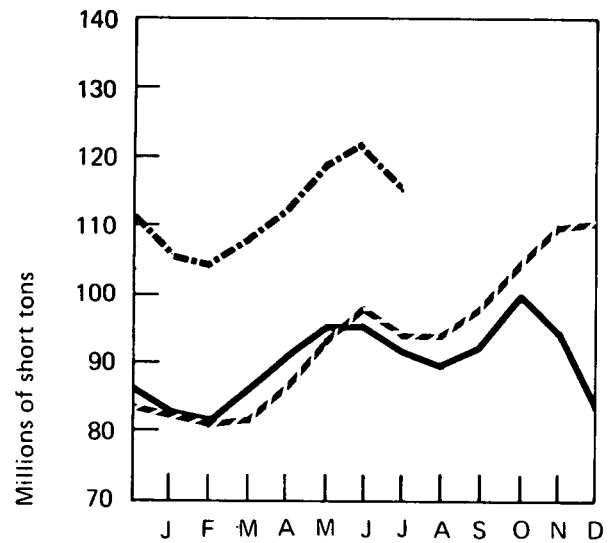
Source: Federal Power Commission.

— 1974
 --- 1975
 -.- 1976

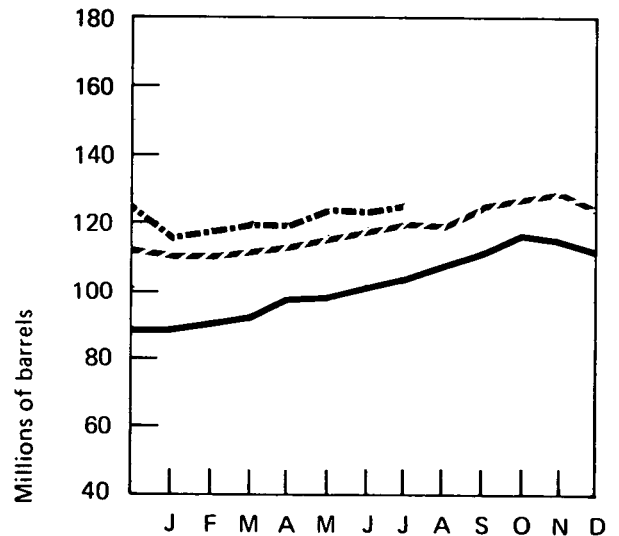
Electric Utilities (Continued)

| | | Stocks at End of Month | |
|------|-----------|----------------------------|-------------------------|
| | | Coal | Oil |
| | | Thousands of short tons | Thousands of barrels |
| 1974 | January | 82,540 | 89,468 |
| | February | 81,720 | 91,652 |
| | March | 86,166 | 93,879 |
| | April | 91,018 | 98,051 |
| | May | 95,601 | 99,591 |
| | June | 95,895 | 102,395 |
| | July | 91,522 | 105,633 |
| | August | 89,474 | 109,674 |
| | September | 92,973 | 112,502 |
| | October | 100,506 | 118,027 |
| | November | 94,165 | 117,382 |
| | December | 83,527 | 112,894 |
| 1975 | January | 82,073 | 111,273 |
| | February | 80,957 | 111,478 |
| | March | 81,872 | 113,621 |
| | April | 86,811 | 114,276 |
| | May | 93,845 | 117,205 |
| | June | 98,007 | 118,915 |
| | July | 94,261 | 121,148 |
| | August | 94,199 | 120,595 |
| | September | 98,078 | 126,213 |
| | October | 105,397 | 128,756 |
| | November | 110,295 | 130,203 |
| | December | 110,734 | 125,022 |
| 1976 | January | 105,508 | 117,732 |
| | February | 104,862 | 118,646 |
| | March | 108,431 | 120,069 |
| | April | 112,841 | 120,158 |
| | May | 119,518 | 125,668 |
| | June | 122,875 | 125,482 |
| | July | 115,160 | 126,189 |

Coal Stocks



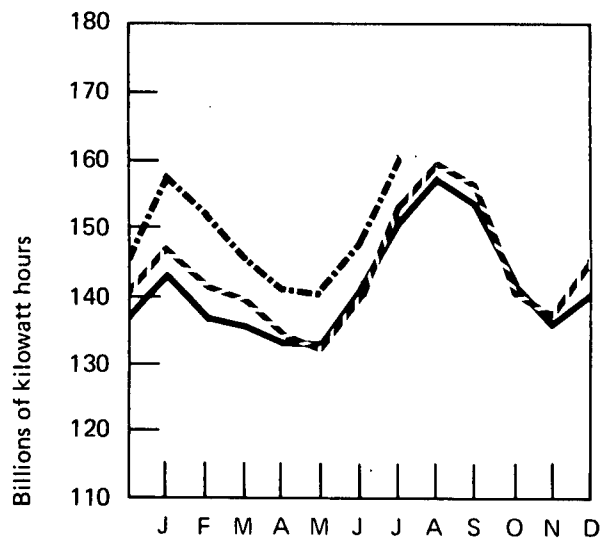
Oil Stocks



— 1974
 - - 1975
 - · - 1976

| | | Sales | | | | |
|----------------------------|----------------------------|-----------------|-----------------|-----------------|----------------|-------------------|
| | | Residential | Commercial | Industrial | Other* | Total |
| Millions of kilowatt hours | | | | | | |
| 1974 | January | 52,878 | 30,647 | 55,457 | 5,004 | 143,986 |
| | February | 47,779 | 29,563 | 54,799 | 4,596 | 136,737 |
| | March | 46,096 | 29,345 | 55,814 | 4,697 | 135,952 |
| | April | 43,193 | 29,089 | 56,115 | 4,610 | 133,007 |
| | May | 41,105 | 30,061 | 57,226 | 4,685 | 133,077 |
| | June | 46,597 | 32,989 | 57,702 | 4,643 | 141,931 |
| | July | 53,541 | 35,498 | 57,503 | 4,969 | 151,511 |
| | August | 56,699 | 36,702 | 59,641 | 5,070 | 158,112 |
| | September | 52,948 | 35,801 | 59,893 | 4,977 | 153,619 |
| | October | 44,164 | 32,275 | 60,116 | 4,800 | 141,355 |
| | November | 42,671 | 30,986 | 57,157 | 4,952 | 135,784 |
| | December | 50,512 | 31,868 | 53,433 | 5,039 | 140,852 |
| | TOTAL | 578,183 | 384,824 | 684,874 | 58,042 | 1,705,923 |
| 1975 | 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 | R41,077 | R30,926 | R54,767 | R5,404 | R132,174 |
| | June | R45,766 | R35,210 | R55,369 | R5,384 | R141,729 |
| | July | 56,829 | 37,891 | 53,973 | 5,052 | 153,745 |
| | August | 59,979 | 38,768 | 56,067 | 5,223 | 160,037 |
| | September | 56,983 | 37,550 | 56,797 | 5,320 | 156,650 |
| | October | 45,142 | 3,329 | 56,486 | 5,194 | 140,151 |
| | November | 44,019 | 32,288 | 56,174 | 5,235 | 137,716 |
| | December | 51,900 | 33,183 | 55,532 | 5,357 | 145,972 |
| | TOTAL | R598,647 | R404,676 | R663,345 | R64,575 | R1,731,243 |
| 1976 | January | 60,091 | 34,833 | 57,448 | 6,380 | 158,752 |
| | February | 54,264 | 33,583 | 58,228 | 5,874 | 151,949 |
| | March | 47,060 | 32,273 | 60,516 | 5,990 | 145,839 |
| | April | 43,551 | 31,598 | 60,106 | 5,407 | 140,662 |
| | May | 41,036 | 32,347 | 61,271 | 5,478 | 140,132 |
| | June | R44,157 | R35,707 | R62,419 | R5,344 | R147,627 |
| | July | 53,312 | 40,415 | 61,417 | 5,871 | 161,015 |
| | TOTAL (7 months) | 343,471 | 240,756 | 421,405 | 40,344 | 1,045,976 |

Total Sales



*Includes street lighting and trolley cars.

Source: Federal Power Commission; data for latest month are from Edison Electric Institute.

— 1974
 - - 1975
 ... 1976

Cooling Degree-Days*

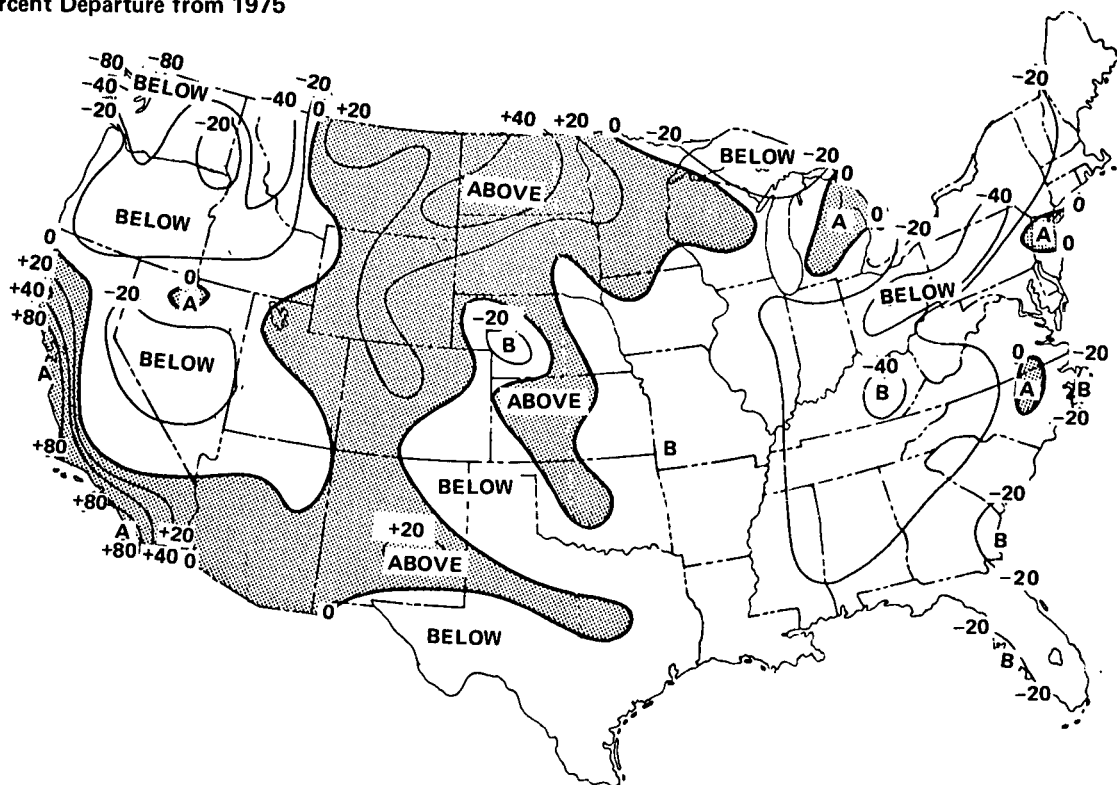
| Petroleum Administration for Defense (PAD) Districts | SEPTEMBER (August 30 - September 26) | | | Cumulative Since May 3 | | |
|--|--------------------------------------|-----------------------------|-------------------------------|------------------------|---------------------------------|--------------------------------|
| | 1976 | 1975** | Normal (1941-70)** | 1976 | 1975** | Normal (1941-70)** |
| PAD District I New England Conn., Maine, Mass., N.H., R.I., Vt. | 123.5 43.1 | 124.0 (-0.4) 30.7 (40.1) | 154.9 (-20.3) 51.3 (-16.1) | 1,054.4 696.0 | 1,172.7 (-10.1) 753.9 (-7.7) | 1,103.9 (-4.5) 569.0 (22.3) |
| Middle Atlantic Del., Md., N.J., N.Y., Pa. | 83.3 | 46.8 (78.1) | 103.5 (-19.4) | 871.5 | 910.9 (-4.3) | 883.8 (-1.4) |
| Lower Atlantic Fla., Ga., N.C., S.C., Va., W.Va. | 219.1 | 281.1 (-22.0) | 277.8 (-21.1) | 1,486.8 | 1,750.4 (-15.1) | 1,669.3 (-10.9) |
| PAD District II Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc. | 88.0 | 67.6 (30.1) | 101.3 (-13.1) | 839.0 | 1,010.9 (-17.0) | 920.1 (-8.8) |
| PAD District III Ala., Ark., La., Miss., N. Mex., Tex. | 302.9 | 278.3 (8.9) | 338.8 (-10.6) | 1,738.1 | 1,933.1 (-10.1) | 2,067.7 (-15.9) |
| PAD District IV Colo., Idaho, Mont., Utah, Wyo. | 68.3 | 59.3 (15.2) | 65.4 (4.5) | 659.3 | 633.6 (4.1) | 662.7 (-0.5) |
| PAD District V Ariz., Calif., Nev., Oreg., Wash. | 163.2 | 171.6 (-4.9) | 142.9 (14.2) | 762.5 | 716.6 (6.4) | 717.2 (6.3) |
| U.S. TOTAL | 137.5 | 129.1 (6.5) | 155.4 (-11.6) | 1,014.8 | 1,132.7 (-10.4) | 1,093.3 (-7.2) |

*See Explanatory Note 9 for explanation of cooling degree-days.

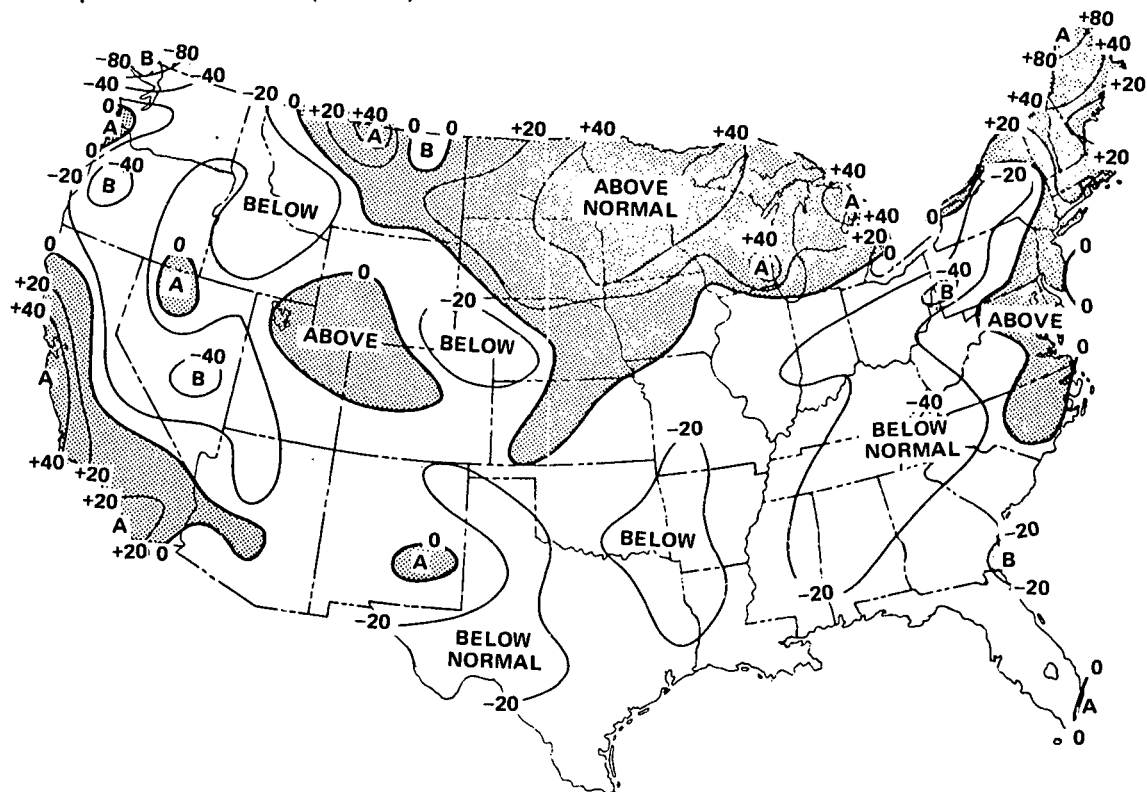
**Percentage change in parentheses.

Cooling Degree-Days Accumulated from January 1, 1976 through September 26, 1976

Percent Departure from 1975



Percent Departure from Normal (1941-70)



Note: Above normal cooling degree-days correspond to above normal temperatures.

Source: Department of Commerce—NOAA.

Nuclear Power

The 54 domestic reactors in commercial operation, with a total maximum dependable capacity of 36,029 megawatts, performed at 66 percent of capacity during September, down slightly from 69 percent in August. Twenty-one reactors (totaling 14,961 megawatts) operated at better than 80 percent of capacity during the month.

Brunswick Unit 1, an 821-megawatt boiling water reactor owned by the Carolina Power and Light Company, was issued a license to load fuel on September 18. Brunswick Unit 2 entered commercial operation in November 1975. The facility is located on the Cape Fear River, 20 miles south of Wilmington, North Carolina.

The final edition of the Generic Environmental Statement on Mixed Oxide Fuel (GESMO) was released in late August by the Nuclear Regulatory Commission. The report presents cost-benefit analyses for health, safety, and environmental aspects of widespread recycling of plutonium recovered from spent reactor fuel. Currently there are no commercial recycling facilities. NRC concludes that the safety of reactors and fuel cycle facilities, public health, and waste management operations would not be significantly impaired by a widespread recycling program. A supplement to the GESMO report, scheduled for release in December, will detail the problems of safeguarding plutonium against theft and will summarize the cost-benefit analyses of the recycle option.

Recent studies prepared for the Energy Research and Development Administration continue to indicate that costs of post-reactor services for commercial nuclear powerplants have been underestimated. One report reiterates that high-level nuclear wastes (the long-lived radioactive products chemically separated from spent reactor fuel) must be solidified, encased in stainless steel, and placed in deep geologic structures away from the biotic environment. Existing commercial wastes, totaling 600,000 gallons, would amount to 10,000 cubic feet and cost an estimated \$400 million to solidify. In addition, some 2,000 metric tons of commercial spent fuel are now being stored at reactors and other facilities awaiting commercial reprocessing. Each year, a 1,000-

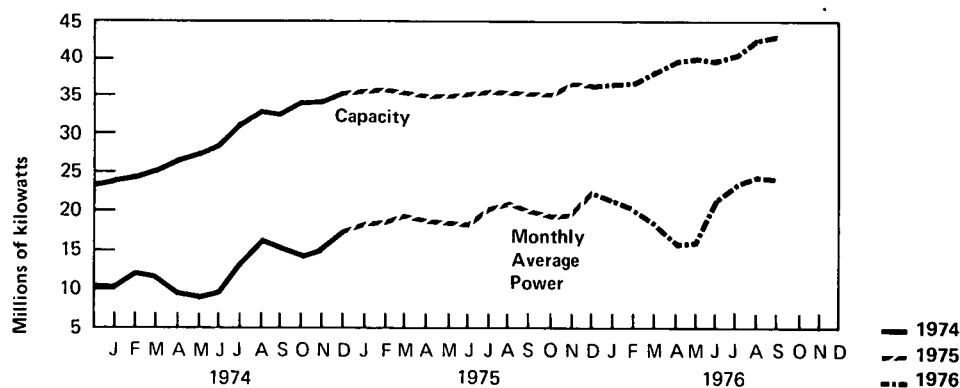
megawatt reactor discharges about 30 tons of spent fuel which when reprocessed will generate between 3,000 and 6,000 gallons of high-level wastes. Solidification of these wastes could cost between 0.17 and 0.35 mills* per kilowatt hour of electricity generated. Reprocessing and/or disposal of solid wastes could cost an additional 1.26 mills per kilowatt hour. Total costs of post-reactor services, therefore, would range between 1.43 and 1.71 mills, over three times the cost projected by the Atomic Energy Commission in 1974. (All costs are expressed in 1975 dollars.)

*A mill is equal to one-tenth of 1 cent.

U.S. Nuclear Powerplant Operations*

| | | Maximum Dependable Capacity | Average Power | Percent of Total Domestic Electricity Generation |
|------|------------------------------|-----------------------------------|------------------|--|
| | | Thousands of net kilowatts | | |
| 1974 | January | 24,006 | 10,222 | 4.8 |
| | February | 24,776 | 12,106 | 5.7 |
| | March | 25,305 | 11,819 | 5.9 |
| | April | 26,862 | 9,914 | 5.0 |
| | May | 27,670 | 8,832 | 4.3 |
| | June | 28,748 | 9,844 | 4.6 |
| | July | 31,374 | 13,672 | 5.7 |
| | August | 33,045 | 16,547 | 7.1 |
| | September | 32,609 | 15,258 | 7.2 |
| | October | 34,464 | 14,504 | 7.1 |
| | November | 34,480 | 15,193 | 7.3 |
| | December | 35,317 | 17,733 | 8.3 |
| | AVERAGE | 29,921 | 12,982 | 6.1 |
| 1975 | January | 35,691 | 18,641 | 8.5 |
| | February | 35,899 | 18,869 | 8.6 |
| | March | 35,686 | 19,926 | 9.5 |
| | April | 35,017 | 18,444 | 9.1 |
| | May | 35,017 | 18,442 | 8.9 |
| | June | 35,322 | 18,065 | 8.0 |
| | July | 35,596 | 20,661 | 8.7 |
| | August | 35,589 | 21,047 | 8.7 |
| | September | 35,540 | 19,890 | 9.2 |
| | October | 35,540 | 19,464 | 9.4 |
| | November | 36,752 | 19,586 | 9.2 |
| | December | 36,424 | 22,321 | 9.8 |
| | AVERAGE | 35,671 | 19,626 | 9.0 |
| 1976 | January | 36,750 | 21,315 | 8.9 |
| | February | 36,879 | 20,605 | 9.2 |
| | March | 38,072 | 18,816 | 8.5 |
| | April | 39,763 | 15,238 | 7.2 |
| | May | 39,902 | 15,899 | 7.5 |
| | June | 39,781 | 21,799 | 9.0 |
| | July | 40,168 | R23,662 | 9.5 |
| | August | 42,067 | **24,661 | **9.9 |
| | September | **42,896 | **24,138 | **10.5 |
| | AVERAGE (9 months) | 39,804 | 20,682 | 9.0 |

U.S. Nuclear Powerplants



*Includes all units licensed to operate, whether in commercial operation or power ascension status.

**Preliminary data.

R=Revised data.

Sources: Average Power for latest 2 months and Capacity are from U.S. Nuclear Regulatory Commission; Percent of Total Domestic Electricity Generation for latest 2 months is based on data from Edison Electric Institute; remaining data are from Federal Power Commission.

Status of Nuclear Powerplants — September 30, 1976

| Status | Number of Plants | | | | | Design Capacity |
|-----------------------------|------------------------|-------------------------------|----------------------------|-----------|------------|--------------------------|
| | Boiling Water Reactors | High Temperature Gas Reactors | Pressurized Water Reactors | Other* | Total | Net Electrical Megawatts |
| Licensed to operate | 24 | 1 | 37 | 0 | 62 | 45,000 |
| Construction permit granted | 20 | 0 | 52 | 0 | 72 | 76,000 |
| Construction permit pending | 22 | 0 | 41 | 5 | 68 | 75,000 |
| Orders placed for plant | 3 | 0 | 13 | 0 | 16 | 18,000 |
| Publicly announced | — | — | — | 19 | 19 | 23,000 |
| TOTAL | 69 | 1 | 143 | 24 | 237 | 237,000 |

*Includes 1 Liquid Metal Fast Breeder Reactor and 23 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment — September 1976

| | Domestic Customers | Foreign Customers | Total |
|---|--------------------|-------------------|-----------|
| Separative Work Performed (in metric tons of separative work units) | 642.621 | 442.548 | 1,085.169 |
| Cost (in millions of dollars) | 42.058 | 28.054 | 70.112 |
| Product Quantity (in metric tons of uranium) | 210.570 | 143.640 | 354.210 |
| Feed Requirement (in metric tons of uranium) | 1,029.594 | 622.597 | 1,652.191 |

Source: U.S. Energy Research and Development Administration.

Nuclear Power Generation by Major Non-Communist Countries — September 1976

| Country | Number of Reactors* | Capacity | Generation of Electricity | | | |
|-----------------------------|---------------------|---|----------------------------------|----------------------------|-----------|-----------|
| | | | Generation September | Percent of Design Capacity | | |
| | | | | September | Year | |
| | | Thousands of gross electrical kilowatts | Millions of gross kilowatt hours | | 1974 | 1975 |
| Canada | 5 | 2,380 | 1,342 | 78 | 74 | 64 |
| Federal Republic of Germany | 10 | 6,410 | 1,936 | 42 | 57 | 72 |
| France | 10 | 3,070 | 922 | 42 | 57 | 68 |
| Great Britain | 30 | 6,900 | **3,346 | **67 | 61 | 57 |
| India | 3 | 620 | 194 | 43 | 55 | 46 |
| Italy | 3 | 630 | 322 | 71 | 61 | 69 |
| Japan | 12 | 6,600 | 3,182 | 67 | 61 | 36 |
| Spain | 3 | 1,120 | 423 | 53 | 75 | 77 |
| Sweden | 5 | 3,310 | 994 * | 42 | 20 | 44 |
| Switzerland | 3 | 1,050 | 713 | 94 | 76 | 84 |
| United States | 59 | 43,200 | 18,277 | 59 | 57 | 60 |
| TOTAL | 143 | 75,290 | 31,651 | 58 | 58 | 58 |

*Includes only operational units, i.e., those which have generated electricity during, or prior to, the current month.

**Figures are for 5-week operating period.

Source: *Nucleonics Week*.

Summary of Monthly Nuclear Fuel Cycle – August 1976

| Fuel Cycle Activity | Product | Processed Material* | Percent Utilization of Industry Capacity | Energy Content of Processed Material** | Energy Consumed in Fuel Cycle Activity*** | Cost Contribution to Electric Power† |
|----------------------|--|--------------------------|--|--|---|--------------------------------------|
| | | MTU except where noted | | | Billion Btu | Mills per kilowatt hour |
| Milling | Yellowcake (U ₃ O ₈) Deliveries | 778 | 69 | 268,000 | 438 | 1.04 |
| Conversion | Uranium Hexafluoride (UF ₆) Deliveries | 415 | 29 | 144,000 | 89 | 0.07 |
| Enrichment | Enriched UF ₆ Deliveries | 202 (746 MT-SWU) | †† | 506,000 | 5,900 | 0.86 |
| Fabrication | Finished Fuel Assemblies Shipped | 196 | 82 | 36,600 | 28 | 0.46 |
| Powerplant Operation | Electricity Generated | 19,331 (million kWhe) | 66 | 205,000 | 891 (million kWhe) | 9.82 |
| | Spent Fuel Discharged | NA | — | — | — | } †††0.97 |
| Reprocessing | Spent Fuel Received | 14 | — | — | — | |
| | Spent Fuel Reprocessed | 0 | — | — | — | |

*Units of measure are discussed in Explanatory Notes 10 and 11.

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

***Energy requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.

†Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWh reactor operating at 80 percent capacity factor, given in U.S.A.E.C. Report No. WASH 1117-74. 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.

††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.

†††Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste deposition.

NA=Not available.

Source: ERDA.

Part 7

Consumption

Energy Consumption

Domestic energy consumption in August 1976 totaled 5.889 quadrillion Btu, up 4.1 percent from the August 1975 level and about equal to consumption in August 1974. No sectoral breakdown is available for the month as yet.

The revised consumption total for July was 5.890 quadrillion Btu. Of the total, 2.015 quadrillion Btu was consumed by the combined residential and commercial sector, up 1.1 percent from the July 1975 level, and up 1.9 percent from July 1974. Direct consumption of primary fuels amounted to 40.3 percent of the combined sector's consumption total (coal was 0.7 percent, dry natural gas was 14.7 percent, and petroleum products were 24.9 percent). Consumption of electricity accounted for the remaining 59.7 percent.

The industrial sector consumed 2.234 quadrillion Btu in July 1976, 9.7 percent more than in July 1975, but 3.6 percent less than in July 1974. Coal accounted for 15.1 percent of the total, 30.7 percent was dry natural gas, 20.5 percent was petroleum products, and 33.7 percent was electricity.

Consumption in the transportation sector was 1.641 quadrillion Btu in July, 5.9 percent more than in July 1975 and 4.4 percent more than in July 1974. Petroleum products comprised 96.7 percent of the total. Natural gas used for pipeline transportation, and electricity used by railroads and for street and highway lighting accounted for the balance.

Petroleum Consumption and Forecast

Total demand for petroleum products during September 1976 was 16.79 million barrels per day, 2.0 percent more than the forecast level and 6.5 percent more than the level for last September.

Domestic demand for motor gasoline in September was 7.06 million barrels per day, which was 2.3 percent above the forecast. Demand was also 5.0 percent above the level for September 1975.

Domestic demand for distillate fuel oil was 2.60 million barrels per day in September. This was 5.8 percent above the forecast level and 20.4 percent above the level for the same month in 1975.

Domestic demand for residual fuel oil during September was 2.51 million barrels per day, which was 11.7 percent greater than the forecast level and 7.6 percent greater than demand during September 1975.

| Sector ¹ | Primary Energy Source | | | | | Primary Energy Consumption | Electricity Distributed ⁷ | Net Energy Consumption | Electrical Energy Loss Distributed ⁸ | Ultimate Energy Disposition |
|----------------------------|-----------------------|--------------------------------|------------------------|----------------------------|----------------------|----------------------------|--------------------------------------|------------------------|---|-----------------------------|
| | Coal ² | Natural Gas (dry) ³ | Petroleum ⁴ | Hydroelectric ⁵ | Nuclear ⁶ | | | | | |
| Residential and Commercial | 0.013 | 0.297 | 0.502 | — | — | 0.812 | 0.335 | 1.148 | 0.867 | 2.015 |
| Industrial | 0.336 | 0.685 | 0.458 | 0.003 | — | 1.482 | 0.210 | 1.692 | 0.542 | 2.234 |
| Transportation | 0.001 | 0.035 | 1.587 | — | (⁹) | 1.624 | 0.005 | 1.628 | 0.012 | 1.641 |
| Electric Utilities | 0.871 | 0.334 | 0.288 | 0.281 | 0.188 | 1.971 | — | — | — | — |
| TOTAL | 1.220 | 1.362 | 2.836 | 0.284 | 0.188 | 5.890 | 0.549 | 4.468 | 1.422 | 5.890 |

¹ See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

² Data are from the Bureau of Mines. Includes anthracite and bituminous coal and lignite.

³ 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, adjusted to include a portion of the AGA "Other" category. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.5 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

⁴ 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 Bureau of Mines data on consumption: Residential and Commercial - 52.3 percent; Industrial - 47.7 percent.

⁵ FPC hydroelectric power production plus net imports of electricity from Canada. These imports, estimated at 0.011 quadrillion Btu per month, were assumed to be from hydroelectric power sources. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines annual figure for 1975.

⁶ FPC nuclear power production.

⁷ 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.

⁸ 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.

⁹ Negligible.

Percent Changes in Energy Consumption for July 1976 by Sources and Economic Sectors

| | July 1976 Consumption | Percent Change from July 1975 | Cumulative Percent Change from 1975 (January through July) * |
|---|----------------------------------|--|---|
| | Quadrillion Btu | | |
| Refined Petroleum Products | 2.841 | +5.4 | +4.6 |
| Motor Gasoline | 1.196 | +4.4 | +4.4 |
| Jet Fuel | 0.191 | +15.2 | -1.4 |
| Distillate | 0.407 | +6.8 | +1.5 |
| Residual | 0.498 | +14.1 | +7.3 |
| Other Petroleum Products | 0.549 | -1.9 | +7.7 |
| Natural Gas (Dry) | 1.362 | +1.3 | -0.1 |
| Coal (Anthracite, bituminous, and lignite) | 1.220 | +10.7 | +6.3 |
| Electricity (Sales) | 0.549 | +4.7 | +5.1 |
| TOTAL ENERGY USE | 5.890 | +5.5 | +3.0 |
| Economic Sector Consumption | | | |
| Residential and Commercial | 2.015 | +1.0 | +0.4 |
| Industrial | 2.234 | +9.7 | +5.6 |
| Transportation | 1.641 | +5.8 | +3.4 |

*Calculated on daily average basis.

Energy Consumption (Continued)

Energy Consumption by the Residential and Commercial Economic Sector¹

| | | Coal | Natural Gas (dry) | Petroleum ² | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|------|--------------|-------------------------------------|-------------------|------------------------|-------------------------|------------------------------------|------------------|-----------------------------|
| | | Quadrillion (10 ¹⁵) Btu | | | | | | |
| 1974 | January | 0.040 | 1.158 | 0.662 | 0.297 | 0.700 | 2.856 | 2.856 |
| | February | 0.034 | 1.027 | 0.590 | 0.274 | 0.601 | 2.526 | 5.381 |
| | March | 0.027 | 0.902 | 0.569 | 0.268 | 0.644 | 2.411 | 7.792 |
| | April | 0.019 | 0.754 | 0.530 | 0.258 | 0.598 | 2.158 | 9.950 |
| | May | 0.016 | 0.499 | 0.497 | 0.254 | 0.655 | 1.921 | 11.871 |
| | June | 0.015 | 0.357 | 0.503 | 0.283 | 0.687 | 1.845 | 13.717 |
| | July | 0.014 | 0.293 | 0.507 | 0.316 | 0.847 | 1.977 | 15.694 |
| | August | 0.021 | 0.265 | 0.519 | 0.331 | 0.809 | 1.945 | 17.639 |
| | September | 0.025 | 0.278 | 0.513 | 0.315 | 0.655 | 1.786 | 19.424 |
| | October | 0.027 | 0.395 | 0.589 | 0.272 | 0.636 | 1.920 | 21.345 |
| | November | 0.027 | 0.569 | 0.583 | 0.263 | 0.638 | 2.079 | 23.424 |
| | December | 0.031 | 0.930 | 0.628 | 0.293 | 0.742 | 2.624 | 26.048 |
| | TOTAL | 0.297 | 7.427 | 6.688 | 3.424 | 8.212 | 26.048 | |
| 1975 | January | R0.036 | 1.124 | 0.648 | 0.310 | 0.758 | 2.875 | 2.875 |
| | February | 0.023 | 1.105 | 0.553 | 0.292 | 0.646 | 2.619 | 5.495 |
| | March | 0.023 | 1.018 | 0.565 | 0.284 | 0.693 | 2.583 | 8.078 |
| | April | 0.011 | 0.905 | 0.506 | 0.270 | 0.632 | 2.323 | 10.401 |
| | May | 0.011 | 0.522 | 0.457 | 0.267 | 0.680 | 1.936 | 12.337 |
| | June | 0.014 | 0.338 | 0.451 | 0.297 | 0.758 | 1.858 | 14.194 |
| | July | 0.016 | R0.299 | 0.481 | 0.336 | 0.868 | R1.994 | R16.189 |
| | August | 0.016 | 0.264 | 0.460 | 0.350 | 0.879 | 1.969 | R18.158 |
| | September | 0.020 | 0.281 | 0.501 | 0.336 | 0.693 | 1.831 | R19.989 |
| | October | 0.025 | 0.353 | 0.555 | 0.280 | 0.677 | 1.890 | R21.878 |
| | November | 0.025 | 0.523 | 0.517 | 0.273 | 0.659 | 1.997 | R23.875 |
| | December | 0.034 | 0.910 | 0.642 | 0.303 | 0.780 | 2.669 | R26.544 |
| | TOTAL | 0.253 | R7.636 | 6.337 | 3.596 | 8.721 | R26.544 | |
| 1976 | January | 0.032 | 1.229 | R0.679 | 0.340 | 0.841 | R3.120 | R3.120 |
| | February | 0.019 | 1.106 | R0.595 | 0.314 | 0.687 | R2.721 | R5.842 |
| | March | 0.018 | 0.858 | 0.587 | 0.286 | 0.703 | 2.452 | R8.294 |
| | April | 0.014 | 0.704 | 0.513 | 0.270 | 0.629 | 2.130 | R10.424 |
| | May | 0.012 | 0.510 | R0.524 | 0.267 | 0.646 | R1.960 | R12.383 |
| | June | 0.014 | 0.369 | R0.507 | R0.286 | R0.751 | R1.927 | R14.311 |
| | July | 0.013 | 0.297 | 0.502 | 0.335 | 0.867 | 2.015 | 16.326 |
| | TOTAL | 0.123 | 5.073 | 3.908 | 2.098 | 5.124 | 16.326 | |

(See footnotes on page 46)

Energy Consumption by the Industrial Economic Sector¹

| | | Coal | Natural Gas (dry) | Petroleum ³ | Hydroelectric | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|-------------------------------------|--------------|--------------|-------------------|------------------------|---------------|-------------------------|------------------------------------|------------------|-----------------------------|
| Quadrillion (10 ¹⁵) Btu | | | | | | | | | |
| 1974 | January | 0.378 | 0.830 | 0.603 | 0.003 | 0.189 | 0.447 | 2.450 | 2.450 |
| | February | 0.354 | 0.804 | 0.538 | 0.003 | 0.187 | 0.409 | 2.295 | 4.745 |
| | March | 0.358 | 0.827 | 0.519 | 0.003 | 0.190 | 0.457 | 2.354 | 7.099 |
| | April | 0.352 | 0.662 | 0.483 | 0.003 | 0.191 | 0.444 | 2.137 | 9.236 |
| | May | 0.342 | 0.788 | 0.453 | 0.003 | 0.195 | 0.503 | 2.284 | 11.520 |
| | June | 0.326 | 0.724 | 0.458 | 0.003 | 0.197 | 0.478 | 2.186 | 13.706 |
| | July | 0.325 | 0.806 | 0.462 | 0.003 | 0.196 | 0.526 | 2.318 | 16.024 |
| | August | 0.335 | 0.853 | 0.473 | 0.003 | 0.203 | 0.497 | 2.365 | 18.389 |
| | September | 0.325 | 0.933 | 0.468 | 0.003 | 0.204 | 0.425 | 2.358 | 20.747 |
| | October | 0.347 | 0.997 | 0.537 | 0.003 | 0.205 | 0.480 | 2.569 | 23.316 |
| | November | 0.312 | 1.001 | 0.531 | 0.003 | 0.195 | 0.473 | 2.516 | 25.832 |
| | December | 0.309 | 0.945 | 0.573 | 0.003 | 0.182 | 0.462 | 2.474 | 28.307 |
| | TOTAL | 4.062 | 10.170 | 6.100 | 0.036 | 2.337 | 5.602 | 28.307 | |
| 1975 | January | 0.344 | 0.897 | 0.591 | 0.003 | 0.189 | 0.464 | 2.488 | 2.488 |
| | February | 0.344 | 0.626 | 0.505 | 0.003 | 0.185 | 0.410 | 2.074 | 4.562 |
| | March | 0.365 | 0.656 | 0.515 | 0.003 | 0.186 | 0.453 | 2.178 | 6.740 |
| | April | 0.340 | 0.440 | 0.461 | 0.003 | 0.184 | 0.431 | 1.859 | 8.599 |
| | May | 0.322 | 0.524 | 0.417 | 0.003 | 0.182 | 0.464 | 1.912 | R10.512 |
| | June | 0.300 | 0.600 | 0.411 | 0.003 | 0.185 | 0.470 | 1.969 | R12.481 |
| | July | 0.287 | R0.647 | 0.439 | 0.003 | 0.184 | 0.476 | R2.036 | R14.517 |
| | August | 0.294 | 0.733 | 0.420 | 0.003 | 0.191 | 0.481 | 2.122 | R16.639 |
| | September | 0.294 | 0.761 | 0.457 | 0.003 | 0.194 | 0.400 | 2.109 | R18.748 |
| | October | 0.307 | 0.902 | 0.506 | 0.003 | 0.193 | 0.465 | 2.376 | R21.124 |
| | November | 0.319 | 0.872 | 0.471 | 0.003 | 0.192 | 0.463 | 2.320 | R23.444 |
| | December | 0.338 | 0.904 | 0.585 | 0.003 | 0.189 | 0.488 | 2.507 | R25.951 |
| | TOTAL | 3.854 | R8.562 | 5.780 | 0.036 | 2.254 | 5.465 | 25.951 | |
| 1976 | January | 0.329 | R0.838 | R0.620 | 0.003 | 0.196 | 0.485 | R2.471 | R2.471 |
| | February | 0.312 | R0.499 | R0.542 | 0.003 | 0.199 | 0.434 | R1.989 | R4.461 |
| | March | 0.332 | R0.723 | 0.536 | 0.003 | 0.206 | 0.508 | R2.309 | R6.769 |
| | April | 0.314 | R0.558 | 0.468 | 0.003 | 0.205 | 0.478 | R2.025 | R8.794 |
| | May | 0.321 | R0.645 | R0.478 | 0.003 | 0.209 | 0.505 | R2.161 | R10.955 |
| | June | R0.336 | R0.638 | R0.463 | 0.003 | R0.213 | 0.542 | R2.212 | R13.167 |
| | July | 0.336 | 0.685 | 0.458 | 0.003 | 0.210 | 0.542 | 2.234 | 15.401 |
| | TOTAL | 2.280 | 4.587 | 3.564 | 0.021 | 1.438 | 3.512 | 15.401 | |

(See footnotes on page 46)

Energy Consumption (Continued)

Energy Consumption by the Transportation Economic Sector¹

| | | Coal | Natural Gas (dry) ⁴ | Petroleum | Electricity Distributed | Electrical Energy Loss Distributed | Total Energy Use | Cumulative Total Energy Use |
|-------------------------------------|--------------|--------------|--------------------------------|---------------|-------------------------|------------------------------------|------------------|-----------------------------|
| Quadrillion (10 ¹⁵) Btu | | | | | | | | |
| 1974 | January | 0.001 | 0.072 | 1.399 | 0.005 | 0.013 | 1.490 | 1.490 |
| | February | 0.001 | 0.066 | 1.300 | 0.005 | 0.011 | 1.384 | 2.874 |
| | March | 0.001 | 0.063 | 1.417 | 0.005 | 0.012 | 1.498 | 4.372 |
| | April | 0.001 | 0.051 | 1.397 | 0.005 | 0.011 | 1.465 | 5.837 |
| | May | 0.001 | 0.047 | 1.484 | 0.005 | 0.012 | 1.547 | 7.384 |
| | June | 0.001 | 0.039 | 1.448 | 0.005 | 0.011 | 1.503 | 8.887 |
| | July | 0.001 | 0.040 | 1.514 | 0.005 | 0.012 | 1.572 | 10.458 |
| | August | 0.001 | 0.041 | 1.533 | 0.005 | 0.012 | 1.590 | 12.049 |
| | September | 0.001 | 0.044 | 1.393 | 0.005 | 0.010 | 1.453 | 13.501 |
| | October | 0.001 | 0.051 | 1.507 | 0.005 | 0.012 | 1.576 | 15.077 |
| | November | 0.001 | 0.057 | 1.455 | 0.005 | 0.013 | 1.532 | 16.609 |
| | December | 0.001 | 0.068 | 1.546 | 0.006 | 0.014 | 1.634 | 18.243 |
| | TOTAL | 0.009 | 0.638 | 17.392 | 0.060 | 0.144 | 18.243 | |
| 1975 | January | 0.001 | 0.073 | 1.498 | 0.006 | 0.014 | 1.592 | 1.592 |
| | February | 0.001 | 0.063 | 1.334 | 0.005 | 0.012 | 1.415 | 3.006 |
| | March | 0.001 | 0.061 | 1.456 | 0.005 | 0.013 | 1.536 | 4.542 |
| | April | 0.001 | 0.049 | 1.455 | 0.005 | 0.012 | 1.522 | 6.064 |
| | May | 0.001 | 0.038 | 1.480 | 0.005 | 0.012 | 1.536 | 7.600 |
| | June | 0.001 | 0.034 | 1.466 | 0.005 | 0.012 | 1.517 | 9.116 |
| | July | 0.001 | 0.034 | 1.498 | 0.005 | 0.013 | 1.550 | 10.666 |
| | August | 0.001 | 0.036 | 1.509 | 0.005 | 0.012 | 1.563 | 12.229 |
| | September | 0.001 | 0.038 | 1.420 | 0.005 | 0.010 | 1.473 | 13.703 |
| | October | 0.001 | 0.045 | 1.495 | 0.005 | 0.013 | 1.559 | 15.262 |
| | November | 0.001 | 0.051 | 1.379 | 0.006 | 0.013 | 1.449 | 16.711 |
| | December | 0.001 | 0.066 | 1.556 | 0.006 | 0.015 | 1.643 | 18.354 |
| | TOTAL | 0.008 | 0.587 | 17.547 | 0.062 | 0.150 | 18.354 | |
| 1976 | January | 0.001 | 0.075 | R1.532 | 0.006 | 0.015 | R1.628 | R1.628 |
| | February | 0.001 | 0.058 | R1.380 | 0.006 | 0.012 | R1.456 | R3.084 |
| | March | 0.001 | R0.057 | 1.551 | 0.005 | 0.013 | R1.627 | R4.712 |
| | April | 0.001 | 0.046 | 1.515 | 0.005 | 0.012 | R1.578 | R6.290 |
| | May | 0.001 | R0.042 | R1.493 | 0.005 | 0.012 | R1.553 | R7.843 |
| | June | 0.001 | R0.037 | R1.545 | 0.005 | 0.012 | R1.599 | R9.442 |
| | July | 0.001 | 0.036 | 1.587 | 0.005 | 0.012 | 1.641 | |
| | TOTAL | 0.004 | 0.350 | 10.603 | 0.036 | 0.088 | 11.083 | |

¹ See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculation 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.

² The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 52.3 percent for 1974, 1975, and 1976.

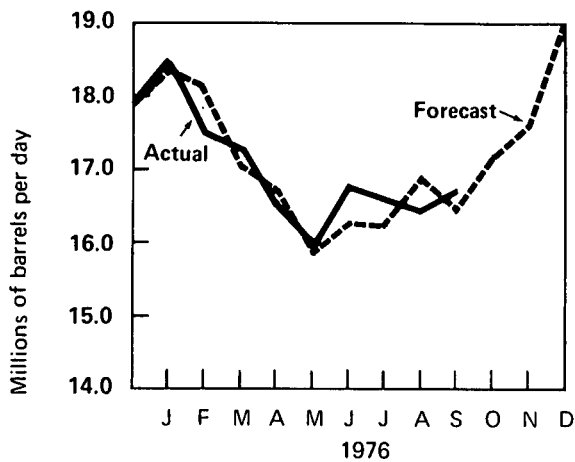
³ The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 47.7 percent for 1974, 1975, and 1976.

⁴ The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.5 percent for 1974, 1975, and 1976.

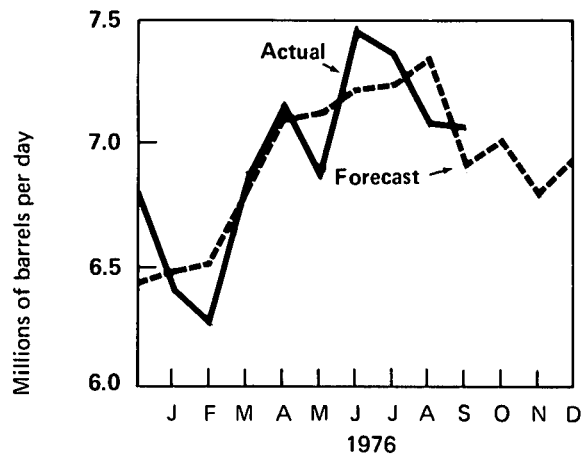
R=Revised data.

Petroleum Consumption and Forecast

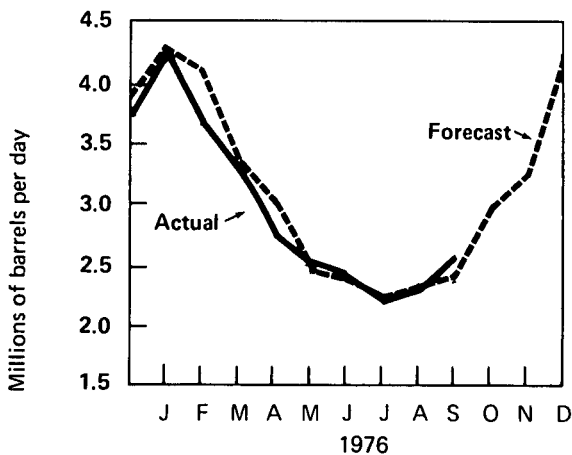
Total Domestic Demand for Petroleum Products



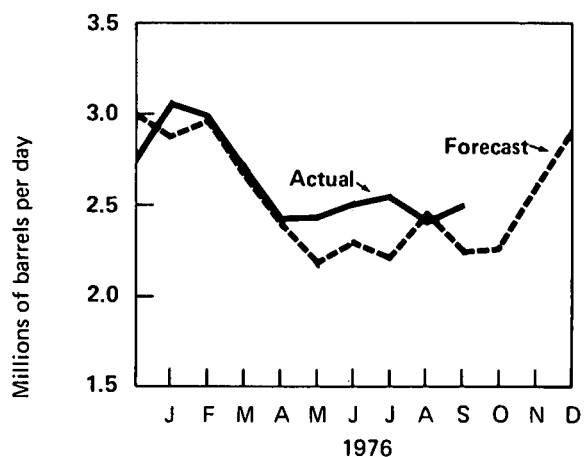
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Notes:

- Domestic Demand — Demand for products, in terms of real consumption, is not available; production plus imports plus withdrawals from primary stocks is used as a proxy for consumption. Secondary stocks, not measured by BOM and API, are substantial for some products.
- Actuals — Based on BOM data for January through July and API data and FEA estimates for August and September.
- Forecast — See Explanatory Note 5 for discussion of basic assumptions for forecast.

Resource Development

Oil and gas drilling activity reached a 15-year high during September and October. The number of rotary drilling rigs in operation climbed from 1,691 during August to 1,744 in September and 1,794 in October. This was the highest October rig count since 1961 and represented an increase of 4.5 percent over the count for the corresponding month in 1975.

During September, 3,582 wells were completed, an increase of 2.3 percent over the September 1975 level and 23.9 percent over the level for the same month in 1974.

Seismic exploration activity dropped in September following a 4-month seasonal rise. There were 268 seismic crews (240 land, 28 marine) at work in the United States and its territorial waters, 2 land crews and 5 marine crews less than during the previous month. Last September, 274 crews (234 land, 40 marine) were active.

The recently imposed Tax Reform Act of 1976 contains several provisions which may have an adverse impact on the level of funds available for petroleum exploration programs. One measure calls for the addition of a portion of intangible drilling costs to the list of preference items subject to minimum tax. This portion is calculated as the amount of intangible drilling costs deductions declared on ordinary taxes which are in excess of the amount allowed if these costs were capitalized and amortized over a 10-year period. (Intangible drilling costs are deducted in the year of incurrence on ordinary taxes.) Another provision of the Act is the elimination of "excess" foreign tax credits, which are U.S. tax credits given to companies operating overseas and that pay foreign taxes in excess of the comparable U.S. tax rate. Formerly, these payments could be booked for later use of offset U.S. tax obligations.

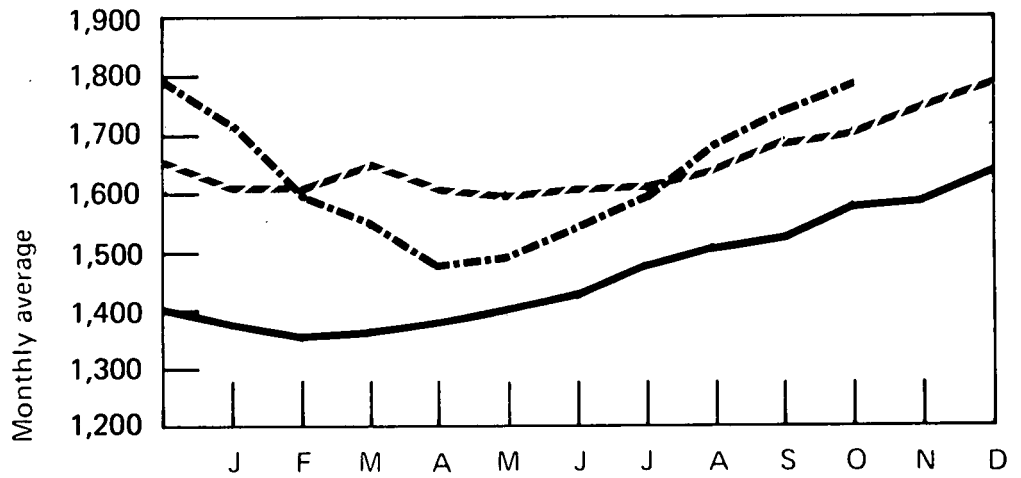
Oil and Gas Exploration

| | | Rotary Rigs in Operation | Wells Drilled | | | | Total Footage of Wells Drilled |
|------|-------------------------------|-----------------------------|-------------------------------------|--------------|---------------|---------------|-----------------------------------|
| | | Monthly average | Oil | Gas | Dry | Total | Thousands of feet |
| 1974 | January | 1,372 | 763 | 577 | 803 | 2,143 | 10,392 |
| | February | 1,355 | 901 | 600 | 816 | 2,317 | 12,160 |
| | March | 1,367 | 936 | 638 | 1,003 | 2,577 | 12,844 |
| | April | 1,381 | 947 | 700 | 945 | 2,592 | 13,349 |
| | May | 1,412 | 957 | 520 | 870 | 2,347 | 11,460 |
| | June | 1,432 | 1,238 | 586 | 982 | 2,806 | 12,976 |
| | July | 1,480 | 1,008 | 461 | 884 | 2,353 | 11,802 |
| | August | 1,518 | 1,210 | 555 | 968 | 2,733 | 12,410 |
| | September | 1,527 | 1,200 | 600 | 1,091 | 2,891 | 12,676 |
| | October | 1,584 | 1,131 | 551 | 1,241 | 2,923 | 14,081 |
| | November | 1,596 | 1,008 | 626 | 1,053 | 2,767 | 11,795 |
| | December | 1,643 | 1,339 | 791 | 1,274 | 3,404 | 15,707 |
| | AVERAGE | 1,475 | TOTAL * 12,784 | 7,240 | 11,674 | 31,698 | 150,551 |
| 1975 | 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 |
| | AVERAGE | 1,660 | TOTAL * 16,408 | 7,580 | 13,247 | 37,235 | 174,434 |
| 1976 | 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 | | | | | |
| | AVERAGE (10 months) | 1,616 | TOTAL * 12,801 (9 months) | 6,668 | 9,928 | 29,397 | 135,482 |

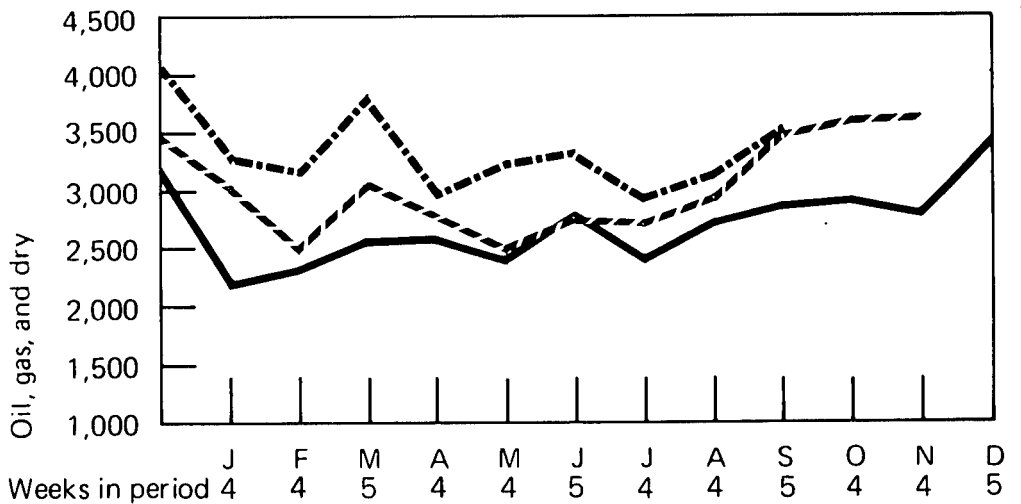
*Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.

Sources: Rotary Rigs—Hughes Tool Company; Wells—American Petroleum Institute.

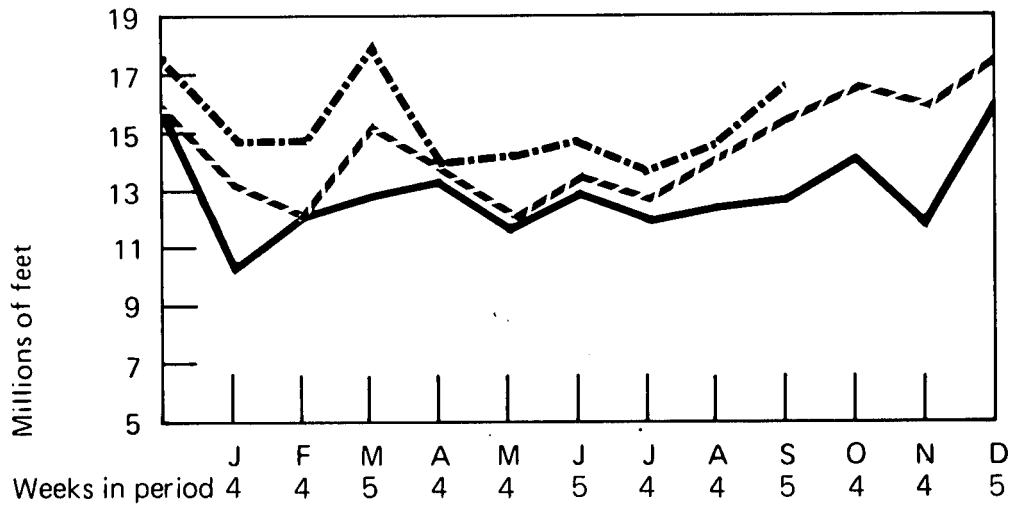
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled

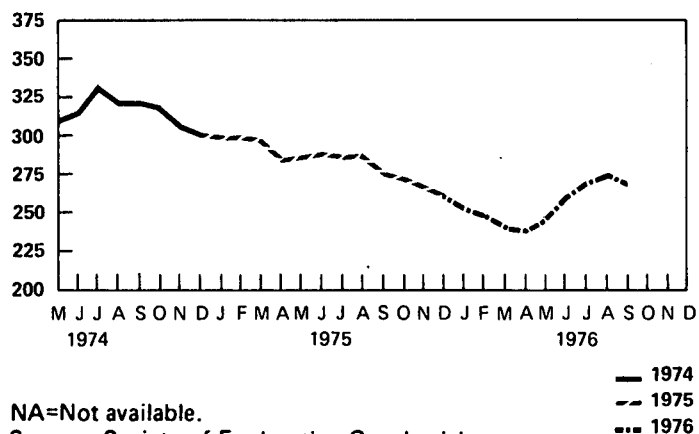


— 1974
 - - 1975
 - . - 1976

Oil and Gas Exploration (Continued)

| | | Crews Engaged in Seismic Exploration | | | Line Miles of Seismic Exploration | | |
|------|-----------------------|--------------------------------------|---------|-------|-----------------------------------|---------|--------|
| | | Offshore | Onshore | Total | Offshore | Onshore | Total |
| | | Monthly average | | | Monthly average | | |
| 1973 | Year | 23 | 227 | 250 | 21,579 | 10,597 | 32,175 |
| 1974 | Year | 31 | 274 | 305 | 28,482 | 13,219 | 41,701 |
| 1975 | Year | 30 | 254 | 284 | 25,773 | 12,558 | 38,331 |
| 1974 | January-April | NA | NA | NA | | | |
| | May | 35 | 278 | 313 | | | |
| | June | 38 | 279 | 317 | | | |
| | July | 35 | 299 | 334 | | | |
| | August | 34 | 287 | 321 | | | |
| | September | 34 | 287 | 321 | | | |
| | October | 32 | 288 | 320 | | | |
| | November | 30 | 276 | 306 | | | |
| | December | 25 | 275 | 300 | | | |
| 1975 | 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 | | | |
| 1976 | 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 | | | |
| | AVERAGE (9 months) | 24 | 231 | 255 | | | |

Total Seismic Crews



Gasoline

The national average selling price for regular gasoline at full service retail outlets rose 0.1 cent in September to 60.2 cents per gallon. The average price that retailers paid for regular gasoline declined 0.1 cent, resulting in a net increase in the dealer margin of 0.2 cent to 7.6 cents per gallon. This was the first change in the dealer margin since May.

figure is 17.5 cents per million Btu lower than the figure for May 1975.

The average cost of natural gas delivered to utilities rose 3.4 cents during the month to 100.8 cents per million Btu. Utility gas costs have increased nearly 40 percent during the past 12 months.

Crude Oil

The preliminary average "upper tier" crude oil price during August was \$11.62 per barrel, 3 cents above the revised July figure.

The preliminary "lower tier" crude oil price in August was \$5.18 per barrel, 1 cent below the price in July.

The preliminary average domestic crude oil price during August was \$8.03, down 1 cent from its level in July.

The preliminary refiner acquisition cost of domestic crude oil during August was \$8.68 per barrel, up 1 cent from the cost in July.

The preliminary refiner acquisition cost of imported crude increased 17 cents in August to \$13.67 per barrel.

The preliminary estimate of the composite cost of crude petroleum purchased by refiners during August was \$10.80, down 10 cents from the level in July. This decrease can be attributed to a decline in purchases of high-priced foreign crude.

Utility Fossil Fuels

During May, the national average cost of fossil fuels delivered to utilities remained relatively stable, decreasing only 0.6 cent to 105.8 cents per million Btu.

The national average cost of coal delivered to utilities in May rose 0.9 cent to 84.6 cents per million Btu.

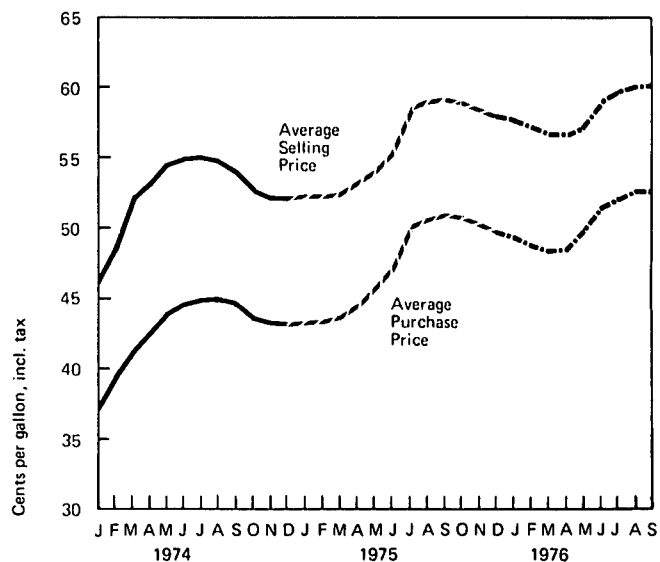
The average cost of residual fuel delivered to utilities declined by 8.6 cents in May to 188.1 cents per million Btu. Utility residual fuel oil costs have been running somewhat lower this year than last. The May 1976

Motor Gasoline

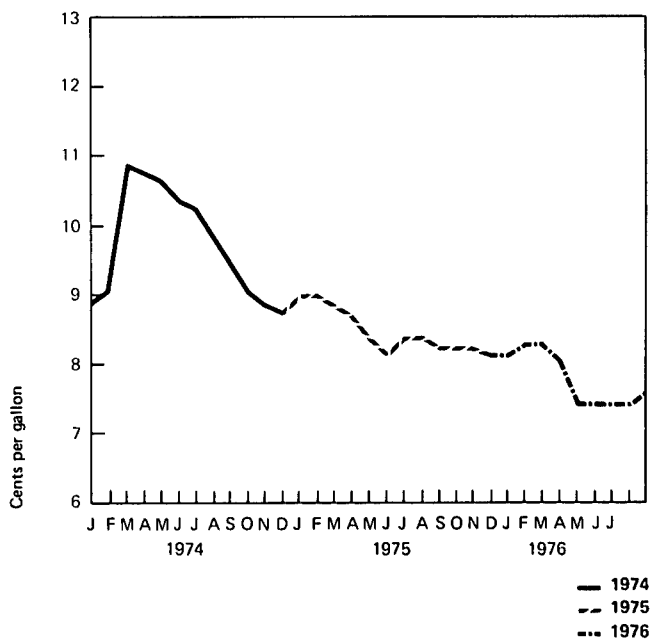
Regular Gasoline at Full Service Retail Outlets

| | | Average Selling Price | Average Purchase Price | Average Dealer Margin |
|------|----------------|----------------------------------|------------------------------|-----------------------------|
| | | Cents per gallon, including tax* | | |
| 1974 | January | 46.3 | 37.4 | 8.9 |
| | February | 48.8 | 39.7 | 9.1 |
| | March | 52.3 | 41.4 | 10.9 |
| | April | 53.4 | 42.7 | 10.7 |
| | May | 54.7 | 44.1 | 10.6 |
| | June | 55.1 | 44.8 | 10.3 |
| | July | 55.2 | 45.0 | 10.2 |
| | August | 54.9 | 45.1 | 9.8 |
| | September | 54.2 | 44.8 | 9.4 |
| | October | 52.4 | 43.4 | 9.0 |
| | November | 52.0 | 43.2 | 8.8 |
| | December | 52.0 | 43.3 | 8.7 |
| | AVERAGE | 52.8 | 43.1 | |
| 1975 | 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 |
| | AVERAGE | 56.2 | 47.8 | |
| 1976 | 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 |

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 may be deducted for 1976.

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

Regular Gasoline at Self Service Retail Outlets

| | | Average Selling Price | Average Dealer Margin |
|-------------|-----------|--------------------------------------|--------------------------------------|
| | | Cents per gallon, including tax | |
| 1975 | November | 55.4 | 5.5 |
| | December | 54.9 | 5.3 |
| 1976 | 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 |

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

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

| | | Premium | Unleaded (Regular) |
|------|-----------|------------------------------------|-----------------------|
| | | Cents per gallon, including tax | |
| 1974 | January | 50.1 | 48.8 |
| | February | 52.6 | 50.8 |
| | March | 56.0 | 53.6 |
| | April | 57.2 | 55.1 |
| | May | 58.5 | 57.1 |
| | June | 58.5 | 57.4 |
| | July | 59.0 | 57.2 |
| | August | 58.0 | 56.8 |
| | September | 58.2 | 55.8 |
| | October | 56.6 | 54.1 |
| | November | 56.3 | 53.9 |
| | December | 56.3 | 53.9 |
| 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 |

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

Average Selling Prices and Margins for Major and Independent Retail Dealers — September 1976

(Cents per gallon, including tax)

Regular Gasoline—Full Service

| | Selling Price | Margin |
|-------------------------|----------------------|---------------|
| Major | 61.0 | 7.9 |
| Independent | 55.7 | 5.9 |
| National Average | 60.2 | 7.6 |

Regular Gasoline—Self Service

| | Selling Price | Margin |
|-------------------------|----------------------|---------------|
| Major | 57.4 | 4.3 |
| Independent | 54.2 | 4.2 |
| National Average | 56.5 | 4.3 |

Premium Gasoline—Selling Prices

| | Full Service | Self Service |
|-------------------------|---------------------|---------------------|
| Major | 66.0 | 63.1 |
| Independent | 60.1 | 58.7 |
| National Average | 65.3 | 61.9 |

Unleaded Gasoline—Full Service Selling Prices

| | Regular | Premium |
|-------------------------|----------------|----------------|
| Major | 64.5 | 68.9 |
| Independent | 59.0 | 65.9 |
| National Average | 64.0 | 68.9 |

Source: Lundberg Survey, Inc.

Average Regional Selling Prices and Dealer Margins for Regular Gasoline at Full Service Retail Outlets — September 1976

| Region | Selling Price | Margin |
|-------------------------|------------------------------------|---------------|
| | Cents per gallon, including tax | |
| 1A New England | 59.1 | 7.0 |
| 1B Mid Atlantic | 61.2 | 6.9 |
| 1C Lower Atlantic | 61.0 | 8.4 |
| 2 Mid Continent | 59.8 | 6.7 |
| 3 Gulf Coast | 57.8 | 8.9 |
| 4 Rocky Mountain | 61.8 | 9.6 |
| 5 West Coast | 62.0 | 8.1 |
| National Average | 60.2 | 7.6 |

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Retail Gasoline Price Changes for 21 Leading Refiners During September 1976
and Entitlement Position* During August 1976

| Company | Effective Date of Change | Amount of Change | Entitlement Position (August) |
|----------------------------|-----------------------------|---------------------------------------|----------------------------------|
| | | Cents per gallon | |
| Amerada Hess | | None | Seller |
| American Petrofina | | None | Seller |
| Ashland | September 7 | 0.25 (St. Paul, Minn.) | Seller |
| Atlantic Richfield | September 10 | -0.80 (PAD I) | Buyer |
| B.P. | September 17 | -0.50 (PAD I) | Seller |
| Cities Service | September 21 | -0.80 (PAD I, III) | Buyer |
| Champlin | | None | Buyer |
| Continental | | None | Buyer |
| Exxon | | None | Buyer |
| Getty | September 22 | -1.00 | Buyer |
| Gulf | | None | Buyer |
| Kerr-McGee | | None | Buyer |
| Mobil | September 11 | -0.80 (PAD I, III) | Buyer |
| Phillips | September 16 | 1.00 (PAD IV, V) | Buyer |
| Shell | September 8 | -0.80 (PAD I, II, III) | Buyer |
| Standard Oil of California | September 22 | -0.80 (PAD I) | Seller |
| Standard Oil of Indiana | September 17 | -0.80 | Buyer |
| Standard Oil of Ohio | September 17 | -0.50 (PAD I) | Seller |
| Sun | September 17 | -0.70 (PAD I) | Buyer |
| Texaco | September 17 | -1.00 (PAD I, II, III) Consumers only | Buyer |
| | | -0.80 (PAD I, III) All classes | Buyer |
| Union Oil of California | September 16 | 1.00 (PAD IV) | |

*See definitions.

Source: FEA.

Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners

| | | Northeast | Mid-Atlantic | Southeast | Central | Western | Southwest | Pacific | National Average |
|---------------------------------|----------------|-----------|--------------|-----------|---------|---------|-----------|---------|------------------|
| Cents per gallon, excluding tax | | | | | | | | | |
| 1974 | January | 21.4 | 21.4 | 21.1 | 21.3 | 22.2 | 20.1 | 21.0 | 21.2 |
| | February | 23.7 | 23.6 | 22.5 | 23.9 | 23.5 | 22.5 | 22.6 | 23.2 |
| | March | 25.4 | 25.2 | 24.1 | 25.3 | 24.5 | 24.2 | 25.2 | 24.8 |
| | April | 26.7 | 26.1 | 24.8 | 26.0 | 25.6 | 24.7 | 25.0 | 25.6 |
| | May | 28.5 | 28.4 | 26.8 | 28.2 | 27.7 | 26.3 | 26.3 | 27.5 |
| | June | 29.8 | 29.4 | 28.0 | 29.3 | 29.3 | 27.1 | 27.2 | 28.6 |
| | July | 29.9 | 29.3 | 28.0 | 29.4 | 28.9 | 27.8 | 28.0 | 28.8 |
| | August | 29.7 | 29.4 | 28.6 | 29.6 | 29.1 | 28.1 | 28.6 | 29.0 |
| | September | 29.3 | 28.9 | 28.0 | 28.8 | 28.7 | 27.4 | 27.8 | 28.4 |
| | October | 28.0 | 27.2 | 26.6 | 27.5 | 27.0 | 26.2 | 26.6 | 27.0 |
| | November | 27.8 | 27.3 | 26.6 | 27.5 | 27.5 | 26.3 | 27.3 | 27.2 |
| | December | 27.7 | 27.6 | 26.9 | 27.7 | 27.9 | 26.7 | 27.3 | 27.4 |
| | AVERAGE | | | | | | | | 26.7 |
| 1975 | January | 27.8 | 27.8 | 27.4 | 28.2 | 28.5 | 27.2 | 27.8 | 27.8 |
| | February | 28.4 | 28.2 | 27.8 | 28.7 | 28.3 | 27.6 | 27.5 | 28.1 |
| | March | 28.9 | 28.8 | 28.4 | 29.1 | 29.0 | 27.8 | 28.0 | 28.6 |
| | April | 29.6 | 29.9 | 29.4 | 30.4 | 29.8 | 29.2 | 29.8 | 29.7 |
| | May | 30.9 | 31.0 | 30.5 | 31.6 | 31.2 | 30.4 | 31.0 | 30.9 |
| | June | 32.4 | 32.5 | 32.0 | 33.1 | 32.6 | 31.6 | 32.6 | 32.4 |
| | July | 34.4 | 34.6 | 33.9 | 34.9 | 34.5 | 33.4 | 33.7 | 34.2 |
| | August | 35.3 | 35.1 | 34.6 | 35.6 | 35.2 | 34.1 | 34.5 | 34.9 |
| | September | 35.2 | 35.1 | 34.5 | 35.4 | 35.0 | 34.1 | 34.5 | 34.8 |
| | October | 34.3 | 34.6 | 34.0 | 34.9 | 34.3 | 33.8 | 34.2 | 34.3 |
| | November | 34.1 | 34.3 | 33.9 | 34.6 | 34.3 | 33.6 | 34.0 | 34.1 |
| | December | 33.7 | 34.1 | 33.6 | 34.3 | 33.8 | 33.3 | 33.7 | 33.8 |
| | AVERAGE | | | | | | | | 32.0 |
| 1976 | January | 33.3 | 33.9 | 33.2 | 34.0 | 33.2 | 33.1 | 33.5 | 33.5 |
| | February | 33.0 | 33.4 | 32.6 | 33.8 | 32.6 | 32.9 | 33.5 | 33.1 |
| | March | 32.4 | 33.0 | 31.8 | 33.4 | 32.5 | 32.6 | 33.2 | 32.7 |
| | April | 33.0 | 33.5 | 32.3 | 33.9 | 33.2 | 33.2 | 33.2 | 33.2 |
| | May | 34.4 | 34.9 | 33.6 | 35.3 | 34.8 | 34.8 | 34.7 | 34.6 |
| | June | 35.7 | 35.9 | 34.8 | 36.5 | 36.1 | 35.9 | 35.5 | 35.8 |
| | July | 36.1 | 36.3 | 35.4 | 36.8 | 36.3 | 36.3 | 36.3 | 36.2 |
| | August | 36.5 | 36.6 | 35.7 | 37.3 | 36.4 | 36.5 | 36.7 | 36.5 |
| | September | 35.8 | 36.1 | 35.3 | 36.9 | 35.9 | 36.6 | 36.5 | 36.2 |

Source: FEA.

Diesel Fuel

Average Selling Prices and Margins for Diesel Fuel*

(Cents per gallon, including tax)

| | | Selling Prices | | Margins | |
|------|-----------|----------------|------------------|-------------|------------------|
| | | Truck Stops | Service Stations | Truck Stops | Service Stations |
| 1974 | January | NA | 46.0 | NA | 6.7 |
| | February | NA | 45.9 | NA | 6.6 |
| | March | NA | 46.8 | NA | 7.2 |
| | April | NA | 48.3 | NA | 7.2 |
| | May | NA | 48.4 | NA | 7.2 |
| | June | NA | 49.3 | NA | 7.7 |
| | July | NA | 49.7 | NA | 7.3 |
| | August | NA | 49.9 | NA | 7.3 |
| | September | NA | 49.6 | NA | 7.4 |
| | October | NA | 49.3 | NA | 7.5 |
| | November | NA | 49.3 | NA | 7.2 |
| | December | NA | 49.2 | NA | 7.5 |
| 1975 | 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 |
| 1976 | 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 |

*See Explanatory Note 13.

Note: Selling prices at truck stops and service stations for the months of January 1976 through June 1976 were not printed under the proper column headings in the October issue. These prices have been corrected to appear in the proper columns in this issue.

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

Average Selling Prices and Margins for Major and Independent Retail Dealers — September 1976

(Cents per gallon, including tax)

Truck Stops

| | Selling Price | Margin |
|-------------------------|----------------------|---------------|
| Major | 53.3 | 5.5 |
| Independent | 50.7 | 6.7 |
| National Average | 52.2 | 5.7 |

Service Stations

| | Selling Price | Margin |
|-------------------------|----------------------|---------------|
| Major | 55.4 | 7.0 |
| Independent | 51.2 | 6.8 |
| National Average | 53.1 | 6.8 |

Source: Lundberg Survey, Inc.

Heating Oil *

Residential Heating Oil Prices

| | | Average Selling Price | Average Purchase Price | Average Dealer Margin |
|------|----------------|-----------------------------|------------------------------|-----------------------------|
| | | Cents per gallon | | |
| 1974 | January | 31.1 | 23.4 | 7.7 |
| | February | 32.8 | 25.4 | 7.4 |
| | March | 33.8 | 25.9 | 7.9 |
| | April | 34.0 | 25.9 | 8.1 |
| | May | 35.1 | 26.8 | 8.3 |
| | June | 35.3 | 27.5 | 7.8 |
| | July | 35.2 | 28.1 | 7.1 |
| | August | 35.8 | 28.1 | 7.7 |
| | September | 36.3 | 28.7 | 7.6 |
| | October | 35.6 | 28.9 | 6.7 |
| | November | 37.9 | 29.1 | 8.8 |
| | December | 36.9 | 28.5 | 8.4 |
| | AVERAGE | 34.7 | 26.9 | |
| 1975 | 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 |
| | AVERAGE | 37.7 | 31.2 | |
| 1976 | January | 40.1 | 32.4 | 7.7 |
| | February | 40.1 | 32.4 | 7.7 |

*Authorization for this data series expired in February 1976. A new data series is currently being developed and will be incorporated herein when it becomes available.

Source: FEA.

Residential Heating Oil Prices by Region

| | | New England | Mid Atlantic | Southeast | East North Central | East South Central | West North Central | West South Central | Mountain | West Coast |
|------|-----------|------------------|--------------|-----------|--------------------|--------------------|--------------------|--------------------|----------|------------|
| | | Cents per gallon | | | | | | | | |
| 1974 | January | 31.9 | 31.6 | 30.8 | 30.3 | 29.8 | 31.3 | NA | 30.4 | 30.5 |
| | February | 33.8 | 33.5 | 32.8 | 30.9 | 32.0 | 32.9 | NA | 37.2 | 32.8 |
| | March | 31.9 | 33.7 | 33.9 | 34.2 | 30.6 | 34.5 | NA | NA | NA |
| | April | 34.3 | 34.8 | 32.5 | 33.5 | 33.7 | 30.1 | NA | 34.2 | 32.6 |
| | May | 34.8 | 35.6 | 36.2 | 34.2 | 34.4 | 32.6 | NA | 34.8 | 37.8 |
| | June | 35.9 | 36.2 | 35.8 | 34.9 | 31.1 | 33.6 | NA | 35.9 | 39.1 |
| | July | 35.2 | 35.5 | 35.6 | 34.4 | 30.2 | 34.9 | NA | 36.1 | 36.3 |
| | August | 36.3 | 36.1 | 37.8 | 35.1 | 33.7 | 35.2 | NA | NA | 35.9 |
| | September | 37.2 | 36.5 | 36.1 | 35.0 | 33.6 | 35.8 | NA | 32.3 | 35.1 |
| | October | 36.7 | 35.9 | 36.9 | 33.3 | 34.1 | 33.8 | NA | 35.6 | 36.3 |
| | November | 39.0 | 38.7 | 37.4 | 36.4 | 35.3 | 35.6 | NA | 37.3 | 36.4 |
| | December | 38.3 | 38.7 | 36.8 | 34.2 | 34.7 | 33.5 | NA | 35.8 | 33.9 |
| 1975 | 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 |
| 1976 | January | 41.3 | 40.6 | 39.9 | 38.6 | NA | 39.0 | NA | 40.2 | 42.0 |
| | February | 41.1 | 41.6 | 39.2 | 38.5 | 37.2 | 38.9 | NA | NA | 40.8 |

NA=Not available.
Source: FEA.

Average Distributor Purchase Prices for Heating Oil by Region

| | | New England | Mid Atlantic | Southeast | East North Central | East South Central | West North Central | West South Central | Mountain | West Coast |
|-------------|-----------|------------------|--------------|-----------|--------------------|--------------------|--------------------|--------------------|----------|------------|
| | | Cents per gallon | | | | | | | | |
| 1974 | January | 22.3 | 23.4 | 23.3 | 23.8 | 23.5 | 24.0 | NA | 22.5 | 23.0 |
| | February | 24.9 | 25.5 | 25.3 | 24.8 | 25.2 | 26.4 | NA | 29.7 | 25.3 |
| | March | 24.9 | 25.0 | 26.3 | 25.6 | 24.0 | 27.0 | NA | NA | NA |
| | April | 25.7 | 26.0 | 26.0 | 27.1 | 26.3 | 24.0 | NA | 26.8 | 26.0 |
| | May | 26.3 | 27.0 | 27.5 | 27.3 | 27.4 | 25.8 | NA | 27.1 | 26.2 |
| | June | 27.5 | 27.6 | 27.8 | 29.0 | 25.4 | 27.4 | NA | 27.3 | 28.0 |
| | July | 28.1 | 28.2 | 28.3 | 27.5 | 25.2 | 28.5 | NA | 28.2 | 29.1 |
| | August | 28.1 | 28.2 | 27.9 | 27.5 | 29.3 | 28.8 | NA | NA | 28.2 |
| | September | 29.2 | 28.9 | 28.5 | 27.8 | 28.2 | 28.4 | NA | 29.3 | 28.8 |
| | October | 29.9 | 29.4 | 28.8 | 27.7 | 28.3 | 27.4 | NA | 29.9 | 29.2 |
| | November | 29.8 | 29.7 | 28.8 | 27.8 | 29.1 | 27.6 | NA | 27.9 | 29.8 |
| | December | 29.3 | 29.4 | 28.4 | 27.4 | 28.8 | 26.7 | NA | 29.3 | 27.0 |
| 1975 | January | 30.3 | 29.7 | 28.5 | 27.2 | 28.8 | 27.5 | NA | 28.5 | 29.7 |
| | February | 29.6 | 29.3 | 28.6 | 27.2 | 28.8 | 27.3 | NA | 29.4 | 28.5 |
| | March | 29.5 | 29.3 | 29.1 | 28.1 | 26.8 | 28.1 | NA | NA | 27.6 |
| | April | 29.4 | 29.5 | 29.7 | 28.3 | 27.8 | 29.5 | NA | 29.0 | 28.5 |
| | May | 30.5 | 30.0 | 30.0 | 30.0 | 28.8 | 29.4 | NA | 30.9 | 28.7 |
| | June | 30.4 | 30.2 | 30.6 | 30.5 | NA | 30.7 | NA | 31.8 | 29.0 |
| | July | 30.7 | 30.1 | 29.9 | 31.6 | 28.8 | 31.4 | NA | NA | 30.4 |
| | August | 31.6 | 30.8 | 30.9 | 31.2 | 29.8 | 30.2 | NA | 31.6 | 32.8 |
| | September | 31.4 | 30.9 | 30.7 | 30.6 | 29.8 | 30.6 | NA | 31.9 | 31.4 |
| | October | 32.0 | 31.9 | 31.3 | 31.5 | 31.1 | 31.4 | NA | 34.4 | 32.5 |
| | November | 32.5 | 31.7 | 32.0 | 32.1 | NA | 32.0 | NA | 34.1 | 32.3 |
| | December | 32.9 | 32.7 | 31.8 | 32.0 | 29.4 | 31.4 | NA | 33.9 | 32.8 |
| 1976 | January | 32.5 | 32.5 | 31.9 | 32.3 | NA | 32.3 | NA | 33.6 | 32.9 |
| | February | 32.8 | 32.9 | 31.6 | 31.9 | 31.3 | 32.1 | NA | NA | 31.1 |

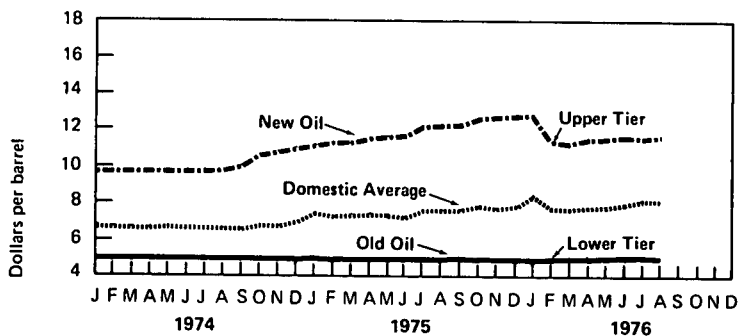
NA=Not available.
Source: FEA.

Crude Oil

Domestic Crude Petroleum Prices at the Wellhead*

| | | Old | New | Domestic Average |
|------|-----------|--------------------|-----------------|---------------------|
| | | Dollars per barrel | | |
| 1974 | January | 5.03 | 9.82 | 6.95 |
| | February | 5.03 | 9.87 | 6.87 |
| | March | 5.03 | 9.88 | 6.77 |
| | April | 5.03 | 9.88 | 6.77 |
| | May | 5.03 | 9.88 | 6.87 |
| | June | 5.03 | 9.95 | 6.85 |
| | July | 5.03 | 9.95 | 6.80 |
| | August | 5.03 | 9.98 | 6.71 |
| | September | 5.03 | 10.10 | 6.70 |
| | October | 5.03 | 10.74 | 6.97 |
| | November | 5.03 | 10.90 | 6.97 |
| | December | 5.03 | 11.08 | 7.09 |
| | AVG. | 5.03 | 10.13 | 6.87 |
| 1975 | January | 5.05 | 11.28 | 7.61 |
| | February | 5.03 | 11.39 | 7.47 |
| | March | 5.03 | 11.47 | 7.57 |
| | April | 5.03 | 11.64 | 7.55 |
| | May | 5.03 | 11.69 | 7.52 |
| | June | 5.03 | 11.73 | 7.49 |
| | July | 5.03 | 12.30 | 7.75 |
| | August | 5.03 | 12.38 | 7.73 |
| | September | 5.04 | 12.46 | 7.75 |
| | October | 5.03 | 12.73 | 7.83 |
| | November | 5.03 | 12.89 | 7.80 |
| | December | 5.03 | 12.95 | 7.93 |
| | AVG. | 5.03 | 12.03 | 7.67 |
| 1976 | January | 5.02 | 12.99 | 8.63 |
| | | Lower Tier** | Upper Tier** | |
| | February | 5.06 | 11.47 | 7.87 |
| | March | 5.07 | 11.39 | 7.79 |
| | April | 5.07 | 11.52 | 7.86 |
| | May | 5.13 | 11.55 | 7.89 |
| | June | 5.15 | 11.60 | 7.99 |
| | July | 5.19 | R11.59 | 8.04 |
| | August | ***5.18 | ***11.62 | ***8.03 |

Crude Oil Wellhead Price



*See Explanatory Note 14. **See definitions. ***Preliminary figure based on early reports. R=Revised data.
Sources: January 1974 through January 1976—FEA Crude Petroleum Production Monthly Report; February 1976 forward—FEA 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 |
| | AVERAGE | 62 | 16 | 8 | 13 |
| 1976 | January | 54 | 21 | 10 | 15 |
| | | Lower Tier | | Upper Tier | |
| | February | 56 | 30 | — | 14 |
| | March | 57 | 29 | — | 14 |
| | April * | 57 | 29 | — | 15 |
| | May | 57 | 29 | — | 14 |
| | June | 56 | 29 | — | 15 |
| | July | 56 | 30 | — | 14 |
| | August ** | 56 | 30 | — | 14 |

*Totals do not add to 100 due to rounding.

**Preliminary.

Sources: January 1975 through January 1976—FEA Crude Petroleum Production Monthly Report; February 1976 forward—FEA Domestic Crude Oil Purchasers Report for Lower Tier percentages, FEA estimates for Upper Tier and Stripper percentages.

Entitlement Prices*

| | | Dollars |
|------|-----------|---------|
| 1974 | November | 5.00 |
| | December | 5.00 |
| 1975 | January | 6.00 |
| | February | 6.75 |
| | March | 7.31 |
| | April | 7.29 |
| | May | 7.39 |
| | June | 7.82 |
| | July | 8.13 |
| | August | 8.31 |
| | September | 8.31 |
| | October | 8.62 |
| | November | 8.94 |
| | December | 8.55 |
| 1976 | January | 8.09 |
| | February | 7.85 |
| | March | 7.89 |
| | April | 7.85 |
| | May | 7.82 |
| | June | 7.91 |
| | July | 7.80 |
| | August | 8.02 |

*See definitions

Source: FEA.

Refiner Acquisition Cost of Crude Petroleum

| | | Domestic * | Imported** | Composite |
|------|----------------|--------------------|--------------|--------------|
| | | Dollars per barrel | | |
| 1974 | January | 6.72 | 9.59 | 7.46 |
| | February | 7.08 | 12.45 | 8.57 |
| | March | 7.05 | 12.73 | 8.68 |
| | April | 7.21 | 12.72 | 9.13 |
| | May | 7.26 | 13.02 | 9.44 |
| | June | 7.20 | 13.06 | 9.45 |
| | July | 7.19 | 12.75 | 9.30 |
| | August | 7.20 | 12.68 | 9.17 |
| | September | 7.18 | 12.53 | 9.13 |
| | October | 7.26 | 12.44 | 9.22 |
| | November | 7.46 | 12.53 | 9.41 |
| | December | 7.39 | 12.82 | 9.28 |
| | AVERAGE | 7.18 | 12.52 | 9.07 |
| 1975 | 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 |
| | AVERAGE | 8.39 | 13.93 | 10.38 |
| 1976 | 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 | R8.62 | R13.41 | R10.66 |
| | June | R8.60 | R13.48 | 10.88 |
| | July | 8.67 | 13.50 | 10.90 |
| | August | ***8.68 | ***13.67 | ***10.80 |

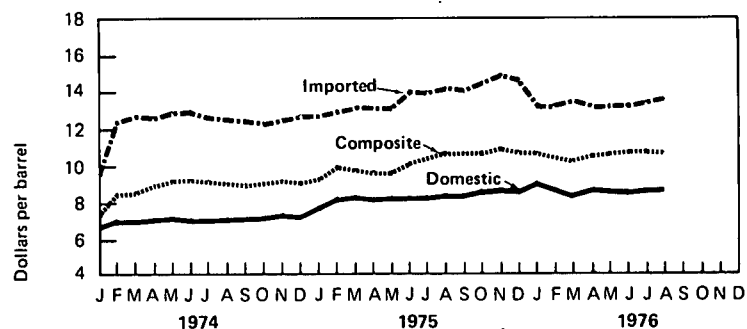
*See Explanatory Note 14.

**See Explanatory Note 15.

***Preliminary data.

Source: FEA.

Crude Oil Refiner Acquisition Cost



Crude Oil (Continued)

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

| | | Algeria | Canada | Indonesia | Iran | Nigeria | Saudi Arabia | U.A. Emirates | Venezuela |
|------|-----------|--------------------|--------|-----------|-------|---------|--------------|---------------|-----------|
| | | Dollars per barrel | | | | | | | |
| 1974 | January | NA | 6.70 | NA | 8.53 | 12.13 | NA | NA | 10.28 |
| | February | NA | 10.90 | NA | 12.11 | 12.74 | NA | NA | 11.31 |
| | March | NA | 11.14 | 12.13 | 13.02 | 13.26 | NA | NA | 11.78 |
| | April | 13.63 | 11.02 | 12.49 | 12.83 | 13.67 | 11.59 | NA | 11.38 |
| | May | 14.67 | 11.47 | 12.95 | 13.84 | 13.83 | 11.53 | NA | 11.28 |
| | June | 14.43 | 12.56 | 13.21 | 13.44 | 13.03 | 11.32 | 13.06 | 10.39 |
| | July | 13.65 | 12.65 | 13.77 | 13.02 | 12.75 | 11.97 | 12.34 | 10.64 |
| | August | 13.96 | 12.49 | 14.38 | 12.31 | 12.70 | 12.16 | 12.69 | 11.20 |
| | September | 13.83 | 12.51 | 13.42 | 11.87 | 12.28 | 11.45 | NA | 11.01 |
| | October | 13.20 | 12.53 | 14.24 | 12.07 | 12.12 | 11.51 | 12.84 | 10.95 |
| | November | 13.43 | 12.33 | 13.45 | 12.15 | 12.83 | 12.15 | 13.54 | 11.15 |
| | December | 13.08 | 12.15 | 14.15 | 11.63 | 12.88 | 11.75 | 14.59 | 11.37 |
| 1975 | January | 12.72 | 12.43 | 13.30 | 12.11 | 12.07 | 12.07 | 13.14 | 11.37 |
| | February | 12.11 | 12.15 | 13.52 | 11.86 | 12.18 | 11.94 | 12.67 | 11.56 |
| | March | 12.46 | 12.79 | 13.94 | 12.08 | 12.56 | 11.78 | 13.40 | 11.66 |
| | April | 12.36 | 12.95 | 13.71 | 12.34 | 12.46 | 12.16 | 12.55 | 11.61 |
| | May | 12.41 | 12.08 | 13.71 | 11.93 | 12.34 | 12.27 | 13.29 | 11.54 |
| | June | 12.37 | 11.90 | 13.73 | 12.51 | 12.49 | 11.93 | 12.48 | 11.51 |
| | July | 12.69 | 12.15 | 13.98 | 11.83 | 12.37 | 12.08 | 12.78 | 11.46 |
| | August | 12.68 | 12.27 | 13.85 | 12.17 | 12.32 | 12.10 | 12.60 | 11.44 |
| | September | 12.52 | 12.63 | 13.75 | 11.97 | 12.42 | 12.17 | 12.49 | 11.42 |
| | October | 13.45 | 13.02 | 14.00 | 12.27 | 13.18 | 12.64 | 12.85 | 12.08 |
| | November | 13.28 | 14.00 | 13.81 | 12.47 | 13.37 | 12.58 | 13.23 | 12.38 |
| | December | 13.46 | 13.96 | 13.92 | 13.01 | 13.57 | 12.93 | 13.21 | 12.31 |
| 1976 | January | 13.56 | 12.95 | 13.89 | 13.01 | 13.61 | 13.18 | 13.50 | 11.60 |
| | February | 13.57 | 13.24 | 13.94 | 12.87 | 13.52 | 13.21 | 13.36 | 12.09 |
| | March | 13.83 | 13.30 | 13.94 | 12.77 | 13.62 | 13.18 | 13.37 | 11.71 |
| | April | 13.73 | 13.61 | 13.78 | 12.91 | 13.60 | 13.11 | 13.18 | 11.95 |
| | May | 13.47 | 13.62 | 13.84 | 12.82 | 13.62 | 13.05 | 13.39 | 11.61 |
| | June | 13.75 | 14.19 | 13.84 | 13.00 | 13.78 | 13.14 | 13.09 | 11.55 |
| | July | 13.77 | 13.79 | 13.80 | 12.76 | 13.81 | 13.02 | 13.45 | 11.44 |
| | August | 13.91 | 13.78 | 13.78 | 13.09 | 13.87 | 13.03 | 13.23 | 11.77 |

*See Explanatory Note 15.

Source: FEA.

Unrecouped Costs for Refined Products for 30 Largest Refiners

| | | Distillate * | Motor Gasoline | Aviation Jet Fuel** | Other Products | Total |
|---------------------|-----------|--------------|-------------------|---------------------------|-------------------|----------|
| Millions of dollars | | | | | | |
| 1974 | January | 116 | 91 | | 43 | 250 |
| | February | 184 | 87 | | 175 | 446 |
| | March | 198 | 85 | | 237 | 520 |
| | April | 223 | 215 | | 346 | 783 |
| | May | 261 | 255 | | 446 | 963 |
| | June | 326 | 394 | | 630 | 1,350 |
| | July | 355 | 325 | | 648 | 1,327 |
| | August | 392 | 349 | | 665 | 1,405 |
| | September | 409 | 431 | | 650 | 1,490 |
| | October | 295 | 424 | | 531 | 1,250 |
| | November | 245 | 475 | | 595 | 1,315 |
| | December | 209 | 413 | | 492 | 1,114 |
| 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 | — | ***576 | ***126 | ***365 | ***1,067 |

*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 data.

R=Revised data.

Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

| | | PURCHASES | | | SALES | | |
|-------------------------------|-----------|-------------------------------|--|--------------------|----------------------------|-------------------|----------------|
| | | From Domestic Producers | From Canadian and Mexican Sources | Total Purchases | To Industrial Users* | To Resellers** | Total Sales |
| Cents per thousand cubic feet | | | | | | | |
| 1974 | January | 24.3 | 42.7 | 25.7 | 48.1 | 55.0 | 55.1 |
| | February | 25.4 | 43.2 | 26.8 | 49.8 | 56.4 | 56.4 |
| | March | 25.7 | 43.2 | 27.0 | 50.8 | 56.9 | 56.9 |
| | April | 25.8 | 46.4 | 27.4 | 49.3 | 57.6 | 57.4 |
| | May | 25.7 | 49.3 | 27.5 | 49.9 | 58.6 | 57.9 |
| | June | 26.0 | 47.7 | 27.5 | 50.8 | 59.4 | 58.5 |
| | July | 26.3 | 58.7 | 28.6 | 52.5 | 62.0 | 61.1 |
| | August | 26.1 | 57.5 | 28.4 | 55.2 | 64.4 | 63.5 |
| | September | 27.3 | 58.8 | 29.5 | 54.7 | 65.2 | 64.3 |
| | October | 27.5 | 58.9 | 29.9 | 56.3 | 64.4 | 64.0 |
| | November | 28.5 | 70.9 | 31.7 | 58.7 | 66.8 | 66.6 |
| | December | 32.6 | 74.5 | 35.8 | 60.3 | 67.2 | 67.4 |
| 1975 | January | 29.8 | 104.0 | 35.2 | 67.6 | 71.1 | 71.4 |
| | February | 29.5 | 105.8 | 35.2 | 70.1 | 74.1 | 74.4 |
| | March | 31.6 | 102.5 | 37.0 | 70.4 | 77.8 | 77.9 |
| | April | 32.9 | 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 | 98.3 | 40.2 | 72.2 | 85.2 | 84.0 |
| | July | 36.9 | 101.1 | 41.8 | 73.9 | 84.7 | 83.6 |
| | August | 35.5 | 141.0 | 43.3 | 73.4 | 85.6 | 84.3 |
| | September | 36.5 | 141.2 | 44.5 | 72.8 | 85.9 | 84.6 |
| | October | 36.1 | 140.1 | 44.3 | 77.2 | 86.1 | 85.6 |
| | 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 |

*Represents direct sales by pipelines 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.

Source: Federal Power Commission.

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

| | | Price |
|-------------|-----------|----------------------------------|
| | | Cents per thousand cubic feet |
| 1974 | January | 113.3 |
| | February | 115.2 |
| | March | 116.9 |
| | April | 118.2 |
| | May | 119.9 |
| | June | 120.3 |
| | July | 122.0 |
| | August | 124.2 |
| | September | 125.6 |
| | October | 127.4 |
| | November | 131.4 |
| | December | 134.2 |
| 1975 | January | 137.9 |
| | February | 141.3 |
| | March | 142.7 |
| | April | 147.1 |
| | May | 150.1 |
| | June | 152.1 |
| | July | 151.1 |
| | August | 151.8 |
| | September | 155.7 |
| | October | 156.3 |
| | November | 162.3 |
| | December | 166.2 |
| 1976 | January | 167.4 |
| | February | 171.1 |
| | March | 172.9 |
| | April | 174.2 |
| | May | 176.6 |
| | June | 178.9 |
| | July | 180.2 |
| | August | 181.5 |
| | September | 186.7 |

Source: Bureau of Labor Statistics.

Utility Fossil Fuels

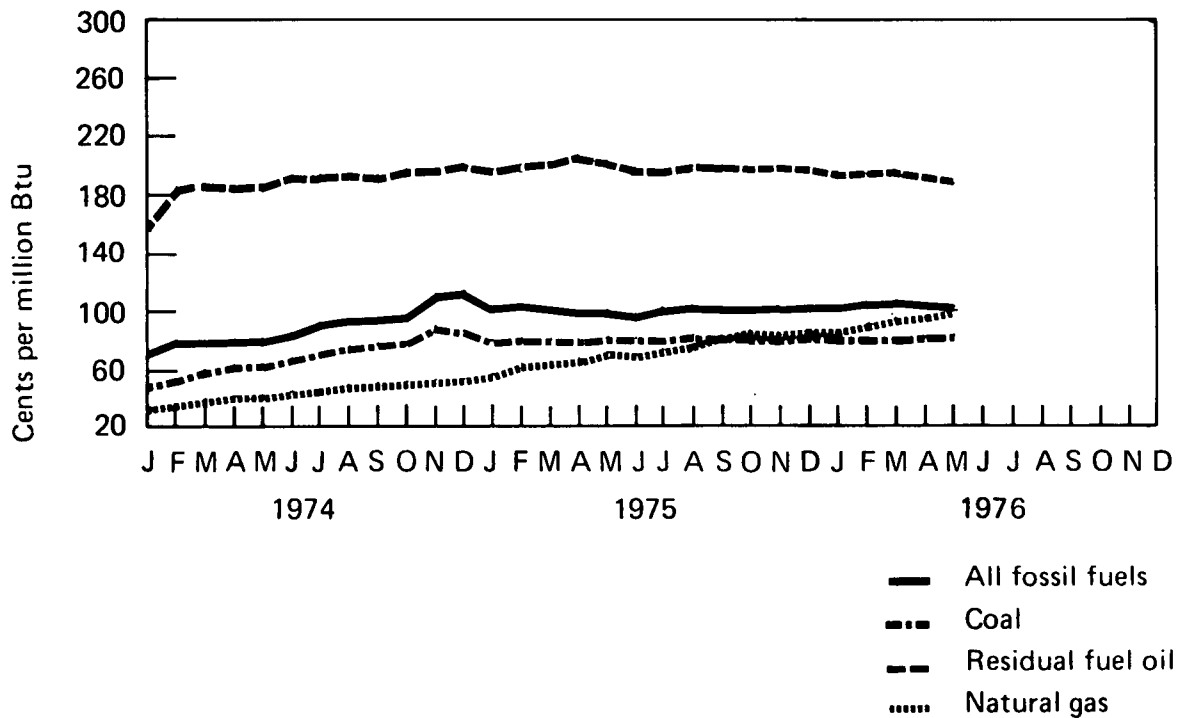
COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

All Fossil Fuels*

| Cents per million Btu | | | | 1975 | | | | | | 1976 | | | | |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Region | MAY | JUNE | JULY | AUG | SEPT, | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | |
| New England | 190.5 | 192.7 | 189.5 | 188.0 | 182.9 | 182.3 | 181.2 | 177.6 | 181.3 | 184.6 | 182.3 | 184.3 | 174.6 | |
| Middle Atlantic | 138.5 | 140.4 | 154.5 | 144.5 | 132.7 | 133.7 | 140.8 | 140.8 | 143.6 | 142.2 | 136.8 | 136.9 | 136.6 | |
| East North Central | 87.4 | 87.5 | 89.2 | 90.1 | 88.2 | 87.0 | 89.5 | 92.6 | 89.9 | 90.0 | 88.3 | 91.3 | 92.1 | |
| West North Central | 60.3 | 62.8 | 63.0 | 62.7 | 63.9 | 62.6 | 62.5 | 65.7 | 72.7 | 67.4 | 67.5 | 67.2 | 68.9 | |
| South Atlantic | 120.1 | 122.5 | 126.8 | 125.2 | 124.4 | 118.4 | 117.0 | 121.3 | 122.0 | 122.7 | 118.3 | 119.2 | 120.0 | |
| East South Central | 84.8 | 85.3 | 86.2 | 84.5 | 85.2 | 83.8 | 84.5 | 85.5 | 88.5 | 88.0 | 87.4 | 90.4 | 90.9 | |
| West South Central | 72.9 | 71.2 | 76.0 | 77.5 | 79.1 | 79.6 | 77.0 | 82.8 | 88.0 | 88.2 | 91.7 | 93.5 | 94.6 | |
| Mountain | 52.1 | 50.9 | 51.8 | 50.4 | 55.0 | 50.1 | 52.3 | 55.6 | 50.4 | 48.3 | 58.4 | 56.1 | 50.1 | |
| Pacific | 187.3 | 154.5 | 147.1 | 171.3 | 174.5 | 177.2 | 206.6 | 222.7 | 214.0 | 206.5 | 211.3 | 196.2 | 180.3 | |
| NATIONAL AVG. | 101.0 | 99.3 | 102.5 | 103.8 | 103.7 | 101.2 | 102.4 | 106.9 | 107.3 | 107.6 | 107.8 | 106.4 | 105.8 | |

*See Explanatory Note 16.

National Average



Coal

| Cents per million Btu Region | 1975 | | | | | | | | 1976 | | | | |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY |
| New England | 125.7 | 116.5 | 119.2 | 127.3 | 120.4 | 128.7 | 127.6 | 120.8 | 124.2 | 122.7 | 119.4 | 124.8 | 127.0 |
| Middle Atlantic | 101.7 | 101.6 | 105.5 | 103.8 | 98.6 | 101.8 | 106.1 | 104.0 | 102.8 | 103.4 | 101.7 | 100.2 | 101.7 |
| East North Central | 82.0 | 82.4 | 82.3 | 84.3 | 83.4 | 82.1 | 83.8 | 85.7 | 83.1 | 83.1 | 82.7 | 85.0 | 86.8 |
| West North Central | 57.7 | 58.9 | 60.8 | 60.7 | 61.3 | 61.2 | 60.6 | 58.2 | 59.2 | 60.2 | 62.3 | 64.1 | 65.8 |
| South Atlantic | 98.8 | 98.4 | 101.6 | 101.4 | 102.4 | 98.6 | 98.5 | 100.1 | 98.3 | 99.2 | 99.7 | 100.8 | 100.8 |
| East South Central | 81.5 | 80.5 | 79.5 | 79.1 | 80.8 | 80.7 | 82.3 | 81.9 | 83.9 | 83.5 | 82.6 | 83.4 | 85.1 |
| West South Central | 21.0 | 21.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 |
| Mountain | 31.1 | 31.0 | 33.1 | 32.2 | 32.8 | 31.7 | 33.5 | 36.1 | 34.1 | 33.0 | 42.4 | 34.6 | 32.2 |
| Pacific | 57.0 | 58.4 | 58.2 | 58.8 | 58.9 | 58.4 | 59.5 | 58.9 | 72.7 | 76.0 | 74.5 | 75.5 | 75.7 |
| NATIONAL AVG. | 81.8 | 81.4 | 80.8 | 82.1 | 82.1 | 81.5 | 81.7 | 82.2 | 80.2 | 81.4 | 83.3 | 83.7 | 84.6 |

Residual Fuel Oil*

| Cents per million Btu Region | 1975 | | | | | | | | 1976 | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY |
| New England | 200.1 | 201.7 | 196.3 | 192.6 | 187.9 | 184.1 | 184.8 | 181.0 | 182.5 | 185.4 | 183.5 | 185.7 | 170.0 |
| Middle Atlantic | 200.1 | 201.5 | 200.4 | 199.3 | 191.2 | 192.2 | 191.5 | 191.6 | 191.3 | 179.9 | 191.8 | 197.1 | 190.3 |
| East North Central | 157.0 | 168.3 | 185.2 | 191.7 | 205.9 | 189.7 | 211.4 | 192.4 | 197.0 | 193.4 | 200.9 | 198.4 | 202.8 |
| West North Central | 163.9 | 165.5 | 161.1 | 157.5 | 150.3 | 153.5 | 161.6 | 157.1 | 173.1 | 162.2 | 153.4 | 153.0 | 145.6 |
| South Atlantic | 187.7 | 189.3 | 185.4 | 183.8 | 181.5 | 180.7 | 179.8 | 173.0 | 174.6 | 177.5 | 178.6 | 179.6 | 171.3 |
| East South Central | 161.0 | 165.5 | 167.8 | 175.0 | 174.4 | 175.5 | 180.4 | 171.4 | 172.8 | 173.7 | 174.3 | 176.0 | 170.9 |
| West South Central | 177.7 | 182.0 | 186.2 | 185.2 | 174.4 | 168.4 | 189.2 | 187.9 | 195.3 | 190.7 | 183.0 | 187.4 | 182.0 |
| Mountain | 198.0 | 199.0 | 209.1 | 221.3 | 223.7 | 210.3 | 195.8 | 202.3 | 206.8 | 203.5 | 205.0 | 220.8 | 206.4 |
| Pacific | 260.6 | 245.6 | 253.8 | 258.1 | 257.9 | 255.5 | 261.9 | 259.7 | 246.6 | 240.7 | 240.3 | 232.7 | 229.2 |
| NATIONAL AVG. | 205.6 | 200.0 | 198.9 | 200.8 | 200.5 | 197.0 | 200.5 | 198.1 | 194.1 | 195.4 | 197.7 | 196.7 | 188.1 |

Natural Gas**

| Cents per million Btu Region | 1975 | | | | | | | | 1976 | | | | |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY |
| New England | 110.8 | 121.7 | 122.1 | 154.1 | 137.7 | 135.6 | 133.8 | 157.7 | 166.1 | 166.1 | 151.6 | 134.5 | 144.0 |
| Middle Atlantic | 98.3 | 92.7 | 91.2 | 87.6 | 87.6 | 90.5 | 103.1 | 105.0 | 107.8 | 195.8 | 106.3 | 150.3 | 111.5 |
| East North Central | 120.8 | 111.6 | 103.4 | 104.6 | 114.0 | 120.2 | 128.3 | 136.8 | 126.8 | 124.4 | 125.0 | 127.7 | 135.3 |
| West North Central | 58.6 | 58.1 | 59.2 | 56.9 | 57.8 | 55.4 | 55.8 | 55.9 | 56.1 | 61.6 | 61.5 | 68.0 | 73.4 |
| South Atlantic | 71.2 | 72.2 | 68.9 | 69.7 | 76.4 | 79.6 | 78.5 | 80.8 | 75.1 | 82.0 | 75.5 | 78.2 | 84.0 |
| East South Central | 76.4 | 77.0 | 91.0 | 95.9 | 110.3 | 105.5 | 120.2 | 146.6 | 156.6 | 157.4 | 147.5 | 148.0 | 128.6 |
| West South Central | 71.3 | 69.2 | 72.7 | 75.7 | 77.9 | 79.7 | 77.6 | 80.3 | 83.5 | 87.3 | 90.8 | 92.3 | 94.0 |
| Mountain | 68.1 | 69.6 | 71.8 | 71.1 | 78.6 | 82.0 | 86.2 | 90.4 | 86.2 | 85.5 | 87.4 | 90.4 | 87.4 |
| Pacific | 82.4 | 84.1 | 89.7 | 111.1 | 115.2 | 122.4 | 136.9 | 151.1 | 141.2 | 151.6 | 149.5 | 152.6 | 147.3 |
| NATIONAL AVG. | 72.6 | 71.3 | 74.8 | 79.1 | 83.8 | 85.5 | 83.5 | 86.1 | 86.5 | 92.1 | 94.9 | 97.4 | 100.8 |

*See Explanatory Note 16.

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

Source: Federal Power Commission.

Utility Fossil Fuels (Continued)

U.S. Average Delivered Prices of Coal at Utilities

| | | Contract | Spot |
|------|-----------|--------------------------|-------|
| | | In dollars per short ton | |
| 1974 | January | 9.83 | 17.02 |
| | February | 10.40 | 20.57 |
| | March | 10.63 | 22.54 |
| | April | 11.28 | 23.70 |
| | May | 11.80 | 24.21 |
| | June | 11.87 | 25.84 |
| | July | 12.05 | 27.99 |
| | August | 12.50 | 28.87 |
| | September | 12.89 | 30.64 |
| | October | 13.30 | 30.67 |
| | November | 14.16 | 31.95 |
| | December | 14.20 | 31.05 |
| 1975 | 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 |
| 1976 | 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 |

Source: Federal Power Commission.

Petroleum Consumption

Total petroleum consumption during the first half of 1976 by the nations belonging to the International Energy Agency (IEA) increased 2.8 percent over the consumption level for the comparable period in 1975. The increase occurred mostly in the larger, more industrialized nations. (The "other IEA" figure shows a decrease of 6.7 percent.) Japan used 6.8 percent more petroleum between January and July than during the same period a year ago, and West Germany used 8.5 percent more. Between January and August, France* consumed 10.1 percent more petroleum than in the same months of 1975.

Crude Oil Production

Total world crude oil production in August 1976 was 57.2 million barrels per day, 1.4 percent higher than in July, and 3.4 percent greater than in August 1975. The largest production increases during the month were in Iraq (where liftings rose by 250,000 barrels per day) and Iran (where production was 240,000 barrels per day higher). Saudi Arabia, on the other hand, reduced production by 220,000 barrels per day. Member nations of the Organization of Petroleum Exporting Countries accounted for 53.2 percent of total world production during August and 67.7 percent of free world production.

*Not a member of IEA.

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

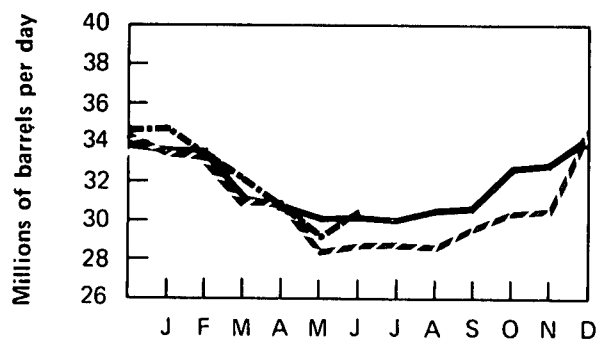
| | | Total IEA* | Japan** | West Germany | France*** | United Kingdom | Canada | Italy† | Other IEA†† |
|------------------------------|------------------------|------------|---------|--------------|-----------|----------------|--------|--------|-------------|
| Thousands of barrels per day | | | | | | | | | |
| 1974 | Jan | 33,700 | 4,273 | 2,556 | 2,523 | 2,045 | 1,823 | 1,755 | R3,962 |
| | Feb | 33,700 | 4,709 | 1,969 | 2,389 | 2,127 | 1,863 | 1,760 | R3,906 |
| | Mar | 31,200 | 4,508 | 2,173 | 2,249 | 2,133 | 1,659 | 1,579 | R3,044 |
| | Apr | 30,600 | 3,805 | 2,539 | 1,970 | 1,899 | 1,560 | 1,421 | R3,448 |
| | May | 30,000 | 3,718 | 2,403 | 1,915 | 1,704 | 1,577 | 1,349 | R3,523 |
| | June | 30,100 | 3,710 | 2,414 | 2,103 | 1,545 | 1,455 | 1,314 | R3,545 |
| | July | 30,000 | 3,574 | 2,548 | 1,703 | 1,531 | 1,534 | 1,368 | R3,096 |
| | Aug | 30,600 | 3,787 | 2,476 | 1,506 | 1,513 | 1,463 | 1,287 | R3,524 |
| | Sept | 30,700 | 3,868 | 2,473 | 1,996 | 1,663 | 1,415 | 1,527 | R3,730 |
| | Oct | 32,800 | 3,843 | 2,613 | 2,045 | 2,049 | 1,680 | 1,569 | R3,996 |
| | Nov | 33,000 | R4,076 | 2,432 | 2,260 | 2,108 | 1,714 | 1,580 | R3,739 |
| | Dec | 34,300 | 4,401 | 2,261 | 2,492 | 1,983 | 1,831 | 1,753 | R4,058 |
| | AVG. | 31,775 | 4,019 | 2,408 | 2,094 | 1,857 | 1,630 | 1,521 | R3,687 |
| 1975 | Jan | 33,600 | 3,850 | 2,183 | 2,190 | 1,981 | 1,691 | 1,792 | R4,120 |
| | Feb | 33,600 | 4,242 | 2,455 | 2,243 | 1,906 | 1,872 | 1,767 | R4,274 |
| | Mar | 31,000 | 3,978 | 2,234 | 1,952 | 1,731 | 1,558 | 1,558 | R3,625 |
| | Apr | 30,800 | 3,448 | 2,431 | 2,202 | 1,826 | 1,592 | 1,530 | R3,932 |
| | May | 28,200 | 3,296 | 2,253 | 1,640 | 1,482 | 1,474 | 1,174 | R3,403 |
| | June | 28,800 | 3,325 | 2,106 | 1,642 | 1,414 | 1,550 | 1,289 | R3,505 |
| | July | 28,900 | 3,437 | 2,319 | 1,491 | 1,322 | 1,537 | 1,234 | R3,289 |
| | Aug | 28,700 | 3,397 | 2,360 | 1,300 | 1,208 | 1,444 | 1,105 | R3,419 |
| | Sept | 29,800 | 3,569 | 2,309 | 1,785 | 1,502 | 1,474 | 1,465 | R3,712 |
| | Oct | 30,500 | 3,584 | 2,328 | 1,914 | 1,704 | R1,555 | 1,679 | R3,306 |
| | Nov | 30,600 | 3,940 | 2,361 | 2,074 | 1,723 | 1,577 | 1,448 | R3,830 |
| | Dec | 34,600 | 4,519 | 2,502 | 2,653 | 1,821 | 1,855 | 1,600 | R4,316 |
| | AVG. | 30,745 | 3,712 | 2,319 | 1,921 | 1,613 | 1,593 | 1,468 | R3,749 |
| 1976 | Jan | 34,700 | 4,143 | 2,459 | R2,432 | R1,680 | 1,748 | 1,748 | R4,378 |
| | Feb | 33,400 | 4,382 | 2,490 | R2,492 | R1,866 | 1,730 | 1,713 | R3,879 |
| | Mar | 32,300 | 4,286 | 2,742 | R2,372 | R1,879 | 1,788 | 1,621 | R2,745 |
| | Apr | 30,900 | R3,806 | 2,332 | R2,117 | R1,661 | 1,512 | 1,409 | 3,583 |
| | May | 29,200 | R3,440 | 2,314 | R1,796 | R1,418 | 1,532 | 1,238 | 3,261 |
| | June | 30,500 | 3,635 | 2,388 | R1,604 | 1,420 | 1,550 | 1,208 | 3,463 |
| | July | NA | 3,607 | 2,588 | 1,624 | 1,338 | 1,551 | 1,289 | NA |
| | Aug | NA | NA | NA | 1,669 | NA | NA | 1,247 | NA |
| | AVG. (Year to date) | 31,829 | 3,897 | 2,474 | 2,011 | 1,607 | 1,630 | 1,433 | 3,548 |

Note: All recent figures are estimates.

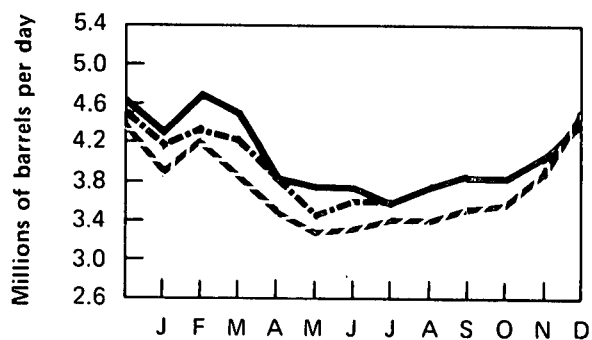
*The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United 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. Source: Central Intelligence Agency.

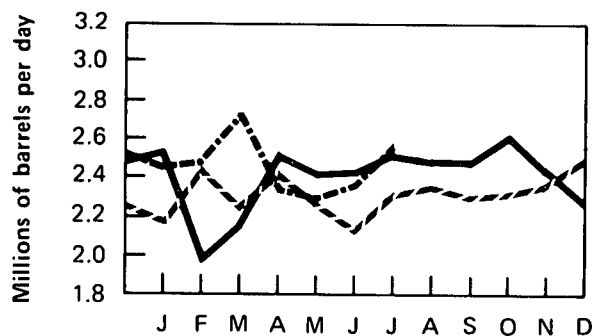
Total IEA



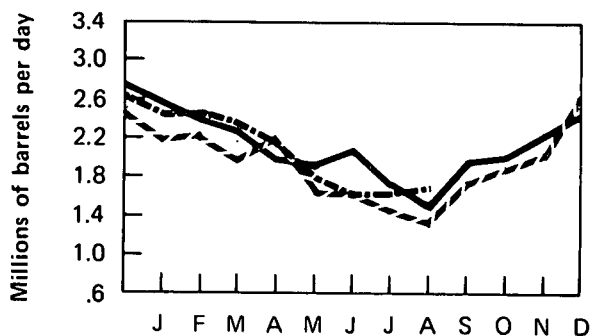
Japan*



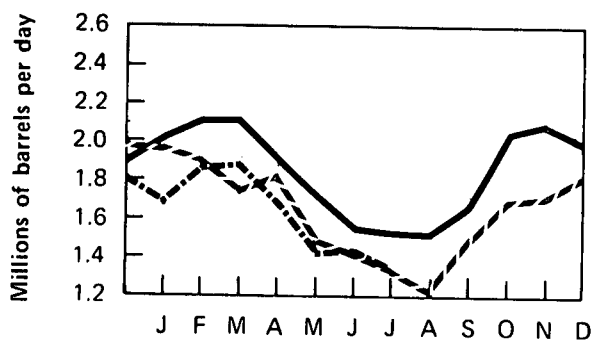
West Germany



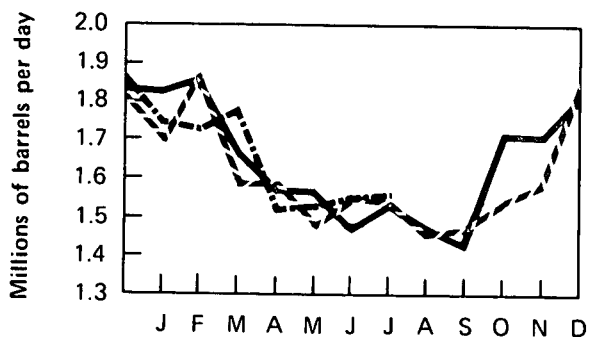
France**



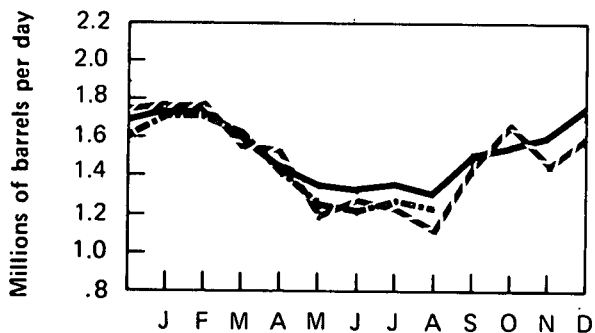
United Kingdom



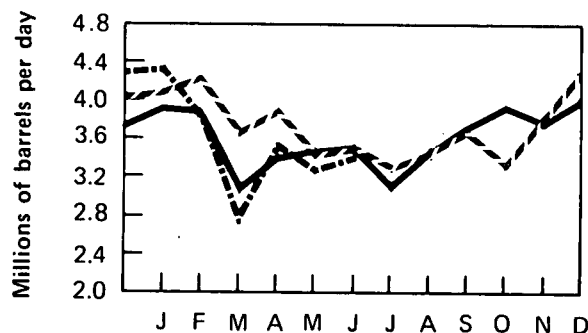
Canada



Italy***



Other IEA†



*Excludes liquefied petroleum gases and condensates.

**Not a member of IEA.

***Principal products only.

†Excludes the United States.

— 1974
-- 1975
... 1976

Crude Oil Production

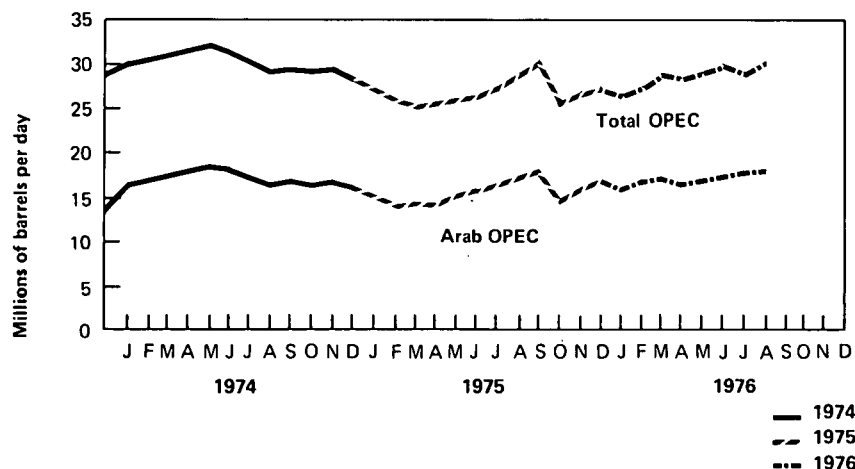
Crude Oil Production for Major Petroleum Exporting Countries – August 1976

| Country | Production | | | | Production Capacity | Production Shut in |
|-----------------------------------|------------------------------|---------------|---------------|---------------|---------------------|--------------------|
| | 1973 | 1974 | 1975 | 1976 August** | August | August |
| | Thousands of barrels per day | | | | | Percent |
| Algeria | 1,070 | 960 | 930 | 1,000 | 1,000 | 0 |
| Iraq | 2,015 | 1,975 | 2,250 | 2,050 | 3,000 | 31.7 |
| Kuwait* | 3,020 | 2,545 | 2,100 | 1,920 | 3,500 | 45.1 |
| Libya | 2,175 | 1,520 | 1,520 | 2,060 | 2,500 | 17.6 |
| Qatar | 570 | 520 | 440 | 520 | 700 | 25.7 |
| Saudi Arabia* | 7,600 | 8,480 | 7,080 | 8,760 | 11,500 | 23.8 |
| United Arab Emirates | 1,530 | 1,680 | 1,700 | 1,970 | 2,380 | 17.2 |
| Subtotal: Arab OPEC | 17,980 | 17,680 | 16,020 | 18,280 | 24,580 | 25.6 |
| Ecuador | 210 | 175 | 160 | 200 | 200 | 0 |
| Gabon | 150 | 200 | 220 | 220 | 250 | 12.0 |
| Indonesia | 1,340 | 1,375 | 1,310 | 1,510 | 1,700 | 11.2 |
| Iran | 5,860 | 6,020 | 5,350 | 5,820 | 6,500 | 10.5 |
| Nigeria | 2,055 | 2,255 | 1,790 | 2,000 | 2,500 | 20.0 |
| Venezuela | 3,365 | 2,975 | 2,350 | 2,440 | 2,700 | 9.6 |
| Subtotal: Non-Arab OPEC | 12,980 | 13,000 | 11,180 | 12,190 | 13,850 | 12.0 |
| Total: OPEC | 30,960 | 30,680 | 27,200 | 30,470 | 38,430 | 20.7 |
| Canada | 1,800 | 1,695 | 1,470 | 1,235 | 1,800 | 31.3 |
| Mexico | 465 | 580 | 720 | 850 | 850 | 0 |
| Total: OPEC, Canada Mexico | 33,225 | 32,955 | 29,390 | 32,555 | 41,080 | 20.7 |
| Total World | 55,740 | 55,885 | 53,160 | 57,220 | | |

*Includes about one-half of Neutral Zone production which amounted to approximately 460,000 barrels per day in August. **Estimate.

Sources: Central Intelligence Agency 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) or (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

The volume of crude oil flowing out of the ground. Domestic 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 Imports

The monthly volume of crude oil imported which is reported by receiving refineries, including crude oil entering the U.S. through pipelines from Canada.

Crude Oil Input to Refineries

Total crude oil used as input for the refining process, less crude oil lost or used for refinery fuel.

Crude Oil Stocks

Stocks held at refineries and at pipeline terminals.

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 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.

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 FEA. 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 FEA, 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 FEA, is the exact differential as reported for the month between the weighted average cost per barrel to refiners of "old" oil and of imported crude oil, less 21 cents, such cost to be equivalent to the delivered cost to the refinery.

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 crude 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) \$1.35 per barrel.

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 20 or more States.

Motor Gasoline Production

Total production of motor gasoline by refineries, measured at 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.

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.

Power Ascension Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but which 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.

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

Property means the right to produce domestic crude oil, which arises from a lease or from a fee interest.

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, natural gas, plant condensate, and unfinished oils. Included are imports of fuels into bonded storage and receipts from U.S. territories.

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).

Stripper Well Lease

A property whose average daily production of crude oil (excluding condensate recovered in nonassociated production) per well did not exceed 10 barrels per day during any preceding calendar year 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

New crude oil and crude oil produced from a stripper well lease.

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) \$1.32 per barrel.

Well

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. 1975 and 1976 electricity imports were estimated on the basis of imports levels during 1974.

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. 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 NGL stock series shown in this volume includes liquids held as stocks at both natural gas processing plants and at refineries.

5. The petroleum short-term demand forecasting model uses historical consumption data to construct a regression equation for each of eight major petroleum products. 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 disposable personal income and gross national product (GNP), (2) real product prices, (3) variables representing the effects of weather and other seasonal variations on demand, and (4) other factors relevant to a particular product.

The assumptions underlying the current short-term forecast are:

1. Normal weather.
2. Real GNP growth rate of 6.5 percent for 1976.
3. Implementation of the Energy Policy and Conservation Act and the Energy Conservation and Production Act; specifically, the composite price of domestic crude oil is set at \$7.66 per barrel beginning February 1976. This price ceiling is permitted to rise at 10 percent per year. Furthermore, stripper oil and tertiary oil is not controlled.
4. Elimination of the \$2-per barrel crude oil import fee beginning in January 1976.
5. The price of imported oil is assumed to be \$13.40, \$13.98, and \$14.73 for the years 1976, 1977, and 1978, respectively.

The short-term projections are periodically revised to incorporate observed weather conditions and actual values of macroeconomic and other explanatory variables as they become available. This "revised forecast" is termed the "backcast." On page 47 in this issue of the *Monthly Energy Review*, the backcast is solved for December 1975.

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.

6. 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.

7. 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.

8. Bituminous coal and lignite consumption as reported by the Bureau of Mines are derived 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 the Bureau of Mines from Association of American Railroads reports of carloadings.

9. Cooling degree-days can be used as a measurement of energy consumption by air-conditioning systems. 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. Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration from approximately 200 weather stations around the country. These data are used to calculate statewide cooling degree-day averages based on the population of the area surrounding each weather station. The population-weighted State figures are aggregated into Petroleum Administration for Defense Districts and the national average, also using a population weighting scheme.

10. 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 latter 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 section on Units of Measure.

11. The units used to describe power generation at nuclear plants are all 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 megawatt hours), multiply the average power level (in megawatts) 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).

12. 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.

13. 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 truck stops 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.

14. The domestic crude petroleum wellhead price represents the first sale price for crude oil and lease conden-

sates. 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.

15. 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 cost incurred in purchasing and shipping crude oil to the United States.

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.

16. 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_3O_8) | <i>contains</i> | 0.769 metric tons of uranium |
| 1 short ton (UF_6) | <i>contains</i> | 0.613 metric tons of uranium |
| 1 metric ton (UF_6) | <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 | 5.5061 million Btu/barrel |
| Gasoline | 5.248 million Btu/barrel |
| Jet Fuel, average | 5.600 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 4.024 million Btu/barrel

Natural gas

| | |
|-----|----------------------|
| Wet | 1,097 Btu/cubic foot |
| Dry | 1,024 Btu/cubic foot |

Coal

| | |
|------------------------|-----------------------------|
| Bituminous and lignite | |
| Production | 23.73 million Btu/short ton |
| Consumption | 23.07 million Btu/short ton |
| Anthracite | 25.40 million Btu/short ton |

Electricity Conversion Heat Rates

Fossil fuel steam-electric

| | |
|------|--------------------------|
| Coal | 10,176 Btu/kilowatt hour |
| Gas | 10,733 Btu/kilowatt hour |
| Oil | 10,826 Btu/kilowatt hour |

Nuclear steam-electric 10,660 Btu/kilowatt hour

Hydroelectric 10,389 Btu/kilowatt hour

Electricity Consumption 3,412 Btu/kilowatt hour

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