

Energy Statistics

A SUPPLEMENT TO THE
SUMMARY OF NATIONAL
TRANSPORTATION
STATISTICS



AUGUST 1975

FINAL REPORT

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INTRODUCTION

The recent national interest in energy problems has created a surge in the demand for quantitative data on many facets of the energy situation. In partial answer to meet that demand the Department of Transportation has instituted a program of publishing relevant energy statistics. One of the products of this program is the annual publication: Energy Statistics - A Supplement to the Summary of National Transportation Statistics. The 1975 edition, essentially an updated version of the 1974 edition, with a few additions, emphasizes statistics relating to (1) the role of transportation in the energy supply infrastructure, and (2) transportation as a consumer of energy, although additional data relating to energy are included as well.

The statistics recorded here have been gathered from the Department of Transportation, as well as a wide variety of other government and private sources, including the Interstate Commerce Commission, the U.S. Department of the Interior, and the American Petroleum Institute. Divided into three parts, the report displays selected time-series data on (1) energy transport, (2) reserves, production, and refining, and (3) energy consumption. A few of the tables include time-series through the year 1969 only. The most recent data which are readily available have been included in all cases.

The first section, Part 1, includes financial, inventory, and activity statistics related to the transportation of energy commodities via pipeline, water, truck, and rail. A few examples: Table 1-1 presents data on revenues, expenses, and income of the U.S. oil pipeline companies, 1955-1973; Table 1-9 shows the annual growth of the world tank ship fleet, 1964-1974; Table 1-19 shows the amount of petroleum and coal transported in domestic and foreign waterborne commerce, 1973.

Part 2 begins with estimates of U.S. proved crude oil reserves. Proved reserves are *not* the same as "oil-in-place," or the amount of oil actually in the ground. As stated in Appendix B, "Proved reserves of crude oil as of December 31 of any given year are the estimated quantities of all liquids statistically reported as crude oil which geological and engineering data demonstrate with reasonable certainty to be recoverable in the future from known reservoirs under existing economic and operating conditions."¹ This means, for example, that all else being equal an increase in the per barrel price of crude oil will lead to an increase in the estimate of proved crude oil reserves.

Part 2 also includes time-series on natural gas reserves and production, U.S. refinery capacity and yields. Table 2-10, for example, shows that the average gasoline yield in 1974 was 45.93% of all crude oil inputs to U.S. refineries.

Part 3 contains U.S. energy consumption statistics. Included in Tables 3-1 through 3-29 are estimates of the fuel and oil costs for the various modes of transportation. The data in Tables 3-30 through 3-39 have been compiled by the U.S. Department of the Interior, which periodically reports statistics for the following consuming sectors: (1) household and commercial, (2) industrial, (3) transportation, (4) electric utilities, (5) miscellaneous. Interior's transportation figures cannot be completely disaggregated by mode, but it is possible to break them down by fuel type. (See Table 3-35.) The Interior Department's statistics are based on fuel production and sales data, rather than actual consumption by the various modes of transportation. This means that Interior's estimates include the losses from spillage and evaporation which occur between the refinery and the consumer.

¹ American Petroleum Institute, *Standard Definitions for Petroleum Statistics*, July 1, 1969, p. 2.

Transportation fuel consumption data disaggregated by mode, assembled from a number of sources, are also presented in Part 3. Tables 3-41 through 3-46 contain data from the Federal Highway Administration, the Civil Aeronautics Board, the Association of American Railroads, the American Petroleum Institute, and the American Transit Association. Because these statistics do not include the losses which occur between the refinery and the consumer, they are *not* consistent with Interior's estimates. It is also important to point out that Interior includes military transportation in the transportation sector, while Tables 3-40 through 3-46 deal with commercial and private transportation only. Tables 3-47 through 3-56 contain 1972 fuel and energy statistics (i.e., production, consumption and processing) for the nine regions of the U.S. shown in Figure 21.

Energy Intensiveness data, projected for 1974-1980 and given in Appendix A, was obtained from the joint DOT/NASA reference paper titled, Transportation Vehicle Energy Intensities.

PART 1. ENERGY TRANSPORT

Table 1-1. Revenues, Expenses, and Income of U.S. Oil Pipeline Companies,¹ 1955 - 1973

| As of Dec. 31 | Number of Companies | Operating Revenues (\$000) | Operating Expenses (\$000) | Operating Ratio (%) | Operating ² Income (\$000) | Net ² Income (\$000) |
|-------------------|---------------------------|----------------------------------|----------------------------------|---------------------------|---|---------------------------------------|
| 1973 ³ | 100 | 1,445,826 | 843,816 | 58.36 | 602,011 | 374,734 |
| 1972 | 99 | 1,337,861 | 780,162 | 58.31 | 557,699 | 331,700 |
| 1971 | 99 | 1,249,299 | 712,178 | 57.01 | 537,121 | 313,560 |
| 1970 | 101 | 1,188,254 | 672,336 | 56.58 | 515,918 | 311,852 |
| 1969 | 99 | 1,103,258 | 642,703 | 58.25 | 460,555 | 272,717 |
| 1968 | 97 | 1,022,962 | 597,023 | 58.36 | 425,939 | 260,760 |
| 1967 | 90 | 994,520 | 564,420 | 56.75 | 430,099 | 252,656 |
| 1966 | 87 | 941,138 | 533,043 | 56.64 | 408,096 | 236,001 |
| 1965 | 89 | 903,817 | 515,113 | 56.99 | 388,705 | 217,761 |
| 1964 | 90 | 865,079 | 502,456 | 58.08 | 362,623 | 209,527 |
| 1963 | 94 | 840,260 | 439,701 | 52.09 | 232,220 | 200,770 |
| 1962 | 92 | 810,605 | 426,363 | 52.60 | 227,030 | 203,799 |
| 1961 | 89 | 786,718 | 419,854 | 53.37 | 214,616 | 180,698 |
| 1960 | 87 | 770,417 | 417,640 | 54.21 | 198,911 | 169,398 |
| 1959 | 86 | 765,232 | 406,140 | 53.07 | 211,276 | 182,815 |
| 1958 | 84 | 720,670 | 389,678 | 54.07 | 190,748 | 161,838 |
| 1957 | 82 | 729,952 | 386,661 | 52.97 | 182,392 | 159,197 |
| 1956 | 83 | 737,386 | 370,787 | 50.28 | 188,272 | 178,457 |
| 1955 | 84 | 677,605 | 346,985 | 51.21 | 176,256 | 153,334 |

¹ Includes only those companies reporting to the Interstate Commerce Commission

² Before Federal Income Tax

³ Statistics include figures for Black Mesa Pipeline, Inc. which is a coal slurry pipeline.

Source: Interstate Commerce Commission, Transport Statistics, Part 6, "Pipelines," December 31, 1972, p. 2; December 31, 1973, p. 2 and equivalent tables in earlier editions.

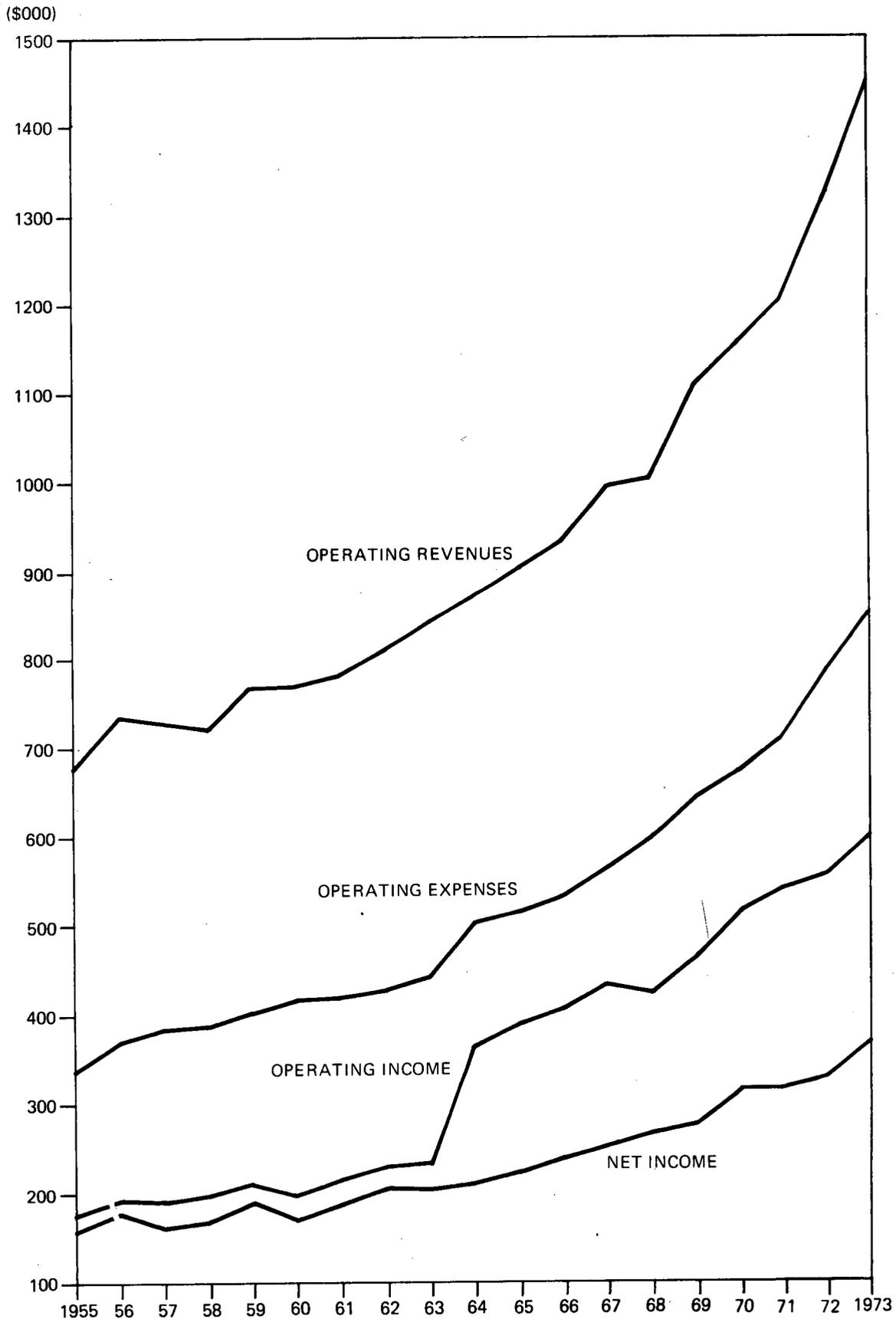


Figure 1. Revenue, Expenses, and Income of U.S. Oil Pipeline Companies, 1955 - 1973

**Table 1-2. U.S. Railroad Revenue¹ From Petroleum, By Product, 1931 - 1973
(Dollars)**

| Year | Crude Oil and Natural Gas ² | Natural Gasoline ² | Total Crude Petroleum | Gasoline | Lubricating Oils and Greases | Asphalt ³ | Liquefied Petroleum Gas ⁴ | Kerosene ⁵ | Residual and Distillate Fuel Oils | Other Refined Products | Total Petroleum Revenue | Total All Car Freight Revenue | Petroleum as Percent of All Car Freight Revenue |
|------|--|-------------------------------|------------------------|-------------------------|------------------------------|----------------------|--------------------------------------|-----------------------|-----------------------------------|------------------------|-------------------------|-------------------------------|---|
| 1973 | 9,987,000 | 3,528,000 | 13,575,000 | 7,504,000 | 50,487,000 | 32,132,000 | 94,726,000 | 1,424,000 | 71,280,000 | 43,542,000 | 314,610,000 | 14,309,000,000 | 2.20 |
| 1972 | 4,686,148 ^r | 3,901,433 | 8,587,581 ^r | 6,854,097 | 46,487,678 | 28,678,310 | 81,716,730 | 1,383,115 | 52,649,620 | 39,761,551 | 266,300,682 | 12,985,675,160 | 2.05 |
| 1971 | 2,333,112 | 3,676,734 | 6,009,846 | 7,334,632 | 44,859,176 | 24,989,600 | 81,691,506 | 1,749,033 | 47,329,830 | 35,693,287 | 249,656,910 | 12,214,179,121 | 2.04 |
| 1970 | 2,263,533 | 3,145,504 | 5,409,037 | 8,492,128 | 42,916,869 | 24,247,908 | 80,693,259 | 1,422,876 | 41,573,081 | 31,642,665 | 236,397,823 | 11,351,054,869 | 2.08 |
| 1969 | 2,513,904 | 2,890,546 | 5,404,450 | 9,263,788 | 43,974,169 | 23,221,745 | 75,785,033 | 1,402,942 | 41,168,744 | 28,919,561 | 229,140,432 | 10,801,140,820 | 2.12 |
| 1968 | 2,328,534 | 3,247,547 | 5,576,081 | 10,133,840 | 41,411,044 | 23,427,187 | 64,891,623 | 1,767,923 | 40,210,087 | 26,789,093 | 214,206,878 | 10,174,805,428 | 2.11 |
| 1967 | 2,172,837 | 2,877,254 | 5,050,091 | 11,143,676 | 39,051,762 | 22,935,995 | 56,864,348 | 2,213,875 | 37,528,512 | 25,410,724 | 200,198,983 | 9,492,109,695 | 2.11 |
| 1966 | 2,230,578 | 2,900,879 | 5,131,457 | 12,193,055 | 38,863,213 | 25,755,025 | 52,749,314 | 2,326,420 | 36,394,311 | 28,001,544 | 201,414,339 | 9,679,324,440 | 2.08 |
| 1965 | 2,411,362 | 2,725,142 | 5,136,504 | 13,843,412 | 36,837,093 | 27,607,415 | 49,023,362 | 1,674,771 | 35,701,242 | 29,400,433 | 199,224,232 | 9,225,137,234 | 2.16 |
| 1964 | 2,710,546 | 3,150,803 | 5,861,349 | 20,221,681 | 35,239,353 | 28,863,083 | 51,820,150 | 3,423,431 | 34,165,369 | 24,117,267 | 203,711,683 | 8,846,315,669 | 2.30 |
| 1963 | — | — | 3,271,938 | 19,683,062 | 34,116,473 | 24,921,815 | — | — | 26,086,628 | 99,074,625 | 207,154,541 | 8,484,598,073 | 2.44 |
| 1962 | — | — | 6,793,918 | 22,725,293 | 35,396,093 | 24,489,305 | — | — | 27,325,169 | 105,773,192 | 222,502,970 | 8,285,280,269 | 2.69 |
| 1961 | — | — | 7,993,725 | 25,946,609 | 35,134,293 | 25,522,187 | — | — | 28,805,876 | 115,062,010 | 238,464,700 | 7,988,867,744 | 2.98 |
| 1960 | — | — | 9,283,233 | 28,573,797 | 37,042,468 | 25,777,709 | — | — | 35,384,271 | 126,003,845 | 262,065,323 | 8,248,794,710 | 3.18 |
| 1959 | — | — | 8,031,497 | 32,951,690 | 39,397,252 | 28,446,696 | — | — | 42,001,187 | 130,036,781 | 280,865,103 | 8,520,061,481 | 3.30 |
| 1958 | — | — | 6,434,698 | 33,952,493 | 37,783,782 | 32,058,706 | — | — | 43,939,810 | 134,097,516 | 288,267,005 | 8,257,194,611 | 3.49 |
| 1957 | — | — | 9,081,403 | 37,782,287 | 41,121,450 | 32,303,419 | — | — | 52,207,133 | 139,092,895 | 311,588,587 | 9,119,666,885 | 3.42 |
| 1956 | — | — | 9,448,489 | 43,110,472 | 41,995,011 | 35,022,023 | — | — | 54,713,821 | 138,921,814 | 323,211,630 | 9,104,909,587 | 3.55 |
| 1955 | — | — | 11,496,624 | 49,260,244 | 42,646,316 | 34,411,621 | — | — | 56,175,591 | 128,961,328 | 322,951,724 | 8,657,476,023 | 3.78 |
| 1954 | — | — | 15,413,343 | 53,772,426 | 41,613,825 | 34,883,756 | — | — | 58,780,858 | 120,674,063 | 325,138,271 | 7,890,287,959 | 4.12 |
| 1953 | — | — | 19,541,293 | 59,133,940 | 45,179,660 | 39,724,745 | — | — | 68,723,813 | 119,881,540 | 352,184,991 | 9,031,342,777 | 3.90 |
| 1952 | — | — | 17,540,985 | 66,873,375 | 48,845,623 | 44,453,969 | — | — | 69,316,932 | 110,230,738 | 357,261,622 | 8,834,695,654 | 4.04 |
| 1951 | — | — | 17,934,308 | 67,303,933 | 51,172,812 | 41,540,490 | — | — | 73,518,096 | 99,505,747 | 350,975,386 | 8,673,404,344 | 4.05 |
| 1950 | — | — | 16,999,196 | 65,721,697 | 47,744,161 | 39,786,059 | — | — | 78,640,611 | 85,384,536 | 334,276,260 | 7,792,716,884 | 4.29 |
| 1949 | — | — | 19,138,643 | 74,720,088 | 45,033,109 | 38,038,931 | — | — | 75,359,928 | 72,254,021 | 324,544,720 | 6,985,709,676 | 4.64 |
| 1948 | — | — | 64,328,877 | 91,609,984 | 54,587,169 | 43,579,895 | — | — | 88,887,646 | 75,736,061 | 418,729,632 | 7,827,795,556 | 5.35 |
| 1947 | — | — | 39,946,626 | 89,959,774 ⁶ | 50,921,960 | 35,647,747 | — | — | 76,857,416 | 59,016,431 | 352,349,954 | 6,886,790,061 | 5.12 |
| 1946 | — | — | 19,825,442 | 130,048,773 | 42,715,165 | 27,835,316 | — | — | 55,210,341 | 4,400,807 ⁶ | 280,035,844 | 5,631,981,906 | 4.97 |
| 1945 | — | — | 59,090,840 | 210,452,636 | 54,499,016 | 24,161,108 | — | — | 126,359,677 | 5,052,786 | 480,435,063 | 6,563,299,959 | 7.32 |
| 1944 | — | — | 109,883,724 | 270,008,625 | 56,138,138 | 24,819,397 | — | — | 168,935,080 | 5,619,608 | 635,404,572 | 6,956,939,440 | 9.13 |
| 1943 | — | — | 152,407,684 | 231,248,599 | 58,003,215 | 27,299,213 | — | — | 186,079,718 | 5,851,136 | 660,889,565 | 6,748,420,895 | 9.79 |
| 1942 | — | — | 119,900,560 | 208,128,006 | 44,089,523 | 30,501,539 | — | — | 129,077,981 | 4,092,404 | 535,790,013 | 5,857,060,708 | 9.15 |
| 1941 | — | — | 17,178,984 | 137,531,980 | 28,988,333 | 26,010,655 | — | — | 47,155,370 | 2,691,325 | 259,556,647 | 4,317,978,117 | 6.01 |
| 1940 | — | — | 8,859,239 | 137,169,180 | 21,220,884 | 20,317,104 | — | — | 42,499,250 | 1,994,182 | 232,059,839 | 3,430,486,460 | 6.76 |
| 1939 | — | — | 12,172,521 | 150,763,517 | 22,014,464 | 18,929,108 | — | — | 40,904,735 | 2,029,397 | 246,813,742 | 3,123,589,475 | 7.90 |
| 1938 | — | — | 9,095,159 | 162,993,074 | 19,223,888 | 17,803,094 | — | — | 37,468,268 | 1,535,207 | 248,118,690 | 2,737,635,419 | 9.08 |
| 1937 | — | — | 9,698,893 | 169,278,364 | 21,124,220 | 16,624,625 | — | — | 43,202,708 | 1,664,349 | 261,593,159 | 3,251,215,140 | 8.05 |
| 1936 | — | — | 8,606,962 | 171,922,566 | 20,504,148 | 15,202,609 | — | — | 43,492,944 | 1,563,875 | 261,293,104 | 3,171,233,547 | 8.24 |
| 1935 | — | — | 8,831,368 | 168,451,151 | 18,174,467 | 10,706,564 | — | — | 32,897,585 | 1,325,914 | 240,387,049 | 2,662,142,958 | 9.03 |
| 1934 | — | — | 9,406,266 | 172,517,432 | 17,003,160 | 9,681,216 | — | — | 33,393,764 | 1,154,367 | 243,156,205 | 2,506,068,320 | 9.70 |
| 1933 | — | — | 11,711,448 | 171,432,250 | 15,188,469 | 8,239,678 | — | — | 29,497,353 | 1,186,563 | 237,255,761 | 2,350,138,203 | 10.10 |
| 1932 | — | — | 8,589,599 | 192,065,349 | 15,647,882 | 9,616,285 | — | — | 27,600,442 | 978,871 | 254,498,428 | 2,280,897,221 | 11.16 |
| 1931 | — | — | 22,032,121 | 241,743,778 | 19,094,717 | 10,630,892 | — | — | 34,503,686 | 1,078,600 | 329,083,794 | 3,019,039,343 | 10.90 |

^r = revised

¹ Carload freight only.

² Not reported separately prior to 1964.

³ Natural and petroleum asphalt.

⁴ Includes liquefied coal gas.

⁵ Included with "other refined products" prior to 1964.

⁶ In 1947, certain refined products previously included in the gasoline category were reclassified as other refined products.

Table 1-3. Energy Transport by Class I Common and Contract Motor Carriers of Property, 1972

| | Revenue Freight Originated | | Revenue Freight Terminated | | Total Freight Traffic (Including Duplications) | | Gross Freight Revenue |
|--|----------------------------|-------------|----------------------------|-------------|--|-------------|------------------------|
| | Truckloads | Tons | Truckloads | Tons | Truckloads | Tons | (Dollars In Thousands) |
| Coal | 13,829 | 441,433 | 13,810 | 441,469 | 14,148 | 446,513 | 1,648 |
| Anthracite | 4,355 | 94,544 | 4,311 | 94,031 | 4,562 | 97,889 | 1,028 |
| Raw anthracite | 87 | 1,472 | 30 | 527 | 90 | 1,518 | 24 |
| Cleaned or prepared anthra, (crshd, scrnd, sized) | 325 | 5,978 | 389 | 7,360 | 469 | 8,430 | 135 |
| Bituminous coal and lignite | 9,474 | 346,889 | 9,499 | 347,438 | 9,586 | 348,624 | 620 |
| Bituminous coal | 2,012 | 180,061 | 2,039 | 180,717 | 2,112 | 181,658 | 320 |
| Crude petroleum, natural gas, and natural gasoline | 113,072 | 3,074,164 | 113,140 | 3,074,995 | 113,230 | 3,076,205 | 11,270 |
| Crude petroleum and natural gas | 111,378 | 3,028,635 | 111,450 | 3,029,480 | 111,522 | 3,030,514 | 11,122 |
| Natural gasoline | 1,694 | 45,529 | 1,690 | 45,515 | 1,708 | 45,691 | 147 |
| Petroleum and coal products | 5,150,196 | 126,400,122 | 5,153,320 | 126,447,462 | 5,168,703 | 126,683,630 | 473,969 |
| Products of petroleum refining | 4,982,641 | 122,917,922 | 4,986,239 | 122,969,806 | 4,998,314 | 123,154,183 | 443,605 |
| Gsln, jet oth high vola pet fuels exc nat gsln | 2,336,448 | 60,458,203 | 2,337,930 | 60,492,726 | 2,338,252 | 60,497,577 | 171,395 |
| Kerosene ¹ | 305,664 | 7,390,161 | 305,584 | 7,387,791 | 305,731 | 7,390,973 | 21,009 |
| Distillate fuel oil | 821,172 | 20,713,968 | 821,304 | 20,716,811 | 821,547 | 20,720,439 | 61,344 |
| Lubricating and similar oils and derivatives | 144,012 | 2,779,246 | 145,993 | 2,795,744 | 152,969 | 2,900,613 | 37,891 |
| Lubricating greases | 57,754 | 1,228,397 | 57,449 | 1,223,712 | 58,730 | 1,244,392 | 7,550 |
| Asph, tar & pitches (petro, coke oven, coal tar) | 414,824 | 9,846,801 | 414,876 | 9,848,064 | 415,694 | 9,859,900 | 54,726 |
| Residual fuel oil & oth low vola petro fuels | 401,071 | 9,776,490 | 401,212 | 9,778,438 | 401,306 | 9,779,849 | 29,269 |
| Products of petroleum refining, nec | 222,051 | 4,888,847 | 222,268 | 4,890,712 | 224,303 | 4,922,895 | 29,738 |
| Liquefied petroleum gases and coal gases | 279,645 | 5,835,809 | 279,623 | 5,835,808 | 279,782 | 5,837,545 | 30,684 |
| Paving and roofing materials | 106,579 | 2,192,387 | 106,887 | 2,202,396 | 108,103 | 2,219,762 | 19,794 |
| Paving mixtures and blocks | 32,931 | 830,194 | 32,854 | 831,147 | 33,131 | 834,731 | 5,171 |
| Asphalt felt and coating | 73,648 | 1,362,193 | 74,033 | 1,371,249 | 74,972 | 1,385,031 | 14,623 |
| Miscellaneous petroleum and coal products | 60,976 | 1,289,813 | 60,194 | 1,275,260 | 62,286 | 1,309,685 | 10,569 |
| Coke and coal briquettes | 12,762 | 275,364 | 12,204 | 262,866 | 12,901 | 277,503 | 1,104 |
| Energy commodities | 5,277,097 | 129,915,719 | 5,280,270 | 129,963,926 | 5,296,081 | 130,206,348 | 486,887 |
| All commodities | 19,989,290 | 457,182,739 | 20,057,235 | 457,846,636 | 21,238,091 | 493,840,635 | 10,724,575 |
| Energy commodities as a percent of all commodities | 26% | 28% | 26% | 28% | 25% | 26% | 5% |

Source: -ICC, *Freight Commodity Statistics, Motor Carriers, 1972*, p. 3 and 6.

Table 1-4. U.S. Total Petroleum Pipeline Mileage, 1950 - 1973

(As of December 31)

| Year | Crude-Oil Trunk Lines | | Refined-Oil Trunk Lines | | Total Trunk Lines | | Crude-Oil Gathering Lines | | Total Petroleum Pipelines | | Year |
|------|-----------------------|------------------------|-------------------------|------------------------|-------------------|------------------------|---------------------------|------------------------|---------------------------|------------------------|------|
| | ICC Lines | All Lines ² | ICC Lines | All Lines ² | ICC Lines | All Lines ² | ICC Lines | All Lines ² | ICC Lines | All Lines ² | |
| 1973 | 57,435 | 76,250 ⁴ | 64,919 ³ | 76,839 ⁴ | 122,354 | 153,089 ⁴ | 41,655 | 69,266 ⁴ | 170,691 ¹ | 222,355 ⁴ | 1973 |
| 1972 | 59,757 | n/a | 64,701 | n/a | 124,458 | n/a | 42,893 | n/a | 173,532 ¹ | n/a | 1972 |
| 1971 | 60,946 | 75,143 | 61,525 | 72,396 | 122,471 | 147,539 | 45,759 | 71,132 | 174,722 ¹ | 218,671 | 1971 |
| 1970 | 63,030 | n/a | 59,335 | n/a | 122,365 | n/a | 46,587 | n/a | 175,735 ¹ | n/a | 1970 |
| 1969 | 61,887 | n/a | 56,096 | n/a | 117,983 | n/a | 45,993 | n/a | 170,824 ¹ | n/a | 1969 |
| 1968 | 61,807 | 70,825 | 53,431 | 64,529 | 115,238 | 135,354 | 46,886 | 74,124 | 169,307 ¹ | 209,478 | 1968 |
| 1967 | 60,893 | n/a | 51,475 | n/a | 112,368 | n/a | 46,855 | n/a | 165,478 ¹ | n/a | 1967 |
| 1966 | 63,210 | n/a | 52,493 | n/a | 115,803 | n/a | 47,352 | n/a | 163,155 | n/a | 1966 |
| 1965 | 63,981 | 72,383 | 50,791 | 61,443 | 114,772 | 133,826 | 46,640 | 77,041 | 161,412 | 210,867 | 1965 |
| 1964 | 63,220 | n/a | 49,477 | n/a | 112,697 | n/a | 46,886 | n/a | 159,583 | n/a | 1964 |
| 1963 | 58,648 | n/a | 45,358 | n/a | 104,006 | n/a | 46,563 | n/a | 156,812 ¹ | n/a | 1963 |
| 1962 | 61,702 | 70,355 | 45,288 | 53,200 | 106,990 | 123,555 | 48,063 | 76,988 | 155,053 | 200,543 | 1962 |
| 1961 | 62,251 | n/a | 41,830 | n/a | 104,081 | n/a | 49,656 | n/a | 153,737 | n/a | 1961 |
| 1960 | 62,059 | n/a | 40,508 | n/a | 102,567 | n/a | 49,401 | n/a | 151,968 | n/a | 1960 |
| 1959 | 61,860 | 70,317 | 37,732 | 44,483 | 99,592 | 114,800 | 49,567 | 75,182 | 149,159 | 189,982 | 1959 |
| 1958 | 61,702 | n/a | 32,865 | n/a | 94,567 | n/a | 49,787 | n/a | 144,354 | n/a | 1958 |
| 1957 | 61,379 | n/a | 31,780 | n/a | 93,159 | n/a | 52,077 | n/a | 145,236 | n/a | 1957 |
| 1956 | 61,885 | 78,594 | 29,465 | 36,420 | 91,350 | 115,014 | 51,336 | 73,526 | 142,686 | 188,540 | 1956 |
| 1955 | 63,347 | n/a | 26,382 | n/a | 89,729 | n/a | 50,645 | n/a | 140,374 | n/a | 1955 |
| 1954 | 64,145 | n/a | 24,128 | n/a | 88,273 | n/a | 50,689 | n/a | 138,962 | n/a | 1954 |
| 1953 | 63,408 | 75,228 | 20,462 | 27,236 | 83,870 | 102,464 | 50,030 | 68,040 | 133,900 | 170,504 | 1953 |
| 1952 | 64,888 | n/a | 19,305 | n/a | 84,193 | n/a | 48,522 | n/a | 132,715 | n/a | 1952 |
| 1951 | 64,992 | n/a | 18,836 | n/a | 83,828 | n/a | 47,629 | n/a | 131,457 | n/a | 1951 |
| 1950 | 64,622 | 71,373 | 16,374 | 20,881 | 80,996 | 92,254 | 47,593 | 60,560 | 128,589 | 152,814 | 1950 |

n/a — not available

¹ Total mileage includes pipelines classified as "other" by the ICC. In 1963 "other" pipeline mileage was 6,243 miles and in 1967 it was 6,255 miles.

² Triennial data.

³ Includes 273 miles of coal slurry pipeline.

⁴ Date of data is January 1, 1974.

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, "Pipelines"; Table 2, 1973, 1972, and equivalent tables in earlier editions. U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, "Crude-Oil and Refined Pipeline Mileage in the United States," Jan. 1, 1974, Table 1.

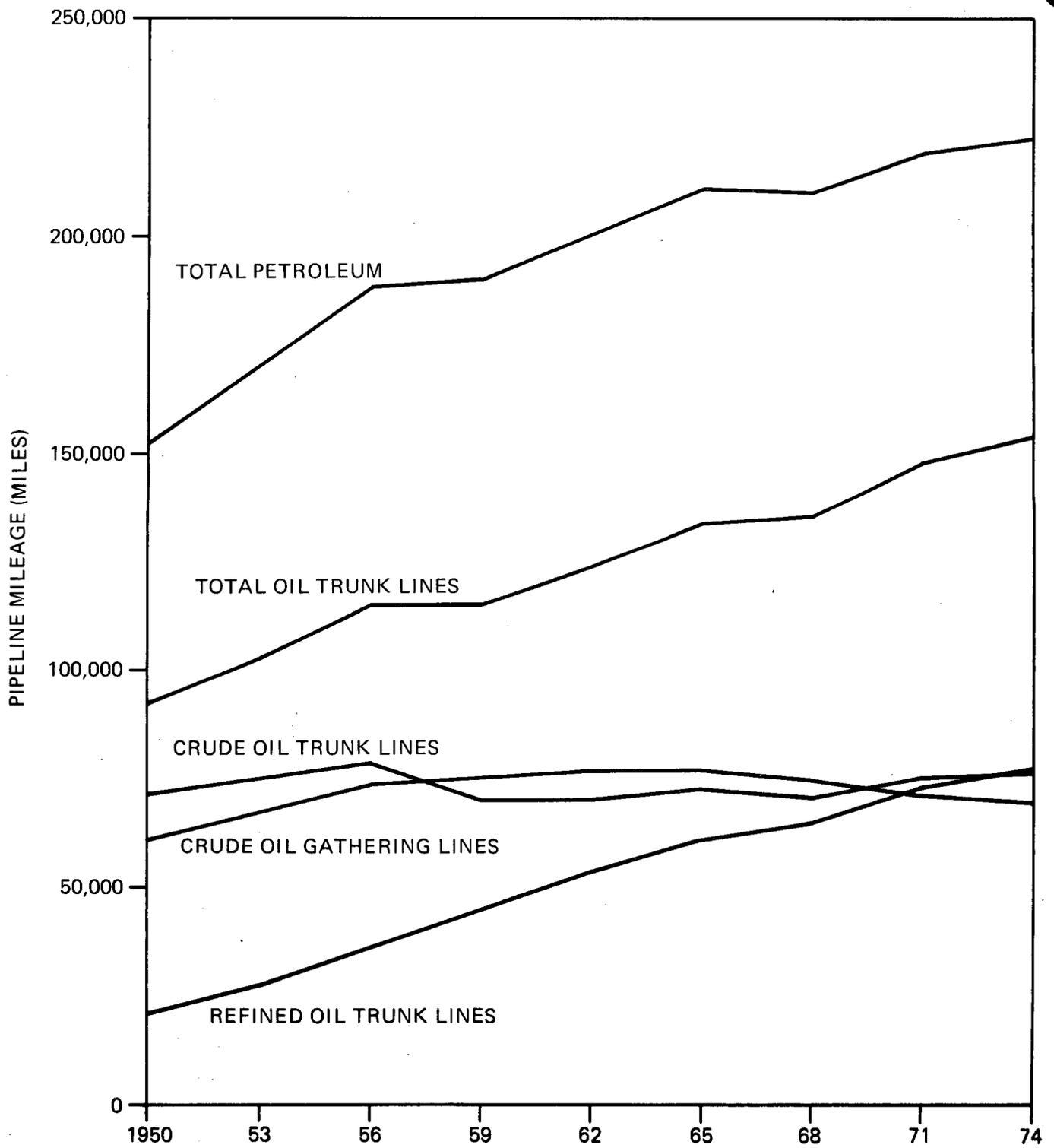
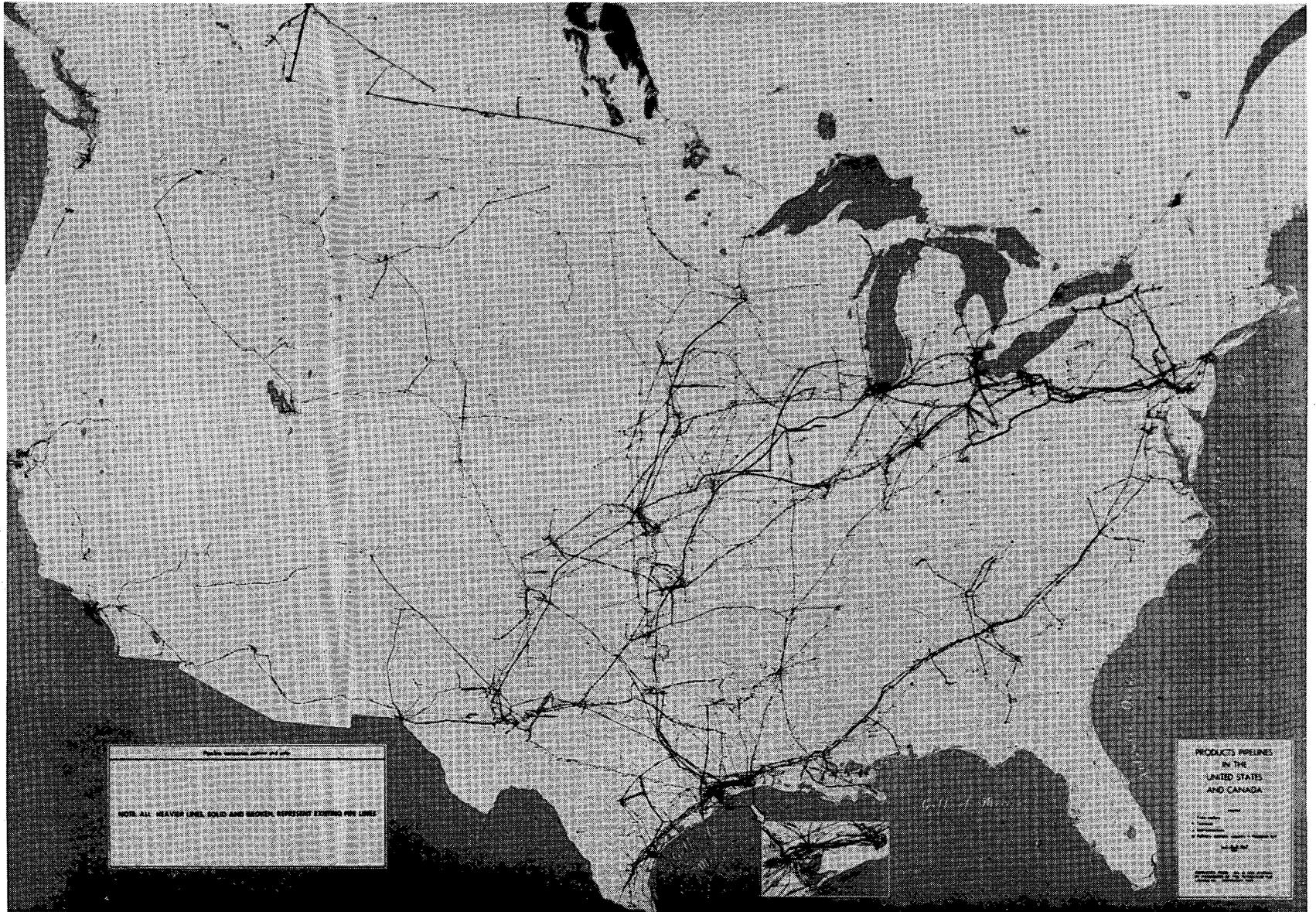


Figure 2. U.S. Petroleum Pipeline Mileage, 1950 - 1974



Source: *Oil & Gas Journal*

Figure 3. The Product Oil Pipeline System of the United States



Source: *Oil & Gas Journal*

Figure 4. The Crude Oil Pipeline System of the United States

Table 1-5. Total Mileage¹ of Natural-Gas Pipelines and Utility Main, by States, 1950 - 1973

| Division and State | 1950 | 1955 | 1960 | 1965 | 1970 | 1971 | 1972 | 1973 |
|----------------------|---------|---------|---------|---------|---------|---------|----------------------|---------|
| United States | 387,470 | 496,740 | 630,950 | 767,520 | 914,830 | 933,675 | 951,908 ^F | 967,667 |
| New England | 15,030 | 17,000 | 19,140 | 22,090 | 25,686 | 26,008 | 26,233 | 27,547 |
| Connecticut | 3,130 | 3,720 | 4,300 | 4,960 | 5,728 | 5,812 | 5,820 | 5,952 |
| Maine | 450 | 430 | 390 | 390 | 705 | 465 | 465 | 462 |
| Massachusetts | 9,400 | 10,570 | 11,910 | 13,740 | 15,609 | 15,824 | 16,117 | 17,278 |
| New Hampshire | 480 | 540 | 630 | 800 | 1,041 | 1,249 | 1,132 | 1,143 |
| Rhode Island | 1,370 | 1,520 | 1,720 | 1,990 | 2,299 | 2,342 | 2,373 | 2,377 |
| Vermont | 200 | 220 | 190 | 210 | 304 | 316 | 326 | 335 |
| Middle Atlantic | 69,690 | 80,710 | 92,600 | 102,580 | 111,644 | 112,633 | 113,213 | 113,552 |
| New Jersey | 10,190 | 12,420 | 15,140 | 18,320 | 21,052 | 21,402 | 21,776 | 21,934 |
| New York | 23,840 | 28,440 | 33,020 | 36,580 | 39,995 | 40,193 | 40,239 | 40,386 |
| Pennsylvania | 35,660 | 39,850 | 44,440 | 47,680 | 50,637 | 51,038 | 51,198 | 51,232 |
| East North Central | 75,370 | 90,210 | 113,420 | 147,640 | 178,268 | 182,028 | 184,098 | 186,248 |
| Illinois | 17,120 | 21,250 | 27,770 | 38,750 | 46,683 | 48,249 | 49,169 | 49,389 |
| Indiana | 9,480 | 11,840 | 14,800 | 20,240 | 25,264 | 25,519 | 25,594 | 26,016 |
| Michigan | 14,000 | 16,810 | 21,860 | 30,370 | 37,699 | 37,940 | 38,493 | 39,084 |
| Ohio | 29,450 | 34,180 | 40,150 | 44,690 | 49,393 | 50,565 | 50,886 | 51,197 |
| Wisconsin | 5,320 | 6,130 | 8,840 | 13,590 | 19,229 | 19,757 | 19,956 | 20,562 |
| West North Central | 42,010 | 55,200 | 67,640 | 82,250 | 101,099 | 103,243 | 105,368 ^F | 108,325 |
| Iowa | 5,650 | 7,840 | 9,970 | 13,630 | 16,654 | 16,531 | 16,891 | 16,921 |
| Kansas | 18,600 | 22,910 | 25,860 | 28,780 | 34,365 | 34,855 | 35,299 ^F | 36,673 |
| Minnesota | 4,010 | 5,360 | 8,090 | 10,680 | 14,162 | 14,859 | 15,335 | 15,502 |
| Missouri | 7,450 | 9,770 | 11,950 | 15,150 | 18,654 | 19,310 | 19,749 ^F | 20,188 |
| Nebraska | 4,940 | 7,320 | 8,910 | 10,300 | 12,627 | 13,057 | 13,204 | 14,177 |
| North Dakota | 580 | 930 | 1,100 | 1,560 | 2,332 | 2,297 | 2,506 | 2,472 |
| South Dakota | 780 | 1,070 | 1,760 | 2,150 | 2,305 | 2,334 | 2,381 | 2,392 |
| South Atlantic | 33,460 | 43,260 | 59,100 | 74,180 | 92,738 | 95,320 | 97,222 ^F | 97,843 |
| Delaware | 490 | 560 | 830 | 1,160 | 1,270 | 1,289 | 1,284 | 1,288 |
| District of Columbia | 1,080 | 1,140 | 1,160 | 1,150 | 1,164 | 1,175 | 1,173 | 1,169 |
| Florida | 2,770 | 3,220 | 6,400 | 8,330 | 11,435 | 11,673 | 11,782 | 11,795 |
| Georgia | 3,110 | 6,430 | 10,580 | 14,600 | 19,549 | 20,347 | 20,897 | 21,616 |
| Maryland | 3,320 | 4,430 | 5,400 | 6,710 | 7,986 | 8,193 | 8,375 | 8,466 |
| North Carolina | 1,420 | 2,290 | 4,830 | 7,080 | 10,605 | 10,893 | 11,200 | 11,437 |
| South Carolina | 730 | 1,350 | 3,320 | 6,090 | 8,514 | 9,082 | 9,360 ^F | 9,619 |
| Virginia | 3,410 | 4,750 | 6,490 | 8,190 | 10,451 | 10,682 | 11,141 | 10,868 |
| West Virginia | 17,130 | 19,090 | 20,090 | 20,870 | 21,764 | 21,986 | 21,920 | 21,585 |
| East South Central | 21,050 | 33,390 | 44,930 | 54,390 | 65,441 | 64,964 | 67,441 ^F | 69,108 |
| Alabama | 3,910 | 8,220 | 11,380 | 13,860 | 16,607 | 15,605 | 17,120 | 17,406 |
| Kentucky | 7,360 | 9,790 | 13,130 | 15,470 | 18,295 | 18,879 | 19,366 | 19,627 |
| Mississippi | 6,060 | 9,020 | 11,420 | 13,460 | 16,403 | 16,148 | 16,402 | 16,781 |
| Tennessee | 3,720 | 6,360 | 9,000 | 11,600 | 14,136 | 14,333 | 14,553 | 15,294 |
| West South Central | 72,170 | 99,330 | 127,120 | 150,260 | 182,752 | 188,084 | 191,254 ^F | 194,121 |
| Arkansas | 6,780 | 8,700 | 10,380 | 13,060 | 16,429 | 16,500 | 17,018 | 17,016 |
| Louisiana | 11,160 | 17,820 | 24,970 | 30,310 | 36,921 | 38,093 | 38,994 | 39,315 |
| Oklahoma | 13,200 | 16,080 | 19,590 | 23,850 | 28,532 | 30,972 | 31,474 | 32,609 |
| Texas | 41,030 | 56,730 | 72,180 | 83,040 | 100,870 | 102,519 | 103,768 ^F | 105,181 |
| Mountain | 19,260 | 29,630 | 44,940 | 59,000 | 71,848 | 74,441 | 77,242 | 80,276 |
| Arizona | 4,240 | 6,770 | 9,630 | 11,120 | 13,379 | 13,794 | 14,358 | 14,830 |
| Colorado | 3,280 | 5,530 | 8,080 | 12,240 | 15,870 | 16,746 | 17,453 | 18,446 |
| Idaho | 20 | 20 | 1,490 | 2,770 | 3,226 | 3,310 | 3,482 | 3,594 |
| Montana | 3,530 | 4,120 | 5,120 | 5,970 | 6,324 | 6,442 | 6,813 | 6,998 |
| Nevada | 100 | 300 | 660 | 1,940 | 2,470 | 2,577 | 2,664 | 2,766 |
| New Mexico | 4,340 | 8,320 | 13,160 | 15,410 | 19,050 | 19,686 | 20,057 | 20,761 |
| Utah | 1,580 | 2,160 | 3,400 | 4,940 | 5,609 | 5,749 | 5,897 | 6,165 |
| Wyoming | 2,170 | 2,410 | 3,400 | 4,610 | 5,920 | 6,137 | 6,518 | 6,716 |
| Pacific | 39,430 | 48,010 | 62,060 | 75,130 | 85,354 | 86,954 | 89,837 | 90,647 |
| Alaska | a | a | n/a | 250 | 667 | 484 | 635 | 690 |
| California | 34,630 | 43,070 | 52,280 | 60,650 | 66,328 | 67,329 | 69,748 | 70,133 |
| Hawaii | a | a | 440 | 490 | 530 | 537 | 546 | 558 |
| Oregon | 2,660 | 2,720 | 3,940 | 6,360 | 8,014 | 8,335 | 8,409 | 8,659 |
| Washington | 2,140 | 2,220 | 5,400 | 7,380 | 9,815 | 10,269 | 10,499 | 10,607 |

^a Excludes data for Alaska prior to 1959 and Hawaii prior to 1960.

n/a not available.

^F Revised

¹ Includes field, gathering, underground storage, transmission and distribution main but excludes service pipe. Data not adjusted to common diameter equivalent. Mileage shown as of end of year.

Source: American Gas Association, *Gas Facts*, 1973, p. 54.

Table 1-6. U.S. Tank Ship Fleet (Actual and T2-SE-A1 Equivalents), 1941 - 1973

(Ocean-going Vessels of 2,000 Gross Tons and Over)

| Actual Fleet | | | | T2-SE-A1 Equivalents | | Year ¹ |
|--------------|------------|-----------------|-----------------------|----------------------|-------------------------|-------------------|
| Number | Gross Tons | Deadweight Tons | Average Speed (Knots) | Number | Per Cent of World Total | |
| 312 | 5,507,000 | 9,525,200 | 16.3 | 640.3 | 3.8 | 1973 |
| 328 | 5,411,300 | 9,253,330 | 16.4 | 621.0 | 4.3 | 1972 |
| 347 | 5,453,100 | 9,218,250 | 16.3 | 616.4 | 4.9 | 1971 |
| 350 | 5,305,800 | 8,911,002 | 16.2 | 593.4 | 5.5 | 1970 |
| 365 | 5,319,400 | 8,797,900 | 16.1 | 584.9 | 6.2 | 1969 |
| 380 | 5,337,300 | 8,655,700 | 16.1 | 574.6 | 7.0 | 1968 |
| 382 | 5,322,800 | 8,550,700 | 16.1 | 566.4 | 7.8 | 1967 |
| 337 | 5,343,700 | 8,549,900 | 16.1 | 566.3 | 8.5 | 1966 |
| 410 | 5,479,800 | 8,733,500 | 16.0 | 575.8 | 9.6 | 1965 |
| 422 | 5,553,400 | 8,816,300 | 16.0 | 579.3 | 10.6 | 1964 |
| 440 | 5,631,000 | 8,912,600 | 15.9 | 583.5 | 12.1 | 1963 |
| 456 | 5,726,900 | 9,045,300 | 15.9 | 589.8 | 13.0 | 1962 |
| 469 | 5,751,400 | 9,085,300 | 15.8 | 590.1 | 13.7 | 1961 |
| 478 | 5,664,000 | 8,894,600 | 15.7 | 575.0 | 14.1 | 1960 |
| 485 | 5,593,600 | 8,766,300 | 15.6 | 563.0 | 14.7 | 1959 |
| 474 | 5,316,100 | 8,309,200 | 15.5 | 529.5 | 15.6 | 1958 |
| 470 | 5,097,400 | 7,959,900 | 15.4 | 503.1 | 16.8 | 1957 |
| 477 | 5,040,700 | 7,892,700 | 15.2 | 493.4 | 18.9 | 1956 |
| 490 | 5,094,900 | 7,989,500 | 15.1 | 497.4 | 20.8 | 1955 |
| 525 | 5,376,500 | 8,446,200 | 15.0 | 521.7 | 23.3 | 1954 |
| 550 | 5,475,800 | 8,639,800 | 14.8 | 525.3 | 26.2 | 1953 |
| 550 | 5,284,400 | 8,446,400 | 14.6 | 508.3 | 29.4 | October 1, 1952 |
| 560 | 5,363,699 | 8,520,800 | 14.6 | 510.0 | 33.0 | April 1, 1951 |
| 559 | 5,322,698 | 8,460,700 | 14.5 | 505.1 | 34.4 | September 1, 1950 |
| 578 | 5,439,009 | 8,639,800 | 14.4 | 513.2 | 38.0 | September 1, 1949 |
| 593 | 5,656,497 | 9,016,200 | 14.1 | 524.2 | 41.1 | January 1, 1949 |
| 621 | 5,878,786 | 9,395,500 | 14.0 | 541.9 | 42.9 | April 1, 1948 |
| 744 | 6,995,223 | 11,171,400 | 14.07 | 646.4 | 50.8 | October 1, 1947 |
| 951 | 8,784,894 | 14,035,000 | 13.86 | 800.5 | 62.3 | January 1, 1947 |
| 907 | 8,379,542 | 13,379,143 | 13.74 | 756.2 | 59.8 | September 1, 1945 |
| 780 | 7,084,022 | 11,283,652 | 13.59 | 630.9 | 55.9 | 1945 |
| 556 | 4,784,954 | 7,608,833 | 13.12 | 410.6 | 45.2 | 1944 |
| 366 | 2,901,748 | 4,640,027 | 12.23 | 233.5 | 31.2 | 1943 |
| 389 | 2,931,193 | 4,680,863 | 11.31 | 217.8 | 27.4 | 1942 |
| 379 | 2,824,128 | 4,498,684 | 11.13 | 205.9 | 25.8 | 1941 |

¹ As of December 31, unless otherwise indicated.

Source: Sun Oil Company, Division of Planning and Industry Affairs, "Analysis of World Tank Ship Fleet; December 31, 1973," December, 1974, Table 1, and equivalent tables in earlier editions.

Table 1-7. World Tank Ship Fleet (Actual and T2-SE-A1 Equivalent), 1941 - 1973

(Ocean-going Vessels of 2,000 Gross Tons and Over)

| Year ¹ | Actual Fleet | | | | T2-SE-A1 Equivalents | Year ¹ |
|-------------------|--------------------|---------------|--------------------------|-----------------------------|-------------------------|-------------------|
| | Number | Gross Tons | Deadweight Tons | Average Speed (Knots) | | |
| 1973 | 4,563 | 142,355,300 | 256,715,900 | 15.8 | 16,650.1 | 1973 |
| 1972 | 4,342 ^r | 124,250,300 | 221,204,000 ^r | 15.8 | 14,341.0 ^r | 1972 |
| 1971 | 4,207 | 110,447,100 | 193,891,000 | 15.8 | 12,577.0 | 1971 |
| 1970 | 4,002 | 96,921,800 | 167,940,000 | 15.8 | 10,925.0 | 1970 |
| 1969 | 3,893 | 86,821,100 | 146,029,100 | 15.8 | 9,461.5 | 1969 |
| 1968 | 3,748 | 77,148,500 | 126,454,200 | 15.8 | 8,202.3 | 1968 |
| 1967 | 3,613 | 69,965,500 | 112,366,200 | 15.7 | 7,274.6 | 1967 |
| 1966 | 3,524 | 64,787,600 | 102,908,800 | 15.7 | 6,641.4 | 1966 |
| 1965 | 3,436 | 59,158,200 | 93,171,900 | 15.7 | 5,984.4 | 1965 |
| 1964 | 3,359 | 54,468,900 | 85,125,700 | 15.6 | 5,455.3 | 1964 |
| 1963 | 3,279 | 49,168,600 | 76,179,500 | 15.4 | 4,841.3 | 1963 |
| 1962 | 3,259 | 46,630,100 | 71,995,700 | 15.3 | 4,542.9 | 1962 |
| 1961 | 3,250 | 44,701,000 | 68,859,400 | 15.2 | 4,304.8 | 1961 |
| 1960 | 3,264 | 42,801,300 | 65,780,400 | 15.1 | 4,076.0 | 1960 |
| 1959 | 3,276 | 40,831,500 | 62,657,800 | 14.8 | 3,826.1 | 1959 |
| 1958 | 3,146 | 37,020,100 | 56,640,700 | 14.6 | 3,403.3 | 1958 |
| 1957 | 2,954 | 33,046,800 | 50,424,800 | 14.4 | 2,988.2 | 1957 |
| 1956 | 2,778 | 29,455,500 | 44,887,600 | 14.2 | 2,614.2 | 1956 |
| 1955 | 2,681 | 27,338,600 | 41,623,100 | 14.0 | 2,398.1 | 1955 |
| 1954 | 2,602 | 25,733,900 | 39,137,300 | 13.9 | 2,244.0 | 1954 |
| 1953 | 2,502 | 23,473,900 | 35,732,300 | 13.6 | 2,003.5 | 1953 |
| October 1, 1952 | 2,292 | 20,417,100 | 31,318,300 | 13.4 | 1,726.8 | October 1, 1952 |
| April 1, 1951 | 2,131 | 18,453,538 | 28,255,100 | 13.3 | 1,544.1 | April 1, 1951 |
| September 1, 1950 | 2,056 | 17,567,202 | 26,957,200 | 13.3 | 1,469.7 | September 1, 1950 |
| September 1, 1949 | 1,955 | 16,249,603 | 24,932,400 | 13.2 | 1,352.3 | September 1, 1949 |
| January 1, 1949 | 1,872 | 15,459,372 | 23,815,800 | 12.1 | 1,274.4 | January 1, 1949 |
| April 1, 1948 | 1,863 | 15,364,543 | 23,692,400 | 12.9 | 1,264.3 | April 1, 1948 |
| October 1, 1947 | 1,868 | 15,286,141 | 23,585,800 | 13.0 | 1,271.4 | October 1, 1947 |
| January 1, 1947 | 1,925 | 15,692,962 | 24,278,900 | 12.87 | 1,285.1 | January 1, 1947 |
| September 1, 1945 | 1,911 | 15,506,005 | 23,916,319 | 12.85 | 1,264.5 | September 1, 1945 |
| 1945 | 1,768 | 14,102,405 | 21,667,642 | 12.67 | 1,129.2 | 1945 |
| 1944 | 1,556 | 11,889,560 | 18,101,816 | 12.20 | 908.8 | 1944 |
| 1943 | 1,388 | 10,252,380 | 15,498,123 | 11.75 | 749.1 | 1943 |
| 1942 | 1,550 | 11,242,773 | 16,963,861 | 11.40 | 795.8 | 1942 |
| 1941 | 1,589 | 11,410,748 | 17,194,000 | 11.28 | 798.1 | 1941 |

¹ As of December 31, unless otherwise indicated.

r = revised

Source: Sun Oil Company, Division of Planning and Industry Affairs, "Analysis of World Tank Ship Fleet, December 31, 1973," December 1974, Table 1, and equivalent tables in earlier editions.

Table 1-8. World Tanker Fleet at End of 1974
(excluding 41.2 million D.W.T. combined carriers)
(10,000 D.W. Tons and over)

By Flag and Ownership

| Flag | Ownership | | | | | | Change 1974 over 1973 | Share of Total 1974 |
|-----------------------------|------------------------------|--------------|------------|------------|---------------|----------------------------|-----------------------------|---------------------------|
| | Oil Company | Private | Government | Other | Total 1974 | Total ^r 1973 | | |
| | Million Long Tons Deadweight | | | | | | | |
| Liberia | 19.8 | 53.8 | — | 0.3 | 73.9 | 59.2 | +14.7 | 29% |
| Norway | 0.5 | 23.4 | — | — | 23.9 | 21.2 | +2.7 | 9% |
| U.K. | 21.0 | 11.0 | 0.2 | — | 32.2 | 27.8 | +4.4 | 13% |
| Japan | 3.8 | 25.4 | — | — | 29.2 | 26.1 | +3.1 | 11% |
| U.S.A. | 4.3 | 4.6 | 1.5 | — | 10.4 | 9.5 | +0.9 | 4% |
| Panama | 4.0 | 4.4 | — | — | 8.4 | 7.6 | +0.8 | 3% |
| France | 8.4 | 3.3 | 0.1 | — | 11.8 | 9.6 | +2.2 | 5% |
| Greece | — | 13.9 | — | — | 13.9 | 12.6 | +1.3 | 6% |
| Other Western Europe | 13.0 | 18.6 | 0.1 | 0.1 | 31.8 | 26.0 | +5.8 | 12% |
| Other Western Hemisphere | 5.7 | 0.2 | 0.2 | — | 6.1 | 5.2 | +0.9 | 2% |
| U.S.S.R., E. Europe & China | — | — | 6.6 | — | 6.6 | 5.4 | +1.2 | 3% |
| Other Eastern Hemisphere | 2.9 | 4.6 | 0.1 | — | 7.6 | 5.4 | +2.2 | 3% |
| TOTAL | 83.4 | 163.2 | 8.8 | 0.4 | 255.8 | 215.6 | +40.2 | 100% |
| Fleet as at end 1973 | 66.7 | 141.1 | 7.6 | 0.2 | 215.6 | | | |
| Net increase 1974 | 16.7 | 22.1 | 1.2 | 0.2 | 40.2 | | | |

By Age, Size and Propulsion
(million long tons deadweight)

| Size in '000 D.W.T. | Year of Construction | | | | | | | | Propulsion | | New Building in Progress and on Order at end 1974* |
|------------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---|--------------|---|
| | Up to end 1945 | 1946- 1950 | 1951- 1955 | 1956- 1960 | 1961- 1965 | 1966- 1970 | 1971- 1974 | Total | Motor | Other | |
| 10- 25 | 2.9 | 0.6 | 5.6 | 6.8 | 1.9 | 2.4 | 1.7 | 21.9 | 15.4 | 6.5 | 1.1 |
| 25- 45 | 1.0 | 0.9 | 4.0 | 14.6 | 4.0 | 1.4 | 4.6 | 30.5 | 11.7 | 18.8 | 7.1 |
| 45- 65 | — | — | 0.9 | 5.1 | 14.4 | 1.8 | 0.4 | 22.6 | 7.5 | 15.1 | 1.8 |
| 65-125 | — | — | — | 2.2 | 14.0 | 21.9 | 8.3 | 46.4 | 30.1 | 16.3 | 17.6 |
| 125-205 | — | — | — | — | 0.1 | 10.2 | 7.7 | 18.0 | 10.2 | 7.8 | 21.4 |
| 205-285 | — | — | — | — | — | 26.2 | 79.3 | 105.5 | 7.3 | 98.2 | 57.9 |
| 285 and over | — | — | — | — | — | 1.9 | 9.0 | 10.9 | — | 10.9 | 57.5 |
| TOTAL | 3.9 | 1.5 | 10.5 | 28.7 | 34.4 | 65.8 | 111.0 | 255.8 | 82.2 | 173.6 | 164.4 |
| MOTOR | 0.3 | 0.5 | 5.0 | 8.4 | 16.6 | 24.5 | 26.9 | 82.2 | *Excludes 7.3 million D.W.T. combined carriers. | | |
| OTHER | 3.6 | 1.0 | 5.5 | 20.3 | 17.8 | 41.3 | 84.1 | 173.6 | | | |

Employment of Tankers 1974
(estimated proportions of world's active ocean-going fleet on main voyages)

| Voyages To | Voyages From | | | | | Total |
|------------------------------|--------------|-------------|--------------|-------------|--------------|---------------|
| | U.S.A. | Caribbean | Middle East | N. Africa | Others | |
| U.S.A. | 3.0% | 3.5% | 4.5% | 0.5% | 3.5% | 15.0% |
| Canada | — | 0.5% | 2.0% | — | — | 2.5% |
| Other Western Hemisphere | — | — | 5.5% | 0.5% | 1.5% | 7.5% |
| Western Europe, N.&W. Africa | — | 1.0% | 45.5% | 2.0% | 4.0% | 52.5% |
| E.&S. Africa, S. Asia | — | — | 1.5% | — | — | 1.5% |
| Japan | — | — | 12.5% | 0.5% | 2.5% | 15.5% |
| Other Eastern Hemisphere | — | — | 4.0% | — | — | 4.0% |
| U.S.S.R., E. Europe & China | — | — | 1.5% | — | — | 1.5% |
| TOTAL | 3.0% | 5.0% | 77.0% | 3.5% | 11.5% | 100.0% |

r = revised

Source: British Petroleum Company, *BP Statistical Review of the World Oil Industry*, 1974, p. 14.

Table 1-9. World Tanker Fleet by Flag, 1964-1974

| Flag | 1964 ^r | 1965 ^r | 1966 ^r | 1967 ^r | 1968 ^r | 1969 ^r | 1970 ^r | 1971 ^r | 1972 ^r | 1973 ^r | 1974 |
|----------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|
| | Million tons d.w. | | | | | | | | | | |
| U.S.A. | 8.5 | 8.6 | 8.5 | 8.5 | 8.6 | 8.9 | 9.3 | 9.5 | 9.5 | 9.5 | 10.4 |
| U.K. | 11.5 | 11.6 | 12.3 | 13.0 | 15.2 | 18.6 | 21.7 | 25.0 | 25.1 | 27.8 | 32.2 |
| Norway | 12.0 | 13.1 | 14.7 | 16.4 | 16.2 | 15.5 | 17.0 | 18.9 | 19.7 | 21.2 | 23.9 |
| Other Western Europe | 17.6 | 18.0 | 20.5 | 21.8 | 25.3 | 29.5 | 34.0 | 38.9 | 42.0 | 48.2 | 57.5 |
| "Convenience"* | 18.7 | 23.1 | 25.0 | 27.6 | 31.3 | 35.8 | 43.2 | 48.6 | 57.6 | 66.8 | 82.3 |
| Japan | 4.2 | 5.7 | 7.6 | 9.0 | 10.6 | 12.9 | 14.8 | 18.0 | 21.8 | 26.1 | 29.2 |
| Rest of World | 4.7 | 5.6 | 6.4 | 7.2 | 7.9 | 9.6 | 11.3 | 12.0 | 13.8 | 16.0 | 20.3 |
| Total | 77.2 | 85.7 | 95.0 | 103.5 | 115.1 | 130.8 | 151.3 | 170.9 | 189.5 | 215.6 | 255.8 |

*Panama, Liberia, etc.

r = revised

Source: British Petroleum Company, *BP Statistical Review of the World Oil Industry, 1974*, p. 22.

TONS D.W.
(MILLIONS)

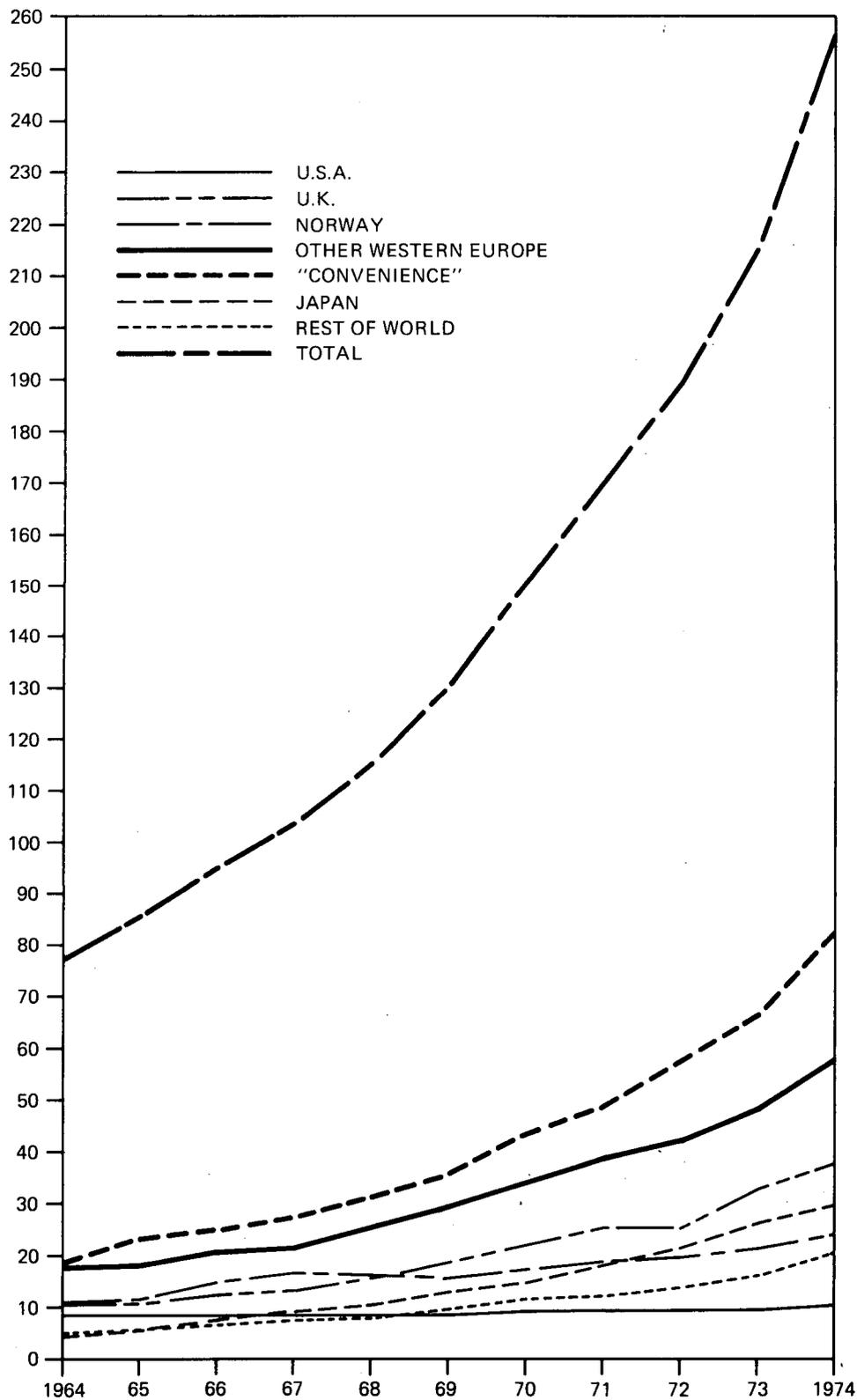


Figure 5. World Tanker Fleet by Flag 1964 - 1974

Table 1-10. Number and Mileage of Privately Owned U.S. Railroad Tank Cars, 1947 - 1973
(As of December 31)

| Year | Number | | | Mileage | | |
|-------------------|---------------------|---------------------|----------------------|--------------------------|--------------------------|----------------------------|
| | Petroleum Tank Cars | Other Tank Cars | Total | Petroleum Tank Cars | Other Tank Cars | Total |
| 1973 | 75,878 | 73,548 | 149,426 | 985,623,840 | 748,616,769 | 1,734,240,609 |
| 1972 | 75,387 ^r | 72,619 ^r | 148,006 ^r | 905,119,533 ^r | 662,865,785 ^r | 1,567,985,318 ^r |
| 1971 | 72,815 | 65,380 | 138,195 | 831,561,636 | 560,666,789 | 1,392,228,425 |
| 1970 | 75,434 | 68,151 | 143,585 | 871,494,171 | 577,724,890 | 1,449,219,061 |
| 1969 | 76,217 | 71,187 | 147,404 | 902,041,283 | 565,623,358 | 1,467,664,641 |
| 1968 | 75,581 | 70,310 | 145,891 | 894,093,477 | 572,310,905 | 1,466,404,382 |
| 1967 | 74,973 | 69,749 | 144,722 | 890,942,715 | 566,944,276 | 1,457,886,991 |
| 1966 ¹ | 80,592 | 76,844 | 157,436 | 960,989,876 | 765,728,108 | 1,726,717,984 |
| 1965 | 123,738 | 31,488 | 155,226 | 1,324,976,232 | 310,989,383 | 1,635,965,615 |
| 1964 | 125,876 | 30,562 | 156,438 | 1,465,229,954 | 330,228,451 | 1,795,458,405 |
| 1963 | 127,526 | 29,156 | 156,682 | 1,568,073,451 | 315,187,688 | 1,883,261,139 |
| 1962 | 128,368 | 27,783 | 156,151 | 1,613,996,311 | 327,352,838 | 1,941,349,149 |
| 1961 | 129,541 | 27,058 | 156,599 | 1,670,063,610 | 326,641,345 | 1,996,704,955 |
| 1960 | 126,070 | 29,541 | 155,611 | 1,784,388,610 | 390,823,252 | 2,175,211,862 |
| 1959 | 126,525 | 30,159 | 156,684 | 1,675,097,423 | 373,223,343 | 2,048,320,766 |
| 1958 | 126,446 | 28,757 | 155,203 | 1,835,139,276 | 390,246,856 | 2,225,386,132 |
| 1957 | 124,198 | 26,531 | 150,729 | 1,927,738,479 | 390,783,858 | 2,318,522,337 |
| 1956 | 122,010 | 25,360 | 147,370 | 1,907,094,342 | 366,313,249 | 2,273,107,591 |
| 1955 | 121,405 | 24,372 | 145,777 | 1,818,573,349 | 343,450,999 | 2,162,024,348 |
| 1954 | 121,507 | 22,088 | 143,595 | 1,934,674,921 | 331,033,786 | 2,265,708,707 |
| 1953 | 118,141 | 21,826 | 139,967 | 1,928,914,341 | 331,987,870 | 2,260,902,211 |
| 1952 | 115,605 | 19,996 | 135,601 | 1,961,975,285 | 318,559,854 | 2,280,535,139 |
| 1951 | 111,451 | 19,086 | 130,537 | 1,860,146,475 | 301,703,841 | 2,161,850,316 |
| 1950 | 115,202 | 19,364 | 134,566 | 1,796,767,001 | 292,030,588 | 2,088,797,589 |
| 1949 | 112,990 | 18,635 | 131,625 | 2,291,271,389 | 311,142,083 | 2,602,413,472 |
| 1948 | 117,540 | 8,762 | 126,302 | 2,264,104,262 | 134,316,262 | 2,398,420,524 |
| 1947 | 117,293 | 8,321 | 125,614 | 1,911,815,204 | 114,608,723 | 2,026,423,927 |

¹ One fleet previously included in the "petroleum" category has been reclassified as "other."

^rrevised

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 9, "Private Car Lines," December 31, 1973, p. 2, and equivalent tables in earlier editions.

**Table 1-11. Total Crude Petroleum and Petroleum Products Transported in the U.S.
by Method of Transportation, 1938 - 1973**

| Year | Pipelines | | Water Carriers | | Trucks ¹ | | Railroads | | Total Tons Carried |
|------|--------------|----------------------|----------------|----------------------|---------------------|----------------------|--------------|----------------------|-----------------------|
| | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | |
| 1973 | 912,209,858 | 46.57 | 421,205,848 | 21.50 | 595,767,175 | 30.41 | 29,736,210 | 1.51 | 1,958,919,091 |
| 1972 | 876,248,100 | 47.53 | 426,603,200 | 23.14 | 513,500,000 | 27.86 | 27,098,200 | 1.47 | 1,843,449,500 |
| 1971 | 806,671,000 | 46.90 | 416,792,000 | 24.24 | 470,700,000 | 27.37 | 25,649,900 | 1.49 | 1,719,812,900 |
| 1970 | 790,241,700 | 46.88 | 402,667,900 | 23.88 | 466,100,000 | 27.65 | 26,732,200 | 1.59 | 1,685,741,800 |
| 1969 | 759,612,000 | 46.81 | 378,862,700 | 23.88 | 458,000,000 | 28.22 | 26,299,900 | 1.62 | 1,622,774,600 |
| 1968 | 726,443,900 | 46.47 | 361,002,600 | 23.09 | 449,700,000 | 28.76 | 26,251,200 | 1.68 | 1,563,397,700 |
| 1967 | 679,321,600 | 45.64 | 349,815,800 | 23.50 | 433,600,000 | 29.13 | 25,742,200 | 1.73 | 1,488,479,600 |
| 1966 | 629,753,680 | 44.81 | 332,877,049 | 23.68 | 417,001,000 | 29.67 | 25,809,500 | 1.84 | 1,405,441,229 |
| 1965 | 587,795,480 | 44.43 | 323,671,414 | 24.47 | 385,480,600 | 29.14 | 25,856,600 | 1.96 | 1,322,804,094 |
| 1964 | 559,392,037 | 44.54 | 321,805,229 | 25.63 | 347,279,800 | 27.65 | 27,381,079 | 2.18 | 1,255,358,145 |
| 1963 | 521,149,137 | 43.57 | 335,611,860 | 28.06 | 312,583,106 | 26.14 | 26,658,686 | 2.23 | 1,196,002,789 |
| 1962 | 502,464,600 | 43.36 | 329,734,358 | 28.46 | 297,698,196 | 25.69 | 28,855,082 | 2.49 | 1,158,752,236 |
| 1961 | 484,170,055 | 43.60 | 322,695,527 | 29.06 | 273,619,665 | 24.64 | 29,964,233 | 2.70 | 1,110,450,480 |
| 1960 | 468,409,682 | 43.01 | 318,295,654 | 29.22 | 270,375,253 | 24.83 | 32,057,140 | 2.94 | 1,089,137,729 |
| 1959 | 464,290,959 | 43.22 | 310,098,034 | 28.86 | 266,642,261 | 24.82 | 33,343,787 | 3.10 | 1,074,375,041 |
| 1958 | 433,027,566 | 42.57 | 298,656,025 | 29.36 | 252,024,743 | 24.78 | 33,470,881 | 3.29 | 1,017,179,215 |
| 1957 | 441,078,169 | 43.25 | 299,800,463 | 29.40 | 242,331,559 | 23.76 | 36,643,971 | 3.59 | 1,019,854,162 |
| 1956 | 441,386,180 | 43.49 | 297,826,330 | 29.34 | 235,960,622 | 23.25 | 39,757,144 | 3.92 | 1,014,930,276 |
| 1955 | 412,533,395 | 42.94 | 284,007,134 | 29.56 | 222,604,360 | 23.17 | 41,663,502 | 4.33 | 960,808,391 |
| 1954 | 373,327,262 | 42.57 | 268,524,812 | 30.62 | 192,564,326 | 21.96 | 42,533,486 | 4.85 | 876,949,886 |
| 1953 | 359,142,335 | 41.63 | 273,476,440 | 31.70 | 184,625,431 | 21.40 | 45,451,188 | 5.27 | 862,695,394 |
| 1952 | 337,594,240 | 40.60 | 274,913,642 | 33.06 | 171,744,588 | 20.66 | 47,204,525 | 5.68 | 831,456,995 |
| 1951 | 324,667,831 | 40.31 | 267,417,940 | 33.20 | 163,566,274 | 20.30 | 49,842,061 | 6.19 | 805,494,106 |
| 1950 | 283,853,383 | 38.82 | 252,765,749 | 34.57 | 145,780,986 | 19.93 | 48,882,196 | 6.68 | 731,282,314 |
| 1949 | 261,023,757 | 39.23 | 229,928,665 | 34.56 | 126,217,294 | 18.97 | 48,199,099 | 7.24 | 665,368,815 |
| 1948 | 262,452,531 | 38.24 | 237,516,329 | 34.61 | 120,897,800 | 17.62 | 65,407,170 | 9.53 | 686,273,830 |
| 1947 | 237,879,554 | 38.42 | 209,087,669 | 33.77 | 105,603,500 | 17.05 | 66,638,669 | 10.76 | 619,209,392 |
| 1946 | 222,266,138 | 40.76 | 172,513,605 | 31.64 | 88,852,600 | 16.29 | 61,696,782 | 11.31 | 545,329,125 |
| 1945 | 240,749,492 | 44.06 | 142,498,332 | 26.08 | 96,135,600 | 17.60 | 67,003,259 | 12.26 | 546,386,683 |
| 1944 | 244,001,439 | 45.21 | 117,688,301 | 21.81 | 99,048,800 | 18.35 | 78,975,455 | 14.63 | 539,713,995 |
| 1943 | 196,391,443 | 41.46 | 115,995,425 | 24.49 | 76,471,500 | 16.14 | 84,875,255 | 17.91 | 473,733,623 |
| 1942 | 175,486,660 | 41.11 | 120,076,511 | 28.13 | 49,524,400 | 11.60 | 81,818,135 | 19.16 | 426,905,706 |
| 1941 | 170,684,472 | 40.53 | 152,430,794 | 36.20 | 28,695,020 | 6.81 | 69,323,685 | 16.46 | 421,133,971 |
| 1940 | 153,502,082 | 39.79 | 149,594,453 | 38.78 | 21,849,000 | 5.67 | 60,797,161 | 15.76 | 385,742,696 |
| 1939 | 147,534,686 | 39.11 | 148,054,469 | 39.25 | 21,557,680 | 5.72 | 60,057,437 | 15.92 | 377,204,272 |
| 1938 | 139,220,962 | 39.28 | 137,728,491 | 38.86 | 20,538,060 | 5.80 | 56,933,147 | 16.06 | 354,420,660 |

¹ Estimated

Source: Association of Oil Pipe Lines, "Shifts in Petroleum Transportation," June 1975, Table 1.

MODAL SHARE
%

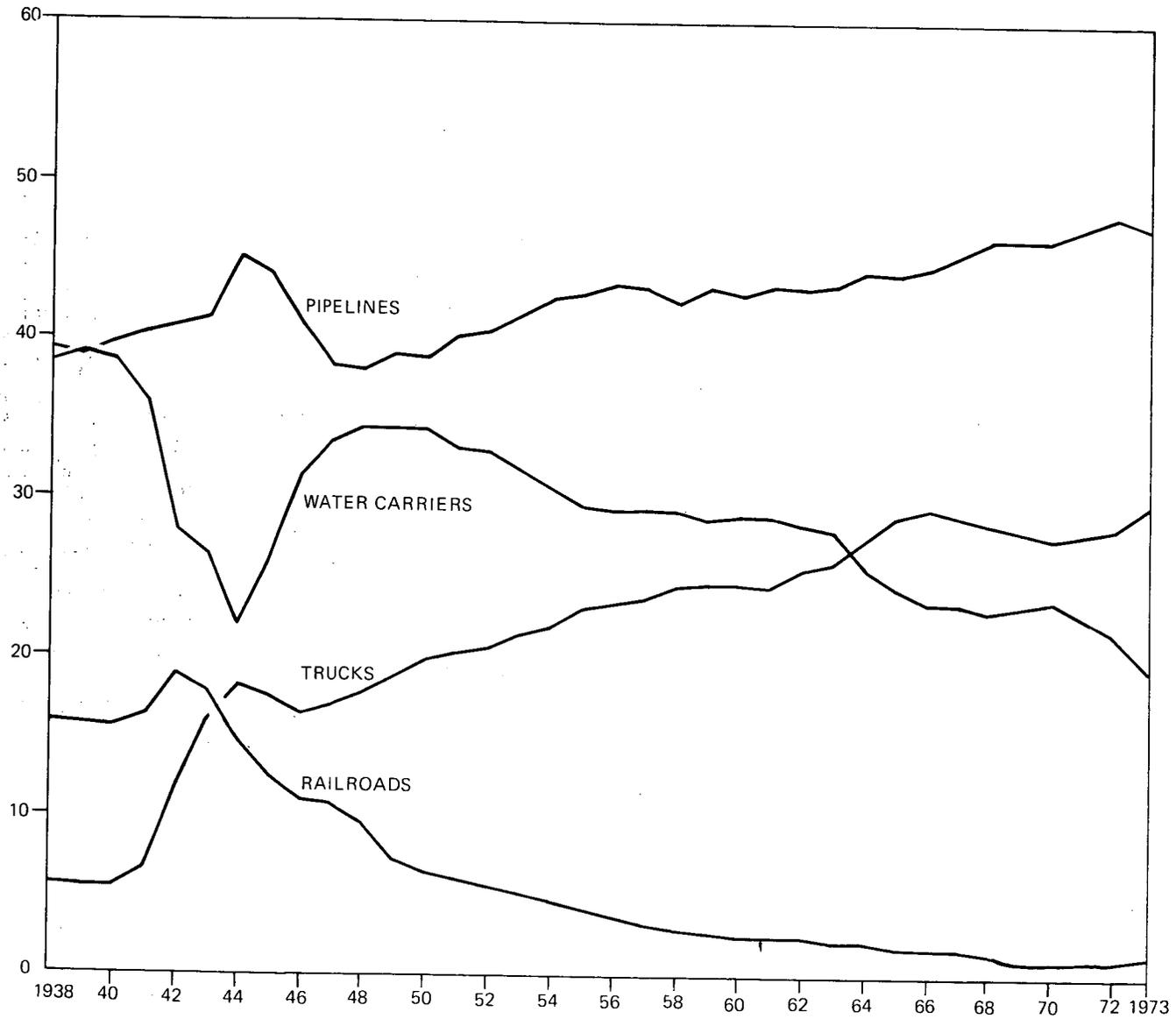


Figure 6. Modal Shares for Total Crude Petroleum and Petroleum Products Transported in the U.S., 1938 - 1973

Table 1-12. Total Crude Oil Transported in the U.S., by Method of Transportation, 1938 - 1973

| Year | Pipelines | | Water Carriers | | Trucks ¹ | | Railroads | | Total Tons Carried |
|------|--------------|----------------------|----------------|----------------------|---------------------|----------------------|--------------|----------------------|-----------------------|
| | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | |
| 1973 | 492,382,317 | 76.89 | 90,518,547 | 14.13 | 55,540,000 | 8.68 | 1,900,923 | 0.30 | 640,391,787 |
| 1972 | 487,606,700 | 75.75 | 103,672,800 | 16.10 | 51,000,000 | 7.92 | 1,495,000 | 0.23 | 643,739,000 |
| 1971 | 459,860,200 | 74.62 | 114,720,700 | 18.62 | 40,800,000 | 6.62 | 876,100 | 0.14 | 616,257,000 |
| 1970 | 457,156,700 | 74.30 | 116,300,900 | 18.90 | 40,900,000 | 6.65 | 916,200 | 0.15 | 615,273,800 |
| 1969 | 441,200,300 | 74.41 | 109,682,900 | 18.50 | 41,100,000 | 6.93 | 963,600 | 0.16 | 592,946,800 |
| 1968 | 425,837,300 | 74.08 | 107,010,300 | 18.62 | 40,900,000 | 7.11 | 1,066,800 | 0.19 | 574,814,400 |
| 1967 | 404,698,400 | 73.63 | 103,300,600 | 18.79 | 40,500,000 | 7.37 | 1,125,900 | 0.21 | 549,624,900 |
| 1966 | 384,542,645 | 74.15 | 92,851,238 | 17.90 | 40,097,000 | 7.73 | 1,120,500 | 0.22 | 518,611,383 |
| 1965 | 367,049,480 | 74.92 | 82,082,862 | 16.76 | 39,696,600 | 8.10 | 1,060,600 | 0.22 | 489,889,542 |
| 1964 | 362,375,186 | 75.59 | 79,998,233 | 16.69 | 35,762,700 | 7.46 | 1,252,786 | 0.26 | 479,388,905 |
| 1963 | 351,876,969 | 75.17 | 83,235,525 | 17.78 | 32,189,676 | 6.88 | 781,296 | 0.17 | 468,083,466 |
| 1962 | 338,642,644 | 74.92 | 80,969,520 | 17.91 | 30,656,834 | 6.78 | 1,755,547 | 0.39 | 452,024,545 |
| 1961 | 333,318,300 | 75.44 | 78,297,176 | 17.72 | 28,177,237 | 6.38 | 2,027,483 | 0.46 | 441,820,196 |
| 1960 | 328,449,000 | 75.97 | 74,137,775 | 17.15 | 27,843,120 | 6.44 | 1,888,387 | 0.44 | 432,318,282 |
| 1959 | 327,697,000 | 76.25 | 73,067,560 | 17.00 | 27,458,698 | 6.39 | 1,531,242 | 0.36 | 429,754,500 |
| 1958 | 307,059,000 | 76.35 | 67,965,254 | 16.90 | 25,953,401 | 6.45 | 1,195,560 | 0.30 | 402,173,215 |
| 1957 | 320,277,900 | 76.01 | 74,090,233 | 17.58 | 24,955,193 | 5.92 | 2,046,347 | 0.49 | 421,369,673 |
| 1956 | 327,846,900 | 77.75 | 67,335,912 | 15.97 | 24,299,117 | 5.76 | 2,191,748 | 0.52 | 421,673,677 |
| 1955 | 310,042,950 | 77.73 | 63,081,850 | 15.81 | 22,923,695 | 5.75 | 2,828,541 | 0.71 | 398,877,036 |
| 1954 | 284,438,700 | 76.37 | 64,572,121 | 17.34 | 19,830,186 | 5.32 | 3,606,041 | 0.97 | 372,447,048 |
| 1953 | 283,379,400 | 75.19 | 70,585,701 | 18.73 | 19,012,642 | 5.05 | 3,882,852 | 1.03 | 376,860,595 |
| 1952 | 269,272,500 | 73.73 | 74,812,548 | 20.48 | 17,686,179 | 4.84 | 3,477,423 | 0.95 | 365,208,650 |
| 1951 | 263,431,350 | 73.68 | 72,497,833 | 20.28 | 16,843,980 | 4.71 | 4,756,252 | 1.33 | 357,529,415 |
| 1950 | 231,198,150 | 72.64 | 67,551,132 | 21.22 | 15,012,459 | 4.72 | 4,518,534 | 1.42 | 318,280,275 |
| 1949 | 215,051,700 | 72.32 | 64,219,078 | 21.60 | 12,997,800 | 4.37 | 5,083,362 | 1.71 | 297,351,940 |
| 1948 | 221,198,250 | 68.48 | 75,126,140 | 23.26 | 12,450,000 | 3.86 | 14,216,922 | 4.40 | 322,991,312 |
| 1947 | 204,375,000 | 69.87 | 67,333,281 | 23.02 | 10,875,000 | 3.72 | 9,918,201 | 3.39 | 292,501,482 |
| 1946 | 193,545,000 | 72.87 | 56,287,368 | 21.19 | 9,150,000 | 3.45 | 6,619,360 | 2.49 | 265,601,728 |
| 1945 | 205,185,000 | 74.86 | 48,477,658 | 17.69 | 9,900,000 | 3.61 | 10,515,776 | 3.84 | 274,078,434 |
| 1944 | 208,560,000 | 77.98 | 32,371,496 | 12.10 | 10,200,000 | 3.81 | 16,337,338 | 6.11 | 267,468,834 |
| 1943 | 176,835,000 | 73.46 | 31,129,833 | 12.93 | 7,875,000 | 3.27 | 24,890,590 | 10.34 | 240,730,423 |
| 1942 | 159,255,000 | 72.12 | 35,299,423 | 15.98 | 5,100,000 | 2.31 | 21,179,792 | 9.59 | 220,834,215 |
| 1941 | 156,300,000 | 73.45 | 46,224,034 | 21.72 | 2,955,000 | 1.39 | 7,317,674 | 3.44 | 212,796,708 |
| 1940 | 140,985,000 | 71.86 | 47,927,090 | 24.43 | 2,250,000 | 1.14 | 5,035,027 | 2.57 | 196,197,117 |
| 1939 | 135,270,000 | 71.02 | 47,045,281 | 24.70 | 2,220,000 | 1.17 | 5,928,983 | 3.11 | 190,464,264 |
| 1938 | 128,175,000 | 71.01 | 46,173,283 | 25.58 | 2,115,000 | 1.17 | 4,045,664 | 2.24 | 180,508,947 |

¹ Estimated

Source: Association of Oil Pipe Lines, "Shifts in Petroleum Transportation," June 2, 1975, Table 2, and other equivalent issues.

**Table 1-13. Total Refined Petroleum Products Transported in the U.S.,
by Method of Transportation, 1938 - 1973**

| Year | Pipelines ¹ | | Water Carriers | | Trucks ² | | Railroads | | Total Tons Carried |
|------|------------------------|----------------------|----------------|----------------------|---------------------|----------------------|--------------|----------------------|-----------------------|
| | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | Tons Carried | Per Cent of Total | |
| 1973 | 419,827,541 | 31.84 | 330,687,301 | 25.08 | 540,177,175 | 40.97 | 27,835,287 | 2.11 | 1,318,527,304 |
| 1972 | 388,641,400 | 32.39 | 322,930,400 | 26.92 | 462,500,000 | 38.55 | 25,638,700 | 2.14 | 1,199,710,500 |
| 1971 | 346,810,800 | 31.43 | 302,071,300 | 27.37 | 429,900,000 | 38.96 | 24,773,800 | 2.24 | 1,103,555,900 |
| 1970 | 333,085,000 | 31.12 | 286,367,000 | 26.75 | 425,200,000 | 39.72 | 25,816,000 | 2.41 | 1,070,468,000 |
| 1969 | 318,411,700 | 30.92 | 269,179,800 | 26.14 | 416,900,000 | 40.48 | 25,336,300 | 2.46 | 1,029,827,800 |
| 1968 | 300,606,600 | 30.41 | 253,992,300 | 25.69 | 408,800,000 | 41.35 | 25,184,400 | 2.55 | 988,583,300 |
| 1967 | 274,623,200 | 29.25 | 246,515,200 | 26.26 | 393,100,000 | 41.87 | 24,616,300 | 2.62 | 938,854,700 |
| 1966 | 245,211,035 | 27.65 | 240,025,811 | 27.07 | 376,904,000 | 42.50 | 24,689,000 | 2.78 | 886,829,846 |
| 1965 | 220,746,000 | 26.50 | 241,588,552 | 29.01 | 345,784,000 | 41.51 | 24,796,000 | 2.98 | 832,914,552 |
| 1964 | 197,016,851 | 25.37 | 241,806,996 | 31.14 | 311,517,100 | 40.12 | 26,128,293 | 3.37 | 776,469,240 |
| 1963 | 169,272,168 | 23.25 | 252,376,335 | 34.67 | 280,393,430 | 38.52 | 25,877,390 | 3.56 | 727,919,323 |
| 1962 | 163,821,956 | 23.18 | 248,764,838 | 35.20 | 267,041,362 | 37.78 | 27,099,535 | 3.84 | 706,727,691 |
| 1961 | 150,851,755 | 22.56 | 244,399,351 | 36.55 | 245,442,428 | 36.71 | 27,936,750 | 4.18 | 668,630,284 |
| 1960 | 139,960,682 | 21.31 | 244,157,879 | 37.17 | 242,532,133 | 36.93 | 30,168,753 | 4.59 | 656,819,447 |
| 1959 | 136,593,959 | 21.19 | 237,030,474 | 36.77 | 239,183,563 | 37.10 | 31,812,545 | 4.94 | 644,620,541 |
| 1958 | 125,968,566 | 20.48 | 230,690,771 | 37.51 | 226,071,342 | 36.76 | 32,275,321 | 5.25 | 615,006,000 |
| 1957 | 120,800,269 | 20.19 | 225,710,230 | 37.71 | 217,376,366 | 36.32 | 34,597,624 | 5.78 | 598,484,489 |
| 1956 | 113,539,280 | 19.14 | 230,490,418 | 38.85 | 211,661,505 | 35.68 | 37,565,396 | 6.33 | 593,256,599 |
| 1955 | 102,490,445 | 18.24 | 220,925,284 | 39.32 | 199,680,665 | 35.53 | 38,834,961 | 6.91 | 561,931,355 |
| 1954 | 88,888,562 | 17.62 | 203,952,691 | 40.43 | 172,734,140 | 34.24 | 38,927,445 | 7.71 | 504,592,838 |
| 1953 | 75,762,935 | 15.59 | 202,890,739 | 41.76 | 165,612,789 | 34.09 | 41,568,336 | 8.56 | 485,834,799 |
| 1952 | 68,321,740 | 14.66 | 200,101,094 | 42.92 | 154,058,409 | 33.04 | 43,727,102 | 9.38 | 466,208,345 |
| 1951 | 61,236,481 | 13.67 | 194,920,107 | 43.51 | 146,722,294 | 32.76 | 45,085,809 | 10.06 | 447,964,691 |
| 1950 | 52,655,233 | 12.75 | 185,214,617 | 44.85 | 130,768,527 | 31.66 | 44,363,662 | 10.74 | 413,002,039 |
| 1949 | 45,972,057 | 12.49 | 165,709,587 | 45.03 | 113,219,494 | 30.76 | 43,115,737 | 11.72 | 368,016,875 |
| 1948 | 41,254,281 | 11.36 | 162,390,189 | 44.70 | 108,447,800 | 29.85 | 51,190,248 | 14.09 | 363,282,518 |
| 1947 | 33,504,554 | 10.26 | 141,754,388 | 43.39 | 94,728,500 | 28.99 | 56,720,468 | 17.36 | 326,707,910 |
| 1946 | 28,721,138 | 10.27 | 116,226,237 | 41.55 | 79,702,600 | 28.49 | 55,077,422 | 19.69 | 279,727,397 |
| 1945 | 35,564,492 | 13.06 | 94,020,674 | 34.53 | 86,235,600 | 31.67 | 56,487,483 | 20.74 | 272,308,249 |
| 1944 | 35,441,439 | 13.02 | 85,316,805 | 31.34 | 88,848,800 | 32.63 | 62,638,117 | 23.01 | 272,245,161 |
| 1943 | 19,556,443 | 8.39 | 84,865,592 | 36.42 | 68,596,500 | 29.44 | 59,984,665 | 25.75 | 233,003,200 |
| 1942 | 16,231,660 | 7.88 | 84,777,088 | 41.14 | 44,424,400 | 21.56 | 60,638,343 | 29.42 | 206,071,491 |
| 1941 | 14,384,472 | 6.90 | 106,206,760 | 50.98 | 25,740,020 | 12.36 | 62,006,011 | 29.76 | 208,337,263 |
| 1940 | 12,517,082 | 6.60 | 101,667,363 | 53.64 | 19,599,000 | 10.34 | 55,762,134 | 29.42 | 189,545,579 |
| 1939 | 12,264,686 | 6.57 | 101,009,188 | 54.09 | 19,337,680 | 10.36 | 54,128,454 | 28.98 | 186,740,008 |
| 1938 | 11,045,962 | 6.35 | 91,555,208 | 52.65 | 18,423,060 | 10.59 | 52,887,483 | 30.41 | 173,911,713 |

¹ Products in pipelines carry light products only—gasoline, kerosene, distillate and liquefied petroleum gases.

² Estimated

Source: Association of Oil Pipe Lines, "Shifts in Petroleum Transportation," June 2, 1975, Table 3, and other equivalent issues.

**Table 1-14. Transportation of Petroleum Products by Pipeline
(thousands of barrels)**

| | December 1974 | November 1974 | December 1973 | January-December (Incl.) 1974 1973 | |
|---|------------------|------------------|------------------|---------------------------------------|-----------|
| Turned into lines: | | | | | |
| Gasoline, total | 150,171 | 148,448 | 144,695 | 1,773,951 | 1,759,322 |
| Motor | 149,840 | 148,111 | 144,421 | 1,769,418 | 1,755,306 |
| Aviation | 331 | 337 | 274 | 4,533 | 4,016 |
| Jet fuel, total | 21,115 | 22,710 | 17,852 | 248,315 | 249,621 |
| Naphtha-type | 2,768 | 3,146 | 1,014 | 33,229 | 15,112 |
| Kerosene-type | 18,347 | 19,564 | 16,838 | 215,086 | 234,509 |
| Kerosene | 3,601 | 3,500 | 4,875 | 35,941 | 46,883 |
| Distillate fuel oil | 69,398 | 61,999 | 70,561 | 701,798 | 727,019 |
| Natural gas liquids | 44,727 | 41,995 | 38,202 | 467,280 | 438,000 |
| Delivered from lines: | | | | | |
| Gasoline, total | 150,751 | 148,346 | 145,442 | 1,774,498 | 1,760,580 |
| Motor | 150,436 | 148,066 | 145,167 | 1,770,174 | 1,756,721 |
| Aviation | 315 | 280 | 275 | 4,324 | 3,859 |
| Jet fuel, total | 21,227 | 22,657 | 18,250 | 244,719 | 247,035 |
| Naphtha-type | 2,777 | 3,163 | 1,033 | 33,044 | 15,337 |
| Kerosene-type | 18,450 | 19,494 | 17,217 | 211,675 | 231,698 |
| Kerosene | 3,616 | 3,569 | 4,663 | 35,822 | 45,086 |
| Distillate fuel oil | 69,361 | 60,764 | 71,616 | 701,650 | 720,997 |
| Natural gas liquids | 45,403 | 42,107 | 37,551 | 468,567 | 431,228 |
| Shortage (or overage): | | | | | |
| Gasoline, total | 361 | 160 | 187 | (865) | (2,425) |
| Motor | 357 | 165 | 162 | (1,010) | (2,586) |
| Aviation | 4 | (5) | 25 | 145 | 161 |
| Jet fuel, total | 382 | 197 | 309 | 3,205 | 2,569 |
| Naphtha-type | (8) | 15 | 2 | (135) | (100) |
| Kerosene-type | 390 | 182 | 307 | 3,340 | 2,669 |
| Kerosene | 119 | 80 | 92 | 884 | 1,608 |
| Distillate fuel oil | (25) | 397 | (439) | (553) | (847) |
| Natural gas liquids | (183) | (253) | 629 | (299) | 1,402 |
| Stocks in lines and working tanks at end of month: | | | | | |
| Gasoline, total | 45,474 | 46,415 | 45,156 | 45,474 | 45,156 |
| Motor | 45,221 | 46,174 | 44,967 | 45,221 | 44,967 |
| Aviation | 253 | 241 | 189 | 253 | 189 |
| Jet fuel, total | 6,214 | 6,708 | 5,823 | 6,214 | 5,823 |
| Naphtha-type | 896 | 897 | 576 | 896 | 576 |
| Kerosene-type | 5,318 | 5,811 | 5,247 | 5,318 | 5,247 |
| Kerosene | 1,872 | 2,006 | 2,637 | 1,872 | 2,637 |
| Distillate fuel oil | 33,115 | 33,053 | 32,414 | 33,115 | 32,414 |
| Natural gas liquids | 20,577 | 21,070 | 21,565 | 20,577 | 21,565 |

Source: Department of Interior, Bureau of Mines, *Mineral Industry Surveys: Crude Petroleum, Petroleum Products, and Natural Gas-Liquids, Dec., 1974*, Table 11, p. 12.

Table 1-14. Transportation of Petroleum Products by Pipeline - Continued
(thousands of barrels)

| | February 1975 | January 1975 | February 1974 | January-February (Incl.) 1975 1974 | |
|---|------------------|-----------------|------------------|---------------------------------------|---------|
| Turned into lines: | | | | | |
| Gasoline, total | 135,751 | 146,402 | 119,952 | 282,153 | 252,949 |
| Motor | 135,561 | 146,026 | 119,674 | 281,587 | 252,403 |
| Aviation | 190 | 376 | 278 | 566 | 546 |
| Jet fuel, total | 19,552 | 22,295 | 17,797 | 41,847 | 38,753 |
| Naphtha-type | 2,529 | 2,272 | 1,412 | 4,801 | 2,638 |
| Kerosene-type | 17,023 | 20,023 | 16,385 | 37,046 | 36,115 |
| Kerosene | 3,810 | 4,163 | 4,559 | 7,973 | 9,695 |
| Distillate fuel oil | 59,372 | 71,187 | 57,759 | 130,559 | 132,560 |
| Natural gas liquids | 36,688 | 44,125 | 34,279 | 80,813 | 72,503 |
| Delivered from lines: | | | | | |
| Gasoline, total | 134,099 | 144,617 | 117,785 | 278,716 | 250,671 |
| Motor | 133,816 | 144,286 | 117,535 | 278,102 | 250,167 |
| Aviation | 283 | 331 | 250 | 614 | 504 |
| Jet fuel, total | 18,638 | 22,739 | 17,516 | 41,377 | 37,608 |
| Naphtha-type | 2,502 | 2,487 | 1,357 | 4,989 | 2,686 |
| Kerosene-type | 16,136 | 20,252 | 16,159 | 36,388 | 34,922 |
| Kerosene | 3,912 | 4,142 | 4,788 | 8,054 | 9,923 |
| Distillate fuel oil | 62,549 | 72,689 | 63,754 | 135,238 | 138,221 |
| Natural gas liquids | 37,424 | 44,021 | 34,778 | 81,445 | 73,866 |
| Shortage (or overage): | | | | | |
| Gasoline, total | 819 | 168 | (456) | 987 | (561) |
| Motor | 823 | 133 | (454) | 956 | (553) |
| Aviation | (4) | 35 | (2) | 31 | (8) |
| Jet fuel, total | 307 | 150 | 304 | 457 | 501 |
| Naphtha-type | 78 | (23) | 15 | 55 | 16 |
| Kerosene-type | 229 | 173 | 289 | 402 | 485 |
| Kerosene | 145 | 162 | 87 | 307 | 214 |
| Distillate fuel oil | 1,028 | (206) | (304) | 822 | (407) |
| Natural gas liquids | 23 | 71 | 272 | 94 | 254 |
| Stocks in lines and working tanks at end of month: | | | | | |
| Gasoline, total | 47,924 | 47,091 | 47,995 | 47,924 | 47,995 |
| Motor | 47,750 | 46,828 | 47,756 | 47,750 | 47,756 |
| Aviation | 174 | 263 | 239 | 174 | 239 |
| Jet fuel, total | 6,227 | 5,620 | 6,467 | 6,227 | 6,467 |
| Naphtha-type | 653 | 704 | 512 | 653 | 512 |
| Kerosene-type | 5,574 | 4,916 | 5,955 | 5,574 | 5,955 |
| Kerosene | 1,484 | 1,731 | 2,195 | 1,484 | 2,195 |
| Distillate fuel oil | 27,614 | 31,819 | 27,160 | 27,614 | 27,160 |
| Natural gas liquids | 19,851 | 20,610 | 19,948 | 19,851 | 19,948 |

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys: Petroleum Statement Monthly*, February, 1975.
Table 11, p. 12.

**Table 1-15. Movement of Petroleum Products by Pipeline Between P.A.D. Districts
(thousands of barrels)**

| Item | December 1974 | November 1974 | December 1973 | January-December (Incl.) 1974 | 1973 |
|---------------------------------------|------------------|------------------|------------------|----------------------------------|---------|
| From District 1 to District 2: | | | | | |
| Gasoline, total | 3,818 | 3,958 | 3,709 | 46,032 | 45,438 |
| Motor | 3,811 | 3,958 | 3,709 | 45,986 | 45,385 |
| Aviation | 7 | -- | -- | 46 | 53 |
| Jet fuel, total | 148 | 158 | 212 | 1,786 | 2,612 |
| Naphtha-type | -- | -- | 35 | 302 | 595 |
| Kerosene-type | 148 | 158 | 177 | 1,484 | 2,017 |
| Kerosene | 37 | 30 | 50 | 270 | 403 |
| Distillate fuel oil | 1,134 | 1,101 | 991 | 11,605 | 11,662 |
| From District 2 to District 1: | | | | | |
| Gasoline, total | 975 | 912 | 871 | 12,440 | 10,066 |
| Motor | 975 | 912 | 871 | 12,440 | 10,066 |
| Jet fuel, total | -- | -- | -- | -- | 57 |
| Naphtha-type | -- | -- | -- | -- | 57 |
| Kerosene | 21 | 4 | -- | 45 | 49 |
| Distillate fuel oil | 147 | 151 | 69 | 1,167 | 980 |
| Natural gas liquids | 1,403 | 770 | 1,117 | 10,351 | 11,910 |
| From District 2 to District 3: | | | | | |
| Gasoline, total | 1,659 | 1,556 | 1,555 | 19,582 | 18,591 |
| Motor | 1,659 | 1,556 | 1,555 | 19,582 | 18,591 |
| Jet fuel, total | 1 | 30 | 1 | 520 | 47 |
| Naphtha-type | -- | 30 | -- | 513 | 1 |
| Kerosene-type | 1 | -- | 1 | 7 | 6 |
| Distillate fuel oil | 484 | 44 | 452 | 5,466 | 4,743 |
| Natural gas liquids | 364 | 307 | 350 | 3,886 | 3,267 |
| From District 2 to District 4: | | | | | |
| Gasoline, total | 242 | 257 | 360 | 2,415 | 674 |
| Motor | 242 | 257 | 360 | 2,415 | 674 |
| Distillate fuel oil | 41 | 42 | 27 | 585 | 92 |
| From District 3 to District 1: | | | | | |
| Gasoline, total | 28,998 | 26,973 | 27,035 | 321,271 | 329,835 |
| Motor | 28,983 | 26,973 | 27,027 | 321,065 | 329,616 |
| Aviation | 15 | -- | 8 | 206 | 219 |
| Jet fuel, total | 4,815 | 5,066 | 4,952 | 51,375 | 55,504 |
| Naphtha-type | 142 | 133 | 116 | 1,423 | 747 |
| Kerosene-type | 4,673 | 4,933 | 4,836 | 49,952 | 54,757 |
| Kerosene | 1,007 | 838 | 1,022 | 8,147 | 11,134 |
| Distillate fuel oil | 14,932 | 14,110 | 17,591 | 173,417 | 180,331 |
| Natural gas liquids | 2,447 | 1,383 | 1,875 | 15,846 | 18,112 |
| From District 3 to District 2: | | | | | |
| Gasoline, total | 4,062 | 6,333 | 5,957 | 66,521 | 64,857 |
| Motor | 3,948 | 6,217 | 5,852 | 65,254 | 63,660 |
| Aviation | 114 | 116 | 105 | 1,267 | 1,197 |
| Jet fuel, total | 147 | 454 | 503 | 3,178 | 4,614 |
| Naphtha-type | -- | 2 | -- | 69 | 3 |
| Kerosene-type | 147 | 452 | 503 | 3,109 | 4,611 |
| Kerosene | 25 | 202 | 355 | 2,043 | 2,505 |
| Distillate fuel oil | 1,925 | 2,972 | 3,097 | 25,088 | 30,938 |
| Natural gas liquids | 9,141 | 7,765 | 7,706 | 75,576 | 71,698 |
| From District 3 to District 4: | | | | | |
| Gasoline, total | 347 | 460 | 312 | 5,305 | 4,759 |
| Motor | 336 | 452 | 297 | 5,146 | 4,499 |
| Aviation | 11 | 8 | 15 | 159 | 260 |
| Jet fuel, total | 340 | 309 | 345 | 3,824 | 4,175 |
| Kerosene-type | 340 | 309 | 345 | 3,824 | 4,175 |
| Kerosene | -- | -- | -- | 1 | 4 |
| Distillate fuel oil | 61 | 46 | 68 | 562 | 688 |
| Natural gas liquids | 153 | 106 | 155 | 963 | 1,259 |
| From District 3 to District 5: | | | | | |
| Gasoline, total | 1,031 | 1,028 | 1,164 | 12,190 | 11,873 |
| Motor | 1,031 | 1,028 | 1,164 | 12,190 | 11,873 |
| Jet fuel, total | 241 | 199 | 122 | 2,146 | 1,708 |
| Naphtha-type | 122 | 90 | 37 | 894 | 652 |
| Kerosene-type | 119 | 109 | 85 | 1,252 | 1,056 |
| Distillate fuel oil | 419 | 446 | 322 | 4,481 | 4,532 |
| From District 4 to District 2: | | | | | |
| Gasoline, total | 462 | 361 | 430 | 5,020 | 4,552 |
| Motor | 462 | 361 | 430 | 5,020 | 4,552 |
| Jet fuel, total | 44 | 67 | 16 | 450 | 310 |
| Naphtha-type | 44 | 60 | 16 | 389 | 310 |
| Kerosene-type | -- | 7 | -- | 61 | -- |
| Kerosene | 9 | -- | 2 | 19 | 59 |
| Distillate fuel oil | 349 | 321 | 320 | 3,720 | 3,304 |
| Natural gas liquids | -- | -- | -- | 14 | -- |
| From District 4 to District 3: | | | | | |
| Natural gas liquids | 288 | 252 | 285 | 3,751 | 3,699 |
| From District 4 to District 5: | | | | | |
| Gasoline, total | 862 | 715 | 595 | 10,540 | 7,805 |
| Motor | 862 | 715 | 595 | 10,540 | 7,805 |
| Jet fuel, total | 131 | 112 | 79 | 1,566 | 828 |
| Naphtha-type | 72 | 59 | 69 | 862 | 351 |
| Kerosene-type | 59 | 53 | 10 | 704 | 477 |
| Distillate fuel oil | 714 | 340 | 440 | 4,851 | 3,672 |

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys: Crude Petroleum, Petroleum Products, and Natural Gas Liquids*, Dec. 1974, Table 12, p. 13.

**Table 1-15. Movement of Petroleum Products by Pipeline Between
P.A.D. Districts - Continued
(thousands of barrels)**

| Item | February | | January | | January - February (Incl.) | |
|---------------------------------------|----------|--------|---------|--------|----------------------------|--|
| | 1975 | 1975 | 1974 | 1975 | 1974 | |
| From District 1 to District 2: | | | | | | |
| Gasoline, total | 3,367 | 3,807 | 2,528 | 7,174 | 6,061 | |
| Motor | 3,362 | 3,801 | 2,528 | 7,163 | 6,061 | |
| Aviation | 5 | 6 | - | 11 | - | |
| Jet fuel, total | 202 | 203 | 268 | 405 | 510 | |
| Naphtha-type | - | - | 39 | - | 112 | |
| Kerosene-type | 202 | 203 | 229 | 405 | 398 | |
| Kerosene | 6 | 66 | 7 | 72 | 37 | |
| Distillate fuel oil | 1,180 | 1,185 | 970 | 2,365 | 1,861 | |
| From District 2 to District 1: | | | | | | |
| Gasoline, total | 691 | 941 | 865 | 1,632 | 1,694 | |
| Motor | 691 | 941 | 865 | 1,632 | 1,694 | |
| Kerosene | - | 22 | - | 22 | - | |
| Distillate fuel oil | 77 | 147 | 37 | 224 | 104 | |
| Natural gas liquids | 1,443 | 1,586 | 758 | 3,029 | 1,488 | |
| From District 2 to District 3: | | | | | | |
| Gasoline, total | 1,380 | 1,538 | 1,424 | 2,918 | 2,964 | |
| Motor | 1,380 | 1,538 | 1,424 | 2,918 | 2,964 | |
| Jet fuel, total | 30 | - | 41 | 30 | 42 | |
| Naphtha-type | 29 | - | 40 | 29 | 40 | |
| Kerosene-type | 1 | - | 1 | 1 | 2 | |
| Distillate fuel oil | 412 | 529 | 419 | 941 | 824 | |
| Natural gas liquids | 351 | 373 | 266 | 724 | 579 | |
| From District 2 to District 4: | | | | | | |
| Gasoline, total | 199 | 162 | 176 | 361 | 411 | |
| Motor | 199 | 162 | 176 | 361 | 411 | |
| Distillate fuel oil | 21 | 34 | 39 | 55 | 88 | |
| From District 3 to District 1: | | | | | | |
| Gasoline, total | 24,838 | 25,475 | 20,272 | 50,313 | 43,191 | |
| Motor | 24,822 | 25,457 | 20,272 | 50,279 | 43,175 | |
| Aviation | 16 | 18 | - | 34 | 16 | |
| Jet fuel, total | 4,373 | 5,363 | 4,676 | 9,736 | 9,486 | |
| Naphtha-type | 129 | 100 | 95 | 229 | 170 | |
| Kerosene-type | 4,244 | 5,263 | 4,581 | 9,507 | 9,316 | |
| Kerosene | 765 | 1,209 | 978 | 1,974 | 2,130 | |
| Distillate fuel oil | 14,847 | 18,465 | 17,517 | 33,312 | 36,971 | |
| Natural gas liquids | 1,403 | 2,019 | 1,274 | 3,422 | 2,679 | |
| From District 3 to District 2: | | | | | | |
| Gasoline, total | 4,292 | 4,654 | 4,687 | 8,946 | 9,369 | |
| Motor | 4,206 | 4,518 | 4,606 | 8,724 | 9,207 | |
| Aviation | 86 | 136 | 81 | 222 | 162 | |
| Jet fuel, total | 178 | 81 | 330 | 259 | 612 | |
| Naphtha-type | 1 | - | - | 1 | 1 | |
| Kerosene-type | 177 | 81 | 330 | 258 | 611 | |
| Kerosene | 56 | 178 | 41 | 234 | 200 | |
| Distillate fuel oil | 989 | 1,403 | 1,572 | 2,392 | 3,544 | |
| Natural gas liquids | 7,831 | 8,728 | 5,741 | 16,559 | 14,383 | |
| From District 3 to District 4: | | | | | | |
| Gasoline, total | 399 | 501 | 231 | 900 | 496 | |
| Motor | 389 | 492 | 215 | 881 | 461 | |
| Aviation | 10 | 9 | 16 | 19 | 35 | |
| Jet fuel, total | 256 | 310 | 288 | 566 | 619 | |
| Kerosene-type | 256 | 310 | 288 | 566 | 619 | |
| Kerosene | 1 | 1 | - | 2 | 1 | |
| Distillate fuel oil | 44 | 59 | 40 | 103 | 94 | |
| Natural gas liquids | 118 | 159 | 92 | 277 | 270 | |
| From District 3 to District 5: | | | | | | |
| Gasoline, total | 975 | 1,117 | 804 | 2,092 | 1,781 | |
| Motor | 975 | 1,117 | 804 | 2,092 | 1,781 | |
| Jet fuel, total | 196 | 245 | 129 | 441 | 306 | |
| Naphtha-type | 104 | 123 | 24 | 227 | 74 | |
| Kerosene-type | 92 | 122 | 105 | 214 | 232 | |
| Distillate fuel oil | 346 | 358 | 380 | 704 | 822 | |
| From District 4 to District 2: | | | | | | |
| Gasoline, total | 350 | 364 | 334 | 714 | 671 | |
| Motor | 350 | 364 | 334 | 714 | 671 | |
| Jet fuel, total | 61 | 63 | 32 | 124 | 55 | |
| Naphtha-type | 61 | 60 | 29 | 121 | 52 | |
| Kerosene-type | - | 3 | 3 | 3 | 3 | |
| Kerosene | 8 | - | - | 8 | 10 | |
| Distillate fuel oil | 238 | 345 | 308 | 583 | 641 | |
| From District 4 to District 3: | | | | | | |
| Natural gas liquids | 192 | 256 | 246 | 448 | 496 | |
| From District 4 to District 5: | | | | | | |
| Gasoline, total | 733 | 835 | 712 | 1,568 | 1,595 | |
| Motor | 733 | 835 | 712 | 1,568 | 1,595 | |
| Jet fuel, total | 50 | 90 | 96 | 140 | 199 | |
| Naphtha-type | 34 | 38 | 28 | 72 | 77 | |
| Kerosene-type | 16 | 52 | 68 | 68 | 122 | |
| Distillate fuel oil | 377 | 473 | 444 | 850 | 889 | |

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys Petroleum Statement*, Monthly, February, 1975, Table 12, p. 13.

Table 1-16. Average Length of Movement on Crude Oil and Petroleum Product Pipelines¹, 1950 - 1973

| Year | Crude Oil Trunk Pipelines | | | Petroleum Products Pipelines | | | Year |
|------|----------------------------|-----------------------------|------------------|------------------------------|-----------------------------|------------------|------|
| | Barrels | Barrel-Miles (Thousands) | Average Miles | Barrels | Barrel-Miles (Thousands) | Average Miles | |
| 1973 | 5,423,651,000 ² | 1,632,542,253 | 301 | 3,633,130,000 ² | 1,236,272,739 | 340 | 1973 |
| 1972 | 5,112,024,546 | 1,526,064,430 | 298 | 3,357,762,424 | 1,166,586,025 | 347 | 1972 |
| 1971 | 4,781,043,520 | 1,439,195,444 | 301 | 3,016,574,466 | 1,045,399,200 | 346 | 1971 |
| 1970 | 4,756,244,120 | 1,428,362,484 | 300 | 2,863,735,391 | 1,021,484,502 | 356 | 1970 |
| 1969 | 4,445,921,966 | 1,321,711,176 | 297 | 2,718,870,361 | 995,029,558 | 366 | 1969 |
| 1968 | 4,273,298,625 | 1,270,465,366 | 297 | 2,559,522,918 | 951,655,430 | 372 | 1968 |
| 1967 | 3,886,370,613 | 1,207,321,010 | 311 | 2,338,581,680 | 925,121,262 | 396 | 1967 |
| 1966 | 3,661,172,872 | 1,181,152,599 | 323 | 2,049,934,224 | 719,728,561 | 351 | 1966 |
| 1965 | 3,504,832,301 | 1,121,113,143 | 320 | 1,871,969,652 | 626,755,696 | 335 | 1965 |
| 1964 | 3,445,981,826 | 1,061,521,062 | 308 | 1,600,713,475 | 448,859,033 | 280 | 1964 |
| 1963 | 3,354,648,208 | 1,053,747,896 | 314 | 1,415,605,280 | 369,475,357 | 261 | 1963 |
| 1962 | 3,213,244,700 | 998,096,023 | 311 | 1,321,859,609 | 347,178,499 | 263 | 1962 |
| 1961 | 3,107,930,439 | 995,642,315 | 320 | 1,191,421,488 | 317,141,089 | 266 | 1961 |
| 1960 | 3,090,718,604 | 976,357,818 | 316 | 1,123,854,986 | 304,448,973 | 271 | 1960 |
| 1959 | 3,037,683,008 | 980,013,807 | 323 | 1,054,674,841 | 284,361,887 | 270 | 1959 |
| 1958 | 2,946,672,171 | 905,200,921 | 307 | 934,671,206 | 259,789,783 | 278 | 1958 |
| 1957 | 3,056,065,958 | 930,558,064 | 304 | 876,234,678 | 248,318,537 | 283 | 1957 |
| 1956 | 3,061,918,045 | 935,801,321 | 306 | 817,045,873 | 233,457,898 | 286 | 1956 |
| 1955 | 2,781,178,550 | 839,009,465 | 302 | 716,703,580 | 204,886,356 | 286 | 1955 |
| 1954 | 2,574,335,641 | 782,219,391 | 304 | 606,861,438 | 182,702,180 | 301 | 1954 |
| 1953 | 2,596,578,447 | 755,997,975 | 291 | 507,845,083 | 161,228,916 | 317 | 1953 |
| 1952 | 2,454,702,973 | 714,722,720 | 291 | 441,788,756 | 142,425,912 | 322 | 1952 |
| 1951 | 2,336,641,710 | 694,723,304 | 297 | 404,976,104 | 122,188,184 | 302 | 1951 |
| 1950 | 1,976,569,928 | 577,054,200 | 292 | 360,276,454 | 106,648,715 | 296 | 1950 |

¹ ICC-regulated oil pipelines only

² Data rounded to thousands

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, "Pipelines," December 31, 1973, p. 3, and equivalent tables in earlier editions.

Table 1-17. U.S. Petroleum Freight Originated by Class I Railroads, by District and Commodity, 1959 - 1973
(thousands of tons)

| District and Commodity | 1973 | 1972 | 1971 | 1970 | 1969 | 1968 | 1967 | 1966 | 1965 | 1964 | 1963 | 1962 | 1961 | 1960 | 1959 |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Eastern District: | | | | | | | | | | | | | | | |
| Crude petroleum ¹ | 635 | 521 | 100 | 69 | 5 | 1 | 4 | 10 | 19 | 13 | 3 | 16 | 126 | 79 | 24 |
| Gasoline | 277 | 214 | 267 | 270 | 299 | 346 | 416 | 443 | 618 | 855 | 758 | 822 | 1,043 | 1,059 | 1,146 |
| Residual and distillate fuel oils | 3,449 | 3,382 | 2,808 | 2,665 | 2,705 | 2,557 | 2,454 | 2,538 | 2,497 | 2,213 | 1,802 | 1,794 | 1,734 | 1,778 | 1,951 |
| Lubricating oils and greases | 1,386 | 1,261 | 1,269 | 1,251 | 1,371 | 1,329 | 1,284 | 1,241 | 1,139 | 1,039 | 1,022 | 988 | 905 | 899 | 919 |
| Other refined products | 1,881 | 1,761 | 1,790 | 1,855 | 1,739 | 1,540 | 1,533 | 1,611 | 1,709 | 1,746 | 1,846 | 1,779 | 1,665 | 1,720 | 1,742 |
| Asphalt (natural and petroleum) | 984 | 830 | 803 | 772 | 763 | 620 | 891 | 936 | 1,001 | 1,095 | 665 | 694 | 693 | 730 | 790 |
| Total Eastern District | 8,612 | 7,969 | 7,037 | 6,882 | 6,882 | 6,393 | 6,582 | 6,779 | 6,983 | 6,961 | 6,096 | 6,093 | 6,167 | 6,265 | 6,572 |
| Southern District: | | | | | | | | | | | | | | | |
| Crude petroleum ¹ | 314 | 327 | 268 | 229 | 231 | 247 | 298 | 274 | 256 | 247 | 189 | 185 | 185 | 188 | 183 |
| Gasoline | 200 | 269 | 358 | 596 | 728 | 877 | 1,091 | 1,100 | 1,274 | 1,883 | 2,026 | 2,237 | 2,326 | 2,617 | 2,825 |
| Residual and distillate fuel oils | 642 | 653 | 558 | 651 | 669 | 664 | 634 | 681 | 705 | 712 | 797 | 804 | 765 | 923 | 971 |
| Lubricating oils and greases | 293 | 228 | 214 | 219 | 236 | 246 | 261 | 27 | 246 | 265 | 252 | 272 | 236 | 225 | 218 |
| Other refined products | 1,719 | 1,481 | 1,205 | 1,127 | 1,141 | 1,075 | 978 | 912 | 807 | 761 | 882 | 875 | 802 | 720 | 734 |
| Asphalt (natural and petroleum) | 196 | 301 | 196 | 237 | 258 | 304 | 335 | 311 | 393 | 520 | 332 | 308 | 237 | 214 | 266 |
| Total Southern District | 3,364 | 3,259 | 2,799 | 3,059 | 3,263 | 3,413 | 3,597 | 3,545 | 3,681 | 4,388 | 4,478 | 4,681 | 4,551 | 4,887 | 5,197 |
| Western District: | | | | | | | | | | | | | | | |
| Crude petroleum ¹ | 1,167 | 623 | 508 | 612 | 727 | 819 | 823 | 836 | 786 | 993 | 589 | 1,555 | 1,716 | 1,621 | 1,324 |
| Gasoline | 863 | 1,018 | 1,035 | 1,185 | 1,374 | 1,554 | 1,750 | 1,916 | 1,961 | 2,530 | 2,596 | 3,128 | 3,492 | 3,855 | 4,201 |
| Residual and distillate fuel oils | 4,246 | 3,001 | 2,747 | 2,808 | 2,879 | 2,993 | 2,870 | 2,731 | 2,985 | 3,251 | 3,214 | 3,611 | 3,870 | 4,578 | 5,144 |
| Lubricating oils and greases | 1,658 | 1,606 | 1,619 | 1,878 | 2,009 | 2,018 | 1,960 | 2,028 | 1,952 | 2,073 | 1,783 | 1,817 | 1,735 | 1,857 | 1,923 |
| Other refined products | 6,741 | 6,711 | 7,054 | 7,558 | 7,433 | 7,063 | 6,470 | 6,077 | 5,644 | 5,277 | 6,005 | 6,119 | 6,552 | 7,204 | 7,095 |
| Asphalt (natural and petroleum) | 1,868 | 1,854 | 1,555 | 1,618 | 1,734 | 1,788 | 1,691 | 1,957 | 1,866 | 1,908 | 1,897 | 1,851 | 1,880 | 1,790 | 1,888 |
| Total Western District | 16,543 | 14,813 | 14,518 | 15,659 | 16,156 | 16,235 | 15,564 | 15,545 | 15,194 | 16,032 | 16,084 | 18,081 | 19,245 | 20,905 | 21,575 |
| United States: | | | | | | | | | | | | | | | |
| Crude petroleum ¹ | 2,116 | 1,472 | 876 | 910 | 963 | 1,067 | 1,126 | 1,120 | 1,061 | 1,253 | 781 | 1,756 | 2,027 | 1,888 | 1,531 |
| Gasoline | 1,340 | 1,502 | 1,660 | 2,051 | 2,401 | 2,777 | 3,257 | 3,458 | 3,853 | 5,268 | 5,380 | 6,187 | 6,861 | 7,531 | 8,172 |
| Residual and distillate fuel oils | 8,337 | 7,036 | 6,113 | 6,126 | 6,253 | 6,214 | 5,958 | 5,950 | 6,186 | 6,176 | 5,813 | 6,209 | 6,369 | 7,279 | 8,066 |
| Lubricating oils and greases | 3,337 | 3,095 | 3,101 | 3,348 | 3,616 | 3,593 | 3,505 | 3,540 | 3,337 | 3,377 | 3,057 | 3,077 | 2,876 | 2,981 | 3,060 |
| Other refined products | 10,341 | 9,953 | 10,049 | 10,540 | 10,313 | 9,678 | 8,980 | 8,600 | 8,160 | 7,784 | 8,733 | 8,773 | 9,020 | 9,644 | 9,571 |
| Asphalt (natural and petroleum) | 3,048 | 2,985 | 2,555 | 2,626 | 2,755 | 2,712 | 2,917 | 3,205 | 3,259 | 3,523 | 2,894 | 2,853 | 2,810 | 2,734 | 2,944 |
| Total United States | 28,519 | 26,043 | 24,354 | 25,601 | 26,301 | 26,041 | 25,743 | 25,873 | 25,856 | 27,381 | 26,658 | 28,855 | 29,963 | 32,057 | 33,344 |

¹ Includes crude oil, natural gas, and natural gasoline

Source: ICC, *Freight Commodity Statistics*, Class I Railroads, December 31, 1973, and equivalent tables in earlier editions.

Table 1-18. Movement of Petroleum in U.S. Waterborne Trade, 1948 - 1973

(Thousands of Tons)

| Year | Foreign Trade | | | | | | | | | | |
|------|--|----------------|---------------------------------------|-------------------------|--|----------------|---------------------------------------|-------------------------|------------------------------|-----------------------|---------------------------|
| | Imports | | | | Exports | | | | Total Imports and Exports | | |
| | Crude Oil and Products | | | | Crude Oil and Products | | | | Total Imports and Exports | | |
| | Atlantic, ¹ Gulf, and Pacific Coasts | Great Lakes | Total Crude Oil and Products | All Other Imports | Atlantic, ¹ Gulf, and Pacific Coasts | Great Lakes | Total Crude Oil and Products | All Other Exports | Crude Oil and Products | All Other Trade | Total Foreign Trade |
| 1973 | 328,634 | 2064 | 330,698 | 159,390 | 6,024 | 59 | 6,083 | 271,223 | 336,781 | 430,613 | 767,394 |
| 1972 | 247,244 | 894 | 248,138 | 149,428 | 5,737 | 93 | 5,830 | 226,585 | 253,968 | 376,013 | 629,981 |
| 1971 | 212,091 | 449 | 212,540 | 147,206 | 6,403 | 214 | 6,617 | 199,623 | 219,157 | 346,829 | 565,986 |
| 1970 | 193,351 | 361 | 193,712 | 145,628 | 7,739 | 123 | 7,862 | 233,767 | 201,574 | 379,395 | 580,969 |
| 1969 | 181,161 | 321 | 181,482 | 138,811 | 6,821 | 231 | 7,052 | 193,967 | 188,534 | 332,778 | 521,312 |
| 1968 | 165,688 | 105 | 165,793 | 145,143 | 7,909 | 244 | 8,153 | 188,861 | 173,946 | 334,004 | 507,950 |
| 1967 | 141,923 | 40 | 141,964 | 134,001 | 12,549 | 250 | 12,799 | 177,208 | 154,763 | 311,209 | 465,972 |
| 1966 | 148,424 | 94 | 148,518 | 135,330 | 6,788 | 215 | 7,002 | 180,541 | 155,520 | 315,871 | 471,391 |
| 1965 | 142,600 | 118 | 142,718 | 127,117 | 6,910 | 160 | 7,070 | 166,822 | 149,788 | 293,939 | 443,727 |
| 1964 | 131,225 | 83 | 131,308 | 117,278 | 8,145 | 159 | 8,304 | 165,035 | 139,612 | 282,313 | 421,925 |
| 1963 | 125,213 | 90 | 125,303 | 102,073 | 9,094 | 256 | 9,350 | 148,933 | 134,653 | 251,006 | 385,659 |
| 1962 | 121,263 | 15 | 121,278 | 101,413 | 7,368 | 295 | 7,663 | 128,246 | 128,941 | 229,659 | 358,599 |
| 1961 | 113,397 | 62 | 113,459 | 86,707 | 7,412 | 366 | 7,778 | 121,386 | 121,237 | 208,093 | 329,330 |
| 1960 | 112,559 | 79 | 112,638 | 98,679 | 8,639 | 414 | 9,053 | 118,907 | 121,691 | 217,586 | 339,277 |
| 1959 | 111,631 | 99 | 111,730 | 101,756 | 7,841 | 534 | 8,375 | 103,809 | 120,105 | 205,565 | 325,670 |
| 1958 | 105,627 | 62 | 105,689 | 83,795 | 8,628 | 1,079 | 9,707 | 109,659 | 115,396 | 193,454 | 308,850 |
| 1957 | 96,265 | 84 | 96,349 | 90,003 | 21,516 | 1,675 | 23,191 | 148,997 | 119,540 | 239,000 | 358,540 |
| 1956 | 90,575 | 132 | 90,707 | 83,507 | 15,097 | 1,853 | 16,950 | 135,526 | 107,657 | 219,033 | 326,690 |
| 1955 | 80,454 | 88 | 80,542 | 72,415 | 11,231 | 1,534 | 12,765 | 105,381 | 93,307 | 177,796 | 271,103 |
| 1954 | 69,119 | 10 | 69,129 | 60,295 | 10,734 | 1,456 | 12,190 | 72,230 | 81,319 | 132,525 | 213,844 |
| 1953 | 67,168 | 25 | 67,193 | 60,788 | 13,662 | 4,425 | 18,087 | 71,328 | 84,280 | 132,116 | 217,396 |
| 1952 | 62,113 | 25 | 62,138 | 53,823 | 14,908 | 4,660 | 19,568 | 91,797 | 81,706 | 145,620 | 227,326 |
| 1951 | 55,036 | — | 55,036 | 53,651 | 14,958 | 3,157 | 18,115 | 105,194 | 73,151 | 158,845 | 231,996 |
| 1950 | 52,545 | — | 52,545 | 49,437 | 9,197 | 1,381 | 10,578 | 56,665 | 63,123 | 106,102 | 169,225 |
| 1949 | 40,496 | 38 | 40,534 | 41,458 | 11,028 | 1,250 | 12,278 | 71,088 | 52,812 | 112,546 | 165,358 |
| 1948 | 32,317 | 37 | 32,354 | 39,943 | 12,773 | 1,385 | 14,158 | 76,517 | 46,512 | 116,460 | 162,972 |

Table 1-18. Movement of Petroleum in U.S. Waterborne Trade, 1948 - 1973 - Continued

(Thousands of Tons)

| Year | Domestic Trade | | | | | | | | | All Waterborne Trade, Foreign and Domestic | | | |
|------|------------------------|--------------------------|---|--------------------------|------------------------|--------------------------|------------------------|--------------------------|--------------------|--|--------------------------------------|-------------|--|
| | Coastwise ² | | Local, Intraport, ³ and Intraterritory | | Lakewise and Internal | | Total Domestic | | | Crude Oil and Products | All Other Foreign and Domestic Trade | Total Trade | Petroleum as a Per Cent of Total Trade |
| | Crude Oil and Products | All Other Domestic Trade | Crude Oil and Products | All Other Domestic Trade | Crude Oil and Products | All Other Domestic Trade | Crude Oil and Products | All Other Domestic Trade | All Domestic Trade | | | | |
| 1973 | 184,727 | 52,068 | 63,713 | 33,793 | 172,765 | 487,093 | 421,206 | 572,952 | 994,158 | 757,987 | 1,003,565 | 1,761,552 | 43.0 |
| 1972 | 192,443 | 50,217 | 59,124 | 33,025 | 175,037 | 476,966 | 426,603 | 560,209 | 986,812 | 680,571 | 936,222 | 1,616,793 | 42.1 |
| 1971 | 197,284 | 45,632 | 52,986 | 30,523 | 166,522 | 453,651 | 416,792 | 529,806 | 946,598 | 635,949 | 876,635 | 1,512,584 | 42.0 |
| 1970 | 192,552 | 45,889 | 48,286 | 34,819 | 161,830 | 476,379 | 402,668 | 548,059 | 950,727 | 604,243 | 927,454 | 1,531,697 | 39.4 |
| 1969 | 171,985 | 44,723 | 49,030 | 39,872 | 157,847 | 463,942 | 378,863 | 548,537 | 927,399 | 567,396 | 881,316 | 1,448,712 | 39.2 |
| 1968 | 168,250 | 46,000 | 47,503 | 44,846 | 145,249 | 436,041 | 361,003 | 526,887 | 887,889 | 534,949 | 860,890 | 1,395,839 | 38.3 |
| 1967 | 167,012 | 47,635 | 45,778 | 58,020 | 137,511 | 414,678 | 350,301 | 520,333 | 870,634 | 505,064 | 831,542 | 1,336,606 | 37.8 |
| 1966 | 158,752 | 49,622 | 42,707 | 57,755 | 131,417 | 422,472 | 332,877 | 529,848 | 862,725 | 488,397 | 845,719 | 1,334,116 | 36.6 |
| 1965 | 155,183 | 46,325 | 41,296 | 63,055 | 127,192 | 396,118 | 323,671 | 505,498 | 829,169 | 473,459 | 799,437 | 1,272,896 | 37.2 |
| 1964 | 161,568 | 44,120 | 37,712 | 63,448 | 122,525 | 386,796 | 321,805 | 494,364 | 816,169 | 461,417 | 776,677 | 1,238,094 | 37.2 |
| 1963 | 172,835 | 41,018 | 40,375 | 60,236 | 122,402 | 351,242 | 335,612 | 452,496 | 788,108 | 470,307 | 703,460 | 1,173,767 | 40.1 |
| 1962 | 173,035 | 42,426 | 39,194 | 64,345 | 117,501 | 334,305 | 329,730 | 441,076 | 770,805 | 458,714 | 670,690 | 1,129,404 | 40.6 |
| 1961 | 169,798 | 37,102 | 38,361 | 56,671 | 114,538 | 316,355 | 322,697 | 410,128 | 732,825 | 443,934 | 618,221 | 1,062,155 | 41.8 |
| 1960 | 167,986 | 41,211 | 39,848 | 65,362 | 110,462 | 335,704 | 318,296 | 442,277 | 760,573 | 439,987 | 659,863 | 1,099,850 | 40.0 |
| 1959 | 164,120 | 41,389 | 39,641 | 68,093 | 105,634 | 307,855 | 309,395 | 417,337 | 726,732 | 429,500 | 622,902 | 1,052,402 | 40.8 |
| 1958 | 154,858 | 39,192 | 41,778 | 66,479 | 102,003 | 291,355 | 298,639 | 397,026 | 695,665 | 414,035 | 590,480 | 1,004,515 | 41.2 |
| 1957 | 153,689 | 42,730 | 41,487 | 71,741 | 104,625 | 358,590 | 299,801 | 473,061 | 772,862 | 419,341 | 712,061 | 1,131,402 | 37.1 |
| 1956 | 158,745 | 47,165 | 41,952 | 74,637 | 97,606 | 346,118 | 298,303 | 467,920 | 766,223 | 405,960 | 686,953 | 1,092,913 | 37.1 |
| 1955 | 153,163 | 42,554 | 40,825 | 73,989 | 90,676 | 343,826 | 284,664 | 460,369 | 745,033 | 377,971 | 638,165 | 1,016,136 | 37.2 |
| 1954 | 148,564 | 38,676 | 36,692 | 67,438 | 83,752 | 278,673 | 269,008 | 384,787 | 653,795 | 350,327 | 517,312 | 867,639 | 40.4 |
| 1953 | 148,325 | 40,433 | 34,101 | 69,714 | 91,828 | 321,751 | 274,254 | 431,898 | 706,152 | 359,534 | 564,014 | 923,548 | 38.9 |
| 1952 | 143,364 | 40,856 | 38,498 | 66,924 | 93,980 | 276,302 | 275,842 | 384,082 | 659,924 | 357,548 | 529,702 | 887,250 | 40.3 |
| 1951 | 145,868 | 40,805 | 37,652 | 75,793 | 84,218 | 307,650 | 267,738 | 424,248 | 691,986 | 340,889 | 583,093 | 923,982 | 36.9 |
| 1950 | 141,269 | 41,275 | 35,380 | 72,765 | 76,434 | 284,236 | 253,083 | 398,276 | 651,359 | 316,206 | 504,378 | 820,584 | 38.5 |
| 1949 | 127,367 | 34,064 | 33,316 | 69,322 | 69,965 | 241,329 | 230,648 | 344,715 | 575,363 | 283,460 | 457,261 | 740,721 | 38.3 |
| 1948 | 134,312 | 39,769 | 36,633 | 77,326 | 66,718 | 275,470 | 237,663 | 392,565 | 630,228 | 284,175 | 509,025 | 793,200 | 35.8 |

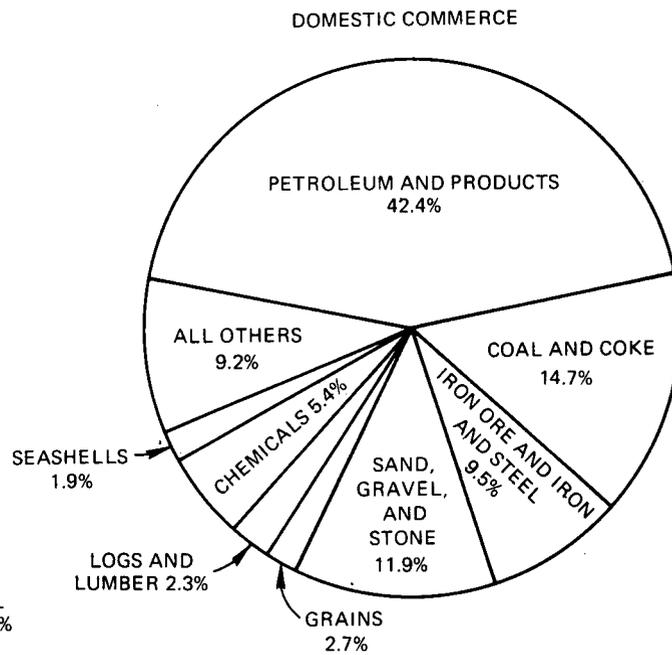
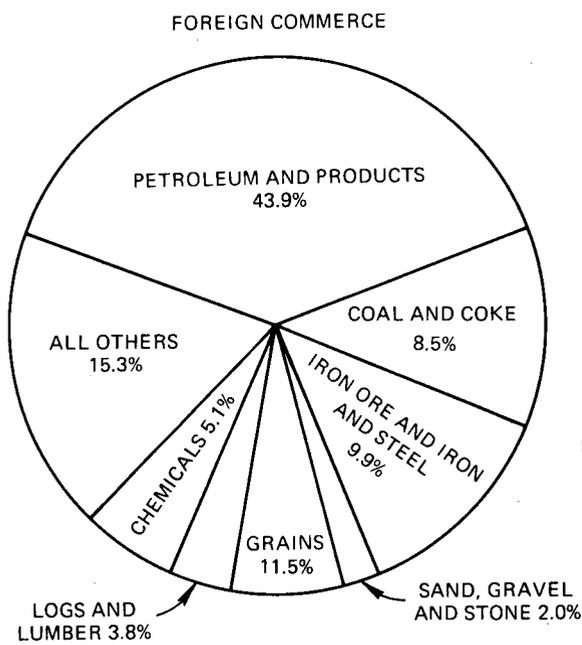
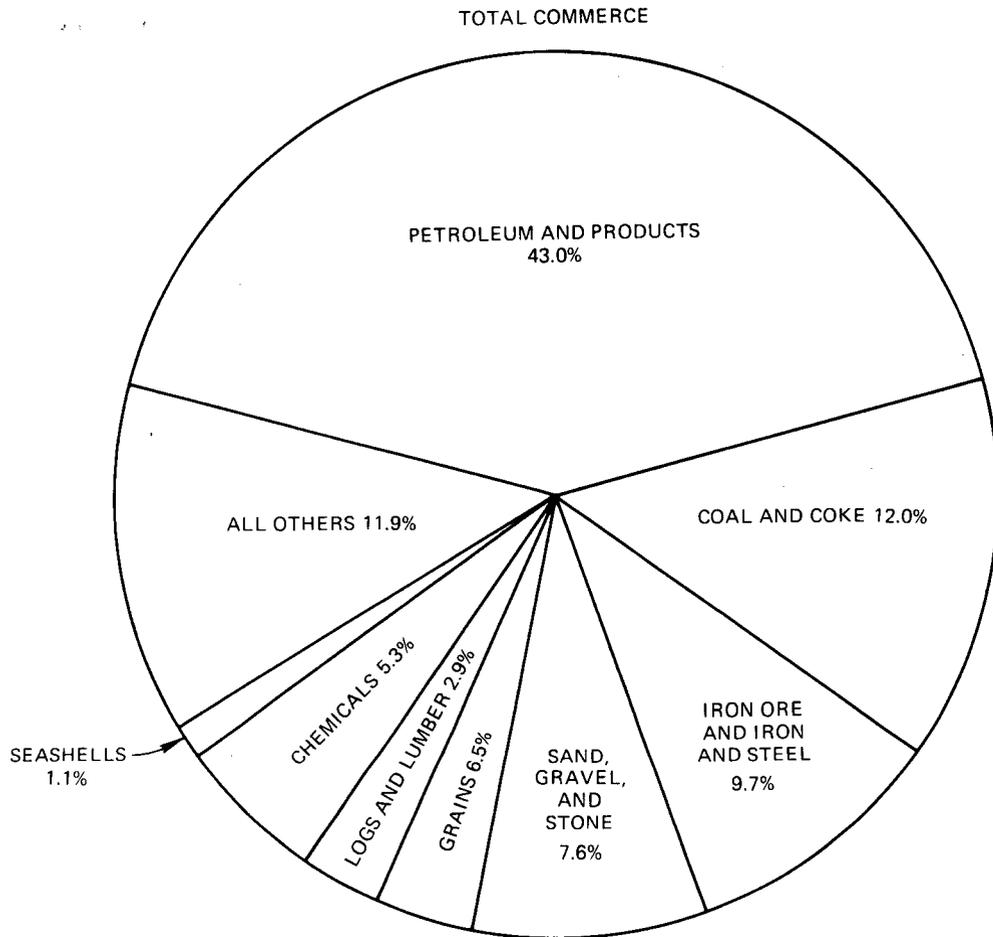
¹ Includes inland waterways.² Atlantic, Gulf, and Pacific Coasts. Includes traffic between Great Lakes ports and seacoast ports.³ Includes traffic within a single channel of a port and traffic between the several channels of a port. Includes such traffic within Great Lakes ports.Source: Department of the Army, Corps of Engineers, *Waterborne Commerce of the United States Part 5*, 1973 and earlier editions for prior years.

**Table 1-19. Summary of Foreign and Domestic Waterborne Commerce, by Type of Traffic
and Commodity, Calendar Year 1973
(net traffic in tons of 2,000 pounds)**

| Commodity | Total | Foreign | | Domestic | | | | | |
|---|---------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-----------------|
| | | Imports | Exports | Total | Coastwise | Lakewise | Internal | Local | Intra-territory |
| Total, all commodities ¹ | 1,761,552,010 | 490,088,015 | 277,305,888 | 994,158,107 | 236,794,660 | 156,620,831 | 503,236,890 | 93,222,623 | 4,283,103 |
| Coal and lignite | 197,655,148 | 122,527 | 53,011,082 | 144,521,539 | 3,561,855 | 23,795,389 | 114,070,954 | 3,093,341 | ----- |
| Crude Petroleum | 287,980,286 | 197,041,672 | 420,067 | 90,518,547 | 34,859,651 | 9,252 | 52,514,158 | 3,135,486 | ----- |
| Gasoline, including natural gasoline | 97,207,786 | 2,800,040 | 338,557 | 94,069,189 | 50,067,484 | 2,352,757 | 34,299,910 | 7,279,778 | 69,260 |
| Jet fuel | 12,715,469 | ----- | ----- | 12,715,469 | 6,043,900 | 188,102 | 4,218,357 | 2,205,867 | 59,243 |
| Kerosene | 15,848,798 | 10,319,238 | 101,789 | 5,427,771 | 2,842,612 | 24,708 | 1,739,838 | 802,541 | 18,072 |
| Distillate fuel oil | 115,602,817 | 30,362,162 | 604,736 | 84,635,919 | 44,051,464 | 1,985,690 | 23,393,486 | 14,864,679 | 340,600 |
| Residual fuel oil | 198,704,340 | 87,900,820 | 1,910,596 | 108,892,924 | 36,009,037 | 1,419,004 | 40,740,994 | 30,194,897 | 528,992 |
| Lubricating oils and greases | 8,667,614 | 20,184 | 1,568,157 | 7,079,273 | 3,983,914 | 4,167 | 1,987,545 | 157,609 | 946,038 |
| Naphtha, mineral spirits, solvents, nec | 4,452,808 | ----- | ----- | 4,452,808 | 1,767,117 | 7,775 | 1,355,608 | 383,654 | 938,654 |
| Asphalt, tar, and pitches | 9,206,199 | ----- | ----- | 9,206,199 | 4,331,048 | 203,770 | 4,270,149 | 397,095 | 4,137 |
| Coke, including petroleum coke | 1,847,468 | ----- | ----- | 1,847,468 | 28,578 | 112,688 | 1,651,486 | 54,716 | ----- |
| Liquefied petroleum gases, coal gases natural gas, and natural gas liquids | 4,552,987 | 2,036,819 | 965,548 | 1,550,620 | 212,369 | 133 | 1,268,371 | 69,148 | 599 |
| Asphalt building materials | 75,682 | 14,322 | 40,907 | 20,453 | 18,639 | 1,631 | ----- | ----- | 183 |
| Petroleum and coal products, nec | 2,972,806 | 203,055 | 133,075 | 2,636,676 | 540,492 | 34,404 | 745,671 | 1,315,972 | 137 |

Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1973, pp. 7 and 8.

¹Includes the energy commodities listed in the table plus all other commodities.



Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1973.

Figure 8. Principal Commodities Carried by Water, Calendar Year 1973

Table 1-20. Tidewater Movements of Crude Oil and Products From the Gulf and West Coasts to the East Coast and From the Gulf Coast to the West Coast (thousands of barrels)

| | December | | November | | December | | January - December (Incl.) | |
|--|---------------|---------------|---------------|----------------|----------------|------|----------------------------|--|
| | 1974 | 1974 | 1973 | 1974 | 1973 | 1974 | 1973 | |
| Gulf Coast to East Coast, total | | | | | | | | |
| Crude oil | 2,330 | 2,914 | 4,155 | 52,337 | 56,614 | | | |
| Unfinished oils | 1,089 | 918 | 1,291 | 18,128 | 14,797 | | | |
| Gasoline, total | 16,899 | 17,571 | 17,463 | 179,888 | 207,474 | | | |
| Motor | 16,633 | 17,312 | 17,188 | 176,908 | 204,258 | | | |
| Aviation | 266 | 259 | 275 | 2,980 | 3,216 | | | |
| Special naphthas | 681 | 692 | 629 | 7,646 | 7,192 | | | |
| Kerosene | 1,224 | 1,076 | 1,328 | 10,879 | 15,078 | | | |
| Distillate fuel oil | 13,195 | 10,068 | 8,973 | 93,460 | 96,283 | | | |
| Residual fuel oil | 3,312 | 3,961 | 2,129 | 36,023 | 16,960 | | | |
| Jet fuel, total | 3,072 | 3,136 | 3,734 | 37,475 | 41,034 | | | |
| Naphtha-type | 608 | 643 | 1,226 | 9,481 | 9,480 | | | |
| Kerosene-type | 2,464 | 2,493 | 2,508 | 27,994 | 31,554 | | | |
| Lubricating oil | 1,134 | 1,402 | 1,198 | 12,922 | 12,342 | | | |
| Wax | 15 | 28 | 32 | 353 | 573 | | | |
| Asphalt and road oil | 364 | 440 | 276 | 5,796 | 5,689 | | | |
| Liquefied gases | 144 | 111 | 131 | 1,541 | 1,304 | | | |
| Petrochemical feedstocks | 192 | 211 | 463 | 3,757 | 3,226 | | | |
| Other products | 338 | 222 | 121 | 2,536 | 1,654 | | | |
| Total | 43,989 | 42,750 | 41,923 | 462,741 | 480,220 | | | |
| Gulf Coast to P.A.D. District II: | | | | | | | | |
| Crude oil | 1,010 | 1,300 | 974 | 12,841 | 10,250 | | | |
| Unfinished oils | — | — | — | 59 | 120 | | | |
| Gasoline, total | 1,497 | 2,659 | 3,184 | 27,890 | 32,730 | | | |
| Motor | 2,470 | 2,614 | 3,121 | 27,357 | 31,998 | | | |
| Aviation | 27 | 45 | 63 | 533 | 732 | | | |
| Special naphthas | 252 | 238 | 365 | 3,275 | 3,187 | | | |
| Kerosene | — | 96 | 144 | 764 | 956 | | | |
| Distillate fuel oil | 620 | 524 | 855 | 6,449 | 9,224 | | | |
| Residual fuel oil | 1,776 | 1,234 | 1,127 | 13,209 | 10,523 | | | |
| Jet fuel, total | 276 | 175 | 184 | 2,698 | 2,626 | | | |
| Naphtha-type | — | — | — | 227 | 14 | | | |
| Kerosene-type | 276 | 175 | 184 | 2,471 | 2,612 | | | |
| Lubricating oil | 329 | 310 | 259 | 4,125 | 3,692 | | | |
| Wax | — | — | — | 8 | — | | | |
| Asphalt and road oil | 118 | 212 | 348 | 3,684 | 3,523 | | | |
| Liquefied gases | — | 13 | 112 | 71 | 654 | | | |
| Petrochemical feedstocks | 98 | 78 | 184 | 1,381 | 1,872 | | | |
| Other products | 28 | 11 | 47 | 1,095 | 993 | | | |
| Total | 7,004 | 6,850 | 7,783 | 77,549 | 80,350 | | | |
| Gulf Coast to West Coast: | | | | | | | | |
| Crude oil | — | — | — | 564 | — | | | |
| Unfinished oils | — | — | — | 288 | 372 | | | |
| Motor gasoline | — | — | — | 1,392 | 675 | | | |
| Kerosene | — | — | — | — | 36 | | | |
| Distillate fuel oil | 46 | — | 43 | 2,279 | 687 | | | |
| Residual fuel oil | — | — | 315 | 316 | 1,898 | | | |
| Jet fuel, total | — | — | 801 | 2,021 | 801 | | | |
| Naphtha-type | — | — | 110 | 489 | 110 | | | |
| Kerosene-type | — | — | 691 | 1,532 | 691 | | | |
| Lubricating oil | 251 | 35 | 199 | 1,671 | 1,491 | | | |
| Wax | — | — | — | — | — | | | |
| Petrochemical feedstocks | 26 | — | — | 105 | 4 | | | |
| Other products | — | — | 8 | 15 | 105 | | | |
| Total | 323 | 35 | 1,366 | 8,651 | 6,069 | | | |
| West Coast to East Coast: | | | | | | | | |
| Motor gasoline | — | — | — | — | — | | | |
| Special naphthas | — | — | — | — | 4 | | | |
| Distillate fuel oil | — | — | — | — | — | | | |
| Residual fuel oil | — | — | — | — | — | | | |
| Lubricating oil | 88 | 41 | 29 | 785 | 690 | | | |
| Other products | 22 | 16 | 11 | 324 | 242 | | | |
| Total | 110 | 57 | 40 | 1,109 | 936 | | | |

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys, Petroleum Statement Monthly*, Dec., 1974, pg. 14, Table 13.

**Table 1-21. Shipment of Aviation Fuels in 1973 and 1972
(thousands of barrels)**

| Product and use | Shipments to P.A.D. Districts: | | | | | United States Total |
|---|--------------------------------|--------|--------|-------|---------------------|---------------------|
| | I | II | III | IV | V | |
| 1973: | | | | | | |
| I. Aviation gasoline: | | | | | | |
| A. For commercial use, total | 2,982 | 3,160 | 2,144 | 661 | 2,561 | 11,508 |
| 1. Airlines | 575 | 487 | 308 | 16 | 136 | 1,522 |
| 2. Factory | 45 | 70 | 33 | 6 | 70 | 224 |
| 3. General aviation | 2,362 | 2,603 | 1,803 | 639 | 2,355 | 9,762 |
| B. For military use | 1,264 | 975 | 1,131 | 63 | 1,502 | 4,935 |
| II. Jet fuel: | | | | | | |
| A. For commercial use, total | 109,090 | 61,206 | 22,656 | 8,049 | 78,748 | 279,749 |
| 1. Kerosene-type, total | 106,296 | 60,876 | 21,886 | 8,049 | 74,335 | 271,442 |
| a. Airlines | 102,027 | 57,068 | 20,317 | 7,626 | 72,874 | 259,912 |
| b. Factory | 858 | 1,276 | 292 | — | 562 | 2,988 |
| c. General aviation | 3,411 | 2,532 | 1,277 | 423 | 899 | 8,542 |
| 2. Naphtha-type, total | 2,794 | 330 | 770 | — | 4,413 | 8,307 |
| a. Airlines | 2,503 | 4 | 661 | — | 4,254 | 7,422 |
| b. Factory | 224 | 142 | 15 | — | 100 | 481 |
| c. General aviation | 67 | 184 | 94 | — | 59 | 404 |
| B. For military use, total ¹ | 24,112 | 13,067 | 13,840 | 3,162 | 31,850 | 86,031 |
| 1. JP-4 | ¹ 13,137 | 12,939 | 13,184 | 3,162 | ¹ 18,168 | 60,590 |
| 2. JP-5 | ¹ 10,783 | 117 | 653 | — | ¹ 13,411 | 24,964 |
| 3. Other | 192 | 11 | 3 | — | 271 | 477 |
| C. Non-aviation use ^P | 4,630 | 1,266 | 150 | — | 303 | 6,349 |
| 1972: | | | | | | |
| I. Aviation gasoline: | | | | | | |
| A. For commercial use, total | 2,843 | 3,103 | 1,762 | 486 | 2,513 | 10,707 |
| 1. Airlines | 385 | 225 | 149 | 28 | 138 | 925 |
| 2. Factory | 46 | 39 | 15 | 1 | 51 | 152 |
| 3. General aviation | 2,412 | 2,839 | 1,598 | 457 | 2,324 | 9,630 |
| B. For military use | 2,207 | 794 | 1,002 | 190 | 1,733 | 5,926 |
| II. Jet fuel: | | | | | | |
| A. For commercial use, total | 103,016 | 58,667 | 20,923 | 7,324 | 78,467 | 268,397 |
| 1. Kerosene-type, total | 100,354 | 58,379 | 20,881 | 7,322 | 74,882 | 261,818 |
| a. Airlines | 92,851 | 55,057 | 18,916 | 6,934 | 73,185 | 246,943 |
| b. Factory | 626 | 554 | 290 | — | 645 | 2,115 |
| c. General aviation | 6,877 | 2,768 | 1,675 | 388 | 1,052 | 12,760 |
| 2. Naphtha-type, total | 2,662 | 288 | 42 | 2 | 3,585 | 6,579 |
| a. Airlines | 1,154 | 7 | — | — | 3,308 | 4,469 |
| b. Factory | 1,015 | 166 | 20 | — | 20 | 1,221 |
| c. General aviation | 493 | 115 | 22 | 2 | 257 | 889 |
| B. For military use, total ² | 27,020 | 17,047 | 13,516 | 2,965 | 35,537 | 96,085 |
| 1. JP-4 | ² 16,935 | 16,786 | 11,183 | 2,650 | ² 25,153 | 72,707 |
| 2. JP-5 | 9,197 | 249 | 1,485 | — | 9,816 | 20,747 |
| 3. Other | 888 | 12 | 848 | 315 | 568 | 2,631 |
| C. Non-aviation use | 6,891 | 1,464 | 2 | 55 | 409 | 8,821 |

p = preliminary

¹Excludes direct imports by the military of naphtha-type jet into: P.A.D. I, 8,993,000 barrels; P.A.D. V, 1,946,000 barrels. Also excludes direct imports by the military of kerosene-type jet into: P.A.D. I, 376,000 barrels; P.A.D. V, 140,000 barrels.

²Excludes direct imports by the military of naphtha-type jet into: P.A.D. I, 6,939,000 barrels; P.A.D. V, 2,129,000 barrels.

Definitions of terms used in this table:

1. Aviation gasoline - Any fuel in the gasoline boiling range for use in a piston-type aviation engine.
2. Jet fuel - Any fuel for use in an aviation turbine engine.
3. Airline - Sales to U.S. certificated air carriers, including air freight carriers, international air carriers (if delivery is made in the U.S.), and to such other air carriers as supplemental or nonschedule carriers, air taxi, etc.
4. Factory - Direct sales to airframe and engine manufacturers. Does not include aviation fuels supplied to these accounts for Defense Fuel Supply Center (DFSC).
5. General Aviation - All non-military sales which are not classified as airline or factory. Primarily made up of sales to distributors and airport dealers.
6. Military - Sales to Defense Fuel Supply Center and to other military agencies of the Government.
7. Non-aviation - Sales for use in turbine engines other than aviation turbine engines. Sales to electric utilities are included in this category.

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys, Petroleum Statement, Monthly, March, 1974, Table 25.*

Table 1-22. Interarea Total Oil Movements 1974

| From | To | U.S.A. | Canada | Other Western Hemisphere | Western Europe | Africa | South East Asia | Japan | Australasia | Other Eastern Hemisphere | Destination Not Known | Total Exports |
|--------------------------|--------------|------------------------|--------------|--------------------------|----------------|--------------|-----------------|-------------|--------------|--------------------------|-----------------------|---------------|
| | | Million Tons | | | | | | | | | | |
| U.S.A. | — | — | 1.7 | 3.3 | 4.2 | 0.2 | 0.2 | 1.9 | 0.6 | — | — | 12.1 |
| Canada | 51.5 | — | — | — | 1.0 | — | — | — | — | — | — | 52.5 |
| Caribbean | 123.0 | 21.7 | — | 7.7 | 16.3 | 0.5 | — | 0.5 | — | — | — | 169.7 |
| Other Western Hemisphere | 6.7 | — | — | 6.0 | — | — | — | — | — | — | — | 12.7 |
| Western Europe | 11.7 | — | — | — | — | 3.7 | — | 0.8 | — | 1.6 | 4.5 | 22.3 |
| Middle East | 52.8 | 18.8 | — | 60.8 | 505.4 | 24.1 | 63.9 | 201.6 | 13.7 | 36.0 | 15.4 | 992.5 |
| North Africa | 11.4 | 0.7 | — | 6.1 | 91.2 | 0.5 | — | 3.3 | — | 12.1 | — | 125.3 |
| West Africa | 40.1 | 0.7 | — | 14.5 | 63.0 | — | 1.5 | 4.8 | — | — | — | 124.6 |
| South East Asia | 15.6 | — | — | 2.1 | 0.2 | — | — | 47.1 | 2.1 | — | — | 67.1 |
| U.S.S.R., E. Europe | 1.6 | — | — | 8.2 | 52.5 | 3.2 | — | 6.2 | — | 1.0 | — | 72.7 |
| Other Eastern Hemisphere | 1.0 | — | — | — | — | — | 1.4 | 1.9 | — | — | — | 4.3 |
| Total Imports | 315.4 | 43.6 | 108.7 | 733.8 | 32.2 | 67.0 | 268.1 | 16.4 | 50.7 | 19.9 | 1,655.8 | |
| | | Thousand Barrels Daily | | | | | | | | | | |
| U.S.A. | — | 30 | 60 | 75 | 5 | 5 | 35 | 10 | — | — | — | 220 |
| Canada | 1,025 | — | — | 20 | — | — | — | — | — | — | — | 1,045 |
| Caribbean | 1,320 | 430 | 155 | 320 | 10 | — | 10 | — | — | — | — | 3,245 |
| Other Western Hemisphere | 125 | — | 120 | — | — | — | — | — | — | — | — | 245 |
| Western Europe | 240 | — | — | — | 80 | — | 15 | — | — | 35 | 95 | 465 |
| Middle East | 1,025 | 400 | 1,265 | 10,195 | 490 | 1,320 | 4,050 | 285 | 715 | 305 | — | 20,050 |
| North Africa | 230 | 15 | 130 | 1,915 | 10 | — | 70 | — | 255 | — | — | 2,625 |
| West Africa | 795 | 15 | 305 | 1,300 | — | — | 100 | — | — | — | — | 2,545 |
| South East Asia | 315 | — | 45 | 5 | — | — | 990 | 45 | — | — | — | 1,400 |
| U.S.S.R., E. Europe | 30 | — | 160 | 1,010 | 60 | — | 120 | — | 20 | — | — | 1,400 |
| Other Eastern Hemisphere | 20 | — | — | — | — | — | 30 | 40 | — | — | — | 90 |
| Total Imports | 6,125 | 890 | 2,240 | 14,840 | 655 | 1,385 | 5,430 | 340 | 1,025 | 400 | 33,330 | |

Source: British Petroleum Co., *BP Statistical Review of the World Oil Industry, 1974*, p. 10.

Table 1-23. Imports and Exports, Crude Oil and Products, 1974

| Country/Area | Million Tons | | | | Thousand Barrels Daily | | | |
|-----------------------------|----------------|--------------|----------------|--------------|------------------------|--------------|---------------|--------------|
| | Imports | | Exports | | Imports | | Exports | |
| | Crude | Products | Crude | Products | Crude | Products | Crude | Products |
| U.S.A. | 172.0 | 143.4 | — | 12.1 | 3,475 | 2,650 | — | 220 |
| Canada | 40.9 | 2.7 | 39.1 | 13.4 | 810 | 80 | 795 | 250 |
| Caribbean | 60.8 | 3.0 | 54.2 | 115.5 | 1,230 | 60 | 1,045 | 2,200 |
| Other Western Hemisphere | 39.7 | 5.2 | 8.2 | 4.5 | 800 | 150 | 170 | 75 |
| Western Europe | 689.8 | 44.0 | — | 22.3 | 13,990 | 850 | — | 465 |
| Middle East | 6.2 | 0.6 | 945.5 | 47.0 | 130 | 10 | 19,065 | 985 |
| North Africa | 1.2 | 4.7 | 124.1 | 1.2 | 25 | 95 | 2,600 | 25 |
| West Africa | 0.8 | 1.3 | 124.0 | 0.6 | 15 | 25 | 2,535 | 10 |
| E. & S. Africa, S. Asia | 38.4 | 8.8 | — | 0.3 | 775 | 180 | — | 5 |
| South East Asia | 50.9 | 16.1 | 58.2 | 8.9 | 1,030 | 335 | 1,175 | 225 |
| Japan | 239.4 | 28.7 | — | 1.5 | 4,825 | 605 | — | 35 |
| Australasia | 12.1 | 4.3 | — | 2.5 | 245 | 95 | — | 50 |
| U.S.S.R., E. Europe & China | 19.5 | 1.4 | 33.5 | 39.2 | 400 | 25 | 670 | 730 |
| *Destination not known | 15.1 | 4.8 | — | — | 305 | 95 | — | — |
| Total | 1,386.8 | 269.0 | 1,386.8 | 269.0 | 28,055 | 5,275 | 28,055 | 5,275 |

*Includes quantities in transit, transit losses, minor movements not otherwise shown, military use, etc.

Source: British Petroleum Co., *BP Statistical Review of the World Oil Industry, 1974*, p. 10.

**PART 2. RESERVES, PRODUCTION,
AND REFINING**

Table 2-1. Estimated Reserves of Crude Oil in the United States, 1973 and 1974
(thousands of barrels of 42 U.S. gallons)

| State | Proved Reserves as of 12/31/73 | Changes in Proved Reserves During 1974 | | | | | | Proved Reserves as of 12/31/74 | Net Changes in Proved Reserves During 1974 | Indicated Additional Reserves From Known Reservoirs ^b | State |
|-----------------------------|--------------------------------|--|----------------|----------------|-----------------------|---|-------------------------|--------------------------------|--|--|-----------------------------|
| | | Revisions | | Extensions | New Field Discoveries | New Reservoir Discoveries in Old Fields | Production ^a | | | | |
| | | Plus | Minus | | | | | | | | |
| Alabama | 53,603 | 25,066 | 602 | 114 | 1,550 | — | 11,013 | 68,718 | 15,115 | 4,000 | Alabama |
| Alaska | 10,112,213 | 52,495 | — | — | — | — | 70,609 | 10,094,099 | (18,114) | 13,000 | Alaska |
| Arkansas | 105,552 | 16,840 | 2,917 | 1,262 | 1,123 | 319 | 15,843 | 106,336 | 784 | 21,444 | Arkansas |
| California ^c | 3,488,100 | 288,677 | 36,690 | 40,988 | 98,010 | 460 | 322,509 | 3,557,036 | 68,936 | 1,348,550 | California ^c |
| Coastal Region | 536,284 | 75,487 | 9,789 | 5,055 | 94,010 | 10 | 73,836 | 627,221 | 90,937 | 164,750 | Coastal Region |
| Los Angeles Basin | 1,197,868 | 52,795 | 12,475 | 653 | — | — | 125,581 | 1,113,260 | (84,608) | 357,500 | Los Angeles Basin |
| San Joaquin Basin | 1,753,948 | 160,395 | 14,426 | 35,280 | 4,000 | 450 | 123,092 | 1,816,555 | 62,607 | 826,300 | San Joaquin Basin |
| Colorado | 304,790 | 13,788 | 3,428 | 7,734 | 2,998 | 362 | 36,911 | 289,333 | (15,457) | 97,090 | Colorado |
| Florida | 183,859 | 152,904 | 147 | 1,305 | 874 | — | 36,086 | 302,709 | 118,850 | 20,936 | Florida |
| Illinois | 152,343 | 37,999 | 4,759 | 840 | 41 | 4 | 26,679 | 159,789 | 7,446 | 5,900 | Illinois |
| Indiana | 26,622 | 1,295 | 280 | 520 | 73 | 930 | 4,809 | 24,351 | (2,271) | 2,200 | Indiana |
| Kansas | 401,089 | 49,392 | 11,530 | 14,753 | 1,585 | 1,240 | 61,422 | 395,107 | (5,982) | 1,500 | Kansas |
| Kentucky | 39,980 | 5,035 | 1,023 | 190 | 300 | 50 | 7,960 | 36,572 | (3,408) | 2,700 | Kentucky |
| Louisiana ^c | 4,576,826 | 290,435 | 221,359 | 86,308 | 74,731 | 58,758 | 639,185 | 4,226,514 | (350,312) | 224,501 | Louisiana ^c |
| North | 252,388 | 57,244 | 3,854 | 3,051 | 398 | 108 | 35,387 | 273,948 | 21,560 | 31,645 | North |
| South | 4,324,438 | 233,191 | 217,505 | 83,257 | 74,333 | 58,650 | 603,798 | 3,952,566 | (371,872) | 192,856 | South |
| Michigan | 72,444 | 11,469 | — | — | 16,340 | — | 17,954 | 82,299 | 9,855 | 7,500 | Michigan |
| Mississippi | 291,049 | 46,079 | 32,489 | 3,857 | 1,862 | 1,762 | 50,712 | 261,408 | (29,641) | 27,252 | Mississippi |
| Montana | 219,343 | 22,598 | 6,283 | 4,922 | 1,566 | — | 34,757 | 207,389 | (11,954) | 46,200 | Montana |
| Nebraska | 28,166 | 5,825 | 1,133 | 60 | 401 | — | 6,540 | 26,779 | (1,387) | 4,120 | Nebraska |
| New Mexico | 642,994 | 62,396 | 2,959 | 14,522 | 525 | 983 | 93,493 | 624,968 | (18,026) | 311,549 | New Mexico |
| Northwest | 23,860 | 4,228 | 485 | 5,120 | 130 | — | 5,646 | 27,207 | 3,347 | 4,050 | Northwest |
| Southeast | 619,134 | 58,168 | 2,474 | 9,402 | 395 | 983 | 87,847 | 597,761 | (21,373) | 307,499 | Southeast |
| New York | 8,288 | 2,500 | — | 1,000 | — | — | 890 | 10,898 | 2,610 | 6,400 | New York |
| North Dakota | 179,520 | 15,481 | 6,001 | 2,318 | 975 | 165 | 19,664 | 172,794 | (6,726) | 12,720 | North Dakota |
| Ohio | 124,911 | — | — | 7,928 | 120 | — | 9,088 | 123,871 | (1,040) | — | Ohio |
| Oklahoma | 1,270,964 | 144,062 | 48,230 | 28,630 | 2,345 | 205 | 165,599 | 1,232,377 | (38,587) | 204,900 | Oklahoma |
| Pennsylvania | 39,613 | 12,200 | — | 2,000 | — | — | 3,399 | 50,414 | 10,801 | 54,670 | Pennsylvania |
| Texas ^c | 11,756,613 | 569,716 | 217,555 | 85,382 | 12,198 | 21,553 | 1,226,401 | 11,001,506 | (755,107) | 2,032,579 | Texas ^c |
| District 1 | 144,149 | 14,106 | 10,105 | 2,695 | 621 | 195 | 18,272 | 133,389 | (10,760) | 38,339 | District 1 |
| District 2 | 677,125 | 46,551 | 35,991 | 994 | 74 | 2,906 | 68,773 | 622,886 | (54,239) | 5,720 | District 2 |
| District 3 | 1,489,428 | 42,784 | 25,745 | 11,985 | 209 | 3,958 | 170,516 | 1,352,103 | (137,325) | 27,328 | District 3 |
| District 4 | 304,422 | 19,806 | 57,581 | 4,880 | 902 | 7,306 | 42,543 | 237,192 | (67,230) | 38,550 | District 4 |
| District 5 | 126,462 | 3,807 | 817 | 282 | 995 | 140 | 19,977 | 110,892 | (15,570) | 36,000 | District 5 |
| District 6 | 2,049,248 | 23,156 | 6,560 | 1,431 | 750 | 254 | 154,621 | 1,913,658 | (135,590) | 199,351 | District 6 |
| District 7-B | 235,870 | 51,361 | 13,691 | 10,799 | 945 | 749 | 35,646 | 250,387 | 14,517 | 10,700 | District 7-B |
| District 7-C | 204,996 | 19,197 | 13,595 | 17,533 | 708 | 265 | 29,517 | 199,587 | (5,409) | 9,028 | District 7-C |
| District 8 | 3,205,538 | 115,922 | 18,277 | 20,279 | 3,996 | 2,951 | 265,893 | 3,064,516 | (141,022) | 978,247 | District 8 |
| District 8-A | 2,785,308 | 153,420 | 9,969 | 6,212 | 758 | 1,477 | 359,003 | 2,578,203 | (207,105) | 678,261 | District 8-A |
| District 9 | 363,708 | 61,362 | 20,296 | 4,184 | 1,975 | 990 | 42,101 | 369,822 | 6,114 | 7,555 | District 9 |
| District 10 | 170,359 | 18,244 | 4,928 | 4,108 | 265 | 362 | 19,539 | 168,871 | (1,488) | 3,500 | District 10 |
| Utah | 264,512 | 15,075 | 23,028 | 32,000 | 1,300 | — | 39,211 | 250,648 | (13,864) | 40,500 | Utah |
| West Virginia | 32,126 | — | — | 1,998 | 720 | 15 | 2,649 | 32,210 | 84 | 5,000 | West Virginia |
| Wyoming | 916,763 | 105,823 | 17,083 | 28,757 | 6,250 | 757 | 137,907 | 903,360 | (13,403) | 140,007 | Wyoming |
| Miscellaneous ^d | 7,556 | 1,414 | 139 | 1,530 | 276 | — | 2,166 | 8,471 | 915 | 500 | Miscellaneous ^d |
| Total U.S. | 35,299,839 | 1,948,564 | 637,635 | 368,918 | 226,163 | 87,563 | 3,043,456 | 34,249,956 | (1,049,883) | 4,635,718 | Total U.S. |
| Gulf of Mexico ^e | 2,347,525 | 139,027 | 61,948 | 34,664 | 73,528 | 37,225 | 358,013 | 2,212,008 | (135,517) | 50,215 | Gulf of Mexico ^e |

^a Preliminary estimate.

^b Additional reserves include additional recoveries in known reservoirs (in excess of the proved reserves) which engineering knowledge and judgement indicate will be economically available by application of fluid injection, whether or not such program is currently installed.

^c Includes offshore reserves.

^d Includes Arizona, Missouri, Nevada, South Dakota, Tennessee, and Virginia.

^e Included with Texas and Louisiana.

(-) Denotes negative volume.

Source: API, AGA, CPA, *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1974*, Volume 29, May 1975, Part I, Table I.

Table 2-2. Annual Estimates of Proved Crude Oil Reserves in the United States, 1946 through 1974
(thousands of barrels of 42 U.S. gallons)

| Year | Proved Reserves at Beginning of Year | Revisions | Extensions | New Field Discoveries | New Reservoir Discoveries in Old Fields | Total of Discoveries, Revisions, and Extensions | Production a | Proved Reserves at End of Year | Net Change From Previous Year |
|------|--------------------------------------|-----------|------------|-----------------------|---|---|--------------|--------------------------------|-------------------------------|
| 1946 | 19,941,846 | 1,254,705 | 1,158,923 | b | 244,434 | 2,658,062 | 1,726,348 | 20,873,560 | 931,714 |
| 1947 | 20,873,560 | 749,278 | 1,269,862 | b | 445,430 | 2,464,570 | 1,850,445 | 21,487,685 | 614,125 |
| 1948 | 21,487,685 | 1,958,853 | 1,439,873 | 269,438 | 127,043 | 3,795,207 | 2,002,448 | 23,280,444 | 1,792,759 |
| 1949 | 23,280,444 | 603,566 | 1,693,862 | 544,319 | 346,098 | 3,187,845 | 1,818,800 | 24,649,489 | 1,369,045 |
| 1950 | 24,649,489 | 663,378 | 1,334,391 | 407,739 | 157,177 | 2,562,685 | 1,943,776 | 25,268,398 | 618,909 |
| 1951 | 25,268,398 | 1,776,110 | 2,248,588 | 205,959 | 183,297 | 4,413,954 | 2,214,321 | 27,468,031 | 2,199,633 |
| 1952 | 27,468,031 | 743,729 | 1,509,131 | 280,066 | 216,362 | 2,749,288 | 2,256,765 | 27,960,554 | 492,523 |
| 1953 | 27,960,554 | 1,264,832 | 1,439,618 | 344,053 | 247,627 | 3,296,130 | 2,311,856 | 28,944,828 | 984,274 |
| 1954 | 28,944,828 | 537,788 | 1,749,443 | 307,625 | 278,181 | 2,873,037 | 2,257,119 | 29,560,746 | 615,918 |
| 1955 | 29,560,746 | 696,114 | 1,697,653 | 219,824 | 257,133 | 2,870,724 | 2,419,300 | 30,012,170 | 451,424 |
| 1956 | 30,012,170 | 804,803 | 1,702,311 | 234,727 | 232,495 | 2,974,336 | 2,551,857 | 30,434,649 | 422,479 |
| 1957 | 30,434,649 | 465,421 | 1,543,182 | 207,437 | 208,760 | 2,424,800 | 2,559,044 | 30,300,405 | (134,244) |
| 1958 | 30,300,405 | 954,605 | 1,338,908 | 151,210 | 163,519 | 2,608,242 | 2,372,730 | 30,535,917 | 235,512 |
| 1959 | 30,535,917 | 1,518,678 | 1,778,705 | 165,695 | 203,667 | 3,666,745 | 2,483,315 | 31,719,347 | 1,183,430 |
| 1960 | 31,719,347 | 787,934 | 1,323,538 | 141,296 | 112,560 | 2,365,328 | 2,471,464 | 31,613,211 | (106,136) |
| 1961 | 31,613,211 | 1,087,092 | 1,209,101 | 107,423 | 253,951 | 2,657,567 | 2,512,273 | 31,758,505 | 145,294 |
| 1962 | 31,758,505 | 759,053 | 1,041,257 | 92,488 | 288,098 | 2,180,896 | 2,550,178 | 31,389,223 | (369,282) |
| 1963 | 31,389,223 | 966,051 | 858,168 | 96,732 | 253,159 | 2,174,110 | 2,593,343 | 30,969,990 | (419,233) |
| 1964 | 30,969,990 | 899,292 | 1,419,182 | 126,682 | 219,611 | 2,664,767 | 2,644,247 | 30,990,510 | 20,520 |
| 1965 | 30,990,510 | 1,783,231 | 792,901 | 237,335 | 234,612 | 3,048,079 | 2,686,198 | 31,352,391 | 361,881 |
| 1966 | 31,352,391 | 1,839,307 | 814,249 | 160,384 | 150,038 | 2,963,978 | 2,864,242 | 31,452,127 | 99,736 |
| 1967 | 31,452,127 | 1,900,969 | 716,467 | 125,105 | 219,581 | 2,962,122 | 3,037,579 | 31,376,670 | (75,457) |
| 1968 | 31,376,670 | 1,320,109 | 776,780 | 166,291 | 191,455 | 2,454,635 | 3,124,188 | 30,707,117 | (669,553) |
| 1969 | 30,707,117 | 1,258,142 | 614,710 | 96,435 | 150,749 | 2,120,036 | 3,195,291 | 29,631,862 | (1,075,255) |
| 1970 | 29,631,862 | 2,088,927 | 631,354 | 9,852,512 | 116,125 | 12,688,918 | 3,319,445 | 39,001,335 | 9,369,473 |
| 1971 | 39,001,335 | 1,600,426 | 560,596 | 91,469 | 65,241 | 2,317,732 | 3,256,110 | 38,062,957 | (938,378) |
| 1972 | 38,062,957 | 820,107 | 459,311 | 123,210 | 155,220 | 1,557,848 | 3,281,397 | 36,339,408 | (1,723,549) |
| 1973 | 36,339,408 | 1,551,777 | 390,141 | 116,097 | 87,816 | 2,145,831 | 3,185,400 | 35,299,839 | (1,039,569) |
| 1974 | 35,299,839 | 1,310,929 | 368,918 | 226,163 | 87,563 | 1,993,573 | 3,043,456 | 34,249,956 | (1,049,883) |

a Production is the amount originally estimated and used by the committee in prior volumes of the reserves report. These figures differ from production data developed by the committee and reported in Tables III and IV.

b All discoveries were classified as "New Reservoirs."

() Denotes negative volume.

Source: API, AGA, CPA, *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1974*. Volume 29, May 1975, Part I, Table II.

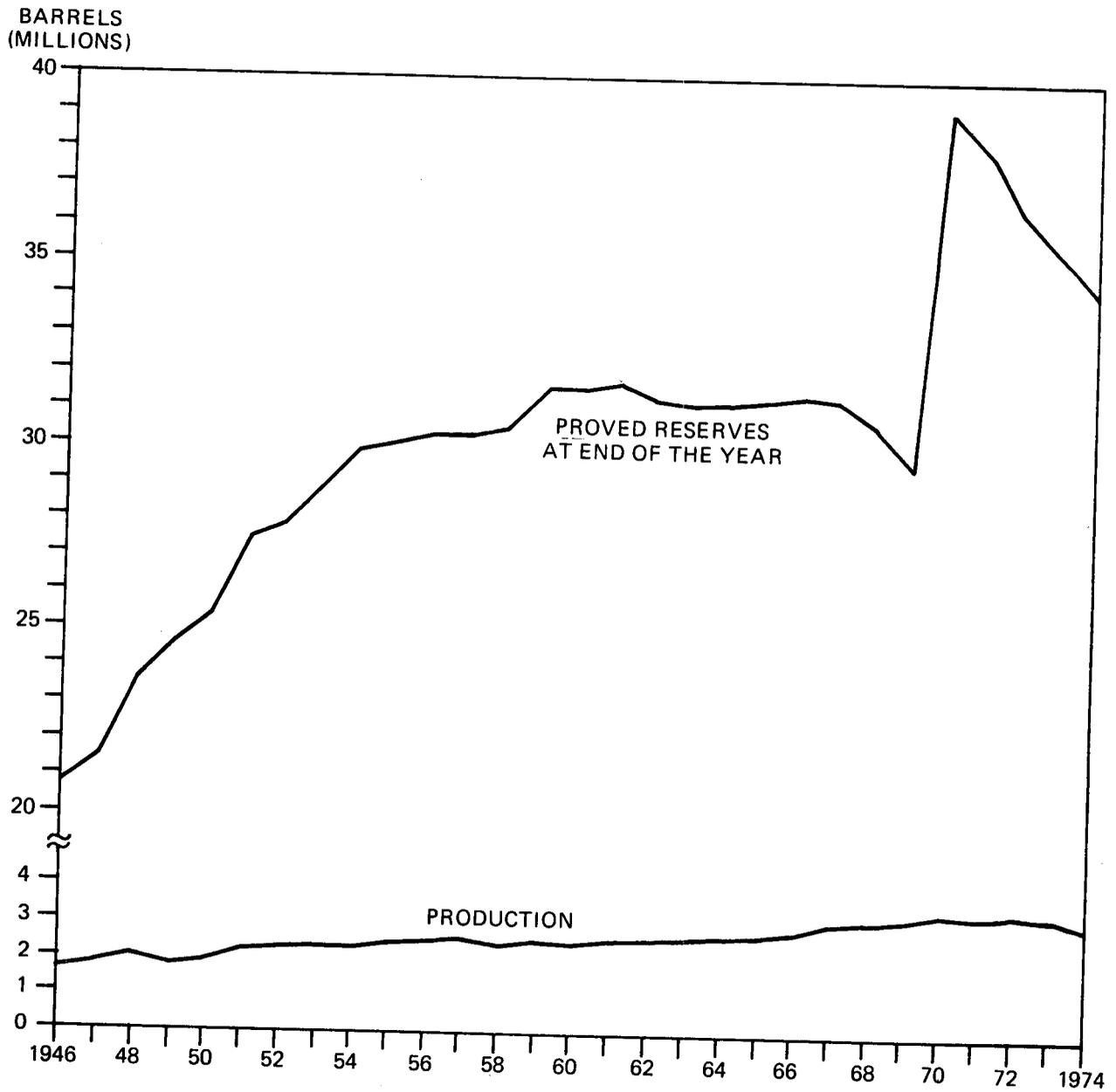


Figure 9. Production and Proved Crude Oil Reserves in the U.S., 1946 - 1974

Table 2-3. Estimated Total Proved Reserves of Natural Gas in the United States, 1973 and 1974
(Millions of Cubic Feet — 14.73 psia, at 60°F.)

| State | Changes in Reserves During 1974 | | | | | | Reserves as of December 31, 1974 | | | | |
|--------------------------------|---------------------------------|--------------------|------------------|-----------------------|---|---|----------------------------------|--------------------|--------------------|----------------------|-----------------------------------|
| | Reserves as of 12-31-73 | Revisions | Extensions | New Field Discoveries | New Reservoir Discoveries in Old Fields | Net Change in Under-ground Storage ^b | Production ^a | Total Gas | Non-Associated | Associated-Dissolved | Under-ground Storage ^a |
| Alabama | 327,375 | 62,404 | 133,787 | 716 | 0 | 0 | 16,912 | 507,370 | 464,760 | 42,610 | 0 |
| Alaska | 31,642,626 | 13,916 | 154,000 | 0 | 200,000 | 0 | 143,930 | 31,866,612 | 5,436,788 | 26,429,824 | 0 |
| Arkansas | 2,269,353 | (87,115) | 22,300 | 1,434 | 42,065 | (10,943) | 123,690 | 2,113,404 | 1,934,788 | 155,058 | 23,558 |
| California | 5,199,837 | 134,092 | 106,988 | 34,700 | 23,055 | 52,883 | 356,963 | 5,194,592 | 2,273,602 | 2,588,435 | 332,555 |
| San Joaquin Basin ¹ | 4,075,907 | (41,373) | 101,788 | 34,700 | 23,055 | 16,909 | 252,202 | 3,958,784 | 2,209,182 | 1,628,753 | 120,849 |
| Coastal Region ¹ | 684,922 | 167,637 | 5,200 | 0 | 0 | 37,013 | 58,717 | 836,055 | 61,685 | 607,751 | 166,619 |
| Los Angeles Basin ¹ | 439,008 | 7,828 | 0 | 0 | 0 | (1,039) | 46,044 | 399,753 | 2,735 | 351,931 | 45,087 |
| Colorado | 1,868,299 | (45,504) | 174,363 | 13,780 | 3,218 | (676) | 131,785 | 1,881,695 | 1,609,917 | 247,421 | 24,357 |
| Florida | 148,914 | 199,346 | 0 | 87 | 0 | 0 | 39,481 | 308,866 | 0 | 308,866 | 0 |
| Illinois | 380,525 | (388) | 10 | 0 | 0 | 22,343 | 3,076 | 399,414 | 1,103 | 20,741 | 377,570 |
| Indiana | 66,682 | (726) | 0 | 0 | 0 | (1,300) | 515 | 64,141 | 2,078 | 2,648 | 59,415 |
| Kansas | 11,722,395 | 605,750 | 262,315 | 13,415 | 1,759 | (8,594) | 892,309 | 11,704,731 | 11,435,236 | 170,992 | 98,503 |
| Kentucky | 864,921 | 107 | 28,301 | 4,876 | 885 | 4,693 | 59,781 | 844,002 | 683,888 | 42,717 | 117,397 |
| Louisiana ¹ | 69,151,613 | (539,101) | 1,112,272 | 852,039 | 1,194,730 | (5,321) | 7,713,787 | 64,052,445 | 52,929,627 | 10,949,026 | 173,792 |
| North | 2,976,133 | 69,449 | 111,763 | 19,235 | 25,964 | (5,254) | 360,736 | 2,836,554 | 1,750,390 | 927,389 | 158,775 |
| South ¹ | 66,175,480 | (608,550) | 1,000,509 | 832,804 | 1,168,766 | (67) | 7,353,051 | 61,215,891 | 51,179,237 | 10,021,637 | 15,017 |
| Michigan | 1,548,508 | (56,267) | 0 | 140,240 | 0 | (99,186) | 75,041 | 1,458,254 | 477,613 | 455,230 | 525,411 |
| Mississippi | 1,178,218 | (85,778) | 15,986 | 44,949 | 7,107 | 2,642 | 83,704 | 1,079,420 | 869,964 | 117,721 | 91,735 |
| Montana | 1,092,449 | (144,104) | 24,104 | 13,937 | 7,947 | (42,072) | 51,001 | 901,260 | 676,749 | 81,272 | 143,329 |
| Nebraska | 48,816 | 2,976 | 9 | 2,169 | 0 | 5,179 | 4,540 | 54,609 | 11,884 | 11,304 | 31,421 |
| New Mexico | 12,488,363 | 86,943 | 403,506 | 151,806 | 4,108 | 11,157 | 1,200,981 | 11,944,902 | 9,483,527 | 2,433,917 | 27,458 |
| Northwest | 7,985,386 | 16,167 | 168,549 | 51 | 0 | 2,039 | 554,795 | 7,617,397 | 7,533,050 | 81,273 | 3,074 |
| South | 4,502,977 | 70,776 | 234,957 | 151,755 | 4,108 | 9,118 | 646,186 | 4,327,505 | 1,950,477 | 2,352,644 | 24,384 |
| New York | 136,842 | 0 | 28,175 | 5,975 | 0 | (1,470) | 3,976 | 165,546 | 62,191 | 25 | 103,330 |
| North Dakota | 448,184 | 14,219 | 156 | 1,729 | 16 | 0 | 31,622 | 432,682 | 6,059 | 426,623 | 0 |
| Ohio | 1,179,391 | 131,322 | 109,081 | 1,724 | 4,268 | (23,200) | 94,376 | 1,308,210 | 786,412 | 174,250 | 347,548 |
| Oklahoma | 14,098,735 | 148,190 | 805,452 | 64,212 | 4,697 | (26,205) | 1,704,769 | 13,390,312 | 10,670,558 | 2,506,095 | 213,659 |
| Pennsylvania | 1,494,381 | 0 | 135,200 | 1,800 | 2,500 | (59,001) | 82,735 | 1,492,145 | 933,752 | 11,881 | 546,512 |
| Texas ¹ | 84,936,502 | (1,524,894) | 1,882,335 | 587,548 | 594,761 | 6,817 | 7,942,352 | 78,540,717 | 55,723,891 | 22,672,909 | 143,917 |
| District 1 | 1,473,201 | 13,954 | 34,992 | 3,387 | 5,037 | 0 | 110,698 | 1,419,873 | 1,134,547 | 284,893 | 433 |
| District 2 | 8,449,920 | (731,249) | 15,501 | 37,460 | 116,169 | (184) | 500,872 | 7,386,745 | 5,269,011 | 2,117,281 | 453 |
| District 3 ¹ | 18,526,171 | (302,464) | 158,070 | 28,311 | 124,578 | 12,880 | 1,469,302 | 17,078,244 | 11,533,627 | 5,468,699 | 75,918 |
| District 4 ¹ | 19,416,215 | (1,354,621) | 226,045 | 281,947 | 212,897 | 0 | 1,491,189 | 17,291,294 | 12,170,861 | 5,120,433 | 0 |
| District 5 | 1,149,781 | (140,132) | 11,630 | 62,005 | 6,617 | (3,765) | 99,315 | 986,821 | 815,424 | 143,521 | 27,876 |
| District 6 | 5,432,193 | (341,762) | 168,554 | 26,567 | 27,790 | 0 | 286,659 | 5,026,683 | 3,598,123 | 1,428,560 | 0 |
| District 7B | 652,076 | (46,592) | 108,560 | 15,658 | 8,820 | (925) | 77,982 | 659,615 | 290,383 | 342,353 | 26,879 |
| District 7C | 2,430,873 | (81,447) | 227,771 | 12,431 | 9,553 | 49 | 295,639 | 2,303,591 | 1,484,614 | 817,001 | 1,976 |
| District 8 | 14,796,454 | 506,950 | 508,290 | 73,913 | 66,110 | 0 | 1,988,830 | 13,962,887 | 9,582,049 | 4,380,838 | 0 |
| District 8A | 2,121,505 | 39,644 | 3,728 | 10,944 | 881 | 0 | 222,842 | 1,953,860 | 81,107 | 1,872,753 | 0 |
| District 9 | 1,502,193 | 3,846 | 49,667 | 3,898 | 4,086 | (1,238) | 145,987 | 1,416,465 | 1,041,699 | 364,364 | 10,382 |
| District 10 | 8,985,920 | 908,979 | 369,527 | 31,027 | 12,223 | 0 | 1,253,037 | 9,054,639 | 8,722,446 | 332,193 | 0 |
| Utah | 1,024,723 | (29,437) | 90,170 | 1,020 | 0 | 1,392 | 56,459 | 1,031,409 | 553,738 | 474,629 | 3,042 |
| Virginia | 37,273 | 0 | 13,500 | 900 | 0 | 0 | 6,966 | 44,707 | 44,707 | 0 | 0 |
| West Virginia | 2,319,828 | (335) | 105,334 | 3,675 | 7,930 | (10,753) | 160,098 | 2,265,581 | 1,869,226 | 51,917 | 344,438 |
| Wyoming | 4,109,523 | (213,956) | 238,807 | 70,309 | 52,327 | (2,454) | 337,169 | 3,917,387 | 3,239,711 | 624,754 | 52,922 |
| Miscellaneous ^a | 165,931 | (4,945) | 1,100 | 505 | 100 | 5,645 | 452 | 168,084 | 10,453 | 1,325 | 156,306 |
| Total United States | 249,950,207 | (1,333,285) | 5,847,251 | 2,013,475 | 2,151,473 | (178,424) | 21,318,470 | 237,132,497 | 162,192,222 | 71,002,190 | 3,938,085 |
| Gulf of Mexico ² | 36,785,308 | 607,323 | 765,931 | 736,676 | 547,548 | 0 | 4,094,945 | 35,347,841 | 30,873,975 | 4,473,866 | 0 |

¹ Includes offshore.

² Included with Louisiana and Texas.

³ Preliminary net production.

⁴ Includes Arizona, Iowa, Maryland, Minnesota, Missouri, South Dakota, Tennessee and Washington.

⁵ The net difference between recoverable gas stored in and gas withdrawn from underground storage reservoirs, inclusive of adjustments and native gas transferred

from other reserve categories.

⁶ Proved, recoverable gas contained in underground gas storage reservoirs, including native and net injected gas.

() Denotes negative volume.

Source: API, AGA, CPA, *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1974*, Volume 29, May 1975, Part II, Table 1.

Table 2-4. Annual Estimates of Proved Natural Gas and Natural Gas Liquids Reserves, United States,^b 1945 Through 1974 (millions of cubic feet — 14.73 psia, at 60°F, and thousands of barrels of 42 U.S. gallons)

| Year | NATURAL GAS Year-End Reserves | | | | NATURAL GAS LIQUIDS Year-End Reserves | | |
|------|----------------------------------|----------------------|------------------------|-------------|--|----------------------|-----------|
| | Non-Associated | Associated-Dissolved | Underground Storage | Total Gas | Non-Associated | Associated-Dissolved | Total NGL |
| 1945 | 110,113,066 | 36,873,657 | a | 146,986,723 | a | a | a |
| 1946 | 115,807,949 | 43,895,864 | a | 159,703,813 | 1,929,926 | 1,233,293 | 3,163,219 |
| 1947 | 119,101,110 | 45,924,655 | a | 165,025,765 | 1,928,127 | 1,325,848 | 3,253,975 |
| 1948 | 122,724,358 | 49,995,941 | 204,757 | 172,925,056 | 2,023,155 | 1,517,628 | 3,540,783 |
| 1949 | 125,432,561 | 53,682,229 | 286,903 | 179,401,693 | 2,104,620 | 1,624,392 | 3,729,012 |
| 1950 | 129,919,009 | 54,325,898 | 339,838 | 184,584,745 | 2,372,189 | 1,895,474 | 4,267,663 |
| 1951 | 133,044,892 | 59,242,150 | 471,868 | 192,758,910 | 2,404,128 | 2,320,474 | 4,724,602 |
| 1952 | 136,892,642 | 61,069,290 | 669,634 | 198,631,566 | 2,411,496 | 2,585,155 | 4,996,651 |
| 1953 | 146,052,855 | 63,062,645 | 1,183,263 | 210,298,763 | 2,729,919 | 2,708,003 | 5,437,922 |
| 1954 | 145,282,729 | 64,004,531 | 1,273,671 | 210,560,931 | 2,648,599 | 2,595,858 | 5,244,457 |
| 1955 | 151,229,351 | 69,892,358 | 1,360,835 | 222,482,544 | 2,619,926 | 2,818,639 | 5,488,565 |
| 1956 | 159,163,774 | 75,825,365 | 1,494,076 | 236,483,215 | 2,809,846 | 3,092,486 | 5,902,332 |
| 1957 | 167,558,391 | 75,998,909 | 1,672,837 | 245,230,137 | 2,706,246 | 2,981,114 | 5,687,360 |
| 1958 | 176,894,570 | 74,136,803 | 1,730,419 | 252,761,792 | 3,230,975 | 2,973,043 | 6,204,018 |
| 1959 | 183,170,257 | 76,109,302 | 1,890,872 | 261,170,431 | 3,417,915 | 3,104,393 | 6,522,308 |
| 1960 | 185,291,523 | 74,862,658 | 2,172,145 | 262,326,326 | 3,686,986 | 3,129,073 | 6,816,059 |
| 1961 | 190,669,393 | 73,272,560 | 2,331,689 | 266,273,642 | 3,852,152 | 3,196,944 | 7,049,096 |
| 1962 | 198,687,335 | 71,100,603 | 2,490,920 | 272,278,858 | 4,237,659 | 3,073,858 | 7,311,517 |
| 1963 | 201,219,649 | 72,186,931 | 2,744,653 | 276,151,233 | 4,571,636 | 3,102,342 | 7,673,978 |
| 1964 | 207,122,360 | 71,189,331 | 2,939,763 | 281,251,454 | 4,791,833 | 2,954,799 | 7,746,632 |
| 1965 | 213,315,274 | 70,063,403 | 3,090,246 | 286,468,923 | 5,040,024 | 2,983,510 | 8,023,534 |
| 1966 | 217,426,169 | 68,681,867 | 3,224,769 | 289,332,805 | 5,229,261 | 3,099,705 | 8,328,966 |
| 1967 | 221,751,275 | 67,780,256 | 3,376,172 | 292,907,703 | 5,575,956 | 3,038,275 | 8,614,231 |
| 1968 | 220,990,299 | 62,864,813 | 3,494,740 | 287,349,852 | 5,693,001 | 2,905,107 | 8,598,108 |
| 1969 | 211,873,282 | 59,633,644 | 3,601,909 | 275,108,835 | 5,416,898 | 2,726,276 | 8,143,174 |
| 1970 | 204,098,552 | 82,643,929 | 4,003,927 | 290,746,408 | 5,110,939 | 2,592,002 | 7,702,941 |
| 1971 | 195,953,617 | 78,537,773 | 4,314,228 | 278,805,618 | 4,867,070 | 2,437,157 | 7,304,227 |
| 1972 | 186,072,643 | 75,541,412 | 4,470,791 | 266,084,846 | 4,572,721 | 2,213,838 | 6,786,559 |
| 1973 | 172,245,938 | 73,587,760 | 4,116,509 ^c | 249,950,207 | 4,124,031 | 2,330,676 | 6,454,707 |
| 1974 | 162,192,222 | 71,002,190 | 3,938,085 ^c | 237,132,497 | 4,109,128 | 2,241,321 | 6,350,449 |

a-Not estimated.

b-Includes offshore reserves.

c-See footnote e, Table 2-1.

Source: API, AGA, CPA, *Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1974*, Vol. 29, May 1975, Table XIII-1, p. 124.

Table 2-5. Production and Disposition of Natural Gas in the United States, 1950 - 1973

Note: Production data include allowance for natural gas liquids content in the natural gas, and therefore differ from totals developed by A.G.A.
(Millions of cubic feet)

| Year | Production | | | | | Disposition | | | | | |
|-----------|-------------------------|------------------------|-------------------------|--------------|-------------------------|-------------------------------|---------------------|------------------------|------------------------------------|----------------------|-------------------------|
| | Gross ^a | | Total | Repressuring | Net | Losses and Waste ^a | Marketed Production | Field Use | Net Change in Under-ground Storage | Lost in Transmission | Net Marketed Production |
| Gas Wells | Oil Wells | | | | | | | | | | |
| 1950 | 5,603,200 | 2,876,450 | 8,479,650 | 1,396,546 | 7,083,104 | 801,044 | 6,282,060 | 1,187,473 | 54,492 | 175,437 | 4,864,658 |
| 1951 | 6,481,452 | 3,207,920 | 9,689,372 | 1,438,827 | 8,250,545 | 793,186 | 7,457,359 | 1,441,870 | 138,262 | 192,372 | 5,684,855 |
| 1952 | 6,839,177 | 3,433,389 | 10,272,566 | 1,410,501 | 8,862,065 | 848,608 | 8,013,457 | 1,483,754 | 176,684 | 203,646 | 6,149,373 |
| 1953 | 7,095,237 | 3,550,561 | 10,645,798 | 1,438,606 | 9,207,192 | 810,276 | 8,396,916 | 1,471,085 | 158,036 | 240,445 | 6,527,350 |
| 1954 | 7,466,007 | 3,518,843 | 10,984,850 | 1,518,737 | 9,466,113 | 723,567 | 8,742,546 | 1,456,883 | 102,106 | 215,709 | 6,967,848 |
| 1955 | 7,841,958 | 3,877,836 | 11,719,794 | 1,540,804 | 10,178,990 | 773,639 | 9,405,351 | 1,507,671 | 67,934 | 246,933 | 7,582,813 |
| 1956 | 8,306,550 | 4,066,355 | 12,372,905 | 1,426,648 | 10,946,257 | 864,334 | 10,081,923 | 1,420,550 | 136,470 | 212,992 | 8,311,911 |
| 1957 | 8,716,835 | 4,189,834 | 12,906,669 | 1,417,263 | 11,489,406 | 809,148 | 10,680,258 | 1,479,720 | 191,396 | 205,373 | 8,803,769 |
| 1958 | 9,154,051 | 3,992,584 | 13,146,635 | 1,482,975 | 11,663,660 | 633,412 | 11,030,248 | 1,604,104 | 83,081 | 283,597 | 9,059,466 |
| 1959 | 10,101,754 | 4,127,518 | 14,229,272 | 1,612,109 | 12,617,163 | 571,048 | 12,046,115 | 1,737,402 | 118,742 | 223,312 | 9,966,659 |
| 1960 | 10,853,426 | 4,234,485 | 15,087,911 | 1,753,996 | 13,333,915 | 562,877 | 12,771,038 | 1,779,671 | 131,694 | 274,231 | 10,585,442 |
| 1961 | 11,195,087 | 4,265,225 | 15,460,312 | 1,682,754 | 13,777,558 | 523,533 | 13,254,025 | 1,881,208 | 145,616 | 234,808 | 10,992,393 |
| 1962 | 11,702,382 | 4,336,591 | 16,038,973 | 1,736,722 | 14,302,251 | 425,629 | 13,876,622 | 1,993,128 | 86,487 | 285,726 | 11,511,281 |
| 1963 | 12,606,022 | 4,367,346 | 16,973,368 | 1,843,297 | 15,130,071 | 383,408 | 14,746,663 | 2,081,339 | 130,772 | 364,658 | 12,169,894 |
| 1964 | 13,035,200 | 4,405,100 | 17,440,300 | 1,638,161 | 15,802,139 | 339,996 | 15,462,143 | 2,082,029 | 128,804 | 302,781 | 12,948,529 |
| 1965 | 13,523,600 | 4,439,500 | 17,963,100 | 1,604,204 | 16,358,896 | 319,143 | 16,039,753 | 1,909,697 | 118,115 | 318,711 | 13,693,230 |
| 1966 | 13,893,921 | 5,139,918 | 19,033,839 | 1,451,516 | 17,582,323 | 375,695 | 17,206,628 | 1,772,708 | 68,855 | 401,203 | 14,963,862 |
| 1967 | 15,346,853 | 4,904,923 | 20,251,776 | 1,590,574 | 18,661,202 | 489,877 | 18,171,325 | 1,925,500 ^b | 184,829 | 296,214 | 15,764,782 |
| 1968 | 16,539,925 | 4,785,075 | 21,325,000 | 1,486,092 | 19,838,908 | 516,508 | 19,322,400 | 2,065,008 ^b | 95,539 | 325,062 | 16,836,791 |
| 1969 | 17,489,415 | 5,189,780 | 22,679,195 | 1,455,205 | 21,223,990 | 525,750 | 20,698,240 | 2,212,208 ^b | 119,500 | 331,587 | 18,034,945 |
| 1970 | 18,594,658 | 5,191,795 | 23,786,453 | 1,376,351 | 22,410,102 | 489,460 | 21,920,642 | 2,305,171 ^b | 398,160 | 227,650 | 18,989,661 |
| 1971 | 18,925,136 | 5,162,895 | 24,088,031 | 1,310,458 | 22,777,573 | 284,561 | 22,493,012 | 2,296,777 ^b | 331,768 | 338,999 | 19,525,468 |
| 1972 | 19,042,592 ^r | 4,973,517 ^r | 24,016,109 ^r | 1,236,292 | 22,779,817 ^r | 248,119 ^r | 22,531,698 | 2,363,556 ^b | 135,734 | 328,002 | 19,704,406 |
| 1973 | 19,371,600 | 4,695,602 | 24,067,202 | 1,171,361 | 22,895,841 | 248,292 | 22,647,549 | 2,412,466 ^b | 441,504 | 195,863 | 19,597,716 |

^a Includes gas (mostly residue gas) blown to the air but does not include direct waste on producing properties, except where data are available.

^b Beginning in 1967, computed by A.G.A. from "Extraction loss" and "Lease and plant fuel."

r = Revised

Sources: American Gas Association, *Gas Facts*, 1973, p. 29, Table 21.

Table 2-6. Oil Shale Deposites

| | Billions of Barrels of Oil in Place | | | |
|---|-------------------------------------|------------|------------|--------------|
| | Colorado | Utah | Wyoming | Total |
| Intervals 10 ft. or more thick averaging 25 gal./ton or more of oil | 480 | 90 | 30 | 600 |
| Intervals 10 ft. or more thick averaging 10 to 25 gal./ton of oil | 800 | 230 | 400 | 1,430 |
| Total: intervals 10 ft. or more thick averaging over 10 gal./ton | <u>1,280</u> | <u>320</u> | <u>430</u> | <u>2,030</u> |

Over 2 trillion barrels of oil are locked in known shale oil deposits in the Green River Formation, but less than one third of this is in reasonably thick deposits which average more than 25 gal. of oil per ton of shale; only these are generally regarded as potentially exploitable.

| | Percent | Weight Percent |
|----------------------------------|---------|----------------|
| Mineral matter: | | |
| Content of raw shale | | 86.2 |
| Estimated mineral constituents: | | |
| Carbonates, principally dolomite | 50 | |
| Feldspars | 19 | |
| Illite | 15 | |
| Quartz | 10 | |
| Analcite and others | 5 | |
| Pyrite | 1 | |
| Organic matter: | | |
| Content of raw shale | | 13.8 |
| Ultimate organic composition: | | |
| Carbon | 80.5 | |
| Hydrogen | 10.3 | |
| Nitrogen | 2.4 | |
| Sulfur | 1.0 | |
| Oxygen | 5.8 | |

The richest oil shales occur in the Mahogany Zone of Colorado (the Piceance Creek Basin near Rifle) and adjacent portions of Utah. Even here the organic matter represents less than 15 percent of the total shale content; one ton of shale may yield as much as 75 gal. of crude oil, but the average even in this richest shale deposit is more nearly 25 to 30 gal./ton.

Source: *Technology Review*, January 1974, pp 28 and 29.

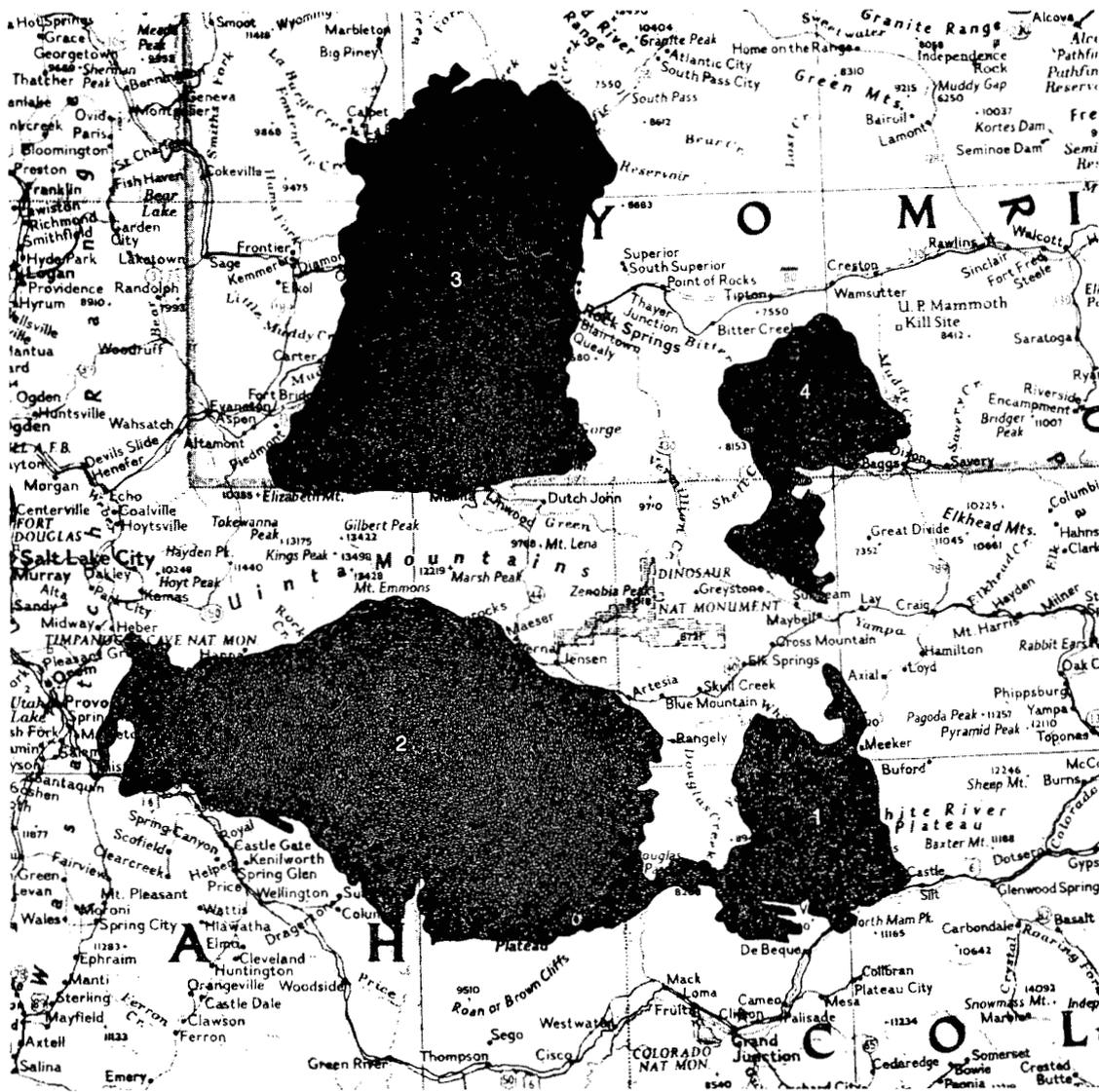
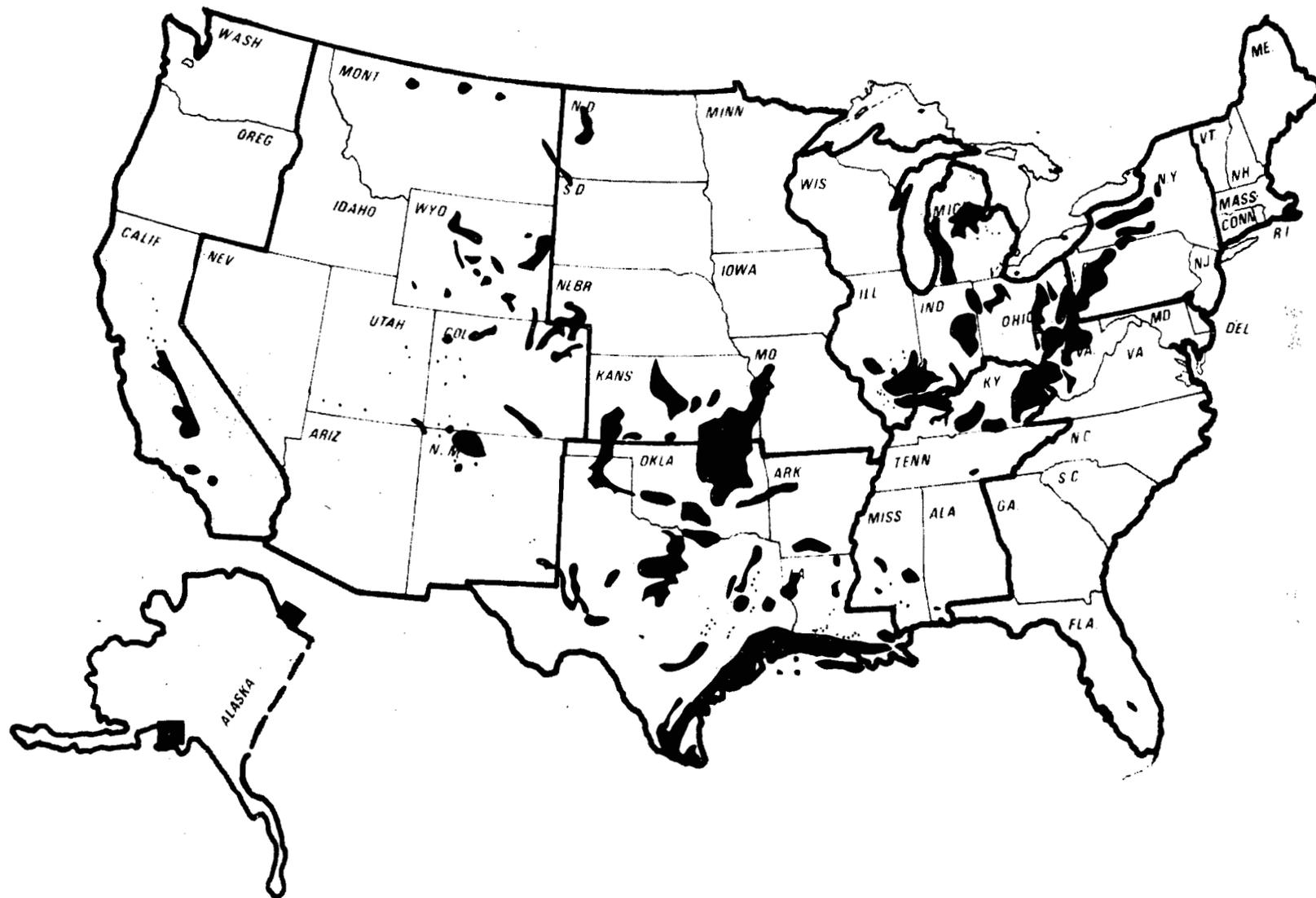


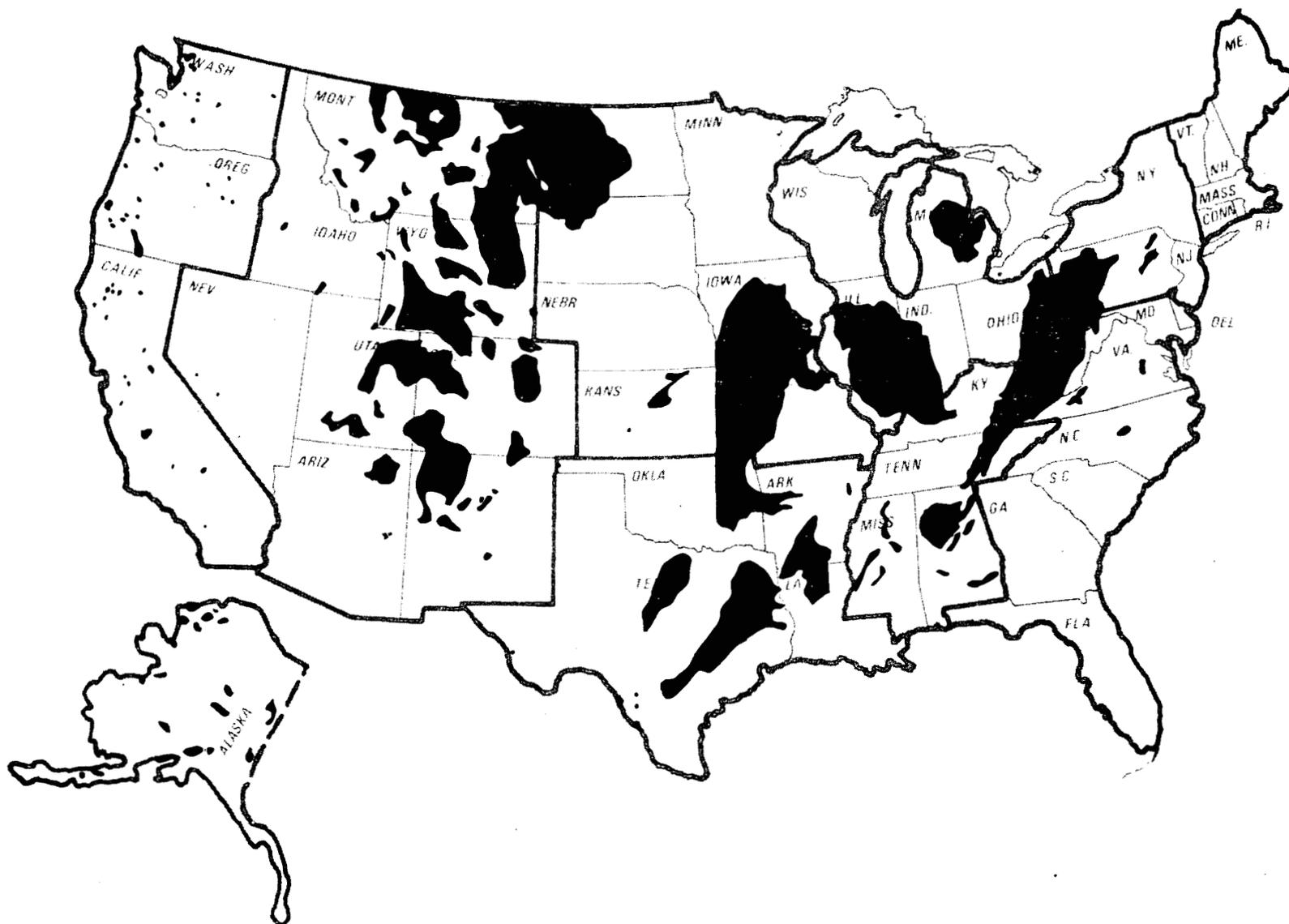
Figure 10. Map of U.S. Oil Shale Deposits

The West's oil shales, rocks containing up to 10 to 15 per cent organic matter, occur in the Green River Formation in the area where Utah, Wyoming, and Colorado join. The Piceance Creek Basin in Colorado (1)—though a small fraction by area of the Green River Formation—contains most of the richest shale and 80 per cent of the total recoverable oil, and it is the area of greatest current interest and potential activity. Other areas which contribute to the total of 600 billion bbl. of recoverable oil include the Uinta Basin (2) in Utah (90 billion bbl.) and the Green River (3) and Washakie (4) Basins in Wyoming and Colorado with some 30 billion bbl. (Map: © 1963 National Geographic Society)



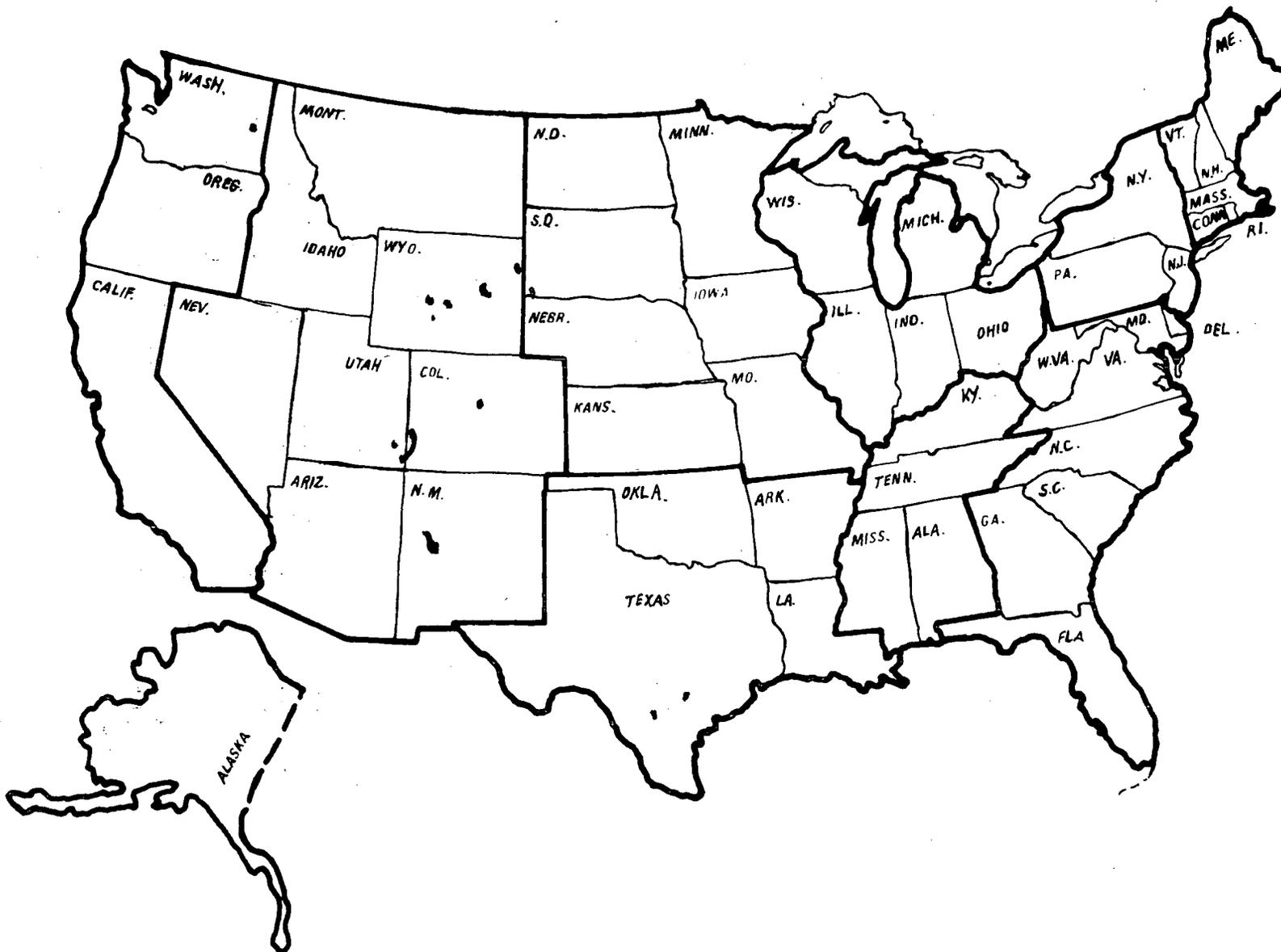
Source: Department of the Interior, *Fuel and Energy Data*, 1974, p. 69.

Figure 11. Oil and Gas Fields in the United States



Source: Department of the Interior, *Fuel and Energy Data*, 1974, p. 68.

Figure 12. Coal Fields of the United States



Source: U.S. Department of the Interior, Bureau of Mines Information Circular 8647, *Fuel and Energy Data*, p. 70.

Figure 13. Principal Uranium Deposits of the United States

Table 2-7. World Oil Production, 1964 - 1974

| Country/Area | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 ^r | 1974 | Yearly Change | | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|----------------------|----------------------|--|
| | | | | | | | | | | | | 1974 over 1964 | 1974 over 1969 | |
| MILLION TONS | | | | | | | | | | | | | | |
| NORTH AMERICA | | | | | | | | | | | | | | |
| U.S.A. | | | | | | | | | | | | | | |
| Crude Oil | 379.2 | 387.6 | 412.0 | 437.5 | 452.9 | 458.8 | 478.6 | 469.9 | 470.1 | 457.3 | 436.8 | + 1.4% | - 1.0% | |
| Natural Gas Liquids | 41.7 | 43.6 | 46.1 | 50.5 | 53.8 | 56.4 | 58.9 | 60.1 | 62.1 | 61.7 | 59.9 | + 3.7% | + 1.2% | |
| | 420.9 | 431.2 | 458.1 | 488.0 | 506.7 | 515.2 | 537.5 | 530.0 | 532.2 | 519.0 | 496.7 | + 1.7% | - 0.7% | |
| Canada | 40.8 | 44.6 | 49.2 | 53.8 | 58.2 | 62.2 | 71.5 | 76.6 | 88.8 | 102.3 | 96.5 | + 9.0% | + 9.2% | |
| Mexico | 17.6 | 17.8 | 18.3 | 20.2 | 21.7 | 22.8 | 23.9 | 23.9 | 24.8 | 26.9 | 30.6 | + 5.7% | + 6.0% | |
| TOTAL NORTH AMERICA | 479.3 | 493.6 | 525.6 | 562.0 | 586.6 | 600.2 | 632.9 | 630.5 | 645.8 | 648.2 | 623.8 | + 2.7% | + 0.8% | |
| CARIBBEAN | | | | | | | | | | | | | | |
| Venezuela | 177.4 | 182.1 | 177.0 | 186.1 | 189.9 | 188.7 | 195.2 | 187.7 | 171.5 | 179.0 | 158.2 | - 1.1% | - 3.5% | |
| Colombia | 8.7 | 10.2 | 10.0 | 9.6 | 8.8 | 10.7 | 11.2 | 11.0 | 10.0 | 9.4 | 8.7 | - | - 4.2% | |
| Trinidad | 7.1 | 7.0 | 7.9 | 9.3 | 9.5 | 8.2 | 7.3 | 6.7 | 7.3 | 8.6 | 9.4 | + 2.8% | + 2.8% | |
| TOTAL CARIBBEAN | 193.2 | 199.3 | 194.9 | 205.0 | 208.2 | 207.6 | 213.7 | 205.4 | 188.8 | 197.0 | 176.3 | - 0.9% | - 3.2% | |
| SOUTH AMERICA | | | | | | | | | | | | | | |
| Argentina | 14.3 | 14.0 | 15.0 | 16.4 | 17.9 | 18.6 | 20.4 | 22.1 | 22.6 | 22.0 | 21.6 | + 4.2% | + 3.1% | |
| Brazil | 4.5 | 4.6 | 5.6 | 7.1 | 8.0 | 8.5 | 8.0 | 8.3 | 8.1 | 8.1 | 8.5 | + 6.7% | - | |
| Other South America | 5.5 | 5.6 | 5.8 | 7.1 | 7.8 | 7.2 | 6.4 | 6.4 | 10.8 | 18.0 | 15.5 | +10.8% | +16.6% | |
| TOTAL SOUTH AMERICA | 24.3 | 24.2 | 26.4 | 30.6 | 33.7 | 34.3 | 34.8 | 36.8 | 41.5 | 48.1 | 45.6 | + 6.5% | + 5.9% | |
| TOTAL WESTERN HEMISPHERE | 696.8 | 717.1 | 746.9 | 797.6 | 828.5 | 842.1 | 881.4 | 872.7 | 876.1 | 893.3 | 845.7 | + 2.0% | + 0.1% | |
| WESTERN EUROPE | | | | | | | | | | | | | | |
| France | 2.8 | 3.0 | 2.9 | 2.8 | 2.7 | 2.5 | 2.3 | 1.9 | 1.5 | 1.3 | 1.1 | - 9.2% | -15.4% | |
| W. Germany | 7.7 | 7.9 | 7.9 | 7.9 | 8.0 | 7.9 | 7.5 | 7.4 | 7.1 | 6.6 | 6.2 | - 2.1% | - 4.7% | |
| Austria | 2.7 | 2.8 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 2.5 | 2.5 | 2.6 | 2.2 | - 1.7% | - 4.1% | |
| Turkey | 0.9 | 1.6 | 2.1 | 2.8 | 3.1 | 3.6 | 3.5 | 3.5 | 3.4 | 3.5 | 3.3 | +13.6% | - 1.7% | |
| Other Western Europe | 7.5 | 6.8 | 6.5 | 6.5 | 6.5 | 6.7 | 6.7 | 6.5 | 7.7 | 8.6 | 9.8 | + 2.7% | + 7.8% | |
| TOTAL WESTERN EUROPE | 21.6 | 22.1 | 22.1 | 22.7 | 23.0 | 23.4 | 22.8 | 21.8 | 22.2 | 22.6 | 22.6 | + 0.4% | - 0.7% | |
| MIDDLE EAST | | | | | | | | | | | | | | |
| Iran | 85.4 | 95.0 | 105.2 | 129.6 | 141.8 | 168.1 | 191.3 | 227.0 | 251.9 | 293.1 | 301.2 | +13.4% | +12.4% | |
| Iraq | 61.7 | 64.4 | 68.1 | 60.3 | 73.9 | 74.9 | 76.9 | 83.5 | 72.1 | 99.0 | 94.9 | + 4.4% | + 4.8% | |
| Kuwait | 106.7 | 109.1 | 114.4 | 115.2 | 122.1 | 129.5 | 137.5 | 147.1 | 151.2 | 138.4 | 114.4 | + 0.7% | - 2.4% | |
| Neutral Zone | 18.8 | 19.4 | 21.7 | 21.5 | 21.0 | 21.7 | 26.0 | 28.3 | 29.3 | 27.6 | 28.1 | + 4.1% | + 5.3% | |
| Qatar | 10.2 | 11.1 | 13.8 | 15.5 | 16.3 | 17.0 | 17.7 | 20.5 | 23.2 | 27.3 | 24.9 | + 9.3% | + 7.9% | |
| Saudi Arabia | 86.2 | 100.6 | 118.8 | 129.0 | 140.9 | 148.6 | 176.2 | 223.4 | 285.4 | 364.7 | 407.8 | +16.8% | +22.4% | |
| Abu Dhabi | 9.0 | 13.5 | 17.3 | 18.3 | 23.9 | 28.9 | 33.4 | 44.9 | 50.6 | 62.6 | 67.9 | +22.4% | +18.7% | |
| Oman | ----- | ----- | ----- | 2.9 | 12.1 | 16.4 | 16.6 | 14.4 | 14.2 | 14.7 | 14.8 | * | - 2.1% | |
| Other Middle East | 2.5 | 3.0 | 3.3 | 3.6 | 5.3 | 9.5 | 12.6 | 16.2 | 17.5 | 19.6 | 23.5 | +25.1% | +19.7% | |
| TOTAL MIDDLE EAST | 380.5 | 416.1 | 462.6 | 495.9 | 557.3 | 614.6 | 688.2 | 805.3 | 895.4 | 1,047.0 | 1,077.5 | +11.0% | +11.9% | |
| AFRICA | | | | | | | | | | | | | | |
| Algeria | 26.5 | 26.6 | 34.2 | 39.1 | 42.9 | 44.5 | 48.5 | 36.5 | 50.1 | 51.2 | 48.5 | + 6.2% | + 1.7% | |
| Libya | 41.4 | 58.9 | 72.3 | 84.0 | 125.7 | 149.8 | 159.8 | 133.1 | 108.2 | 104.9 | 73.5 | + 5.9% | -13.3% | |
| Other North Africa | 6.6 | 6.7 | 7.0 | 8.6 | 14.5 | 20.9 | 27.7 | 25.2 | 21.6 | 16.7 | 16.0 | + 9.4% | - 5.2% | |
| Nigeria | 6.0 | 13.5 | 20.4 | 15.6 | 7.2 | 26.4 | 52.9 | 74.7 | 88.9 | 100.1 | 113.5 | +34.2% | +33.9% | |
| Other West Africa | 2.4 | 2.0 | 2.2 | 4.1 | 5.8 | 7.5 | 10.9 | 11.5 | 13.6 | 17.6 | 21.0 | +24.0% | +22.9% | |
| TOTAL AFRICA | 82.9 | 107.7 | 136.1 | 151.4 | 196.1 | 249.1 | 299.8 | 281.0 | 282.4 | 290.5 | 272.5 | +12.6% | + 1.8% | |
| SOUTH EAST ASIA | | | | | | | | | | | | | | |
| Indonesia | 23.3 | 24.0 | 23.5 | 25.2 | 29.7 | 37.1 | 42.2 | 44.1 | 53.4 | 66.0 | 69.0 | +11.5% | +13.2% | |
| Other South East Asia | 3.6 | 4.0 | 4.7 | 5.4 | 6.2 | 6.8 | 7.8 | 11.0 | 12.3 | 16.0 | 15.0 | +15.2% | +17.1% | |
| TOTAL SOUTH EAST ASIA | 26.9 | 28.0 | 28.2 | 30.6 | 35.9 | 43.9 | 50.0 | 55.1 | 65.7 | 82.0 | 84.0 | +12.0% | +13.8% | |
| U.S.S.R. | | | | | | | | | | | | | | |
| Eastern Europe | 15.0 | 15.2 | 15.6 | 16.2 | 16.4 | 16.1 | 16.3 | 16.8 | 17.3 | 17.1 | 17.3 | + 7.3% | + 6.6% | |
| China** | 9.3 | 10.7 | 13.3 | 11.9 | 14.0 | 15.7 | 21.3 | 26.9 | 31.5 | 42.1 | 52.4 | +18.9% | +27.3% | |
| Other Eastern Hemisphere | 4.2 | 5.1 | 7.0 | 8.5 | 9.5 | 10.3 | 17.6 | 24.3 | 26.7 | 28.2 | 27.9 | +20.8% | +22.1% | |
| TOTAL EASTERN HEMISPHERE | 764.0 | 847.8 | 950.0 | 1,025.3 | 1,161.4 | 1,301.4 | 1,469.0 | 1,603.2 | 1,735.2 | 1,950.5 | 2,005.2 | +10.1% | + 9.0% | |
| WORLD (excl. U.S.S.R., E. Europe and China) | 1,212.9 | 1,296.1 | 1,402.9 | 1,506.7 | 1,650.3 | 1,783.4 | 1,959.8 | 2,060.2 | 2,168.5 | 2,363.6 | 2,330.2 | + 6.7% | + 5.5% | |
| WORLD | 1,460.8 | 1,564.9 | 1,696.9 | 1,822.9 | 1,989.9 | 2,143.5 | 2,350.4 | 2,475.9 | 2,611.3 | 2,843.8 | 2,850.9 | + 6.9% | + 5.9% | |

* Greater than 300%

**Includes Albania

r = revised

Source: British Petroleum Corp., BP Statistical Review of the World Oil Industry, 1974, p. 18.

**Table 2-8. API Refinery Capacity Survey
(barrels of 42 gallons per calendar day)**

| P.A.D. District | Operable Refinery Capacity | | | | | Operable Capacity Shut Down on Sept. 30 1974 (in- cluded in Column 1) | Inoperable Refinery Capacity Sept. 30, 1974 Through Sept. 30, 1975 |
|----------------------|----------------------------|------------------------|---------------------|--------------------|-------------------------|---|---|
| | September 30 1974 | December 31 1974 | March 31 1975 | June 30 1975 | September 30 1975 | | |
| East Coast | 1,544,500 | 1,558,500 | 1,558,500 | 1,558,500 | 1,558,500 | -- | 15,000 |
| Appalachian No. 1 | 215,710 | 215,710 | 215,710 | 215,710 | 215,710 | -- | 1,400 |
| I. Total | 1,760,210 | 1,774,210 | 1,774,210 | 1,774,210 | 1,774,210 | -- | 16,400 |
| Appalachian No. 2 | 64,000 | 64,000 | 64,000 | 64,000 | 64,000 | -- | -- |
| Ind. Ill., Ky. | 2,573,902 | 2,626,400 | 2,677,600 | 2,677,600 | 2,677,600 | 12,020 | 163,600 |
| Minn., Wisc., Daks. | 298,300 | 303,300 | 303,300 | 303,300 | 303,300 | 5,000 | -- |
| Okla., Kan., Mo. | 1,035,466 | 1,065,146 | 1,066,146 | 1,075,006 | 1,096,006 | 12,400 | 6,200 |
| II. Total | 3,971,668 | 4,058,846 | 4,111,046 | 4,119,906 | 4,140,906 | 19,420 | 169,800 |
| Inland Texas | 513,200 | 517,200 | 524,200 | 524,200 | 524,200 | 3,000 | -- |
| Texas Gulf Coast | 3,432,350 | 3,447,350 | 3,447,350 | 3,447,350 | 3,447,350 | 9,000 | -- |
| Louisiana Gulf Coast | 1,901,800 | 1,937,800 | 1,937,800 | 1,937,800 | 1,937,800 | -- | 20,000 |
| No. La. & Ark. | 212,800 | 212,800 | 225,800 | 225,800 | 225,800 | 2,000 | 1,400 |
| New Mexico | 88,450 | 98,350 | 98,350 | 98,350 | 98,350 | -- | -- |
| III. Total | 6,148,600 | 6,213,500 | 6,233,500 | 6,233,500 | 6,233,500 | 14,000 | 21,400 |
| IV. Other Rocky Mt. | 543,481 | 549,481 | 552,250 | 556,681 | 556,681 | 11,800 | -- |
| V. West Coast | 2,371,500 | 2,376,400 | 2,378,900 | 2,389,900 | 2,389,900 | 48,300 | -- |
| Total United States | 14,795,459 | 14,972,437 | 15,049,906 | 15,074,197 | 15,095,197 | 103,520 | 207,600 |

Source: American Petroleum Institute, *Weekly Statistical Bulletin*, Nov. 29, 1974
See Appendix C for new definition of operable refinery capacity.

Table 2-9. Number and Capacity of U.S. Refineries, 1918 - 1974

| Year | Number of Refineries As of January 1 | | | | | Capacity as of January 1 (Barrels Per Day) | | | | Daily Average Crude Oil Runs To Stills (barrels) | |
|-------------------|---|------------------|---|---------------|---|---|-----------------------|---------------------------------------|-----------------------|---|--|
| | Oper- ating | Shut- down | Total Oper- ating and Shut- down | Build- ing | Total Oper- ating and Shut- down and Build- ing | Operating | Shutdown ² | Total Operating and Shutdown | Building ³ | | Total Operating, Shutdown and Building |
| 1974 | 257 | 27 | 284 | 5 | 289 | 14,220,316 | 269,120 | 14,489,436 | 1,319,490 | 15,808,926 | 12,044,000* |
| 1973 | 252 | 25 | 277 | 0 | 277 | 13,454,471 | 320,175 | 13,774,646 | 100,500 | 13,875,146 | 12,431,000 |
| 1972 | 250 | 32 | 282 | 2 | 284 | 13,034,818 | 402,650 | 13,437,468 | 223,470 | 13,660,938 | 11,696,000 |
| 1971 | 253 | 26 | 279 | 3 | 282 | 12,658,248 | 361,830 | 13,019,978 | 621,300 | 13,641,278 | 11,199,000 |
| 1970 | 262 | 19 | 281 | 4 | 285 | 11,882,393 | 191,930 | 12,074,323 | 386,700 | 12,461,023 | 10,870,000 |
| 1969 | 264 | 20 | 284 | 2 | 287 | 11,575,829 | 163,680 | 11,739,509 | 362,500 | 12,102,009 | 10,630,000 |
| 1968 | 270 | 21 | 291 | 1 | 292 | 11,172,694 | 360,160 | 11,532,854 | 751,550 | 12,284,404 | 10,312,000 |
| 1967 | 260 | 21 | 281 | 4 | 285 | 10,412,447 | 347,160 | 10,759,607 | 391,700 | 11,151,307 | 9,815,000 |
| 1966 | 267 | 19 | 286 | 3 | 289 | 10,171,159 | 321,580 | 10,492,739 | 148,300 | 10,641,039 | 9,444,364 |
| 1965 | 273 | 27 | 300 | 1 | 301 | 10,161,311 | 613,284 | 10,774,595 | 74,960 | 10,849,555 | 9,043,403 |
| 1964 | 282 | 22 | 304 | 1 | 305 | 10,063,164 | 322,210 | 10,385,374 | 54,700 | 10,440,074 | 8,806,910 |
| 1963 | 287 | 21 | 308 | 2 | 310 | 9,814,791 | 303,530 | 10,118,321 | 178,300 | 10,296,621 | 8,686,718 |
| 1962 | 287 | 24 | 311 | 1 | 312 | 9,812,248 | 292,899 | 10,105,147 | 110,350 | 10,215,497 | 8,409,947 |
| 1961 | 289 | 22 | 311 | 0 | 311 | 9,629,685 | 380,388 | 10,010,073 | 36,500 | 10,046,573 | 8,183,994 |
| 1960 | 290 | 20 | 310 | 2 | 312 | 9,543,329 | 358,095 | 9,901,424 | 70,947 | 9,972,371 | 8,067,032 |
| 1959 | 291 | 22 | 313 | 0 | 313 | 9,450,741 | 369,105 | 9,819,846 | 108,400 | 9,928,246 | 7,993,591 |
| 1958 | 289 | 29 | 318 | 2 | 320 | 8,939,907 | 467,800 | 9,407,707 | 185,265 | 9,592,972 | 7,605,737 |
| 1957 | 298 | 21 | 319 | 3 | 322 | 8,808,841 | 314,833 | 9,123,674 | 256,350 | 9,380,024 | 7,919,003 |
| 1956 | 294 | 24 | 318 | 2 | 320 | 8,380,801 | 251,589 | 8,632,390 | 267,000 | 8,899,390 | 7,937,448 |
| 1955 | 296 | 30 | 326 | 4 | 330 | 8,069,154 | 351,476 | 8,420,630 | 146,800 | 8,567,430 | 7,480,049 |
| 1954 | 308 | 29 | 337 | 7 | 344 | 7,782,103 | 224,794 | 8,006,897 | 397,500 | 8,404,397 | 6,957,710 |
| 1953 | 315 | 28 | 343 | 4 | 347 | 7,481,701 | 156,960 | 7,638,661 | 509,721 | 8,148,382 | 6,999,630 |
| 1952 | 327 | 23 | 350 | 0 | 350 | 7,161,366 | 171,519 | 7,332,885 | 282,680 | 7,615,565 | 6,670,106 |
| 1951 | 325 | 32 | 357 | 1 | 358 | 6,701,815 | 261,829 | 6,963,644 | 160,100 | 7,123,744 | 6,494,258 |
| 1950 | 320 | 47 | 367 | 2 | 369 | 6,222,998 | 473,302 | 6,696,300 | 145,600 | 6,841,900 | 5,739,362 |
| 1949 | 336 | 39 | 375 | 3 | 378 | 6,230,505 | 208,490 | 6,438,995 | 341,500 | 6,780,495 | 5,236,633 |
| 1948 | 352 | 38 | 390 | 2 | 392 | 5,825,566 | 208,686 | 6,034,252 | 367,250 | 6,401,502 | 5,596,583 |
| 1947 | 361 | 38 | 399 | 0 | 399 | 5,336,399 | 233,083 | 5,569,482 | 162,200 | 5,731,682 | 5,074,646 |
| 1946 | 364 | 29 | 393 | 1 | 394 | 5,086,165 | 229,691 | 5,315,856 | 53,100 | 5,368,956 | 4,740,266 |
| 1945 | 380 | 33 | 413 | 1 | 414 | 5,077,690 | 223,463 | 5,301,153 | 36,075 | 5,337,228 | 4,711,052 |
| 1944 | 384 | 68 | 452 | 0 | 452 | 4,709,382 | 383,641 | 5,093,023 | 118,270 | 5,211,293 | 4,551,049 |
| 1943 | 386 | 85 | 471 | 1 | 472 | 4,409,013 | 492,998 | 4,902,011 | 195,100 | 5,097,111 | 3,917,090 |
| 1942 | 430 | 92 | 522 | 1 | 523 | 4,496,843 | 459,756 | 4,956,599 | 43,400 | 4,999,999 | 3,655,077 |
| 1941 | 420 | 136 | 556 | 6 | 562 | 4,180,588 | 538,381 | 4,718,969 | 141,225 | 4,860,194 | 3,860,800 |
| 1940 | 461 | 86 | 547 | 10 | 557 | 4,196,694 | 431,952 | 4,628,646 | 92,567 | 4,721,213 | 3,535,962 |
| 1939 | 435 | 103 | 538 | 7 | 545 | 3,933,785 | 574,770 | 4,508,555 | 142,250 | 4,650,805 | 3,391,342 |
| 1938 ⁴ | 431 | 120 | 551 | 10 | 561 | 3,970,196 | 380,955 | 4,351,151 | 283,020 | 4,634,171 | 3,191,822 |
| 1938 ⁵ | 431 | 120 | 551 | 10 | 561 | 4,151,276 | 199,875 | 4,351,151 | 22,550 | 4,373,701 | — |
| 1937 | 423 | 149 | 572 | 11 | 583 | 3,966,616 | 328,265 | 4,294,881 | 81,200 | 4,376,081 | 3,242,301 |
| 1936 | 422 | 210 | 632 | 15 | 647 | 3,749,835 | 367,212 | 4,117,047 | 46,899 | 4,163,946 | 2,919,590 |
| 1935 | 435 | 196 | 631 | 7 | 638 | 3,614,749 | 443,751 | 4,058,500 | 13,900 | 4,072,400 | 2,646,000 |
| 1934 | 454 | 137 | 591 | 13 | 604 | 3,553,569 | 364,648 | 3,918,217 | 44,450 | 3,962,667 | 2,453,797 |
| 1933 | 372 | 133 | 505 | 18 | 523 | 3,445,118 | 444,118 | 3,889,510 | 31,545 | 3,921,055 | 2,359,600 |
| 1932 | 365 | 108 | 473 | 6 | 479 | 3,624,992 | 389,616 | 4,014,608 | 8,720 | 4,023,328 | 2,240,429 |
| 1931 | 346 | 89 | 435 | 10 | 445 | 3,706,610 | 236,075 | 3,942,685 | 45,000 | 3,987,685 | 2,450,981 |
| 1930 | 358 | 54 | 412 | 8 | 420 | 3,634,825 | 130,760 | 3,765,585 | 37,200 | 3,802,785 | 2,540,951 |
| 1929 | 341 | 72 | 413 | 14 | 427 | 3,325,890 | 183,650 | 3,509,540 | 99,000 | 3,608,540 | 2,706,049 |
| 1928 | 326 | 97 | 423 | 5 | 428 | 3,036,125 | 214,255 | 3,250,380 | 22,000 | 3,272,380 | 2,495,342 |
| 1927 | 327 | 138 | 465 | 7 | 472 | 2,834,282 | 226,725 | 3,061,007 | 61,000 | 3,122,007 | 2,270,781 |
| 1926 | 352 | 158 | 510 | 2 | 512 | 2,562,357 | 290,610 | 2,852,967 | 5,500 | 2,858,467 | 2,134,970 |
| 1925 (May 1) | 365 | 185 | 550 | 4 | 554 | 2,511,817 | 342,025 | 2,853,842 | 11,000 | 2,864,842 | 2,027,178 |
| 1924 (November 1) | 357 | 190 | 547 | 8 | 555 | 2,480,922 | 333,410 | 2,814,332 | 18,200 | 2,832,532 | 1,592,433 |
| 1922 | 325 | 154 | 479 | 30 | 509 | 1,854,590 | 254,610 | 2,109,200 | 59,950 | 2,169,150 | 1,371,797 |
| 1921 | 350 | 65 | 415 | 44 | 459 | 1,794,395 | 94,405 | 1,888,800 | 76,600 | 1,965,400 | 1,214,693 |
| 1920 | 373 ⁶ | (⁶) | 373 | 99 | 472 | 1,530,565 ⁶ | (⁶) | 1,530,565 | 263,500 | 1,794,065 | 1,185,560 |
| 1919 | — | — | — | — | 289 | 1,295,115 | 0 | 1,295,115 | 0 | 1,295,115 | 990,466 |
| 1918 | — | — | — | — | 267 | 1,186,155 | 0 | 1,186,155 | 0 | 1,186,155 | 893,219 |

¹ New plants.

² Beginning in 1938, shutdown capacity includes inoperative portions of operating refineries as well as plants completely shutdown. In previous years, shutdown capacity represented only plants completely shutdown.

³ Beginning in 1938, building capacity includes additional capacity being built at existing refineries as well as new plants under construction. In previous years, building capacity included only new plants being built.

⁴ New basis; see footnotes 2 and 3.

⁵ Old basis; see footnotes 2 and 3.

⁶ Shutdown facilities included with operating facilities.

*DOT - TSC computation from weekly averages in American Petroleum Industry, Weekly Statistical Bulletin, Vol. 55, 1974.

Source: U.S. Department of the Interior, Bureau of Mines, "Petroleum Refineries in the United States and Puerto Rico: January 1, 1974," July 22, 1974, p. 3 for 1974 and equivalent tables in earlier editions; and the "Annual Petroleum Statement."

Table 2-10. Total Input at U.S. Refineries and Percent Yields of Products, 1956 - 1974

| Crude Oil Run To Stills | Unfinished Oils Re-run (Net) ¹ | Total Input ² | Gasoline From Crude | Kerosene | Jet Fuel Naphtha Type | Jet Fuel Kerosene Type | Dist. Fuel Oil | Resid. Fuel Oil | Lubricants | Others | Year |
|-------------------------|---|--------------------------|---------------------|-------------------|-----------------------|------------------------|----------------|-----------------|------------|--------|-------------------|
| | | | | | | | | | | | |
| PERCENT YIELD | | | | | | | | | | | |
| 2,905,106 | + 4,008 | 2,909,114 | 43.37 | 4.24 | | | 22.88 | 14.67 | 2.04 | 12.80 | 1956 |
| 2,890,436 | - 1,355 | 2,889,081 | 43.79 | 3.77 | | | 23.14 | 14.39 | 1.93 | 12.98 | 1957 |
| 2,789,404 | +32,493 | 2,821,897 | 45.17 | 3.90 | | Prior | 22.38 | 12.88 | 1.82 | 13.85 | 1958 |
| 2,917,661 | +25,868 | 2,943,529 | 44.85 | 3.76 | | years | 23.06 | 11.82 | 1.91 | 14.60 | 1959 ³ |
| 2,917,661 | +25,868 | 2,943,529 | 44.85 | 3.76 | | not | 23.06 | 11.82 | 1.91 | 14.60 | 1959 ⁴ |
| 2,952,534 | +22,094 | 2,974,628 | 45.16 | 4.56 ⁵ | | available | 22.42 | 11.17 | 2.00 | 14.69 | 1960 |
| 2,987,158 | +19,260 | 3,006,418 | 44.67 | 4.70 | | on a | 23.15 | 10.50 | 1.97 | 15.01 | 1961 |
| 3,069,631 | +27,733 ⁶ | 3,097,364 | 44.80 | 5.05 | | comparable | 23.23 | 9.55 | 1.98 | 15.39 | 1962 |
| 3,170,652 | +31,934 | 3,202,586 | 44.14 | 5.14 | | basis. | 23.87 | 8.62 | 1.97 | 16.26 | 1963 |
| 3,223,329 | +27,322 | 3,250,651 | 44.10 ⁷ | 5.17 | | | 22.83 | 8.21 | 1.96 | 17.73 | 1964 |
| 3,300,842 | +32,111 | 3,332,953 | 44.05 | 2.79 | 2.47 | 3.26 | 22.95 | 8.06 | 1.89 | 14.53 | 1965 |
| 3,447,193 | +34,632 | 3,481,825 | 44.46 | 2.90 | 2.57 | 3.62 | 22.54 | 7.58 | 1.88 | 14.45 | 1966 |
| 3,582,594 | +34,237 | 3,616,831 | 44.07 | 2.74 | 3.03 | 4.52 | 22.24 | 7.63 | 1.79 | 13.98 | 1967 |
| 3,774,360 | +26,152 | 3,800,512 | 43.97 | 2.65 | 3.19 | 5.09 | 22.09 | 7.25 | 1.73 | 14.03 | 1968 |
| 3,879,605 | +34,346 | 3,913,951 | 44.81 | 2.60 | 2.68 | 5.54 | 21.64 | 6.79 | 1.66 | 14.28 | 1969 |
| 3,967,503 | +38,091 | 4,005,594 | 45.32 | 2.36 | 2.10 | 5.44 | 22.36 | 6.43 | 1.65 | 14.34 | 1970 |
| 4,087,809 | +43,608 | 4,131,417 | 46.15 | 2.09 | 2.07 | 5.31 | 22.04 | 6.65 | 1.58 | 14.11 | 1971 |
| 4,280,863 | +51,518 | 4,332,381 | 46.24 | 1.83 | 1.76 | 5.39 | 22.21 | 6.75 | 1.51 | 14.31 | 1972 |
| 4,537,254 | +45,768 | 4,583,022 | 45.61 | 1.73 | 1.44 | 5.41 | 22.46 | 7.74 | 1.50 | 14.11 | 1973 |
| 4,428,726 | +37,351 | 4,466,077 | 45.93 | 1.27 | 1.59 | 5.24 | 21.80 | 8.74 | 1.58 | 13.85 | 1974 |
| | | | | | | | | | | | 1973 |
| 377,903 | +10,272 | 388,175 | 43.98 | 2.43 | 1.36 | 5.54 | 24.18 | 8.88 | 1.48 | 12.15 | January |
| 341,244 | + 2,663 | 343,907 | 43.15 | 2.70 | 1.33 | 5.98 | 23.91 | 8.45 | 1.58 | 12.90 | February |
| 378,221 | - 5,882 | 372,339 | 44.67 | 2.13 | 1.63 | 6.00 | 22.20 | 7.95 | 1.58 | 13.84 | March |
| 366,239 | - 2,524 | 363,715 | 46.70 | 1.79 | 1.64 | 5.68 | 20.71 | 7.24 | 1.50 | 14.74 | April |
| 380,702 | + 3,554 | 384,256 | 48.36 | 1.33 | 1.56 | 5.21 | 20.52 | 7.65 | 1.50 | 13.87 | May |
| 385,869 | + 6,431 | 392,300 | 47.82 | 1.14 | 1.36 | 5.03 | 21.61 | 7.00 | 1.38 | 14.66 | June |
| 395,236 | + 5,783 | 401,019 | 47.59 | 1.22 | 1.21 | 5.17 | 21.27 | 6.82 | 1.44 | 15.28 | July |
| 391,699 | + 7,897 | 399,596 | 46.97 | 1.35 | 1.34 | 5.21 | 21.73 | 6.60 | 1.40 | 15.40 | August |
| 376,789 | + 1,622 | 378,411 | 46.01 | 1.55 | 1.47 | 5.24 | 22.30 | 6.96 | 1.44 | 15.03 | September |
| 395,491 | + 2,993 | 398,484 | 45.21 | 1.74 | 1.32 | 5.48 | 22.64 | 7.66 | 1.55 | 14.40 | October |
| 371,224 | + 3,866 | 375,090 | 44.24 | 1.75 | 1.31 | 5.51 | 23.37 | 8.49 | 1.61 | 13.72 | November |
| 376,637 | + 9,093 | 385,730 | 42.32 | 1.83 | 1.76 | 4.90 | 25.20 | 9.31 | 1.56 | 13.12 | December |
| 4,537,254 | +45,768 | 4,583,022 | 45.61 | 1.73 | 1.44 | 5.41 | 22.46 | 7.74 | 1.50 | 14.11 | Total |
| | | | | | | | | | | | 1974 |
| 356,206 | + 4,924 | 361,130 | 43.87 | 1.63 | 1.51 | 5.36 | 24.72 | 9.20 | 1.63 | 12.08 | January |
| 310,863 | + 6,100 | 316,963 | 45.82 | 1.77 | 1.53 | 5.38 | 21.19 | 9.09 | 1.64 | 13.58 | February |
| 352,008 | - 6,721 | 345,287 | 47.31 | 1.35 | 1.93 | 5.54 | 19.99 | 8.18 | 1.77 | 13.93 | March |
| 354,689 | + 3,803 | 358,492 | 47.00 | 1.00 | 1.71 | 5.56 | 21.10 | 8.24 | 1.68 | 13.71 | April |
| 382,331 | - 683 | 381,648 | 45.97 | 1.02 | 1.80 | 5.26 | 21.97 | 8.08 | 1.59 | 14.31 | May |
| 386,912 | + 1,662 | 382,574 | 46.69 | 1.06 | 1.68 | 4.67 | 21.82 | 8.04 | 1.59 | 14.45 | June |
| 397,142 | + 5,798 | 402,940 | 46.78 | .92 | 1.29 | 4.88 | 21.48 | 8.12 | 1.48 | 15.05 | July |
| 391,978 | + 7,303 | 399,281 | 47.20 | 1.02 | 1.29 | 4.96 | 21.00 | 8.28 | 1.51 | 14.74 | August |
| 363,711 | + 5,125 | 368,836 | 46.73 | 1.11 | 1.76 | 5.30 | 20.75 | 8.40 | 1.57 | 14.38 | September |
| 380,854 | + 1,852 | 382,706 | 45.05 | 1.51 | 1.60 | 5.43 | 21.87 | 8.90 | 1.55 | 14.09 | October |
| 369,948 | + 2,843 | 372,791 | 44.32 | 1.43 | 1.74 | 5.20 | 22.54 | 9.89 | 1.56 | 13.32 | November |
| 388,084 | + 5,345 | 393,429 | 44.32 | 1.52 | 1.36 | 5.42 | 23.04 | 10.52 | 1.48 | 12.34 | December |
| 4,428,726 | +37,351 | 4,466,077 | 45.93 | 1.27 | 1.59 | 5.24 | 21.80 | 8.74 | 1.58 | 13.85 | Total |

¹This figure represents the net of running imported unfinished oils and the change in stocks of unfinished oils. A decrease in stocks appears here as a plus, indicating the re-running of a larger amount of unfinished oils than was produced in the period.

²Excludes natural gas liquids and benzol blended and the re-running of unfinished gasoline. Beginning with 1968, other hydrocarbons are excluded.

³These figures and those for preceding years are on a 48 state basis.

⁴These figures and those for subsequent years are on a 50 state basis.

⁵These figures and those through 1964 include commercial jet fuel.

⁶Includes net re-running of unfinished gasoline beginning with January 1962.

⁷Beginning with 1964 Special Naphthas are excluded.

Source: American Petroleum Institute, *Annual Statistical Review*, 1956 - 1974.

U.S. Department of the Interior, Bureau of Mines, *Petroleum Statements Monthly* 1974, Tables 2 and 5.

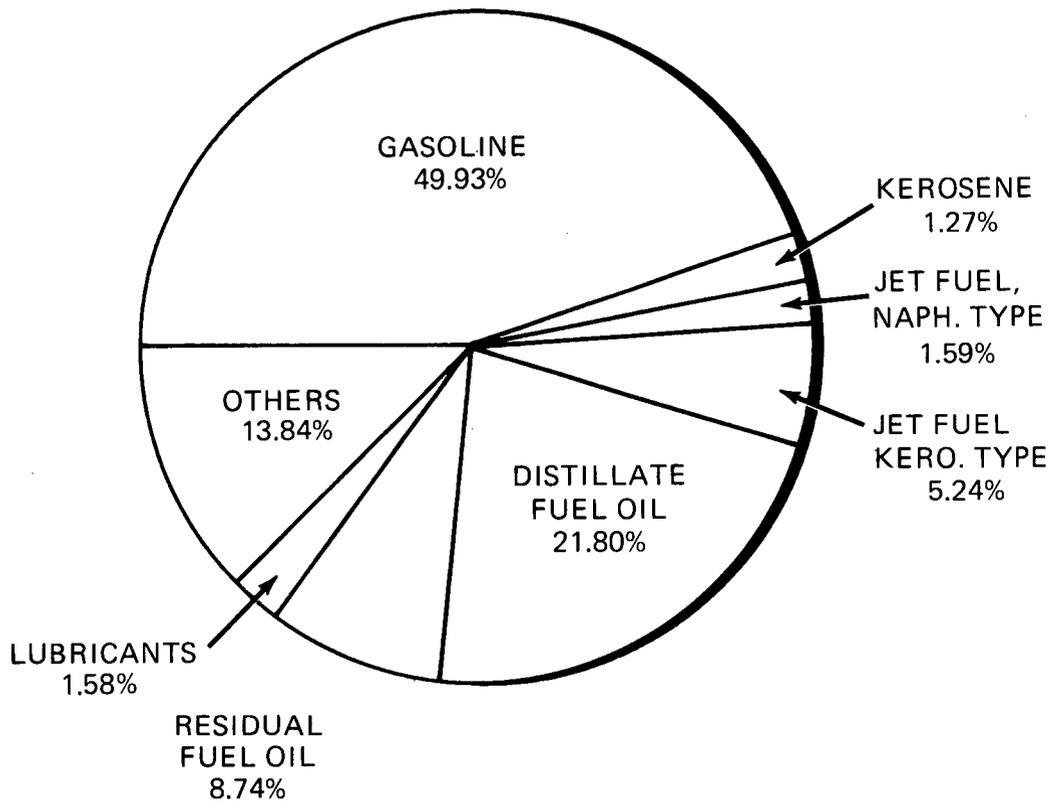


Figure 14. Percentage Yields of Petroleum Products at U.S. Refineries, 1974 -

Table 2-11. Facts About Prudhoe Bay Reserves and the Trans-Alaska Pipeline

Oil industry investment in North Slope exploration
and preliminary development, to date \$2 billion

Anticipated future investment \$3 billion

Estimated proved crude oil reserves at the end of 1972

| | |
|-------------------------------|----------------------|
| Prudhoe Bay area | 9.6 billion barrels |
| All Alaska | 10.1 billion barrels |
| Total United States | 36.3 billion barrels |

Estimated proved natural gas reserves at the end of 1972

| | |
|-------------------------------|------------------------|
| Prudhoe Bay area | 25 trillion cu. ft. |
| All Alaska | 31.5 trillion cu. ft. |
| Total United States | 266.1 trillion cu. ft. |

Characteristics of the proposed Trans-Alaska Pipeline System (T.A.P.S.)

- 789 miles long, running north and south between Prudhoe Bay and Valdez
- 4 feet in diameter
- In geological fault areas, the pipe is designed with flexibility to move 3 feet vertically and 20 feet horizontally without rupture. Can bend 6 feet in a 100-foot span without a wrinkle.
- Oil pressure would be regulated by a series of pump stations and temporary storage tanks.
- Power-operated, remote-control, cut-off valves would be spaced at 15-mile intervals.
- Estimated cost of construction is \$2.8 billion, or approximately \$3.5 million per mile.
- Approximate time of construction is 3 years.
- Expected initial oil flow is 600,000 barrels per day at 2 miles per hour.
- Anticipated peak oil flow is 2,000,000 barrels per day at 7 miles per hour.

Table 2-12. Total Estimated Remaining Coal Resources of the United States, January 1, 1972

In millions of short tons. Figures are for resources in the ground, about half of which may be considered recoverable. Includes beds of bituminous coal and anthracite 14 inches or more thick and beds of subbituminous coal and lignite 2.5 ft or more thick.

| State | Bituminous Coal | Subbituminous Coal | Overburden 0-3000 ft Thick | | | Estimated Additional Resources in Unmapped and Unexplored Area ¹ | Estimated Total Remaining Resources in the Ground | Overburden 3,000-6,000 ft Thick Estimated Resources in Deeper Structural Basins ¹ | Estimated Total Remaining Resources in the Ground, 0-6,000 ft Overburden |
|----------------|---------------------|--------------------|----------------------------|--------------------------------|----------------------|---|---|--|--|
| | | | Lignite | Anthracite and Semi-Anthracite | Total | | | | |
| Alabama | 13,342 | 0 | 2,000 | 0 | 15,342 | 20,000 | 26,000 | 6,000 | 41,342 |
| Alaska | 19,413 | 110,668 | (²) | (³) | 130,081 | 130,000 | 135,000 | 5,000 | 265,081 |
| Arizona | ⁴ 21,246 | (⁴) | 0 | 0 | 21,246 | 0 | 0 | 0 | 21,246 |
| Arkansas | 1,638 | 0 | 350 | 430 | 2,418 | 4,000 | 4,000 | 0 | 6,418 |
| Colorado | 62,339 | 18,242 | 0 | 78 | 80,659 | 146,000 | 291,000 | 145,000 | 371,659 |
| Georgia | 24 | 0 | 0 | 0 | 24 | 60 | 60 | 0 | 84 |
| Illinois | 139,124 | 0 | 0 | 0 | 139,124 | 100,000 | 100,000 | 0 | 239,124 |
| Indiana | 34,573 | 0 | 0 | 0 | 34,573 | 22,000 | 22,000 | 0 | 56,573 |
| Iowa | 6,509 | 0 | 0 | 0 | 6,509 | 14,000 | 14,000 | 0 | 20,509 |
| Kansas | 18,674 | 0 | (⁵) | 0 | 18,674 | 4,000 | 4,000 | 0 | 22,674 |
| Kentucky | 64,842 | 0 | 0 | 0 | 64,842 | 52,000 | 52,000 | 0 | 116,842 |
| Maryland | 1,158 | 0 | 0 | 0 | 1,158 | 400 | 400 | 0 | 1,558 |
| Michigan | 205 | 0 | 0 | 0 | 205 | 500 | 500 | 0 | 705 |
| Missouri | 31,014 | 0 | 0 | 0 | 31,014 | 18,200 | 18,200 | 0 | 49,214 |
| Montana | 2,299 | 131,855 | 87,521 | 0 | 221,675 | 157,000 | 157,000 | 0 | 378,675 |
| New Mexico | 10,752 | 50,871 | 0 | 4 | 61,427 | 27,000 | 48,000 | 21,000 | 109,427 |
| North Carolina | 110 | 0 | 0 | 0 | 110 | 20 | 25 | 5 | 135 |
| North Dakota | 0 | 0 | 350,630 | 0 | 350,630 | 180,000 | 180,000 | 0 | 530,630 |
| Ohio | 41,358 | 0 | 0 | 0 | 41,358 | 2,000 | 2,000 | 0 | 43,358 |
| Oklahoma | 3,281 | 0 | (⁵) | 0 | 3,281 | 20,000 | 30,000 | 10,000 | 33,281 |
| Oregon | 50 | 284 | 0 | 0 | 334 | 100 | 100 | 0 | 434 |
| Pennsylvania | 56,759 | 0 | 0 | 20,510 | 77,269 | ⁶ 10,000 | 10,000 | 0 | 87,269 |
| Rhode Island | 0 | 0 | 0 | (⁷) | — | 0 | 0 | 0 | — |
| South Dakota | 0 | 0 | 2,031 | 0 | 2,031 | 1,000 | 1,000 | 0 | 3,031 |
| Tennessee | 2,572 | 0 | 0 | 0 | 2,572 | 2,000 | 2,000 | 0 | 4,572 |
| Texas | 6,048 | 0 | 6,824 | 0 | 12,872 | 14,000 | 14,000 | 0 | 26,872 |
| Utah | ⁸ 23,541 | ⁸ 180 | 0 | 0 | ¹¹ 23,721 | ⁹ 21,000 | 56,000 | 35,000 | 79,721 |
| Virginia | 9,352 | 0 | 0 | 335 | 9,687 | 5,000 | 5,100 | 100 | 14,787 |
| Washington | 1,867 | 4,190 | 117 | 5 | 6,179 | 30,000 | 45,000 | 15,000 | 51,179 |
| West Virginia | 100,628 | 0 | 0 | 0 | 100,628 | 0 | 0 | 0 | 100,628 |
| Wyoming | 12,705 | 107,951 | (¹⁰) | 0 | 120,656 | 325,000 | 425,000 | 100,000 | 545,656 |
| Other States | ¹¹ 610 | ¹² 32 | ¹³ 46 | 0 | 688 | 1,000 | 1,000 | 0 | 1,688 |
| Total | 686,033 | 424,073 | 449,519 | 21,362 | 1,580,987 | 1,306,280 | 1,643,385 | 337,105 | 3,224,372 |

¹ Estimates by H.M. Beikman (Washington), H.L. Berryhill, Jr. (Virginia and Wyoming), R.A. Brant (Ohio and North Dakota), W.C. Culbertson (Alabama), K.J. Englund (Kentucky and Virginia), B. R. Haley (Arkansas), E.R. Landis (Colorado and Iowa), E.T. Luther (Tennessee), R.S. Mason (Oregon), C.E. Robinson (Missouri), J.A. Simon (Illinois), J.V.A. Trumbull (Oklahoma), C.E. Wier (Indiana), and the author for the remaining States.

² Small resources of lignite included under subbituminous coal.

³ Small resources of anthracite in the Bering River field believed to be too badly crushed and faulted to be economically recoverable (Barnes, 1951).

⁴ Includes coal in the Dakota Formation of the Black Mesa field, some of which may be of subbituminous rank. Does not include small resources of thin and impure coal in the Deer Creek and Pinedale fields.

⁵ Small resources of lignite in beds generally less than 30 in. thick.

⁶ From Ashley (1944).

⁷ Small resources of meta-anthracite in the Narragansett basin believed to be too graphitic and too badly crushed and faulted to be economically recoverable as fuel.

⁸ Excludes coal in beds less than 4 ft. thick.

⁹ Includes coal in beds 14 in. or more thick, of which 14,000 million tons is in beds 4 ft. or more thick.

¹⁰ Hypothetical resources: Undiscovered mineral deposits, whether of recoverable or subeconomic grade, that are geologically predictable as existing in known district.

¹¹ California, Idaho, Nebraska, and Nevada.

¹² California and Idaho.

¹³ California, Idaho, Louisiana, and Mississippi.

Source: U.S. Geological Survey, Professional Paper 820, "United States Mineral Resources — Coal", Table 27, p. 137.

Table 2-13. Coal—Production, by States: 1961 to 1972

[In thousands of short tons. Includes coal consumed at mines]

| State | 1961- 1965, avg. | 1966- 1970, avg. | 1960 | 1965 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|------------------------|------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total | 473,559 | 570,410 | 434,329 | 526,954 | 564,882 | 556,706 | 570,978 | 612,661 | 560,919 | 602,492 |
| Anthracite (Pa.) | 16,931 | 11,372 | 18,817 | 14,866 | 12,256 | 11,461 | 10,473 | 9,729 | 8,727 | 7,106 |
| Bituminous and lignite | 456,628 | 559,038 | 415,512 | 512,088 | 552,626 | 545,245 | 560,505 | 602,932 | 552,192 | 595,386 |
| Alabama | 13,484 | 16,832 | 13,011 | 14,832 | 15,486 | 16,440 | 17,456 | 20,560 | 17,945 | 20,814 |
| Colorado | 3,978 | 5,555 | 3,607 | 4,790 | 5,439 | 5,558 | 5,530 | 6,025 | 5,337 | 5,522 |
| Illinois | 51,795 | 64,197 | 45,977 | 58,483 | 65,133 | 62,441 | 64,722 | 65,119 | 58,402 | 65,523 |
| Indiana | 15,311 | 19,387 | 15,538 | 15,565 | 18,772 | 18,486 | 20,086 | 22,263 | 21,396 | 25,949 |
| Kentucky | 75,621 | 105,792 | 66,847 | 85,766 | 100,294 | 101,156 | 109,050 | 125,305 | 119,389 | 121,187 |
| Missouri | 3,165 | 3,646 | 2,890 | 3,564 | 3,696 | 3,205 | 3,301 | 4,447 | 4,036 | 4,551 |
| Ohio | 35,968 | 48,854 | 33,957 | 39,390 | 46,014 | 48,323 | 51,242 | 55,351 | 51,431 | 50,967 |
| Pennsylvania | 71,261 | 79,235 | 65,425 | 80,308 | 79,412 | 76,200 | 78,631 | 80,491 | 72,835 | 75,939 |
| Tennessee | 6,010 | 7,522 | 5,931 | 5,865 | 6,832 | 8,148 | 8,082 | 8,237 | 9,271 | 11,260 |
| Utah | 4,706 | 4,503 | 4,955 | 4,992 | 4,175 | 4,316 | 4,657 | 4,733 | 4,626 | 4,802 |
| Virginia | 31,209 | 35,965 | 27,838 | 34,053 | 36,721 | 36,966 | 35,555 | 35,016 | 30,628 | 34,028 |
| West Virginia | 130,948 | 146,887 | 118,944 | 149,191 | 153,749 | 145,921 | 141,011 | 144,072 | 118,258 | 123,743 |
| Wyoming | 2,917 | 4,582 | 2,024 | 3,260 | 3,588 | 3,829 | 4,602 | 7,222 | 8,052 | 10,928 |
| Other States | 10,255 | 16,080 | 8,568 | 12,029 | 13,315 | 14,254 | 16,580 | 24,091 | 30,586 | 40,172 |

Source: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, 1972, Vol. 1, pg. 396, Table 1, pg. 338, Table 5 and previous years.

Table 2-14. Number and Production of Bituminous Coal and Lignite Mines, by State, Size of Output, and Type of Mining, in 1972

(Thousand short tons)

| State | 500,000 tons and over | | 200,000 to 500,000 tons | | 100,000 to 200,000 tons | | 50,000 to 100,000 tons | | 10,000 to 50,000 tons | | Less than 10,000 tons | | Total ¹ | |
|--------------------|-----------------------|----------|-------------------------|----------|-------------------------|----------|------------------------|----------|-----------------------|----------|-----------------------|----------|--------------------|----------|
| | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity |
| Alabama: | | | | | | | | | | | | | | |
| Underground | 5 | 5,659 | 4 | 1,519 | 2 | 300 | — | — | 4 | 77 | 9 | 33 | 24 | 7,588 |
| Strip | 6 | 5,213 | 11 | 3,047 | 18 | 2,622 | 16 | 1,181 | 37 | 1,058 | 13 | 55 | 101 | 13,177 |
| Auger | — | — | — | — | — | — | — | — | 1 | 49 | — | — | 1 | 49 |
| Total | 11 | 10,873 | 15 | 4,566 | 20 | 2,922 | 16 | 1,181 | 42 | 1,184 | 22 | 88 | 126 | 20,814 |
| Alaska: | | | | | | | | | | | | | | |
| Strip | 1 | 668 | — | — | — | — | — | — | — | — | — | — | 1 | 668 |
| Arizona: | | | | | | | | | | | | | | |
| Strip | 1 | 2,954 | — | — | — | — | — | — | — | — | — | — | 1 | 2,954 |
| Arkansas: | | | | | | | | | | | | | | |
| Underground | — | — | — | — | — | — | — | — | — | — | 1 | 8 | 1 | 8 |
| Strip | — | — | — | — | 2 | 248 | 1 | 84 | 2 | 81 | 2 | 7 | 7 | 420 |
| Total | — | — | — | — | 2 | 248 | 1 | 84 | 2 | 81 | 3 | 15 | 8 | 428 |
| Colorado: | | | | | | | | | | | | | | |
| Underground | 1 | 616 | 6 | 1,682 | 3 | 442 | 2 | 146 | 7 | 146 | 8 | 36 | 27 | 3,070 |
| Strip | 3 | 2,198 | — | — | 1 | 122 | 1 | 93 | 2 | 36 | 1 | 4 | 8 | 2,452 |
| Total | 4 | 2,814 | 6 | 1,682 | 4 | 564 | 3 | 239 | 9 | 182 | 9 | 40 | 35 | 5,522 |
| Illinois: | | | | | | | | | | | | | | |
| Underground | 20 | 31,358 | — | — | 3 | 300 | — | — | 3 | 63 | — | — | 26 | 31,721 |
| Strip | 19 | 32,031 | 2 | 979 | 3 | 482 | 3 | 246 | 4 | 57 | 2 | 7 | 33 | 33,802 |
| Total | 39 | 63,389 | 2 | 979 | 6 | 782 | 3 | 246 | 7 | 120 | 2 | 7 | 59 | 65,523 |
| Indiana: | | | | | | | | | | | | | | |
| Underground | 1 | 950 | 1 | 306 | 1 | 104 | 1 | 85 | — | — | — | — | 4 | 1,446 |
| Strip | 12 | 23,172 | 1 | 288 | 2 | 273 | 7 | 506 | 9 | 240 | 5 | 26 | 36 | 24,503 |
| Total | 13 | 24,122 | 2 | 594 | 3 | 377 | 8 | 591 | 9 | 240 | 5 | 26 | 40 | 25,949 |
| Iowa: | | | | | | | | | | | | | | |
| Underground | — | — | — | 239 | 1 | 113 | — | — | — | — | — | — | 2 | 352 |
| Strip | — | — | — | — | — | — | 6 | 419 | 3 | 79 | — | — | 9 | 499 |
| Total | — | — | 1 | 239 | 1 | 113 | 6 | 419 | 3 | 79 | — | — | 11 | 851 |
| Kansas: | | | | | | | | | | | | | | |
| Strip | 1 | 820 | 1 | 205 | 1 | 197 | — | — | — | — | 1 | 6 | 4 | 1,227 |
| Kentucky: | | | | | | | | | | | | | | |
| Underground | 29 | 27,437 | 29 | 9,770 | 51 | 7,200 | 65 | 4,390 | 285 | 6,595 | 238 | 1,102 | 697 | 56,494 |
| Strip | 22 | 32,391 | 22 | 7,020 | 51 | 6,837 | 80 | 5,515 | 225 | 3,219 | 117 | 794 | 517 | 55,776 |
| Auger | — | — | 3 | 1,391 | 10 | 1,410 | 27 | 1,837 | 86 | 3,422 | 118 | 857 | 244 | 8,917 |
| Total | 51 | 59,828 | 54 | 18,181 | 112 | 15,447 | 172 | 11,742 | 596 | 13,236 | 473 | 2,753 | 1,458 | 121,187 |
| Maryland: | | | | | | | | | | | | | | |
| Underground | — | — | — | — | 1 | 100 | — | — | 1 | 28 | 8 | 13 | 5 | 141 |
| Strip | — | — | — | — | 3 | 407 | 8 | 529 | 18 | 437 | 12 | 62 | 41 | 1,435 |
| Auger | — | — | — | — | — | — | — | — | 1 | 21 | 8 | 43 | 9 | 65 |
| Total ¹ | — | — | — | — | 4 | 507 | 8 | 529 | 20 | 486 | 23 | 118 | 55 | 1,640 |
| Missouri: | | | | | | | | | | | | | | |
| Strip | 3 | 3,054 | 3 | 1,258 | 2 | 208 | — | — | 1 | 22 | 2 | 8 | 11 | 4,551 |
| Montana: | | | | | | | | | | | | | | |
| Underground | — | — | — | — | — | — | — | — | — | — | 3 | 17 | 3 | 17 |
| Strip | 3 | 7,874 | 1 | 320 | — | — | — | — | — | — | 2 | 10 | 6 | 8,204 |
| Total | 3 | 7,874 | 1 | 320 | — | — | — | — | — | — | 5 | 27 | 9 | 8,221 |
| New Mexico: | | | | | | | | | | | | | | |
| Underground | 1 | 1,014 | — | — | — | — | — | — | — | — | — | — | 1 | 1,014 |
| Strip | 1 | 6,816 | 1 | 397 | — | — | — | — | 1 | 17 | 1 | 5 | 4 | 7,235 |
| Total ¹ | 2 | 7,830 | 1 | 397 | — | — | — | — | 1 | 17 | 1 | 5 | 5 | 8,248 |
| North Dakota: | | | | | | | | | | | | | | |
| Strip | 4 | 5,426 | 2 | 876 | 2 | 282 | — | — | 2 | 33 | 4 | 15 | 14 | 6,632 |

See footnotes at end of table.

Table 2-14. Number and Production of Bituminous Coal and Lignite Mines, by State, Size of Output, and Type of Mining, in 1972 - Continued

(Thousand short tons)

| State | 500,000 tons and over | | 200,000 to 500,000 tons | | 100,000 to 200,000 tons | | 50,000 to 100,000 tons | | 10,000 to 50,000 tons | | Less than 10,000 tons | | Total ¹ | |
|--------------------|-----------------------|----------|-------------------------|----------|-------------------------|----------|------------------------|----------|-----------------------|----------|-----------------------|----------|--------------------|----------|
| | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity | Number of mines | Quantity |
| Ohio: | | | | | | | | | | | | | | |
| Underground | 14 | 12,741 | 8 | 2,850 | 2 | 375 | 2 | 160 | 5 | 120 | 4 | 24 | 35 | 16,269 |
| Strip | 17 | 18,742 | 23 | 6,815 | 27 | 3,420 | 44 | 3,067 | 66 | 1,704 | 59 | 329 | 236 | 34,077 |
| Auger | — | — | — | — | 1 | 130 | 2 | 102 | 22 | 355 | 10 | 34 | 35 | 621 |
| Total | 31 | 31,483 | 31 | 9,665 | 30 | 3,925 | 48 | 3,329 | 93 | 2,179 | 73 | 387 | 306 | 50,967 |
| Oklahoma: | | | | | | | | | | | | | | |
| Underground | — | — | — | — | — | — | 1 | 80 | — | — | 1 | 8 | 2 | 88 |
| Strip | 2 | 1,568 | 1 | 222 | 3 | 452 | 3 | 260 | 2 | 27 | 2 | 7 | 13 | 2,536 |
| Total | 2 | 1,568 | 1 | 222 | 3 | 452 | 4 | 340 | 2 | 27 | 3 | 15 | 15 | 2,624 |
| Pennsylvania: | | | | | | | | | | | | | | |
| Underground | 40 | 35,119 | 27 | 9,732 | 20 | 2,747 | 12 | 878 | 23 | 535 | 37 | 121 | 159 | 49,133 |
| Strip | 1 | 662 | 10 | 2,629 | 50 | 7,022 | 83 | 5,795 | 344 | 9,455 | 134 | 702 | 622 | 26,264 |
| Auger | — | — | — | — | — | — | — | — | 18 | 341 | 37 | 201 | 55 | 542 |
| Total ¹ | 41 | 35,782 | 37 | 12,361 | 70 | 9,769 | 95 | 6,673 | 385 | 10,331 | 208 | 1,024 | 836 | 75,939 |
| Tennessee: | | | | | | | | | | | | | | |
| Underground | 1 | 1,171 | 4 | 1,029 | 10 | 1,227 | 18 | 1,257 | 46 | 1,029 | 29 | 153 | 108 | 5,866 |
| Strip | — | — | 3 | 857 | 12 | 1,703 | 20 | 1,353 | 43 | 1,133 | 16 | 67 | 94 | 5,113 |
| Auger | — | — | — | — | — | — | 2 | 135 | 6 | 142 | 1 | 3 | 9 | 281 |
| Total | 1 | 1,171 | 7 | 1,886 | 22 | 2,930 | 40 | 2,745 | 95 | 2,304 | 46 | 223 | 211 | 11,260 |
| Texas: | | | | | | | | | | | | | | |
| Strip | 2 | 3,805 | 1 | 240 | — | — | — | — | — | — | — | — | 3 | 4,045 |
| Utah: | | | | | | | | | | | | | | |
| Underground | 1 | 961 | 10 | 2,918 | 4 | 636 | 2 | 183 | 3 | 66 | 1 | 6 | 21 | 4,770 |
| Strip | — | — | — | — | — | — | — | — | 1 | 32 | — | — | 1 | 32 |
| Total | 1 | 961 | 10 | 2,918 | 4 | 636 | 2 | 183 | 4 | 98 | 1 | 6 | 22 | 4,802 |
| Virginia: | | | | | | | | | | | | | | |
| Underground | 7 | 6,718 | 20 | 7,438 | 15 | 2,397 | 30 | 2,401 | 160 | 4,559 | 95 | 480 | 327 | 23,993 |
| Strip | — | — | 3 | 952 | 7 | 1,032 | 33 | 1,825 | 140 | 3,888 | 61 | 238 | 244 | 7,935 |
| Auger | — | — | — | — | 2 | 294 | 5 | 357 | 56 | 1,176 | 59 | 273 | 122 | 2,100 |
| Total ¹ | 7 | 6,718 | 23 | 8,390 | 24 | 3,723 | 68 | 4,583 | 356 | 9,623 | 215 | 991 | 693 | 34,028 |
| Washington: | | | | | | | | | | | | | | |
| Underground | — | — | — | — | — | — | — | — | 1 | 29 | — | — | 1 | 29 |
| Strip | 1 | 2,597 | — | — | — | — | — | — | — | — | 1 | 9 | 2 | 2,606 |
| Total ¹ | 1 | 2,597 | — | — | — | — | — | — | 1 | 29 | 1 | 9 | 3 | 2,634 |
| West Virginia: | | | | | | | | | | | | | | |
| Underground | 49 | 49,735 | 92 | 30,084 | 61 | 9,515 | 70 | 5,716 | 161 | 5,717 | 115 | 895 | 548 | 101,662 |
| Strip | 4 | 3,110 | 18 | 4,626 | 38 | 4,932 | 64 | 4,736 | 114 | 1,377 | 50 | 320 | 288 | 19,101 |
| Auger | — | — | — | — | 7 | 874 | 8 | 640 | 40 | 1,290 | 44 | 175 | 99 | 2,979 |
| Total ¹ | 53 | 52,845 | 110 | 34,710 | 106 | 15,321 | 142 | 11,092 | 315 | 8,384 | 209 | 1,390 | 935 | 123,743 |
| Wyoming: | | | | | | | | | | | | | | |
| Underground | — | — | 1 | 335 | — | — | 1 | 96 | — | — | 3 | 10 | 5 | 442 |
| Strip | 8 | 10,022 | 1 | 289 | 1 | 120 | — | — | 2 | 53 | 1 | 2 | 13 | 10,487 |
| Total ¹ | 8 | 10,022 | 2 | 624 | 1 | 120 | 1 | 96 | 2 | 53 | 4 | 12 | 18 | 10,928 |
| United States | | | | | | | | | | | | | | |
| Underground | 169 | 173,479 | 203 | 67,902 | 174 | 25,456 | 204 | 15,392 | 699 | 18,964 | 547 | 2,906 | 1,996 | 304,103 |
| Strip | 111 | 163,124 | 104 | 31,020 | 223 | 30,359 | 369 | 25,609 | 1,016 | 22,948 | 486 | 2,673 | 2,309 | 275,730 |
| Auger | — | — | 3 | 1,391 | 20 | 2,708 | 44 | 3,071 | 230 | 6,796 | 277 | 1,586 | 574 | 15,554 |
| Total ¹ | 280 | 336,604 | 310 | 100,313 | 417 | 58,523 | 617 | 44,072 | 1,945 | 48,708 | 1,310 | 7,165 | 4,879 | 595,386 |

¹ Data may not add to total shown because of independent rounding.

Source: U.S. Department of the Interior, Bureau of Mines, Minerals Yearbook 1972, Vol. 1, pg. 345, Table 10.

Table 2-15. Domestic Supply and Consumption of Coal, 1970-1972

| ANTHRACITE | | | |
|------------------------------------|--------------------------------|--------------------------------|---|
| | 1970 Thousand Short Tons | 1971 Thousand Short Tons | 1972 ^P Thousand Short Tons |
| Domestic Supply | | | |
| Production | 9,729 | 8,727 | 7,106 |
| Exports | -1,481 | -1,389 | -1,191 |
| Imports | — | — | — |
| Stock change: | | | |
| withdrawals (+), additions (-) | n/a | n/a | n/a |
| Losses, gains, unaccounted for | — | — | — |
| Total Domestic Supply | 8,248 | 7,338 | 5,915 |
| Domestic Consumption | | | |
| Household and commercial | 4,042 | 3,850 | 2,960 |
| Industrial | 2,309 | 1,842 | 1,371 |
| Transportation | n/a | n/a | n/a |
| Electricity generation, utilities | 1,897 | 1,646 | 1,584 |
| Total Domestic Consumption | 8,248 | 7,338 | 5,915 |
| BITUMINOUS COAL AND LIGNITE | | | |
| Domestic Supply | | | |
| Production | 602,932 | 552,192 | 592,000 |
| Exports | -70,944 | -56,633 | -55,960 |
| Imports | 36 | 111 | 47 |
| Stock changes: | | | |
| withdrawals (+), additions (-) | -11,777 | 2,553 | -24,123 |
| Losses, gains unaccounted for | -4,628 | -3,361 | 7,812 |
| Total Domestic Supply | 515,619 | 494,862 | 519,776 |
| Domestic Consumption | | | |
| Fuel and power | | | |
| Household and commercial | 12,072 | 11,351 | 11,748 |
| Industrial | 178,718 | 152,747 | 154,613 |
| Transportation | 298 | 207 | 163 |
| Electricity generation, utilities | 318,921 | 326,280 | 348,612 |
| Raw material, Industrial | 5,610 | 4,277 | 4,640 |
| Total Domestic Consumption | 515,619 | 494,862 | 519,776 |

^PPreliminary

n/a — Not Available

Source: U.S. Dept. of the Interior, Bureau of the Mines, Minerals Yearbook 1972, Vol. 1, Table 9, and similar data in earlier editions.

Table 2-16. Natural Uranium Resources

(In Thousands of tons U_3O_8)

| | United States | Free World excluding United States | Total free world |
|--|---------------|--|---------------------|
| \$10/lb. U_3O_8 : | | | |
| Reasonably assured | 340 | 900 | 1,240 |
| Estimated additional | 700 | 430 | 1,130 |
| Total | 1,040 | 1,330 | 2,370 |
| \$10-15/lb. U_3O_8 : | | | |
| Reasonably assured | 180 | 740 | 920 |
| Estimated additional | 300 | 520 | 820 |
| Total | 480 | 1,260 | 1,740 |

Source: U.S. Atomic Energy Commission. Geology and Resources of Foreign Uranium Deposits, H. H. Adler, October 1974.

Table 2-17. Estimated Uranium Ore Reserves by States, January 1, 1975

| State | Tons of Ore (Millions) | Grade of Ore (% U_3O_8) | Tons of U_3O_8 |
|---|---------------------------|----------------------------------|---------------------|
| New Mexico | 74.8 | 0.22 | 168,000 |
| Wyoming | 62.2 | 0.16 | 102,000 |
| Colorado | 2.9 | 0.28 | 8,000 |
| Utah | 2.8 | 0.21 | 6,000 |
| Others: (Arizona, North Dakota, South Dakota, Texas, Washington, Oregon, Montana, California, Alaska) | 24.9 | 0.12 | 31,000 |
| Total | 167.6 | 0.19 | 315,000 |

Source: U.S. Energy Research and Development Administration, press release, "ERDA Estimates U.S. Uranium Reserves", March 21, 1975.

Table 2-18. Water Power — Developed and Estimated Undeveloped, by Geographic Division: 1945 to 1973

[In thousands of kilowatts. Prior to 1960, excludes Alaska and Hawaii. As of December 31]

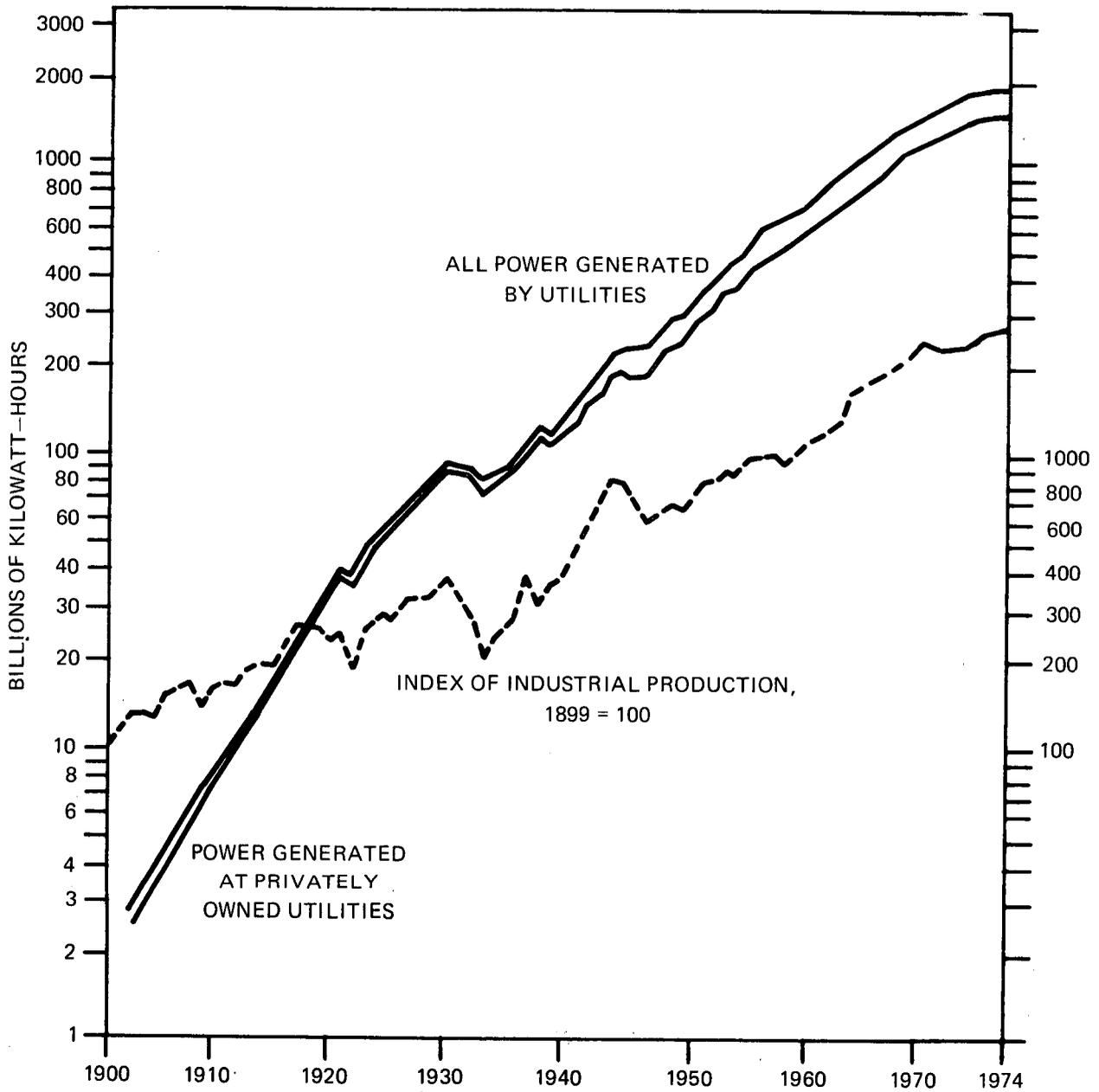
| Item and Division | 1945 | 1950 | 1955 | 1960 | 1965 | 1969 | 1970 | 1971 | 1972 | 1973 |
|--|---------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| Developed Water Power¹ | | | | | | | | | | |
| United States | 15,892 | 18,675 | 25,742 | 33,180 | 44,490 | 50,248 | 51,952 | 53,404 | 53,791 | 54,974 |
| New England ³ | 1,170 | 1,239 | 1,385 | 1,520 | 1,495 | 1,495 | 1,473 | 1,511 | 1,508 | 1,490 |
| Middle Atlantic | 1,668 | 1,678 | 1,789 | 2,472 | 4,815 | 4,231 | 4,264 | 4,252 | 4,252 | 4,246 |
| East North Central | 818 | 901 | 943 | 929 | 886 | 933 | 936 | 944 | 944 | 935 |
| West North Central | 617 | 629 | 962 | 1,594 | 2,982 | 2,785 | 2,728 | 2,726 | 2,724 | 2,769 |
| South Atlantic | 2,664 | 2,767 | 3,536 | 3,773 | 5,170 | 5,271 | 5,265 | 5,473 | 5,472 | 5,467 |
| East South Central | 2,229 | 2,729 | 3,576 | 3,750 | 4,497 | 5,111 | 5,224 | 5,225 | 5,267 | 5,340 |
| West South Central | 374 | 466 | 948 | 944 | 1,661 | 1,840 | 1,946 | 2,096 | 2,116 | 2,237 |
| Mountain | 2,007 | 2,286 | 3,706 | 4,621 | 5,560 | 6,097 | 6,202 | 6,219 | 6,248 | 6,665 |
| Pacific | 4,345 | 5,979 | 8,898 | 13,578 | 17,424 | 22,485 | 23,914 | 24,958 | 25,165 | 25,681 |
| Alaska | | | | | | | | | 76 | 124 |
| Hawaii | | | | | | | | | 19 | 19 |
| Undeveloped Water Power | | | | | | | | | | |
| United States | 77,130 ² | 87,604 | 86,895 | 114,200 | 124,087 | 128,900 | 127,990 | 125,203 | 126,125 | 119,202 |
| New England | 3,348 | 3,250 | 2,586 | 2,900 | 3,240 | 3,300 | 3,330 | 3,318 | 3,332 | 3,327 |
| Middle Atlantic | 5,175 | 6,572 | 8,023 | 7,600 | 4,986 | 4,545 | 4,455 | 4,269 | 4,301 | 4,301 |
| East North Central | 2,574 | 2,344 | 3,051 | 3,000 | 1,351 | 1,288 | 1,576 | 1,305 | 1,333 | 1,321 |
| West North Central | 4,735 | 5,775 | 6,284 | 6,400 | 4,146 | 4,604 | 4,390 | 4,329 | 4,329 | 4,284 |
| South Atlantic | 7,462 | 8,161 | 7,943 | 8,400 | 9,977 | 9,708 | 9,556 | 9,059 | 8,989 | 9,066 |
| East South Central | 4,552 | 4,736 | 3,707 | 4,600 | 4,287 | 3,660 | 3,810 | 3,877 | 3,832 | 3,778 |
| West South Central | 2,894 | 3,568 | 3,506 | 3,900 | 3,056 | 3,394 | 3,279 | 3,029 | 3,009 | 2,847 |
| Mountain | 17,755 | 23,440 | 20,668 | 23,600 | 26,530 | 26,923 | 26,655 | 26,174 | 25,508 | 21,829 |
| Pacific | 28,635 | 29,768 | 31,127 | 53,800 | 66,514 | 71,478 | 70,939 | 69,843 | 38,978 | 35,935 |
| Alaska | | | | | | | | | 32,478 | 32,478 |
| Hawaii | | | | | | | | | 35 | 35 |

¹ Capacity of actual installations only. Electric utilities and industrial plants, excluding pumped storage capacity.

² 1947 data.

³ Regional states shown in figure.

Source: U.S. Federal Power Commission, annual summaries and related monthly reports;
U.S. Department of Commerce, Statistical Abstract of the U.S., 1969.



Source: Federal Power Commission — Press Release Telephone Communication.
 Historical Statistics of the United States;
 U.S. Department of Commerce, Statistical Abstract of the United States, 1974.

Figure 15. Electric Power Generating Capacity, 1900 - 1974

PART 3. ENERGY CONSUMPTION

Table 3-1. Estimated Cost of Operating a *Standard Size 1967 Model Automobile*, Including Cost of Gasoline and Oil¹

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals and Averages for Ten Years (100,000 miles) | |
|---|------------------------------|--------------------------|-------------------------------|--------------------------|---|--------------------------|
| | Total Cost \$ | Cost Per Mile ¢ | Total Cost \$ | Cost Per Mile ¢ | Total Cost \$ | Cost Per Mile ¢ |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 842.00 | 5.81 | 589.00 | 4.53 | 2,806.00 | 2.81 |
| Repairs and Maintenance | 58.10 | 0.40 | 120.50 | 0.93 | 1,788.31 | 1.79 |
| Replacement Tires | — | — | — | — | 232.10 | 0.23 |
| Accessories | 24.51 | 0.17 | 17.14 | 0.13 | 81.67 | 0.08 |
| Gasoline | 216.99 | 1.50 | 194.55 | 1.50 | 1,496.50 | 1.50 |
| Oil | 32.99 | 0.23 | 29.48 | 0.23 | 227.21 | 0.23 |
| Insurance | 181.00 | 1.25 | 170.00 | 1.31 | 1,415.00 | 1.41 |
| Garaging, Parking, Tolls, etc. | 207.73 | 1.43 | 198.65 | 1.53 | 1,805.00 | 1.80 |
| Total | 1,563.32 | 10.79 | 1,319.32 | 10.16 | 9,851.79 | 9.85 |
| Taxes and Fees: | | | | | | |
| State | | | | | | |
| Gasoline | 65.91 | 0.45 | 59.09 | 0.45 | 454.55 | 0.45 |
| Registration | 10.00 | 0.07 | 10.00 | 0.08 | 100.00 | 0.10 |
| Titling | 85.68 | 0.59 | — | — | 85.68 | 0.09 |
| Subtotal | 161.59 | 1.11 | 69.09 | 0.53 | 640.23 | 0.64 |
| Federal: | | | | | | |
| Gasoline | 40.56 | 0.28 | 36.36 | 0.28 | 279.72 | 0.28 |
| Oil ² | 0.85 | — | 0.76 | — | 5.83 | 0.01 |
| Tires | 50.49 | 0.34 | 35.32 | 0.27 | 196.88 | 0.19 |
| Subtotal | 91.90 | 0.62 | 72.44 | 0.55 | 482.43 | 0.48 |
| Total Taxes | 258.49 | 1.77 | 146.53 | 1.12 | 1,172.66 | 1.17 |
| Total of All Costs | 1,821.81 | 12.56 | 1,465.85 | 11.28 | 11,024.45 | 11.02 |
| Total Gasoline and Oil Costs, Including Taxes | 357.30 | 2.16 | 320.24 | 2.46 | 2,463.81 | 2.47 |
| Gasoline and Oil Costs as Percent of all Costs | 20% | 20% | 22% | 22% | 22% | 22% |

¹ This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, purchased for \$2,806, operated 100,000 miles over a 10-year period, then scrapped. Baltimore city prices, considered to be in the middle range, were used.

² Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.

See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, Jan. 1968.

Table 3-2. Estimated Cost of Operating a *Standard Size 1972 Model Automobile*, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals And Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 1,226.00 | 8.46 | 900.00 | 6.92 | 4,379.00 | 4.38 |
| Repairs and Maintenance | 81.84 | .56 | 115.37 | .89 | 2,146.91 | 2.14 |
| Replacement Tires | 17.90 | .12 | 16.05 | .12 | 399.85 | .40 |
| Accessories | 3.21 | .02 | 3.08 | .02 | 52.18 | .05 |
| Gasoline | 286.75 | 1.98 | 257.16 | 1.98 | 1,977.96 | 1.98 |
| Oil | 11.25 | .08 | 11.25 | .09 | 118.50 | .12 |
| Insurance ² | 164.00 | 1.13 | 156.00 | 1.20 | 1,350.00 | 1.35 |
| Garaging, Parking, Tolls, etc. | 208.36 | 1.44 | 199.22 | 1.53 | 1,809.40 | 1.81 |
| Total | 1,999.31 | 13.79 | 1,658.13 | 12.75 | 12,233.80 | 12.23 |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 74.62 | .51 | 66.92 | .52 | 514.71 | .51 |
| Registration | 30.00 | .21 | 30.00 | .23 | 300.00 | .30 |
| Titling | 177.15 | 1.22 | -- | -- | 177.15 | .18 |
| Subtotal | 281.77 | 1.94 | 96.92 | .75 | 991.86 | .99 |
| Federal: | | | | | | |
| Gasoline | 42.64 | .30 | 38.24 | .30 | 294.12 | .30 |
| Oil ³ | .22 | -- | .22 | -- | 2.37 | -- |
| Tires | 1.38 | .01 | 1.24 | .01 | 30.80 | .03 |
| Subtotal | 44.24 | .31 | 39.70 | .31 | 327.29 | .33 |
| Total Taxes | 326.01 | 2.25 | 136.62 | 1.06 | 1,319.15 | 1.32 |
| Total of All Costs | 2,325.32 | 16.04 | 1,794.75 | 13.81 | 13,552.95 | 13.55 |
| Total Gasoline and Oil Costs, Including Taxes | 415.48 | 2.87 | 373.79 | 2.89 | 2,907.66 | 2.94 |
| Gasoline and Oil Costs as Percent of all Costs | 18% | 18% | 21% | 21% | 22% | 22% |

¹ This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, purchased for \$4,379, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

² Previous editions of this study used insurance rates designated for Baltimore city. The rates shown above are for the Baltimore suburbs, and consequently are less than the rates presented in the previous study. If the Baltimore city rates had been used in this study, the insurance costs would have been higher. (For example, the first year would have been \$232).

³ Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.

See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April 1972.

Table 3-3. Estimated Cost of Operating a Compact Size 1972 Model Automobile, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals And Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 674.00 | 4.65 | 519.00 | 3.99 | 2,696.00 | 2.70 |
| Repairs and Maintenance | 79.41 | .55 | 107.14 | .83 | 1,784.50 | 1.79 |
| Replacement Tires | 15.30 | .11 | 13.71 | .11 | 341.77 | .34 |
| Accessories | 3.21 | .02 | 3.08 | .02 | 52.18 | .05 |
| Gasoline | 244.25 | 1.68 | 218.97 | 1.69 | 1,684.48 | 1.68 |
| Oil | 10.50 | .07 | 10.50 | .08 | 113.25 | .11 |
| Insurance | 155.00 | 1.07 | 147.00 | 1.13 | 1,299.00 | 1.30 |
| Garaging, Parking, Tolls, etc. | 208.36 | 1.44 | 199.22 | 1.53 | 1,809.40 | 1.81 |
| Total | 1,390.03 | 9.59 | 1,218.62 | 9.38 | 9,780.58 | 9.78 |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 63.56 | .44 | 56.98 | .44 | 438.34 | .44 |
| Registration | 20.00 | .14 | 20.00 | .15 | 200.00 | .20 |
| Titling | 109.86 | .75 | — | — | 109.86 | .11 |
| Subtotal | 193.42 | 1.33 | 76.98 | .59 | 748.20 | .75 |
| Federal: | | | | | | |
| Gasoline | 36.32 | .25 | 32.56 | .25 | 250.48 | .25 |
| Oil ² | .21 | — | .21 | — | 2.27 | — |
| Tires | 1.17 | .01 | 1.05 | .01 | 26.07 | .03 |
| Subtotal | 37.70 | .26 | 33.82 | .26 | 276.82 | .28 |
| Total Taxes | 231.12 | 1.59 | 110.80 | .85 | 1,027.02 | 1.03 |
| Total of All Costs | 1,621.15 | 11.18 | 1,329.42 | 10.23 | 10,807.60 | 10.81 |
| Total Gasoline and Oil Costs Including Taxes | 354.84 | 2.40 | 319.22 | 2.46 | 2,488.82 | 2.48 |
| Gasoline and Oil Costs as Percent of All Costs | 22% | 22% | 24% | 24% | 23% | 23% |

¹ This estimate covers the total costs of a medium priced, compact size, 2-door sedan, purchased for \$2,696, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

² Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.

See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April, 1972.

Table 3-4. Estimated Cost of Operating a *Subcompact* Size 1972 Model Automobile, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals and Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 310.00 | 2.14 | 285.00 | 2.19 | 2,064.00 | 2.07 |
| Repairs and Maintenance | 76.15 | 0.53 | 114.59 | 0.88 | 1,775.71 | 1.78 |
| Replacement Tires | 13.98 | 0.10 | 12.53 | 0.10 | 312.29 | 0.31 |
| Accessories | 3.21 | 0.02 | 3.08 | 0.02 | 52.18 | 0.05 |
| Gasoline | 181.84 | 1.25 | 163.02 | 1.25 | 1,255.15 | 1.25 |
| Oil | 10.50 | 0.07 | 9.75 | 0.08 | 103.50 | 0.10 |
| Insurance | 145.00 | 1.00 | 140.00 | 1.08 | 1,251.00 | 1.25 |
| Garaging, Parking, Tolls, etc. | 208.36 | 1.44 | 199.22 | 1.53 | 1,809.40 | 1.81 |
| Total | 949.04 | 6.55 | 927.19 | 7.13 | 8,623.23 | 8.62 |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 47.32 | 0.33 | 42.42 | 0.33 | 326.62 | 0.33 |
| Registration | 20.00 | 0.14 | 20.00 | 0.15 | 200.00 | 0.20 |
| Titling | 84.57 | 0.58 | — | — | 84.57 | 0.08 |
| Subtotal | 151.89 | 1.05 | 62.42 | 0.48 | 611.19 | 0.61 |
| Federal: | | | | | | |
| Gasoline | 27.04 | 0.18 | 24.24 | 0.19 | 186.64 | 0.19 |
| Oil ² | 0.21 | — | 0.19 | — | 2.07 | — |
| Tires | 0.94 | 0.01 | 0.84 | 0.01 | 20.90 | 0.02 |
| Subtotal | 28.19 | 0.19 | 25.27 | 0.20 | 209.61 | 0.21 |
| Total Taxes | 180.08 | 1.24 | 87.69 | 0.68 | 820.80 | 0.82 |
| Total of All Costs | 1,129.12 | 7.79 | 1,014.88 | 7.81 | 9,444.03 | 9.44 |
| Total Gasoline and Oil Costs, Including Taxes | 266.91 | 1.83 | 239.62 | 1.85 | 1,873.98 | 1.87 |
| Gasoline and Oil Costs as Percent of All Costs | 24% | 24% | 24% | 24% | 20% | 20% |

¹ This estimate covers the total costs of a low priced, subcompact size, 2-door sedan, purchased for \$2,064, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used. Since cost data for American made subcompacts does not exist past the second year, only the first, second, and estimated ten-year totals are shown.

² Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.
See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April, 1972.

Table 3-5. Estimated Cost of Operating a Standard Size 1974 Model Automobile, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals And Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 1,046.00 | 7.21 | 647.00 | 4.98 | 4,201.00 | 4.20 |
| Repairs and Maintenance | 122.96 | 0.85 | 158.01 | 1.21 | 2,933.94 | 2.94 |
| Replacement Tires | 18.63 | 0.13 | 16.71 | 0.13 | 385.99 | 0.38 |
| Accessories | 3.53 | 0.02 | 3.39 | 0.03 | 57.40 | 0.06 |
| Gasoline | 438.70 | 3.03 | 393.35 | 3.02 | 3,025.96 | 3.03 |
| Oil | 20.00 | 0.14 | 19.00 | 0.15 | 195.00 | 0.19 |
| Insurance ² | 205.00 | 1.41 | 192.00 | 1.48 | 1,618.00 | 1.62 |
| Garaging, Parking, Tolls, etc. | 224.80 | 1.55 | 215.20 | 1.65 | 1,960.00 | 1.96 |
| Total | 2,079.62 | 14.34 | 1,644.66 | 12.65 | 14,383.29 | 14.38 |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 100.98 | 0.70 | 90.54 | 0.70 | 696.51 | 0.70 |
| Registration | 30.00 | 0.21 | 30.00 | 0.23 | 300.00 | 0.30 |
| Tilting | 170.04 | 1.17 | — | — | 170.04 | 0.17 |
| Subtotal | 301.02 | 2.08 | 120.54 | 0.93 | 1,166.55 | 1.17 |
| Federal: | | | | | | |
| Gasoline | 44.88 | 0.31 | 40.24 | 0.31 | 309.56 | 0.31 |
| Oil ³ | 0.30 | — | 0.29 | — | 2.93 | — |
| Tires | 1.45 | 0.01 | 1.30 | 0.01 | 30.03 | 0.03 |
| Subtotal | 46.63 | 0.32 | 41.83 | 0.32 | 342.52 | 0.34 |
| Total Taxes | 347.65 | 2.40 | 162.37 | 1.25 | 1,509.07 | 1.51 |
| Total of All Costs | 2,427.27 | 16.74 | 1,807.03 | 13.90 | 15,892.36 | 15.89 |
| Total Gasoline and Oil Costs, Including Taxes | 604.86 | 4.18 | 560.16 | 4.18 | 4,229.96 | 4.23 |
| Gasoline and Oil Costs as Percent of all Costs | 25% | 25% | 30% | 30% | 27% | 27% |

¹ This estimate covers the total costs of a fully equipped, medium priced, standard size, 4-door sedan, less the average dealer discount allowed on that car, purchased for \$4,251, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

² Previous editions of this study used insurance rates designated for Baltimore city. The rates shown above are for the Baltimore suburbs, and consequently are less than the rates presented in the previous study. If the Baltimore city rates had been used in this study, the insurance costs would have been higher. (For example, the first year would have been \$232).

³ Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column. See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April 1974

Table 3-6. Estimated Cost of Operating a Compact Size 1974 Model Automobile, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals And Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 400.00 | 2.76 | 372.00 | 2.86 | 2,860.00 | 2.86 |
| Repairs and Maintenance | 108.48 | 0.75 | 186.38 | 1.43 | 2,365.53 | 2.36 |
| Replacement Tires | 15.42 | 0.10 | 13.83 | 0.11 | 330.77 | 0.33 |
| Accessories | 3.53 | 0.02 | 3.39 | 0.03 | 57.40 | 0.06 |
| Gasoline | 355.03 | 2.45 | 318.27 | 2.45 | 2,448.45 | 2.45 |
| Oil | 17.00 | 0.12 | 16.00 | 0.12 | 167.00 | 0.17 |
| Insurance | 190.00 | 1.31 | 180.00 | 1.38 | 1,532.00 | 1.53 |
| Garaging, Parking, Tolls, etc. | 224.80 | 1.55 | 215.20 | 1.66 | 1,960.00 | 1.96 |
| Total | <u>1,314.26</u> | <u>9.06</u> | <u>1,305.07</u> | <u>10.04</u> | <u>11,721.15</u> | <u>11.72</u> |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 81.72 | 0.57 | 73.26 | 0.57 | 563.58 | 0.56 |
| Registration | 20.00 | 0.14 | 20.00 | 0.15 | 200.00 | 0.20 |
| Titling | 116.40 | 0.80 | — | — | 116.40 | 0.12 |
| Subtotal | <u>218.12</u> | <u>1.51</u> | <u>93.26</u> | <u>0.72</u> | <u>879.98</u> | <u>0.88</u> |
| Federal: | | | | | | |
| Gasoline | 36.32 | 0.25 | 32.56 | 0.25 | 250.48 | 0.25 |
| Oil ² | 0.26 | — | 0.24 | — | 2.51 | — |
| Tires | 1.18 | 0.01 | 1.06 | 0.01 | 25.41 | 0.03 |
| Subtotal | <u>37.76</u> | <u>0.26</u> | <u>33.86</u> | <u>0.26</u> | <u>278.40</u> | <u>0.28</u> |
| Total Taxes | 255.88 | 1.77 | 127.12 | 0.98 | 1,158.38 | 1.16 |
| Total of All Costs | 1,570.14 | 10.83 | 1,432.19 | 11.02 | 12,879.53 | 12.88 |
| Total Gasoline and Oil Costs Including Taxes | 490.33 | 3.39 | 440.33 | 3.39 | 3,432.02 | 3.43 |
| Gasoline and Oil Costs as Percent of All Costs | 31% | 31% | 31% | 31% | 27% | 27% |

¹ This estimate covers the total costs of a medium priced, compact size, 2-door sedan, less the average dealer discount allowed on that car, purchased for \$2,910, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used.

² Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.
See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April, 1974.

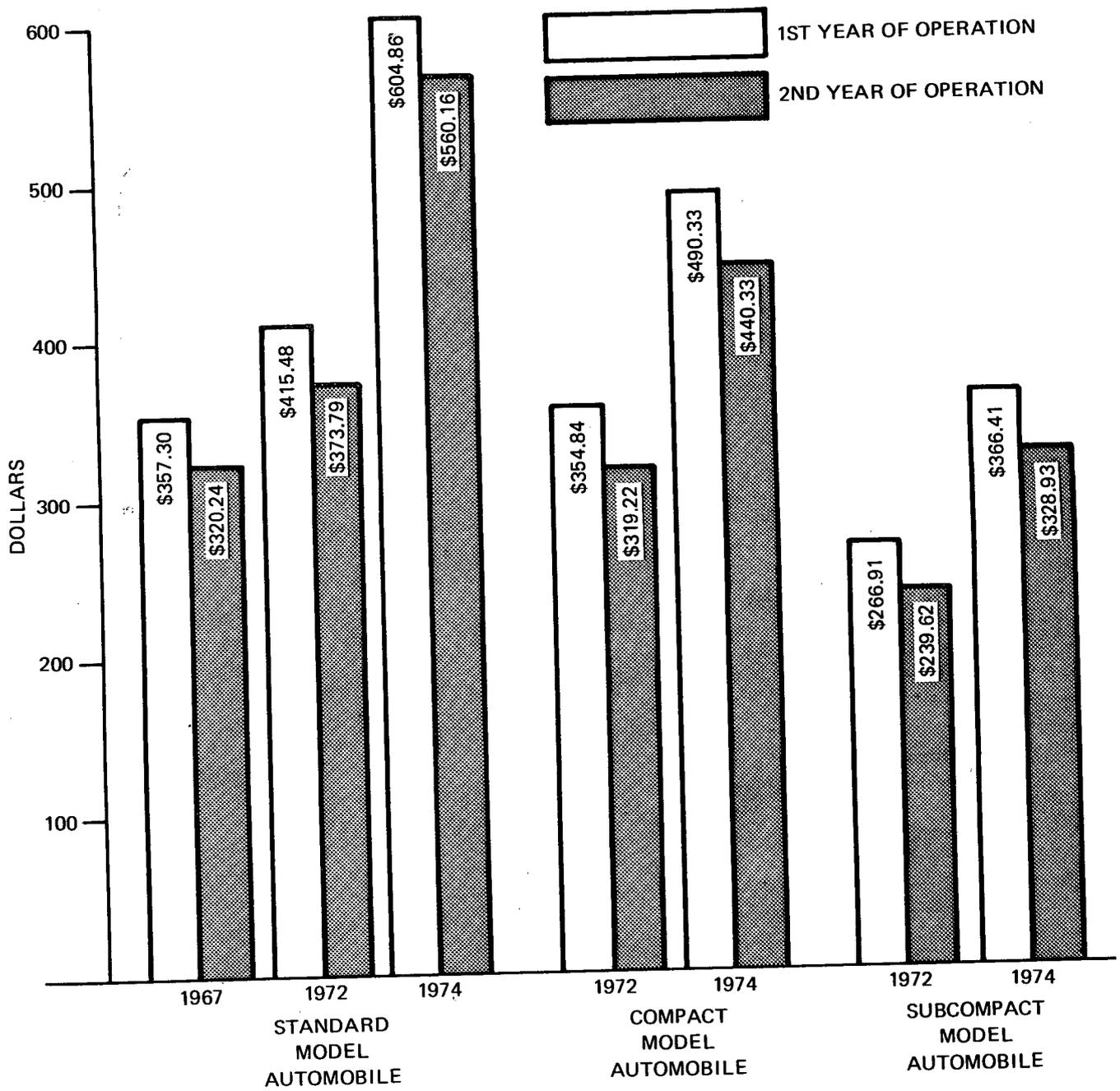
Table 3-7. Estimated Cost of Operating a Subcompact Size 1974 Model Automobile, Including Cost of Gasoline and Oil¹
(total costs in dollars, costs per mile in cents)

| Item | First Year (14,500 miles) | | Second Year (13,000 miles) | | Totals And Averages For Ten Years (100,000 miles) | |
|---|------------------------------|---------------------|-------------------------------|---------------------|---|---------------------|
| | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile | Total Cost | Cost Per Mile |
| Costs Excluding Taxes: | | | | | | |
| Depreciation | 283.00 | 1.95 | 265.00 | 2.04 | 2,360.00 | 2.36 |
| Repairs and Maintenance | 97.69 | 0.67 | 150.55 | 1.16 | 2,119.61 | 2.12 |
| Replacement Tires | 13.64 | 0.09 | 12.23 | 0.09 | 302.72 | 0.30 |
| Accessories | 3.53 | 0.03 | 3.39 | 0.03 | 57.40 | 0.06 |
| Gasoline | 264.32 | 1.82 | 236.95 | 1.82 | 1,824.41 | 1.82 |
| Oil | 14.00 | 0.10 | 13.00 | 0.10 | 138.00 | 0.14 |
| Insurance | 177.00 | 1.22 | 169.00 | 1.30 | 1,466.00 | 1.47 |
| Garaging, Parking, Tolls, etc. | 224.80 | 1.55 | 215.20 | 1.65 | 1,960.00 | 1.96 |
| Total | 1,077.98 | 7.43 | 1,065.32 | 8.19 | 10,228.14 | 10.23 |
| Taxes and Fees: | | | | | | |
| State: | | | | | | |
| Gasoline | 60.84 | 0.42 | 54.54 | 0.42 | 419.14 | 0.42 |
| Registration | 20.00 | 0.14 | 20.00 | 0.15 | 200.00 | 0.20 |
| Titling | 96.40 | 0.66 | — | — | 96.40 | 0.09 |
| Subtotal | 177.24 | 1.22 | 74.54 | 0.57 | 716.34 | 0.71 |
| Federal: | | | | | | |
| Gasoline | 27.04 | 0.19 | 24.24 | 0.19 | 186.64 | 0.19 |
| Oil ² | 0.21 | — | 0.20 | — | 2.07 | — |
| Tires | 0.90 | 0.01 | 0.80 | 0.01 | 19.91 | 0.02 |
| Subtotal | 28.15 | 0.20 | 25.24 | 0.20 | 208.62 | 0.21 |
| Total Taxes | 205.39 | 1.42 | 99.78 | 0.77 | 924.96 | 0.92 |
| Total of All Costs | 1,283.37 | 8.85 | 1,165.10 | 8.96 | 11,153.10 | 11.15 |
| Total Gasoline and Oil Costs, Including Taxes | 366.41 | 2.53 | 328.93 | 2.53 | 2,570.26 | 2.57 |
| Gasoline and Oil Costs as Percent of All Costs | 29% | 29% | 28% | 28% | 23% | 23% |

¹ This estimate covers the total costs of a low priced, subcompact size, 2-door sedan, less the average dealer discount allowed on that car, purchased for \$2,410, operated 100,000 miles over a 10-year period, then scrapped. Baltimore area prices, considered to be in the middle range, were used. Since cost data for American made subcompacts does not exist past the second year, only the first, second, and estimated ten-year totals are shown.

² Where costs per mile were computed to be less than 1/20 cent, a dash (—) appears in the column.
See Appendix D for bases of estimates.

Source: U.S. Department of Transportation, Federal Highway Administration, *Cost of Operating an Automobile*, April, 1974.



NOTE: First year of operation based on 14,500 miles.
 Second year of operation based on 13,000 miles.
 See Appendix D for bases of these estimates.

Figure 16. Estimated Annual Automobile Gasoline and Oil Costs, Including Taxes, by Size and Year of Operation

Table 3-8. Expenditures for Fuel by Class I Common Motor Carriers of General Freight Engaged in Intercity Service, All Districts, 1969-1973

| | Fuel for Revenue Equipment (\$000) | Oil (\$000) | Total Transportation Expenses (\$000) | Grand Total Expenditures (\$000) | Fuel and Oil Expenditures as Percent of Grand Total |
|------|--|----------------|---|--|--|
| 1969 | 177,060 | 9,761 | 3,205,122 | 6,287,848 | 2.9 |
| 1970 | 171,992 | 9,045 | 3,204,372 | 6,413,223 | 2.8 |
| 1971 | 187,900 | 9,615 | 3,673,858 | 7,325,096 | 2.6 |
| 1972 | 206,942 | 10,177 | 4,236,283 | 8,343,202 | 2.6 |
| 1973 | 276,142 | 11,572 | 4,892,293 | 9,412,796 | 3.0 |

Source: ICC, *Transport Statistics*, Part 7, "Motor Carriers", December 31, 1973, p. 24, and equivalent tables in earlier editions.

**Table 3-9. Average Price of Railroad Fuel,*
Class I Railroads, 1961-1973**

| | Diesel Oil (¢/gallon) | Fuel Oil (¢/gallon) | Coal (\$/net ton) | Gasoline (¢/gallon) |
|------|--------------------------|------------------------|----------------------|------------------------|
| 1961 | 9.27 | 6.33 | 5.97 | 24.23 |
| 1962 | 9.16 | 6.16 | 5.90 | 24.21 |
| 1963 | 9.11 | 6.06 | 5.93 | 24.49 |
| 1964 | 8.84 | 4.83 | 5.38 | 27.72 |
| 1965 | 9.10 | 4.97 | 5.47 | — |
| 1966 | 9.19 | 5.18 | 6.12 | — |
| 1967 | 9.61 | 5.07 | 7.42 | — |
| 1968 | 9.94 | 5.14 | 6.71 | — |
| 1969 | 10.17 | 5.38 | 6.68 | — |
| 1970 | 10.73 | — | 6.00 | — |
| 1971 | 10.88 | — | 10.68 | — |
| 1972 | 10.97 | — | 10.69 | — |
| 1973 | 13.49 | — | 12.40 | — |

*Average costs exclude nonlocomotive fuel use beginning in 1964.

Source: A.A.R. *Statistics of Railroads of Class I, 1962-1973*, pg. 15.

**Table 3-10. Jet Operating Expenses, Including Fuel and Oil Costs:
B-727, B-737 and DC-9, Quarter Ending September 30, 1970**

| | B-727-100 | | | | | B-727-200 | | | | | B-737 | | | |
|--|-----------|----------|--------|--------|--------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|
| | AA | BN QC | EA | TW | UA | AA | CO | NE | TW | UA | TS | PI | UA | WA |
| Traffic & Service Fleet Size | 56.4 | 17.0 | 45.8 | 27.0 | 86.0 | 41.0 | 19.0 | 13.0 | 32.0 | 28.0 | 4.0 | 11.0 | 74.2 | 30.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | | |
| Crew Salaries & Expenses | \$166.57 | 153.36 | 158.99 | 160.63 | 175.44 | 170.50 | 135.06 | 152.59 | 156.38 | 177.09 | 116.03 | 109.26 | 187.81 | 119.70 |
| Fuel, Oil & Taxes | 149.13 | 130.20 | 138.20 | 142.03 | 143.03 | 149.59 | 167.62 | 150.17 | 154.71 | 154.47 | 123.61 | 105.36 | 103.53 | 112.84 |
| Insurance | 4.21 | 17.59 | 1.80 | 14.40 | 11.36 | 5.32 | 11.52 | 20.90 | 16.13 | 16.92 | 22.61 | 18.55 | 12.56 | 6.66 |
| Other | ----- | ----- | (.03) | .36 | .04 | ----- | ----- | ----- | .43 | .04 | .30 | ----- | .04 | ----- |
| Total | \$319.91 | 301.15 | 298.96 | 317.42 | 329.87 | 325.41 | 314.20 | 323.66 | 327.65 | 348.52 | 262.55 | 233.17 | 303.94 | 239.20 |
| Maintenance | | | | | | | | | | | | | | |
| Airframe | \$ 55.00 | 45.49 | 54.11 | 49.61 | 41.43 | 33.14 | 47.42 | 37.09 | 20.03 | 39.95 | 40.36 | 42.46 | 41.85 | 40.71 |
| Engine | 35.03 | 47.76 | 50.44 | 66.31 | 43.51 | 34.25 | 34.88 | 23.11 | 27.11 | 41.54 | 32.90 | 40.47 | 26.89 | 44.25 |
| Other | 6.81 | 3.99 | 11.47 | 11.57 | 17.32 | 6.65 | 7.07 | 6.72 | 5.47 | 17.50 | 10.29 | 7.29 | 16.93 | 5.43 |
| Total Direct | \$ 96.84 | 97.24 | 116.02 | 127.49 | 102.26 | 74.04 | 89.37 | 66.92 | 52.61 | 98.99 | 83.55 | 90.22 | 85.67 | 90.39 |
| Maint. Burden | 117.86 | 42.32 | 82.40 | 116.22 | 85.87 | 82.49 | 51.71 | 49.00 | 49.33 | 82.13 | 55.91 | 48.09 | 77.46 | 37.84 |
| Total | \$214.70 | 139.56 | 198.42 | 243.71 | 188.13 | 156.53 | 141.08 | 115.92 | 101.94 | 181.12 | 139.46 | 138.31 | 163.13 | 128.23 |
| Cash Acft. Oper. Exp. | \$534.61 | 440.71 | 497.38 | 561.13 | 518.00 | 481.94 | 455.28 | 439.58 | 429.59 | 529.64 | 402.01 | 371.48 | 467.07 | 367.43 |
| Depr. & Rentals | -111.38 | 93.59 | 115.20 | 114.45 | 113.64 | 133.54 | 96.02 | 178.77 | 187.56 | 156.73 | 207.38 | 87.65 | 96.54 | 103.38 |
| Total Acft. Oper. Exp. | \$645.99 | 534.30 | 612.58 | 675.58 | 631.64 | 615.48 | 551.30 | 618.35 | 617.15 | 686.37 | 609.39 | 459.13 | 563.61 | 470.81 |
| Cost Per Rev. Mile | 177.8¢ | 154.2¢ | 171.1¢ | 179.4¢ | 166.2¢ | 176.3¢ | 130.1¢ | 168.2¢ | 165.6¢ | 207.2¢ | 260.1¢ | 171.2¢ | 215.5¢ | 141.7¢ |
| Cost Per Sch. Seat Mile | 1.91¢ | 1.74¢ | 1.76¢ | 1.93¢ | 1.78¢ | 1.45¢ | 1.18¢ | 1.29¢ | 1.35¢ | 1.63¢ | 2.20¢ | 1.91¢ | 2.37¢ | 1.50¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 23.1 | 24.4 | 22.6 | 21.0 | 22.6 | 24.3 | 30.4 | 24.3 | 25.1 | 22.5 | 20.3 | 22.9 | 18.4 | 24.0 |

**Table 3-10. Jet Operating Expenses, Including Fuel and Oil Costs:
B-727, B-737 and DC-9, Quarter Ending September 30, 1970 - Continued**

| | DC-9 | | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | RW -30 | AL -31 | CB -30 | CO -10 | DL -32 | EA -30 | HA -31 | NC -30 | NE -30 | SO -10 | TW -10 |
| Traffic & Service | | | | | | | | | | | |
| Fleet Size | 15.0 | 25.0 | 3.0 | 19.0 | 57.8 | 71.7 | 6.0 | 14.3 | 14.0 | 12.0 | 18.9 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | |
| Crew Salaries & Expenses | \$112.52 | 97.15 | 121.27 | 102.88 | 113.40 | 139.89 | 104.95 | 96.54 | 122.44 | 93.03 | 131.27 |
| Fuel, Oil & Taxes | 122.18 | 117.85 | 127.23 | 107.30 | 103.78 | 98.11 | 118.13 | 117.91 | 106.29 | 107.05 | 99.62 |
| Insurance | 15.75 | 20.70 | 40.72 | 66.6 | 8.02 | 3.64 | 23.81 | 26.90 | 14.94 | 14.53 | 11.44 |
| Other | .11 | ---- | (.17) | ---- | ---- | (.02) | ---- | ---- | ---- | ---- | .33 |
| Total | \$250.56 | 235.70 | 289.05 | 216.84 | 225.20 | 241.62 | 246.89 | 241.35 | 243.67 | 214.61 | 242.66 |
| Maintenance | | | | | | | | | | | |
| Airframe | \$ 41.24 | 28.87 | ---- | 47.28 | 34.38 | 37.84 | 39.56 | 33.61 | 55.34 | 22.84 | 35.34 |
| Engine | 14.45 | 20.91 | ---- | 34.82 | 24.78 | 37.25 | 86.97 | 66.54 | 20.93 | 59.25 | 41.96 |
| Other | 4.17 | 6.76 | ---- | 9.17 | 2.08 | 8.69 | 4.61 | 2.07 | 9.77 | 18.83 | 9.36 |
| Total Direct | \$ 59.86 | 56.54 | 139.80 | 91.27 | 61.24 | 83.78 | 131.14 | 102.22 | 86.04 | 100.92 | 86.66 |
| Maint. Burden | 21.83 | 37.33 | 41.29 | 52.97 | 49.09 | 50.38 | 41.56 | 43.80 | 64.08 | 27.59 | 76.47 |
| Total | \$ 81.69 | 93.87 | 181.09 | 144.24 | 110.33 | 134.16 | 172.70 | 146.02 | 150.12 | 128.51 | 163.13 |
| Cash Acft. Oper. Exp. | \$332.25 | 329.57 | 470.14 | 361.08 | 335.53 | 375.78 | 419.59 | 387.37 | 393.79 | 343.12 | 405.79 |
| Depr. & Rentals | 117.30 | 105.87 | 163.04 | 89.67 | 98.12 | 100.49 | 164.13 | 109.30 | 109.02 | 115.39 | 131.50 |
| Total Acft. Oper. Exp. | \$449.55 | 435.44 | 633.18 | 450.75 | 433.65 | 476.27 | 583.72 | 496.67 | 502.81 | 458.51 | 537.29 |
| Cost Per Rev. Mile | 149.6¢ | 152.8¢ | 232.05¢ | 129.8¢ | 141.2¢ | 160.2¢ | 261.9¢ | 188.0¢ | 171.5¢ | 163.0¢ | 178.2¢ |
| Cost Per Sch. Seat Mile | 1.64¢ | 1.53¢ | 2.07¢ | 1.83¢ | 1.59¢ | 1.80¢ | 2.40¢ | 1.98¢ | 1.90¢ | 2.30¢ | 2.70¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 27.2 | 27.1 | 20.1 | 23.8 | 23.9 | 20.6 | 20.2 | 23.7 | 21.1 | 23.3 | 18.5 |

Table 3-11. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, Quarter Ending September 30, 1970

| | B-747 | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| | AA Domestic | CO Domestic | PA Combined | TW Combined | UA Domestic |
| Traffic & Service | | | | | |
| Fleet Size | 4.6 | 2.3 | 21.0 | 9.0 | 2.4 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | |
| Flying Operations | | | | | |
| Crew Salaries & Exp. | \$ 199.49 | 281.63 | 281.31 | 250.39 | 192.54 |
| Fuel, Oil & Taxes | 366.69 | 442.07 | 342.78 | 309.59 | 355.33 |
| Insurance | 25.10 | 121.19 | 139.38 | 56.87 | 224.76 |
| Other | --- | --- | .76 | .38 | .15 |
| Total | \$ 591.28 | 844.89 | 764.23 | 617.23 | 772.78 |
| Maintenance | | | | | |
| Airframe | 185.62 | 182.24 | 55.41 | 86.06 | 148.55 |
| Engine | 170.63 | 153.26 | 53.43 | 38.49 | 60.69 |
| Other | 4.79 | 12.88 | 30.41 | 19.29 | 45.03 |
| Total Direct | 361.04 | 348.38 | 139.25 | 143.84 | 254.27 |
| Maint. Burden | 112.25 | 190.44 | 163.01 | 110.08 | 193.30 |
| Total | \$ 473.29 | 538.82 | 302.26 | 253.92 | 447.57 |
| Cash Acft. Oper. Exp. | \$1,064.57 | 1,383.71 | 1,066.49 | 871.15 | 1,220.35 |
| Depr. & Rentals | 1,230.71 | 328.79 | 480.39 | 535.78 | 1,080.39 |
| Total Acft. Oper. Exp. | \$2,295.28 | 1,712.50 | 1,546.88 | 1,406.93 | 2,300.74 |
| Cost Per Rev. Mile | 511.6¢ | 355.5¢ | 338.8¢ | 308.8¢ | 490.3¢ |
| Cost Per Sch. Seat Mile | 1.52¢ | 1.04¢ | 0.94¢ | 0.90¢ | 1.45¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 16.0 | 25.8 | 22.2 | 22.0 | 15.4 |

Source: Air Transport World, "Jet Operating Data" - 1971.

Table 3-12. Jet Operating Expenses, Including Fuel and Oil Costs: B-737 and DC-9, Quarter Ending March 31, 1971

| | B-737 | | | | | DC-9 | | | | | | | | | | | |
|--|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | TS | FL | PI | UA | WA | AL | CO | DL | EA | HA | RW | NC | NE | OZ | SO | TT | TW |
| Traffic & Service | | | | | | -31 | -30 | -32 | -30 | -31 | -30 | -30 | -30 | -30 | -10 | -10 | -10 |
| Fleet Size | 3.0 | 10.0 | 12.0 | 73.0 | 30.0 | 27.0 | 19.0 | 58.0 | 72.0 | 6.0 | 15.0 | 15.0 | 14.0 | 10.0 | 13.1 | 11.0 | 18.9 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$143.62 | 116.19 | 113.77 | 220.82 | 127.03 | 124.75 | 109.66 | 126.29 | 152.19 | 143.89 | 134.18 | 115.96 | 119.38 | 116.90 | 102.18 | 109.37 | 177.54 |
| Fuel, Oil & Taxes | 138.74 | 112.87 | 109.29 | 107.39 | 115.28 | 123.66 | 107.12 | 106.11 | 105.33 | 121.64 | 129.33 | 119.85 | 108.77 | 98.80 | 111.81 | 104.75 | 106.97 |
| Insurance | 21.61 | 18.82 | 23.52 | 11.05 | 7.61 | 22.66 | 6.48 | 7.71 | 6.73 | 29.37 | 17.13 | 17.23 | 15.86 | 24.92 | 15.64 | 20.95 | 9.10 |
| Other | .16 | .88 | .71 | --- | --- | --- | --- | --- | 84 | --- | 34 | 1.30 | --- | .88 | --- | --- | 1.19 |
| Total | \$304.14 | 248.76 | 247.29 | 339.26 | 249.92 | 271.07 | 223.26 | 240.11 | 265.09 | 294.90 | 280.98 | 254.34 | 244.01 | 241.50 | 229.63 | 235.07 | 294.80 |
| Maintenance | | | | | | | | | | | | | | | | | |
| Airframe | 59.88 | 67.68 | 42.89 | 30.13 | 43.32 | 34.29 | 44.32 | 33.60 | 42.02 | 47.49 | 41.27 | 30.49 | 51.40 | 26.83 | 29.46 | 54.27 | 34.68 |
| Engine | 40.95 | 56.05 | 32.31 | 18.25 | 50.73 | 38.36 | 33.94 | 23.79 | 32.95 | 47.61 | 54.84 | 45.90 | 48.92 | 44.24 | 36.59 | 33.10 | 37.06 |
| Other | 19.99 | 6.52 | 6.90 | 16.42 | 5.71 | 6.61 | 9.81 | 2.06 | 8.37 | 5.06 | 6.01 | 4.10 | 11.80 | 5.18 | 30.20 | 18.29 | 10.55 |
| Total Direct | \$120.71 | 130.25 | 82.10 | 64.80 | 99.76 | 79.26 | 88.07 | 59.45 | 83.34 | 100.16 | 102.12 | 80.49 | 112.12 | 76.25 | 96.25 | 105.66 | 82.29 |
| Maint. Burden | 80.62 | 41.97 | 43.89 | 69.23 | 39.30 | 45.45 | 61.85 | 54.81 | 60.32 | 48.15 | 27.52 | 41.72 | 73.52 | 22.36 | 34.68 | 30.11 | 92.08 |
| Total | \$201.33 | 172.22 | 125.99 | 134.03 | 139.06 | 124.71 | 149.92 | 114.26 | 143.66 | 148.31 | 129.64 | 122.21 | 185.64 | 98.61 | 130.93 | 135.77 | 174.37 |
| Cash Acft. Oper. Exp. | \$505.47 | 420.98 | 373.28 | 473.29 | 388.98 | 395.78 | 373.18 | 354.37 | 408.75 | 443.21 | 410.62 | 376.55 | 429.65 | 340.11 | 360.56 | 370.84 | 469.17 |
| Depr. & Rental | 191.76 | 144.90 | 95.25 | 114.13 | 104.59 | 107.75 | 93.27 | 100.37 | 104.49 | 199.43 | 121.32 | 114.33 | 119.39 | 118.25 | 110.59 | 95.34 | 140.63 |
| Total Acft. Oper. Exp. | \$697.23 | 565.88 | 468.53 | 587.42 | 493.57 | 505.53 | 466.45 | 454.74 | 513.24 | 642.64 | 531.94 | 490.88 | 549.04 | 458.36 | 471.15 | 466.18 | 609.80 |
| Cost Per Rev. Mile | 315.6¢ | 168.5¢ | 177.9¢ | 211.2¢ | 156.5¢ | 175.1¢ | 137.8¢ | 153.5¢ | 169.3¢ | 301.2¢ | 181.2¢ | 174.5¢ | 180.5¢ | 163.7¢ | 179.1¢ | 161.5¢ | 196.8¢ |
| Cost Per Sch. Seat Mile | 2.67¢ | 1.76¢ | 1.98¢ | 2.33¢ | 1.66¢ | 1.75¢ | 1.94¢ | 1.72 ¢ | 1.90¢ | 2.77¢ | 1.97¢ | 1.96¢ | 2.00¢ | 1.79¢ | 2.44¢ | 2.15¢ | 2.98¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 19.9 | 19.9 | 23.3 | 18.3 | 23.4 | 24.5 | 23.0 | 23.3 | 20.5 | 18.9 | 24.3 | 24.4 | 19.8 | 21.6 | 23.7 | 22.5 | 17.5 |

Source: Air Transport World, "Jet Operating Data" - May 1972, Dec. 1971.

Table 3-13. Jet Operating Expenses, Including Fuel and Oil Costs: B-747, Quarter Ending December 31, 1971

| | B-747 | | | | | | | | | |
|--|---------------------|-----------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|------------------|------------------|
| | AA Combined | BN DOM | CO DOM | DL DOM | EA LAD | NA DOM | MW Combined | PA Combined | TW Combined | UA DOM |
| Traffic & Service | | | | | | | | | | |
| Fleet Size | 16.0 | 0.7 | 4.0 | 5.6 | 2.3 | 2.0 | 14.2 | 26.4 | 18.7 | 11.3 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | |
| Flying Operations | | | | | | | | | | |
| Crew Salaries & Exp. | \$ 282.42 | 308.22 | 245.13 | 186.51 | 330.94 | 234.17 | 254.36 | 293.49 | 254.08 | 288.58 |
| Fuel, Oil & Taxes | 372.78 | 403.30 | 406.72 | 431.80 | 353.86 | 386.38 | 353.72 | 383.68 | 319.72 | 371.87 |
| Insurance | 12.61 | 9.57 | 61.16 | 38.86 | 37.49 | 99.01 | 43.78 | 89.94 | 1.35 | 52.82 |
| Other | (.31) | ----- | ----- | ----- | 1.02 | ----- | 1.28 | 4.47 | 1.03 | .03 |
| Total | \$ 667.50 | 721.09 | 713.01 | 657.17 | 723.31 | 719.56 | 653.14 | 771.58 | 576.18 | 713.30 |
| Maintenance | | | | | | | | | | |
| Airframe | \$ 119.07 | 151.38 | 168.63 | 100.27 | 545.12 | 105.46 | 168.00 | 68.11 | 110.75 | 106.96 |
| Engine | 166.28 | 95.11 | 240.77 | 118.24 | .85 | 193.55 | 141.26 | 339.60 | 433.58 | 87.90 |
| Other | 6.02 | 7.62 | 21.59 | 7.45 | 3.79 | 13.18 | 13.25 | 68.05 | 27.50 | 29.15 |
| Total Direct Maint. Burden | \$ 291.37 132.64 | 254.11 26.46 | 430.99 63.40 | 225.96 225.27 | 549.76 44.17 | 312.19 186.95 | 322.51 66.17 | 475.76 191.59 | 581.83 185.04 | 224.01 158.34 |
| Total | 424.01 | 280.57 | 494.39 | 451.23 | 593.93 | 499.14 | 388.68 | 667.35 | 756.87 | 382.35 |
| Cash Acft. Oper. Exp. | 1,091.51 | 1,001.66 | 1,207.40 | 1,108.40 | 1,317.24 | 1,218.70 | 1,041.82 | 1,438.93 | 1,333.05 | 1,095.65 |
| Depr. & Rentals | 636.41 | 535.89 | 356.06 | 501.82 | 1,679.33 | 566.20 | 415.54 | 575.67 | 567.17 | 601.96 |
| Total Acft. Oper. Exp. | \$1,727.92 | 1,537.55 | 1,563.46 | 1,610.22 | 2,996.57 | 1,784.90 | 1,457.36 | 2,014.60 | 1,900.22 | 1,697.61 |
| Cost Per Rev. Sch. Mile | \$ 3.83 | 3.11 | 3.49 | 4.01 | 6.73 | 4.18 | 3.23 | 4.41 | 4.17 | 3.67 |
| Cost Per Sch. Seat Mile | 1.25¢ | 0.97¢ | 1.19¢ | 1.09¢ | 1.93¢ | 1.16¢ | 0.90¢ | 1.27¢ | 1.31¢ | 1.18¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 21.6 | 26.2 | 26.0 | 26.8 | 11.8 | 21.6 | 24.3 | 19.0 | 16.8 | 21.9 |

Source: Air Transport World, "Jet Operating Data" - September, 1972.

Table 3-14. Jet Operating Expenses, Including Fuel and Oil Costs: B-727-200, B-737 and DC-9, Third Quarter, 1972

| | B-727-200 | | | | | | B-737 | | | DC-9 | | | |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | AA | BN | CO | NA | TW | UA | PI | UA | WA | AL | DL | EA | NC |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 42.0 | 12.0 | 22.0 | 25.0 | 37.0 | 27.4 | 13.0 | 71.0 | 30.0 | 31.0 | 72.3 | 70.0 | 15.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$177.01 | 168.97 | 157.47 | 167.53 | 178.15 | 203.43 | 137.13 | 210.09 | 170.51 | 135.91 | 125.91 | 163.58 | 118.23 |
| Fuel, Oil & Taxes | 165.78 | 168.10 | 182.29 | 162.64 | 163.97 | 164.50 | 109.88 | 104.27 | 122.48 | 127.28 | 107.22 | 106.89 | 117.03 |
| Insurance | 3.57 | 26.25 | 13.63 | 10.30 | 26.79 | 4.51 | 16.72 | 5.28 | 5.46 | 8.67 | 4.61 | 4.37 | 14.50 |
| Other | 3.32 | ---- | ---- | ---- | .30 | .02 | ---- | .02 | ---- | ---- | ---- | ---- | (.04) |
| Total | \$349.68 | 363.38 | 353.39 | 340.47 | 369.21 | 372.46 | 263.73 | 319.66 | 298.45 | 271.86 | 237.74 | 274.84 | 249.72 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | \$ 41.63 | 21.32 | 48.83 | 54.53 | 23.79 | 35.30 | 44.23 | 30.30 | 36.89 | 30.75 | 37.11 | 42.80 | 34.98 |
| Engine | 35.48 | 30.42 | 56.43 | 78.87 | 11.40 | 32.08 | 34.06 | 17.93 | 4.92 | 55.75 | 31.92 | 34.24 | 56.60 |
| Other | 8.54 | 3.06 | 13.54 | 8.28 | 6.61 | 15.94 | 10.47 | 16.19 | 3.49 | 6.83 | 2.50 | 8.97 | 6.92 |
| Total Direct | \$ 85.65 | 54.80 | 118.80 | 141.68 | 41.80 | 83.32 | 88.76 | 64.42 | 45.30 | 93.33 | 71.53 | 86.01 | 98.50 |
| Maint. Burden | 112.50 | 26.99 | 91.56 | 71.28 | 45.06 | 74.87 | 32.48 | 68.20 | 28.50 | 34.95 | 52.13 | 66.52 | 48.97 |
| Total | \$198.15 | 81.79 | 210.36 | 212.96 | 86.86 | 158.19 | 121.24 | 132.62 | 73.80 | 128.28 | 123.66 | 152.53 | 147.47 |
| Cash Acft. Oper. Exp. | \$547.83 | 445.11 | 563.75 | 553.43 | 456.07 | 530.65 | 384.97 | 452.28 | 372.25 | 400.14 | 361.40 | 427.37 | 397.19 |
| Depr. & Rentals | \$144.74 | 177.26 | 95.36 | 130.05 | 201.70 | 158.28 | 93.47 | 105.82 | 100.59 | 106.16 | 105.51 | 98.03 | 104.08 |
| Total Acft. Oper. Exp. | \$692.57 | 622.37 | 695.11 | 683.48 | 657.77 | 688.93 | 478.44 | 558.10 | 472.84 | 506.30 | 466.91 | 525.40 | 501.27 |
| Cost Per Rev. Mile | \$ 1.95 | 1.90 | 1.67 | 2.05 | 1.74 | 1.91 | 1.72 | 1.89 | 1.41 | 1.72 | 1.52 | 1.67 | 1.73 |
| Cost Per Sch. Seat Mile | 1.59¢ | 1.49¢ | 1.54¢ | 1.55¢ | 1.47¢ | 1.57¢ | 1.93¢ | 2.14¢ | 1.49¢ | 1.72¢ | 1.71¢ | 1.87¢ | 1.89¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 23.9 | 27.0 | 26.2 | 23.8 | 24.9 | 23.9 | 23.0 | 18.7 | 26.0 | 25.1 | 23.0 | 20.4 | 23.3 |

Source: Air Transport World, "Jet Operating Data" - April 1973.

Table 3-15. Jet Operating Expenses, Including Fuel and Oil Costs: B-747, L-1011 and DC-10, Third Quarter, 1972

| | B-747 | | | | | | | L-1011 | | DC-10 | | | |
|--|----------------|------------|------------|------------|----------------|-----------------------------|------------|----------------|------------|----------|----------|----------|----------|
| | AA Combined | BN Dom. | CO Dom. | DL Dom. | PA Combined | TW Combiner ^a | UA Dom. | EA Combined | TW Dom. | AA | CO | NA | UA |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 16.0 | 1.0 | 4.0 | 6.2 | 30.0 | 19.0 | 13.8 | 5.0 | 2.9 | 16.7 | 5.0 | 5.0 | 14.9 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$ 267.66 | 259.77 | 265.18 | 248.11 | 285.06 | 263.69 | 321.61 | 326.63 | 239.89 | 273.16 | 222.18 | 220.42 | 259.20 |
| Fuel, Oil & Taxes | 392.55 | 414.76 | 449.41 | 338.44 | 420.96 | 398.27 | 402.91 | 275.89 | 262.70 | 267.28 | 251.42 | 263.32 | 267.24 |
| Insurance | 13.90 | 54.03 | 37.56 | 21.24 | 54.47 | 43.17 | 30.23 | 73.10 | 88.82 | 11.36 | 34.15 | 42.02 | 25.30 |
| Other | 3.66 | ----- | ----- | ----- | 1.69 | .41 | .02 | ----- | .32 | 6.93 | ----- | ----- | .01 |
| Total | \$ 677.77 | 728.56 | 752.15 | 607.79 | 762.18 | 705.54 | 754.77 | 675.62 | 591.73 | 558.73 | 507.75 | 525.76 | 551.75 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | \$ 113.74 | 185.81 | 106.23 | 125.54 | 60.37 | 81.88 | 89.64 | 102.86 | 76.18 | 68.15 | 87.15 | 59.59 | 63.41 |
| Engine | 348.29 | 213.93 | 266.54 | 165.55 | 97.42 | 306.33 | 185.80 | 63.90 | 54.00 | 31.82 | 65.07 | 60.80 | 53.73 |
| Other | 15.73 | 2.77 | 23.18 | 6.54 | 31.98 | 23.33 | 21.97 | 29.66 | 35.43 | 7.81 | 14.38 | 13.49 | 22.17 |
| Total Direct | \$ 477.76 | 402.51 | 395.95 | 297.63 | 189.77 | 411.54 | 297.41 | 196.42 | 165.61 | 107.78 | 166.60 | 133.88 | 139.31 |
| Maint. Burden | \$ 187.87 | 22.86 | 67.88 | 206.38 | 216.04 | 209.10 | 177.32 | 155.87 | 106.57 | 123.89 | 73.12 | 119.64 | 111.91 |
| Total | \$ 665.63 | 425.37 | 463.83 | 504.01 | 405.81 | 620.64 | 474.73 | 352.29 | 272.18 | 231.67 | 239.72 | 253.52 | 251.22 |
| Cash Acft. Oper. Exp. | \$1,343.40 | 1,153.93 | 1,215.98 | 1,111.80 | 1,167.99 | 1,326.18 | 1,229.50 | 1,027.91 | 863.91 | 790.40 | 747.47 | 779.28 | 802.97 |
| Depr. & Rentals | 646.81 | 498.11 | 308.73 | 505.39 | 523.74 | 435.90 | 488.75 | 523.83 | 374.38 | 405.43 | 274.05 | 358.35 | 426.13 |
| Total Acft. Oper. Exp. | \$1,990.21 | 1,652.04 | 1,524.71 | 1,617.19 | 1,691.73 | 1,762.08 | 1,718.25 | 1,551.74 | 1,238.29 | 1,195.83 | 1,021.52 | 1,137.63 | 1,229.10 |
| Cost Per Rev. Mile | \$ 4.34 | 3.32 | 3.17 | 3.85 | 3.67 | 3.67 | 3.62 | 3.65 | 2.69 | 2.80 | 2.38 | 2.65 | 2.84 |
| Cost Per Sch. Seat Mile | 1.39¢ | 1.02¢ | 1.08¢ | 1.05¢ | 1.09¢ | 1.15¢ | 1.19¢ | 1.63¢ | 1.30¢ | 1.24¢ | 1.19¢ | 1.07¢ | 1.28¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 19.7 | 25.1 | 29.5 | 20.9 | 24.9 | 22.6 | 23.4 | 17.8 | 21.2 | 22.4 | 24.6 | 23.1 | 21.7 |

Source: Air Transport World, "Jet Operating Data" - March, 1973.

Table 3-16. Jet Operating Expenses, Including Fuel and Oil Costs: B-727-200, B-737 and DC-9, Fourth Quarter, 1972

| | B-727-200 | | | | | B-737 | | | DC-9-30 | | | |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| | AA | BI | NA | TW | UA | PI | UA | WA | AL | DL | EA | NC |
| Traffic & Service | | | | | | | | | | | | |
| Fleet Size | 42.0 | 11.7 | 25.0 | 37.0 | 27.2 | 14.0 | 69.0 | 30.0 | 30.6 | 77.0 | 70.7 | 15.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$179.04 | 172.26 | 152.80 | 191.63 | 207.34 | 142.59 | 221.90 | 155.78 | 138.34 | 125.89 | 166.86 | 125.07 |
| Fuel, Oil & Taxes | 160.68 | 158.37 | 160.85 | 160.81 | 164.74 | 109.13 | 106.23 | 119.54 | 127.18 | 110.74 | 106.77 | 116.42 |
| Insurance | 1.29 | 5.09 | 10.36 | 18.78 | 4.61 | 14.77 | 3.59 | 6.13 | 8.67 | 4.46 | 4.03 | 14.33 |
| Other | 11.45 | ----- | ----- | .85 | .03 | .99 | .03 | ----- | ----- | ----- | ----- | .83 |
| Total | \$352.46 | 335.72 | 324.01 | 372.07 | 376.72 | 267.48 | 331.75 | 281.45 | 274.19 | 241.09 | 277.66 | 256.65 |
| Maintenance | | | | | | | | | | | | |
| Airframe | \$ 33.89 | 19.47 | 49.05 | 22.73 | 31.31 | 45.93 | 24.60 | 39.65 | 35.11 | 37.20 | 39.37 | 36.20 |
| Engine | 36.24 | 33.03 | 87.79 | 16.22 | 31.67 | 54.65 | 21.15 | 5.82 | 17.45 | 23.17 | 34.34 | 42.45 |
| Other | 7.72 | 3.70 | 6.73 | 7.69 | 16.51 | 10.28 | 16.09 | 3.90 | 6.98 | 2.74 | 8.84 | 8.54 |
| Total Direct | \$ 77.85 | 56.20 | 143.57 | 46.64 | 79.49 | 110.86 | 61.84 | 49.37 | 59.54 | 63.11 | 82.55 | 87.19 |
| Maint. Burden | \$102.92 | 20.57 | 55.35 | 49.81 | 73.25 | 32.20 | 66.41 | 30.70 | 31.93 | 60.70 | 66.39 | 50.21 |
| Total | \$180.77 | 76.77 | 198.92 | 96.45 | 152.74 | 143.06 | 128.25 | 80.07 | 91.47 | 123.81 | 148.94 | 137.40 |
| Cash Acft. Oper. Exp. | \$533.23 | 412.49 | 522.93 | 468.52 | 529.46 | 410.54 | 460.00 | 361.52 | 365.66 | 364.90 | 426.60 | 394.05 |
| Depr. & Rentals | 145.90 | 165.75 | 121.17 | 211.86 | 164.16 | 91.30 | 105.30 | 101.86 | 107.00 | 105.69 | 96.77 | 104.01 |
| Total Acft. Oper. Exp. | \$679.13 | 578.24 | 644.10 | 680.38 | 693.62 | 501.84 | 565.30 | 463.38 | 472.66 | 470.59 | 523.37 | 498.06 |
| Cost Per Rev. Mile | \$ 2.00 | 1.82 | 1.97 | 1.89 | 1.99 | 1.83 | 2.01 | 1.43 | 1.61 | 1.59 | 1.72 | 1.79 |
| Cost Per Sch. Seat Mile | 1.64¢ | 1.43¢ | 1.49¢ | 1.59¢ | 1.65¢ | 2.06¢ | 2.30¢ | 1.50¢ | 1.61¢ | 1.78¢ | 1.93¢ | 1.93¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 23.7 | 27.4 | 25.0 | 23.6 | 23.8 | 21.7 | 18.8 | 25.8 | 27.0 | 23.5 | 20.4 | 23.4 |

Source: Air Transport World, "Jet Operating Data" - June, 1973.

Table 3-17. Jet Operating Expenses, Including Fuel and Oil Costs: B-747, L-1011 and DC-10, Fourth Quarter, 1972

| | B-747 | | | | | | | L-1011 | | DC-10 | | | | |
|--|----------------|------------|------------|------------|----------------|----------------|------------|----------------|------------|------------|------------|------------|------------|------------|
| | AA Combined | BI Dom. | CO Dom. | DL Dom. | PA Combined | TW Combined | UA Dom. | EA Combined | TW Dom. | AA Dom. | CO Dom. | DL Dom. | NA Dom. | UA Dom. |
| Traffic & Service | | | | | | | | | | | | | | |
| Fleet Size | 16.0 | 1.0 | 4.0 | 6.2 | 29.0 | 19.0 | 13.0 | 8.0 | 5.5 | 20.7 | 5.0 | 1.0 | 7.2 | 15.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$ 276.86 | 244.13 | 287.74 | 285.61 | 309.11 | 298.98 | 344.70 | 262.23 | 253.23 | 169.23 | 218.25 | 208.21 | 184.57 | 285.62 |
| Fuel, Oil & Taxes | 398.29 | 345.07 | 458.30 | 324.70 | 415.39 | 392.67 | 405.88 | 281.21 | 264.27 | 251.60 | 256.47 | 254.74 | 253.50 | 253.20 |
| Insurance | 5.00 | (6.70) | 39.93 | 26.67 | 55.08 | 92.10 | 32.90 | 83.54 | 63.31 | 9.54 | 33.99 | 12.36 | 36.32 | 24.79 |
| Other | 13.44 | ----- | ----- | ----- | 4.51 | .97 | .03 | ----- | 1.01 | 10.70 | .14 | ----- | ----- | .04 |
| Total | \$ 693.59 | 582.50 | 785.97 | 636.98 | 784.09 | 784.72 | 783.51 | 626.98 | 581.82 | 441.07 | 508.85 | 475.31 | 474.39 | 563.71 |
| Maintenance | | | | | | | | | | | | | | |
| Airframe | \$ 145.09 | (136.22) | 183.90 | 160.20 | 72.44 | 106.57 | 78.56 | 112.57 | 52.52 | 77.39 | 98.57 | 77.35 | 71.02 | 62.17 |
| Engine | 88.21 | 414.89 | 370.26 | 157.37 | (20.60) | 414.56 | 151.92 | 43.14 | 308.11 | 34.13 | 161.69 | 141.83 | 61.76 | 122.65 |
| Other | 19.11 | 4.38 | 34.40 | 5.85 | 41.60 | 34.28 | 26.31 | 31.37 | 35.00 | 9.40 | 19.95 | 3.99 | 9.48 | 23.54 |
| Total Direct | \$ 252.41 | 283.05 | 588.56 | 323.42 | 93.44 | 555.41 | 256.79 | 187.08 | 393.63 | 120.92 | 280.21 | 223.17 | 142.26 | 208.36 |
| Maint. Burden | \$ 162.65 | 29.49 | 68.75 | 287.91 | 239.54 | 311.36 | 172.60 | 255.31 | 110.75 | 120.59 | 59.79 | 77.81 | 97.75 | 122.52 |
| Total | \$ 415.06 | 312.54 | 657.31 | 611.33 | 332.98 | 866.77 | 429.39 | 442.39 | 506.38 | 241.51 | 340.00 | 300.98 | 240.01 | 330.88 |
| Cash Acft. Oper. Exp. | \$1,108.65 | 895.04 | 1,443.28 | 1,248.31 | 1,117.07 | 1,651.49 | 1,212.90 | 1,069.37 | 1,088.20 | 682.58 | 848.85 | 776.29 | 714.40 | 894.59 |
| Depr. & Rentals | 868.57 | 462.57 | 328.39 | 506.42 | 879.55 | 593.42 | 545.86 | 608.03 | 486.74 | 404.82 | 275.08 | 742.35 | 348.31 | 433.36 |
| Total Acft. Oper. Exp. | \$1,977.22 | 1,357.80 | 1,771.67 | 1,754.72 | 1,996.62 | 2,244.91 | 1,758.76 | 1,677.40 | 1,574.94 | 1,087.40 | 1,123.93 | 1,518.64 | 1,062.71 | 1,327.95 |
| Cost Per Rev. Mile | \$ 4.41 | 2.94 | 3.75 | 4.32 | 4.38 | 4.81 | 3.74 | 4.21 | 3.72 | 2.64 | 2.72 | 4.44 | 2.76 | 3.17 |
| Cost Per Sch. Seat Mile | 1.42¢ | 0.90¢ | 1.28¢ | 1.18¢ | 1.31¢ | 1.54¢ | 1.23¢ | 1.83¢ | 1.81¢ | 1.15¢ | 1.36¢ | 1.78¢ | 1.11¢ | 1.44¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 20.1 | 25.4 | 25.9 | 18.5 | 20.8 | 17.5 | 23.1 | 16.8 | 16.8 | 23.1 | 22.8 | 16.8 | 23.9 | 19.1 |

Source: Air Transport World, "Jet Operating Data" - June, 1973.

Table 3-18. Jet Operating Expenses, Including Fuel and Oil Costs: B-727-200, B-737, DC-9-30, Third Quarter, 1973

| | B-727-200 | | | | | | B-737 | | | DC-9-20 | | | |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|
| | AA | BI | CO | NA | TW | UA | PI | UA | WA | AL | DL | EA | NC |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 42.0 | 18.7 | 25.2 | 25.0 | 37.0 | 28.0 | 15.7 | 66.0 | 30.0 | 35.0 | 76.4 | 71.7 | 18.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$199.19 | 181.14 | 171.94 | 174.12 | 192.07 | 215.94 | 134.02 | 225.36 | 178.57 | 143.38 | 139.60 | 175.41 | 128.97 |
| Fuel, Oil & Taxes | 179.98 | 164.62 | 197.89 | 167.44 | 179.80 | 175.46 | 112.92 | 116.61 | 127.69 | 130.75 | 117.55 | 118.66 | 123.92 |
| Insurance | 3.36 | 19.22 | 10.60 | 8.25 | 6.93 | 4.06 | 10.66 | 3.26 | 6.22 | 6.76 | 5.34 | 4.99 | 11.31 |
| Other | (2.79) | ----- | ----- | ----- | .32 | .03 | .03 | .03 | ----- | ----- | ----- | ----- | ----- |
| Total | \$379.65 | 364.98 | 380.43 | 349.81 | 379.12 | 395.49 | 257.63 | 345.26 | 312.48 | 280.89 | 262.49 | 299.06 | 267.20 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | 40.84 | 21.84 | 57.68 | 51.14 | 32.69 | 37.66 | 38.07 | 35.53 | 46.00 | 40.05 | 43.00 | 41.11 | 33.77 |
| Engine | 42.48 | 21.95 | 7.74 | 61.04 | 18.32 | 34.69 | 49.61 | 29.53 | (24.68) | 42.13 | 19.74 | 31.00 | 26.42 |
| Other | 6.01 | 3.65 | 13.39 | 7.59 | 8.55 | 16.16 | 6.46 | 16.55 | 3.10 | 9.39 | 2.54 | 9.60 | 7.02 |
| Total Direct | \$ 89.33 | 47.44 | 78.81 | 119.77 | 59.56 | 88.51 | 94.14 | 81.61 | 24.42 | 91.57 | 65.28 | 81.71 | 67.21 |
| Maint. Burden | 102.04 | 18.28 | 103.14 | 74.77 | 65.60 | 78.61 | 30.50 | 67.54 | 20.47 | 42.41 | 59.97 | 71.60 | 47.12 |
| Total | \$191.37 | 65.72 | 181.95 | 194.54 | 125.16 | 167.12 | 124.64 | 149.15 | 44.89 | 133.98 | 125.25 | 153.31 | 114.33 |
| Cash Acft. & Oper. Exp. | \$571.02 | 430.70 | 562.38 | 544.35 | 504.28 | 562.61 | 382.27 | 494.41 | 357.37 | 414.87 | 387.74 | 452.37 | 381.53 |
| Depr. & Rentals | 141.26 | 159.55 | 106.17 | 125.55 | 199.54 | 159.38 | 86.22 | 98.68 | 108.96 | 107.56 | 99.46 | 96.68 | 99.00 |
| Total Acft. Oper. Exp. | \$712.28 | 590.25 | 668.55 | 669.90 | 703.82 | 721.99 | 458.49 | 593.09 | 466.33 | 522.43 | 487.20 | 549.05 | 480.53 |
| Cost Per Rev. Mile | \$ 2.03 | 1.77 | 1.75 | 2.08 | 1.91 | 2.07 | 1.72 | 2.08 | 1.43 | 1.74 | 1.64 | 1.74 | 1.76 |
| Cost Per Sch. Seat Mile | 1.66¢ | 1.39¢ | 1.43¢ | 1.60¢ | 1.60¢ | 1.69¢ | 1.92¢ | 2.20¢ | 1.51¢ | 1.73¢ | 1.83¢ | 1.94¢ | 1.86¢ |
| Fuel and Oil costs as % of Total Oper. Exp. | 25.3 | 27.9 | 29.6 | 25.0 | 25.5 | 24.3 | 24.1 | 19.7 | 27.4 | 25.0 | 24.1 | 21.6 | 25.8 |

Source: Air Transport World, "Jet Operating Data" - May, 1974.

**Table 3-19. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, L-1011 and DC-10, Third Quarter, 1973**

| | B-747 | | | | | | | | L-1011 | | DC-10 | | | | | | |
|--|----------------|------------|------------|------------|----------------|----------------|----------------|------------|----------------|------------|------------|------------|------------|------------|----------------|------------|------------|
| | AA Combined | BI Dom. | CO Dom. | DL Dom. | NW Combined | PA Combined | TW Combined | UA Dom. | EA Combined | TW Dom. | AA Dom. | CO Dom. | DL Dom. | NA Dom. | NW Combined | UA Dom. | WA Dom. |
| Traffic & Service | | | | | | | | | | | | | | | | | |
| Fleet size | 16.0 | 1.0 | 4.0 | 5.0 | 15.0 | 31.1 | 21.3 | 18.0 | 14.7 | 15.0 | 24.0 | 8.0 | 5.0 | 9.0 | 9.3 | 18.0 | 3.3 |
| Aircraft Operating Expenses (Dollars per total block hours) | | | | | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | | | | | |
| Crew salaries & expenses | 308.78 | 276.56 | 311.69 | 348.18 | 282.95 | 306.21 | 282.42 | 302.24 | 323.81 | 242.61 | 276.63 | 227.85 | 289.00 | 209.27 | 227.85 | 261.61 | 276.79 |
| Fuel, oil & taxes | 443.47 | 403.34 | 483.49 | 451.43 | 441.96 | 515.95 | 504.20 | 433.58 | 313.36 | 306.67 | 304.32 | 281.69 | 299.74 | 272.57 | 314.03 | 282.18 | 288.49 |
| Insurance | 12.40 | 44.18 | 30.42 | 26.86 | 27.93 | 43.36 | 26.17 | 20.87 | 27.20 | 19.66 | 11.43 | 26.30 | 26.96 | 23.71 | 31.33 | 19.55 | 23.89 |
| Other | (4.41) | ----- | ----- | ----- | 1.13 | 1.61 | .38 | .02 | ----- | .37 | (3.98) | ----- | ----- | ----- | .71 | .03 | ----- |
| Total | 760.24 | 724.08 | 825.60 | 826.47 | 753.97 | 867.13 | 813.17 | 756.71 | 664.37 | 569.31 | 588.40 | 535.84 | 615.70 | 505.55 | 573.92 | 563.37 | 589.17 |
| Maintenance | | | | | | | | | | | | | | | | | |
| Airframe | 135.24 | 191.66 | 169.94 | 68.80 | 77.15 | 51.45 | 72.43 | 70.09 | 109.88 | 53.22 | 87.54 | 32.04 | 102.93 | 64.70 | 20.64 | 92.19 | 44.70 |
| Engine | 440.99 | 358.05 | 395.22 | 61.50 | 146.40 | 93.63 | 262.23 | 100.05 | 88.17 | 100.67 | 129.64 | 77.34 | 83.55 | 166.53 | 9.46 | 87.18 | 71.88 |
| Other | 13.73 | 5.74 | 37.95 | 5.79 | 27.07 | 15.06 | 25.63 | 22.92 | 38.32 | 27.73 | 9.89 | 20.52 | 2.90 | 9.55 | 4.36 | 20.42 | 2.56 |
| Total direct | 589.96 | 555.45 | 603.11 | 136.09 | 250.62 | 160.14 | 360.29 | 193.06 | 236.37 | 181.62 | 227.07 | 129.90 | 189.38 | 240.78 | 34.46 | 199.79 | 119.14 |
| Maint. burden | 158.50 | 21.16 | 126.15 | 190.58 | 71.68 | 234.92 | 190.20 | 149.43 | 239.96 | 109.84 | 158.22 | 79.36 | 145.71 | 109.26 | 20.10 | 128.28 | 99.85 |
| Total | 748.46 | 576.61 | 729.26 | 326.67 | 322.30 | 395.06 | 550.49 | 342.49 | 476.33 | 291.46 | 385.29 | 209.26 | 335.09 | 350.04 | 54.56 | 328.07 | 218.99 |
| Cash acft. oper. exp. | 1508.70 | 1300.69 | 1554.86 | 1153.14 | 1076.27 | 1262.19 | 1363.66 | 1099.20 | 1140.70 | 860.77 | 973.69 | 745.10 | 950.79 | 855.59 | 628.48 | 891.44 | 808.16 |
| Depr. & rentals | 614.76 | 550.30 | 320.97 | 474.57 | 362.11 | 502.58 | 475.15 | 481.00 | 495.56 | 467.63 | 384.05 | 276.41 | 888.19 | 295.78 | 372.72 | 423.50 | 337.17 |
| Total acft. oper. exp. | \$2123.46 | \$1850.99 | \$1875.83 | \$1627.71 | \$1438.38 | \$1764.77 | \$1838.81 | \$1580.20 | \$1636.26 | \$1328.40 | \$1357.74 | \$1021.51 | \$1838.98 | \$1151.37 | \$1001.20 | \$1314.94 | \$1145.33 |
| Cost per rev. mile | \$ 4.73 | \$ 3.69 | \$ 3.97 | \$ 3.93 | \$ 3.23 | \$ 3.83 | \$ 4.01 | \$ 3.40 | \$ 4.04 | \$ 2.94 | \$ 3.36 | \$ 2.36 | \$ 4.77 | \$ 2.81 | \$ 2.68 | \$ 3.11 | \$ 2.47 |
| Cost per sch. seat mile | 1.49¢ | 1.13¢ | 1.28¢ | 1.06¢ | 0.90¢ | 1.06¢ | 1.12¢ | 1.06¢ | 1.61¢ | 1.41¢ | 1.40¢ | 1.18¢ | 1.91¢ | 1.13¢ | 1.13¢ | 1.30¢ | 1.06¢ |
| Fuel and oil costs as % of total acft. oper. exp. | 20.9 | 21.8 | 25.8 | 27.7 | 30.7 | 29.2 | 27.4 | 27.4 | 19.2 | 23.1 | 22.4 | 27.6 | 16.3 | 23.7 | 31.4 | 21.5 | 25.2 |

Source: Air Transport World, "Jet Operating Data" - April, May, 1974.

**Table 3-20. Jet Operating Expenses, Including Fuel and Oil Costs:
B-727-200, B-737 and DC-9-30, Fourth Quarter, 1973**

| | B-727-200 | | | | | | B-737 | | | DC-9-30 | | | |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| | AA | BI | CO | NA | NW | UA | PI | UA | WA | AL | DL | EA | NC |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 40.8 | 24.8 | 28.3 | 25.0 | 24.0 | 28.0 | 15.3 | 66.0 | 29.3 | 36.6 | 75.6 | 71.2 | 18.7 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Exp. | \$199.06 | 180.28 | 192.84 | 172.55 | 177.85 | 226.87 | 144.77 | 239.90 | 207.30 | 154.08 | 145.76 | 191.54 | 132.25 |
| Fuel, Oil & Taxes | 189.03 | 175.88 | 202.12 | 174.02 | 191.60 | 184.16 | 123.45 | 123.22 | 140.23 | 138.28 | 124.78 | 129.05 | 123.32 |
| Insurance | 5.09 | 10.50 | 11.80 | 11.38 | 8.03 | 3.59 | 22.89 | 2.97 | 4.01 | 7.30 | 5.57 | 6.02 | 15.16 |
| Other | (2.11) | ----- | ----- | ----- | .27 | .02 | .49 | .02 | ----- | ----- | ----- | ----- | .59 |
| Total | \$391.07 | 366.66 | 406.76 | 357.95 | 377.75 | 414.64 | 291.60 | 366.11 | 351.54 | 299.66 | 276.11 | 326.61 | 271.32 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | \$ 42.74 | 24.99 | 57.53 | 57.27 | 32.66 | 50.56 | 43.99 | 39.46 | 56.38 | 44.19 | 38.72 | 40.73 | 32.38 |
| Engine | 42.45 | 19.36 | 25.01 | 57.65 | 54.06 | 37.96 | 49.31 | 32.62 | (4.27) | 51.10 | 23.41 | 37.12 | 39.62 |
| Other | 6.24 | 2.02 | 15.02 | 7.66 | 6.45 | 17.10 | 7.64 | 17.00 | 4.53 | 9.47 | 2.75 | 10.42 | 8.84 |
| Total Direct | \$ 91.43 | 46.37 | 97.56 | 122.58 | 93.17 | 105.62 | 100.94 | 89.08 | 56.64 | 104.76 | 64.88 | 88.27 | 80.84 |
| Maint. Burden | 100.25 | 25.29 | 109.19 | 69.64 | 35.09 | 89.42 | 25.15 | 79.10 | 27.00 | 50.62 | 58.60 | 72.72 | 58.96 |
| Total | \$191.68 | 71.66 | 206.75 | 192.22 | 128.26 | 195.04 | 126.09 | 168.18 | 83.64 | 155.38 | 123.48 | 160.99 | 139.80 |
| Cash Acft. Oper. Exp. | \$582.75 | 438.32 | 613.51 | 550.17 | 506.01 | 609.68 | 417.69 | 534.29 | 435.18 | 455.04 | 399.59 | 487.60 | 411.12 |
| Depr. & Rentals | 155.41 | 153.45 | 175.12 | 125.98 | 196.83 | 165.55 | 103.50 | 104.86 | 100.74 | 123.12 | 100.35 | 101.16 | 113.26 |
| Total Acft. Oper. Exp. | \$738.16 | 591.77 | 788.63 | 676.15 | 702.84 | 775.23 | 521.19 | 639.15 | 535.92 | 578.16 | 499.94 | 588.76 | 524.38 |
| Cost Per Rev. Mile | \$ 2.09 | 1.77 | 2.09 | 2.07 | 2.27 | 2.26 | 1.89 | 2.28 | 1.67 | 1.92 | 1.68 | 1.88 | 1.92 |
| Cost Per Sch. Seat Mile | 1.71¢ | 1.39¢ | 1.09¢ | 1.60¢ | 1.83¢ | 1.83¢ | 2.10¢ | 2.40¢ | 1.76¢ | 1.92¢ | 1.87¢ | 2.08¢ | 2.04¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 25.6 | 29.7 | 25.6 | 25.7 | 27.3 | 23.6 | 23.7 | 19.3 | 26.2 | 23.9 | 25.0 | 21.9 | 23.5 |

Source: Air Transport World, "Jet Operating Data" - August, 1974.

**Table 3-21. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, L-1011 and DC-10, Fourth Quarter, 1973**

| | B-747 | | | | | | | |
|--|----------------------|--------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | AA Combined | BI Dom. | CO Dom. | DL Dom. | NA Dom. | NW Combined | PA Combined | UA Dom. |
| Traffic & Service Fleet Size | 16.0 | 1.0 | 4.0 | 5.0 | 2.0 | 15.0 | 29.5 | 18.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | |
| Flying Operations | | | | | | | | |
| Crew Salaries & Expenses | \$ 323.14 | 267.44 | 339.96 | 336.37 | 297.41 | 275.34 | 369.48 | 328.68 |
| Fuel, Oil & Taxes | 530.68 | 415.03 | 510.39 | 425.24 | 425.09 | 566.70 | 623.53 | 455.82 |
| Insurance | 19.01 | 22.49 | 40.48 | 50.27 | 49.15 | 23.38 | 41.72 | 21.08 |
| Other | (3.57) | ----- | ----- | ----- | ----- | 1.08 | 2.44 | .02 |
| Total | \$ 869.26 | 704.96 | 890.83 | 811.88 | 771.65 | 866.50 | 1,037.17 | 805.60 |
| Maintenance | | | | | | | | |
| Air Frame | \$ 182.46 | 287.78 | 139.87 | 177.20 | 113.21 | 66.44 | 71.94 | 93.93 |
| Engine | 742.67 | 425.26 | 1,306.67 | 230.86 | 273.63 | 170.58 | 72.76 | 96.87 |
| Other | 15.92 | 4.56 | 59.04 | 7.66 | 26.32 | 18.77 | 29.92 | 21.49 |
| Total Direct Maint. Burden | \$ 941.05 160.17 | 717.60 13.84 | 1,505.58 165.66 | 415.72 333.14 | 413.16 94.02 | 255.79 74.49 | 174.62 223.49 | 212.29 143.81 |
| Total | \$1,101.22 | 731.44 | 1,671.24 | 748.86 | 507.18 | 330.28 | 398.11 | 356.10 |
| Cash Acft. Oper. Exp. Depr. & Rentals | \$1,970.48 768.24 | 1,436.40 559.64 | 2,562.07 1,088.23 | 1,560.74 591.78 | 1,278.83 563.57 | 1,196.78 384.07 | 1,435.28 654.45 | 1,161.70 524.20 |
| Total Acft. Oper. Exp. | \$2,738.72 | 1,996.04 | 3,650.30 | 2,152.47 | 1,842.40 | 1,580.85 | 2,089.73 | 1,685.90 |
| Cost Per Rev. Mile | \$ 6.29 | 4.04 | 7.68 | 5.35 | 4.27 | 3.55 | 4.60 | 3.66 |
| Cost Per Sch. Seat Mile | 2.10¢ | 1.23¢ | 2.47¢ | 1.45¢ | 1.18¢ | .99¢ | 1.28¢ | 1.15¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 19.4 | 20.8 | 14.0 | 19.6 | 23.1 | 35.8 | 29.8 | 27.0 |

Source: Air Transport World, "Jet Operating Data" - July, 1974.

Table 3-21. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, L-1011 and DC-10, Fourth Quarter, 1973 - Continued

| | L-1011 | | | | DC-10 | | | | |
|--|---------------------|------------------|------------------|------------------|------------------|------------------|----------------|------------------|-----------------|
| | DL Dom. | EA Combined | AA Dom. | CO Dom. | DL Dom. | NA Dom. | NW Dom. | UA Dom. | WA Dom. |
| Traffic & Service Fleet Size | 1.0 | 20.5 | 21.7 | 8.0 | 5.0 | 9.0 | 10.0 | 18.0 | 3.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | |
| Flying Operations | | | | | | | | | |
| Crew Salaries & Expenses | \$ 173.59 | 339.50 | 272.09 | 291.74 | 328.19 | 211.36 | 258.99 | 311.40 | 340.91 |
| Fuel, Oil & Taxes | 313.54 | 376.56 | 310.50 | 304.56 | 308.01 | 278.27 | 333.33 | 303.25 | 300.77 |
| Insurance | 37.03 | 30.27 | 15.56 | 30.41 | 32.22 | 51.70 | 27.08 | 19.55 | 22.13 |
| Other | ----- | ----- | (3.40) | ----- | ----- | ----- | .66 | .02 | ----- |
| Total | \$ 524.16 | 746.33 | 594.75 | 626.71 | 668.42 | 541.33 | 626.06 | 634.22 | 663.81 |
| Maintenance | | | | | | | | | |
| Airframe | \$ 58.15 | 108.12 | 151.08 | 49.63 | 141.39 | 99.28 | 38.87 | 144.43 | 82.77 |
| Engine | 58.86 | 141.26 | 303.83 | 151.59 | 70.61 | 150.98 | 5.32 | 240.89 | 86.65 |
| Other | 10.96 | 35.55 | 11.04 | 27.07 | 3.82 | 8.63 | 7.41 | 30.78 | 4.66 |
| Total Direct Maint. Burden | \$ 127.97 212.56 | 284.93 202.77 | 465.95 161.65 | 228.29 123.62 | 215.82 207.82 | 258.89 108.02 | 51.60 24.90 | 416.10 183.10 | 174.08 82.91 |
| Total | \$ 340.53 | 487.70 | 627.60 | 351.91 | 423.64 | 366.91 | 76.50 | 599.20 | 256.99 |
| Cash Acft. Oper Exp. | \$ 864.69 | 1,234.03 | 1,222.35 | 978.62 | 1,092.06 | 908.24 | 702.56 | 1,233.42 | 920.80 |
| Depr. & Rentals | 589.41 | 631.00 | 471.66 | 303.71 | 1,178.89 | 352.58 | 421.29 | 518.28 | 402.39 |
| Total Acft. Oper. Exp. | \$1,454.10 | 1,865.03 | 1,694.01 | 1,282.33 | 2,270.95 | 1,260.82 | 1,123.85 | 1,751.70 | 1,323.19 |
| Cost Per Rev. Mile | \$ 4.04 | 4.81 | 4.26 | 3.03 | 6.28 | 3.15 | 3.14 | 4.19 | 2.85 |
| Cost Per Sch. Seat Mile | 1.62¢ | 1.98¢ | 1.79¢ | 1.52¢ | 2.51¢ | 1.27¢ | 1.32¢ | 1.77¢ | 1.21¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 21.6 | 20.2 | 18.3 | 23.6 | 13.6 | 22.1 | 30.2 | 17.3 | 22.7 |

Source: Air Transport World "Jet Operating Data" - July, 1974.

**Table 3-22. Jet Operating Expenses, Including Fuel and Oil Costs:
B-727-200, B-737, and DC-9-30, First Quarter 1974**

| | B-727-200 | | | | | | DC-9-30 | | | | B-737 | | |
|--|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | AA | BI | CO | NA | TW | UA | AL | DL | EA | NC | PI | UA | WA |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 40.7 | 27.9 | 29.0 | 25.0 | 36.8 | 28.0 | 37.7 | 74.7 | 70.8 | 19.0 | 16.0 | 66.0 | 28.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Expenses | \$246.34 | \$196.56 | \$203.67 | \$198.10 | \$233.50 | \$255.29 | \$168.99 | \$176.54 | \$224.16 | \$150.88 | \$160.20 | \$276.62 | \$218.74 |
| Fuel, Oil & Taxes | 228.18 | 249.45 | 249.30 | 196.34 | 275.03 | 240.87 | 184.12 | 172.82 | 176.89 | 156.78 | 150.96 | 161.03 | 183.30 |
| Insurance | 5.56 | 11.87 | 7.33 | 9.86 | 6.81 | 4.42 | 8.16 | 5.36 | 6.09 | 2.90 | 16.29 | 4.03 | 3.97 |
| Other | .12 | — | — | — | 1.78 | .02 | — | — | — | .38 | 1.42 | .03 | — |
| Total | \$480.20 | \$457.88 | \$460.30 | \$404.30 | \$517.12 | \$500.60 | \$361.27 | \$354.72 | \$406.94 | \$310.94 | \$328.87 | \$441.71 | \$406.01 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | \$ 38.29 | \$ 21.04 | \$ 63.31 | \$ 65.81 | \$ 27.13 | \$ 47.57 | \$ 54.30 | \$ 45.19 | \$ 39.01 | \$ 37.66 | \$ 41.71 | \$ 53.95 | \$ 49.75 |
| Engine | 42.54 | 8.62 | 54.97 | 60.19 | 16.06 | 53.12 | 59.23 | 22.41 | 45.25 | 44.14 | 43.80 | 43.79 | 37.27 |
| Other | 6.20 | 2.62 | 13.50 | 9.53 | 8.10 | 17.05 | 9.84 | 2.87 | 10.10 | 8.46 | 5.52 | 17.81 | 4.30 |
| Total Direct | \$ 87.03 | \$ 32.28 | \$131.78 | \$135.53 | \$ 51.29 | \$117.74 | \$123.37 | \$ 70.47 | \$ 94.36 | \$ 90.26 | \$ 91.03 | \$115.55 | \$ 91.32 |
| Maint. Burden | 108.28 | 20.29 | 90.05 | 119.71 | 61.49 | 92.98 | 77.96 | 74.42 | 73.70 | 71.62 | 31.35 | 95.88 | 47.31 |
| Total | \$195.31 | \$ 52.57 | \$221.83 | \$255.24 | \$112.78 | \$210.72 | \$201.33 | \$144.89 | \$168.06 | \$161.88 | \$122.38 | \$211.43 | \$138.63 |
| Cash Acft. Oper. Exp. | \$675.51 | \$510.45 | \$682.13 | \$659.54 | \$629.90 | \$711.32 | \$562.60 | \$499.61 | \$575.00 | \$472.82 | \$451.25 | \$653.14 | \$544.64 |
| Depr. & Rentals | 162.52 | 156.10 | 126.15 | 132.67 | 220.32 | 184.15 | 127.42 | 106.62 | 120.22 | 121.02 | 97.04 | 128.57 | 99.23 |
| Total Acft. Oper. Exp. | \$838.03 | \$666.55 | \$808.28 | \$792.21 | \$850.22 | \$895.47 | \$690.02 | \$606.23 | \$695.22 | \$593.84 | \$548.29 | \$781.71 | \$643.87 |
| Cost Per Rev. Mile | \$ 2.32 | \$ 1.96 | \$ 2.18 | \$ 2.37 | \$ 2.38 | \$ 2.55 | \$ 2.38 | \$ 2.06 | \$ 2.24 | \$ 2.13 | \$ 1.99 | \$ 2.84 | \$ 1.98 |
| Cost Per Sch. Seat Mile | 1.92¢ | 1.53¢ | 1.71¢ | 1.83¢ | 2.00¢ | 2.06¢ | 2.38¢ | 2.29¢ | 2.48¢ | 2.30¢ | 2.21¢ | 2.99¢ | 2.09¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 27.2 | 37.4 | 30.8 | 24.8 | 32.3 | 26.9 | 26.7 | 28.5 | 25.4 | 26.4 | 27.5 | 20.6 | 28.5 |

Source: Air Transport World, "Jet Operating Data" 1975.

**Table 3-23. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, First Quarter 1974**

| | B-747 | | | | | | | |
|--|----------------|------------|-------------|------------|----------------|----------------|----------------|------------|
| | AA Combined | BI Dom. | DL* Dom. | NA Dom. | NW Combined | PA Combined | TW Combined | UA Dom. |
| Traffic & Service | | | | | | | | |
| Fleet Size | 7.4 | 1.0 | 5.0 | 2.0 | 15.0 | 29.3 | 18.0 | 18.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | |
| Flying Operations | | | | | | | | |
| Crew Salaries & Expenses | \$ 441.92 | \$ 294.70 | \$ 365.66 | \$ 323.13 | \$ 323.54 | \$ 468.16 | \$ 368.36 | \$ 359.74 |
| Fuel, Oil & Taxes | 740.67 | 597.12 | 596.08 | 480.94 | 928.37 | 993.67 | 1,383.54 | 589.63 |
| Insurance | 19.60 | 23.91 | 23.66 | 52.07 | 30.65 | 44.51 | 29.53 | 21.56 |
| Other | .48 | — | — | — | 1.01 | 2.52 | 1.10 | .02 |
| Total | \$1,202.67 | \$ 915.73 | \$ 985.40 | \$ 856.14 | \$1,283.57 | \$1,508.86 | \$1,782.53 | \$ 970.95 |
| Maintenance | | | | | | | | |
| Airframe | \$ 241.16 | \$ 140.51 | \$ 220.83 | \$ 91.79 | \$ 74.88 | \$ 94.44 | \$ 235.38 | \$ 92.73 |
| Engine | 324.09 | 286.28 | 210.05 | 213.10 | 156.24 | 111.73 | 255.44 | 143.58 |
| Other | 15.54 | 4.43 | 9.94 | 26.30 | 16.11 | 26.51 | 48.47 | 29.67 |
| Total Direct | \$ 580.79 | \$ 431.22 | \$ 440.82 | \$ 331.19 | \$ 247.23 | \$ 232.68 | \$ 539.29 | \$ 265.98 |
| Maint. Burden | 286.57 | 8.42 | 449.77 | 110.04 | 86.43 | 298.72 | 406.11 | 154.16 |
| Total | \$ 867.36 | \$ 439.64 | \$ 890.59 | \$ 441.23 | \$ 333.66 | \$ 531.40 | \$ 945.40 | \$ 420.14 |
| Cash Acft. Oper. Exp. | \$2,070.03 | \$1,355.37 | \$1,875.99 | \$1,297.37 | \$1,617.23 | \$2,040.26 | \$2,727.93 | \$1,391.09 |
| Depr. & Rentals | 1,737.57 | 547.61 | 673.24 | 542.14 | 449.90 | 771.54 | 739.86 | 585.07 |
| Total Acft. Oper. exp. | \$3,807.60 | \$1,902.98 | \$2,549.23 | \$1,839.51 | \$2,067.13 | \$2,811.80 | \$3,467.79 | \$1,976.16 |
| Cost Per Rev. Mile | \$ 8.57 | \$ 3.88 | \$ 6.38 | \$ 4.32 | \$ 4.59 | \$ 6.16 | \$ 7.38 | \$ 4.39 |
| Cost Per Sch. Seat Mile | 2.51¢ | 1.19¢ | 1.72¢ | 1.19¢ | 1.32¢ | 1.70¢ | 2.04¢ | 1.38¢ |
| Fuel and Oil Costs as a % of Total Acft. Oper. Exp. | 19.5 | 31.4 | 23.4 | 26.1 | 44.9 | 35.3 | 39.9 | 29.8 |

*Does not include expense of interchange aircraft.

Source: Air Transport World, "Jet Operating Data" 1975.

**Table 3-24. Jet Operating Expenses, Including Fuel and Oil Costs:
L-1011 and DC-10, First Quarter 1974**

| | DC-10 | | | | | | | L-1011 | | |
|--|----------------------|----------------------|------------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | AA Dom. | CO Dom. | DL Dom. | NA Dom. | NW Dom. | UA Dom. | WA Dom. | DL Dom. | EA Combined | TW Dom. |
| Traffic & Service | | | | | | | | | | |
| Fleet Size | 20.4 | 8.9 | 5.0 | 9.0 | 12.8 | 18.2 | 2.8 | 4.0 | 28.0 | 14.3 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | |
| Flying Operations | | | | | | | | | | |
| Crew Salaries & Expenses | \$ 325.76 | \$ 289.13 | \$ 413.40 | \$ 241.20 | \$ 299.31 | \$ 354.86 | \$ 342.51 | \$ 245.06 | \$ 378.97 | \$ 315.66 |
| Fuel, Oil & Taxes | 377.44 | 398.16 | 424.38 | 316.00 | 511.60 | 394.85 | 392.78 | 417.19 | 521.30 | 502.65 |
| Insurance | 12.39 | 15.77 | 35.54 | 26.69 | 26.34 | 18.61 | 24.61 | 30.04 | 26.25 | 31.64 |
| Other | .27 | — | — | — | .73 | .02 | — | — | — | 2.18 |
| Total | \$ 715.86 | \$ 703.06 | \$ 873.32 | \$ 583.89 | \$ 837.98 | \$ 768.34 | \$ 759.90 | \$ 692.29 | \$ 926.52 | \$ 852.13 |
| Maintenance | | | | | | | | | | |
| Airframe | \$ 148.62 | \$ 81.63 | \$ 122.58 | \$ 71.36 | \$ 36.19 | \$ 94.14 | \$ 98.48 | \$ 113.34 | \$ 83.49 | \$ 36.98 |
| Engine | 356.41 | 192.16 | 81.61 | 264.77 | 18.34 | 153.29 | 94.43 | 35.60 | 108.81 | 240.21 |
| Other | 9.44 | 23.79 | 5.37 | 8.40 | 5.52 | 21.61 | 6.13 | 6.24 | 28.90 | 46.91 |
| Total Direct Maint. Burden | \$ 514.47 229.35 | \$ 297.58 250.87 | \$ 209.56 254.25 | \$ 344.53 121.41 | \$ 60.05 35.05 | \$ 269.04 141.41 | \$ 199.04 103.16 | \$ 155.18 176.37 | \$ 221.20 168.45 | \$ 324.10 150.42 |
| Total | \$ 743.82 | \$ 548.45 | \$ 463.81 | \$ 465.94 | \$ 95.10 | \$ 410.45 | \$ 302.20 | \$ 331.55 | \$ 389.65 | \$ 474.52 |
| Cash Acft. Oper. Exp. Depr. & Rentals | \$1,459.68 577.30 | \$1,251.51 315.39 | \$1,337.13 1,123.29 | \$1,049.83 313.53 | \$ 933.08 461.31 | \$1,178.79 509.75 | \$1,062.10 382.26 | \$1,023.84 602.68 | \$1,316.17 606.32 | \$1,326.65 669.07 |
| Total Acft. Oper. Exp. | \$2,036.98 | \$1,566.90 | \$2,460.42 | \$1,363.36 | \$1,394.39 | \$1,688.54 | \$1,444.36 | \$1,626.52 | \$1,922.49 | \$1,995.72 |
| Cost Per Rev. Mile | \$ 4.96 | \$ 3.65 | \$ 7.05 | \$ 3.52 | \$ 3.76 | \$ 4.06 | \$ 3.23 | \$ 4.45 | \$ 5.02 | \$ 4.65 |
| Cost Per Sch. Seat Mile | 2.07¢ | 1.83¢ | 2.82¢ | 1.42¢ | 1.60¢ | 1.71¢ | 1.45¢ | 1.78¢ | 1.97¢ | 2.24¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 18.5 | 25.4 | 17.2 | 23.2 | 36.7 | 23.4 | 27.2 | 25.6 | 27.1 | 25.2 |

Source: Air Transport World "Jet Operating Data" 1975.

**Table 3-25. Jet Operating Expenses, Including Fuel and Oil Costs:
B-707 and DC-8, First Quarter 1974**

| | B-707 | | | | | | DC-8 | | | |
|--|-------------|-------------|---------------|-------------|-------------|-------------|------------|------------|------------|------------|
| | AA -100B | AA -300B | NW -300B/C | TW -100B | TW -300B | WA -300C | DL -61 | UA -20 | UA -30 | UA -61 |
| Traffic & Service | | | | | | | | | | |
| Fleet Size | 51.0 | 7.0 | 11.3 | 40.0 | 9.8 | 4.3 | 12.0 | 21.7 | 6.6 | 29.2 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | |
| Flying Operations | | | | | | | | | | |
| Crew Salaries & Expenses | \$ 270.63 | \$ 329.53 | \$ 258.42 | \$ 270.65 | \$ 267.64 | \$ 299.85 | \$ 284.78 | \$ 291.45 | \$ 292.46 | \$ 299.20 |
| Fuel, Oil & Taxes | 268.87 | 311.35 | 396.01 | 322.49 | 492.87 | 371.90 | 377.94 | 385.51 | 363.59 | 351.27 |
| Insurance | 4.97 | 5.78 | 7.55 | 2.86 | 5.14 | 8.77 | 10.05 | 1.44 | 2.38 | 5.17 |
| Other | .15 | .34 | .42 | 1.97 | 1.90 | -- | -- | .02 | .02 | .02 |
| Total | \$ 544.62 | \$ 647.00 | \$ 662.40 | \$ 597.97 | \$ 767.55 | \$ 680.52 | \$ 673.67 | \$ 678.42 | \$ 658.45 | \$ 655.66 |
| Maintenance | | | | | | | | | | |
| Airframe | \$ 58.30 | \$ 44.12 | \$ 44.60 | \$ 49.50 | \$ 51.22 | \$ 82.26 | \$ 66.68 | \$ 46.80 | \$ 44.87 | \$ 46.26 |
| Engine | 69.35 | 76.35 | 137.26 | 64.96 | 47.52 | 51.67 | 59.12 | 76.68 | 73.56 | 78.48 |
| Other | 8.68 | 12.73 | 9.72 | 13.98 | 16.20 | 9.96 | 2.66 | 23.01 | 23.85 | 22.28 |
| Total Direct | \$ 136.33 | \$ 133.20 | \$ 191.58 | \$ 128.44 | \$ 114.94 | \$ 143.89 | \$ 128.46 | \$ 146.49 | \$ 142.28 | \$ 147.02 |
| Maint. Burden | 167.86 | 151.21 | 79.27 | 145.39 | 136.38 | 74.52 | 154.09 | 105.22 | 105.10 | 106.12 |
| Total | \$ 304.19 | \$ 284.41 | \$ 270.85 | \$ 273.83 | \$ 251.32 | \$ 218.41 | \$ 282.55 | \$ 251.71 | \$ 247.38 | \$ 253.14 |
| Cash Acft. & Oper. Exp. | \$ 848.81 | \$ 931.41 | \$ 933.35 | \$ 871.80 | \$1,018.87 | \$ 898.93 | \$ 956.22 | \$ 930.13 | \$ 905.83 | \$ 908.80 |
| Depr. & Rentals | 133.12 | 241.94 | 260.89 | 123.94 | 203.95 | 226.16 | 238.23 | 218.37 | 445.10 | 257.02 |
| Total Acft. Oper. Exp. | \$ 981.93 | \$1,173.35 | \$1,194.24 | \$ 995.74 | \$1,222.82 | \$1,125.09 | \$1,194.45 | \$1,148.50 | \$1,350.93 | \$1,165.82 |
| Cost Per Rev. Mile | \$ 2.47 | \$ 2.89 | \$ 3.20 | \$ 2.51 | \$ 3.01 | \$ 2.45 | \$ 3.25 | \$ 2.88 | \$ 3.53 | \$ 2.85 |
| Cost Per Sch. Seat Mile | 2.05¢ | 2.29¢ | 2.78¢ | 1.95¢ | 2.11¢ | 1.82¢ | 1.67¢ | 2.31¢ | 2.79¢ | 2.22¢ |
| Fuel and Oil Costs as % of Total Acft. Oper. Exp. | 27.4 | 26.5 | 33.2 | 32.4 | 40.3 | 33.1 | 31.6 | 33.6 | 26.9 | 30.1 |

Source: Air Transport World, "Jet Operating Data" 1975.

**Table 3-26. Jet Operating Expenses, Including Fuel and Oil Costs:
B-727-200, B-737, and DC-9-30, Second Quarter 1974**

| | B-727-200 | | | | | | DC-9-30 | | | | B-737 | | |
|--|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | AA | B1 | CO | NA | TW | UA | AL | DL | EA | NC | PI | UA | WA |
| Traffic & Service | | | | | | | | | | | | | |
| Fleet Size | 41.3 | 26.2 | 29.0 | 25.0 | 37.0 | 28.0 | 39.0 | 71.7 | 71.3 | 19.0 | 16.2 | 65.5 | 28.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | | | | |
| Flying Operations | | | | | | | | | | | | | |
| Crew Salaries & Expenses | \$242.52 | \$201.88 | \$198.60 | \$198.98 | \$219.92 | \$255.84 | \$165.79 | \$179.61 | \$197.36 | \$158.41 | \$153.54 | \$268.23 | \$225.59 |
| Fuel, Oil & Taxes | 286.68 | 270.20 | 310.13 | 200.78 | 335.63 | 282.10 | 218.55 | 200.60 | 192.40 | 180.98 | 174.35 | 188.49 | 210.61 |
| Insurance | 5.72 | 15.42 | 10.28 | 13.66 | 7.12 | 5.10 | 7.23 | 5.60 | 5.06 | 15.41 | 15.26 | 4.30 | 4.24 |
| Other | (.35) | .02 | — | — | .73 | .02 | — | — | — | .21 | (.04) | .02 | — |
| Total | \$534.57 | \$487.52 | \$519.01 | \$413.42 | \$563.40 | \$543.06 | \$391.57 | \$385.81 | \$394.82 | \$355.01 | \$343.11 | \$461.04 | \$440.44 |
| Maintenance | | | | | | | | | | | | | |
| Airframe | \$ 37.50 | \$ 19.01 | \$ 54.81 | \$ 69.50 | \$ 51.22 | \$ 39.69 | \$ 46.44 | \$ 52.59 | \$ 31.89 | \$ 37.79 | \$ 45.57 | \$ 52.45 | \$ 68.84 |
| Engine | 43.96 | 13.78 | 43.13 | 67.97 | 29.41 | 52.17 | 73.54 | 24.71 | 41.12 | 63.29 | 48.59 | 45.78 | 52.07 |
| Other | 6.19 | 5.08 | 15.88 | 7.89 | 10.01 | 9.11 | 10.82 | 3.09 | 8.62 | 9.49 | 7.49 | 19.44 | 4.96 |
| Total Direct | \$ 87.65 | \$ 37.87 | \$113.82 | \$145.36 | \$ 90.64 | \$100.97 | \$130.80 | \$ 80.39 | \$ 81.63 | \$110.57 | \$101.65 | \$117.67 | \$125.87 |
| Maint. Burden | 101.91 | 27.02 | 101.85 | 112.92 | 93.10 | 80.89 | 66.89 | 82.35 | 56.32 | 63.34 | 24.27 | 92.70 | 59.88 |
| Total | \$189.56 | \$ 64.89 | \$215.57 | \$258.28 | \$183.74 | \$181.86 | \$187.69 | \$162.74 | \$137.95 | \$173.91 | \$125.92 | \$210.37 | \$185.75 |
| Cash Acft. Oper. Exp. | \$724.13 | \$552.41 | \$734.68 | \$671.70 | \$747.14 | \$724.92 | \$579.26 | \$548.55 | \$532.77 | \$528.92 | \$469.03 | \$671.41 | \$626.19 |
| Depr. & Rentals | 157.90 | 150.32 | 122.63 | 128.84 | 176.96 | 174.86 | 126.44 | 110.20 | 110.16 | 117.34 | 89.55 | 116.46 | 110.78 |
| Total Acft. Oper. Exp. | \$882.03 | \$702.73 | \$857.31 | \$800.54 | \$924.10 | \$899.78 | \$705.70 | \$658.75 | \$642.93 | \$646.26 | \$558.58 | \$787.87 | \$736.97 |
| Cost Per Rev. Mile | \$ 2.44 | \$ 2.03 | \$ 2.26 | \$ 2.37 | \$ 2.56 | \$ 2.57 | \$ 2.37 | \$ 2.21 | \$ 2.01 | \$ 2.34 | \$ 1.99 | \$ 2.81 | \$ 2.24 |
| Cost Per Sch. Seat Mile | 2.03¢ | 1.59¢ | 1.83¢ | 1.83¢ | 1.42¢ | 2.08¢ | 2.37¢ | 2.46¢ | 2.22¢ | 2.44¢ | 2.22¢ | 2.97¢ | 2.37¢ |
| Fuel and Costs as a % of Total Acft. Oper. Exp. | 32.5 | 38.5 | 36.2 | 25.1 | 36.3 | 31.4 | 31.0 | 30.5 | 29.9 | 28.0 | 31.2 | 23.9 | 28.6 |

Source: Air Transport World, "Jet Operating Data" 1975.

**Table 3-27. Jet Operating Expenses, Including Fuel and Oil Costs:
B-747, Second Quarter 1974**

| | B-747 | | | | | | | |
|--|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|----------------|
| | AA Combined | BI Domestic | DL* Domestic | NA Domestic | NW Combined | PA* Combined | TW Combined | UA Domestic |
| Traffic & Service | | | | | | | | |
| Fleet Size | 11.0 | 1.0 | 5.0 | 1.1 | 15.0 | 29.7 | 19.0 | 18.0 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | |
| Flying Operations | | | | | | | | |
| Crew Salaries & Expenses | \$ 429.44 | \$ 300.71 | \$ 377.18 | \$ 396.31 | \$ 304.71 | \$ 388.12 | \$ 360.74 | \$ 365.73 |
| Fuel, Oil & Taxes | 824.16 | 681.91 | 738.43 | 462.21 | 1,085.93 | 1,093.07 | 1,364.02 | 697.34 |
| Insurance | 13.20 | 32.35 | 37.16 | 66.78 | 22.67 | 39.40 | 30.40 | 26.35 |
| Other | (1.02) | .02 | — | — | 1.13 | 1.63 | 1.10 | .02 |
| Total | \$1,265.78 | \$1,014.99 | \$1,152.77 | \$ 925.30 | \$1,414.44 | \$1,522.22 | \$1,756.26 | \$1,089.44 |
| Maintenance | | | | | | | | |
| Airframe | \$ 119.59 | \$ 182.92 | \$ 136.27 | \$ 169.60 | \$ 178.04 | \$ 95.48 | \$ 146.79 | \$ 98.04 |
| Engine | 273.30 | 356.39 | 200.46 | 235.50 | 150.73 | 115.40 | 216.83 | 159.54 |
| Other | 15.43 | 7.97 | 8.77 | 19.33 | 18.56 | 40.42 | 41.50 | 16.90 |
| Total Direct | \$ 408.32 | \$ 547.28 | \$ 345.50 | \$ 424.43 | \$ 347.33 | \$ 251.30 | \$ 405.12 | \$ 274.48 |
| Maint. Burden | 219.90 | 11.54 | 406.19 | 297.89 | 81.82 | 253.24 | 331.82 | 161.40 |
| Total | \$ 628.22 | \$ 558.82 | \$ 751.69 | \$ 722.32 | \$ 429.15 | \$ 504.54 | \$ 736.94 | \$ 435.88 |
| Cash Acft. Oper. Exp. | \$1,894.00 | \$1,573.81 | \$1,904.46 | \$1,647.63 | \$1,843.59 | \$2,026.76 | \$2,493.20 | \$1,525.32 |
| Depr. & Rentals | 1,470.66 | 546.03 | 704.81 | 519.33 | 430.30 | 674.41 | 561.13 | 580.65 |
| Total Acft. Oper. Exp. | \$3,364.66 | \$2,119.84 | \$2,609.27 | \$2,166.96 | \$2,273.89 | \$2,701.17 | \$3,054.33 | \$2,105.97 |
| Cost Per Rev. Mile | \$ 7.52 | \$ 4.21 | \$ 6.30 | \$ 5.43 | \$ 5.01 | \$ 5.87 | \$ 6.38 | \$ 4.59 |
| Cost Per Sch. Seat Mile | 2.15¢ | 1.17¢ | 1.70¢ | 1.52¢ | 1.39¢ | 1.63¢ | 1.76¢ | 1.44¢ |
| Fuel and Oil Costs as a % of Total Acft. Oper. Exp. | 24.5 | 32.2 | 28.3 | 21.3 | 47.8 | 40.5 | 44.7 | 33.1 |

*Does not include expense of interchange aircraft.

Source: Air Transport World, "Jet Operating Data" 1975.

**Table 3-28. Jet Operating Expenses, Including Fuel and Oil Costs:
L-1011 and DC-10, Second Quarter 1974**

| | DC-10 Domestic | | | | | | | L-1011 | | |
|--|----------------|------------|-------------|------------|------------|------------|------------|------------|----------------|------------|
| | AA | CO | DL | NA | NW | UA | WA* | DL Dom. | EA Combined | TW Dom. |
| Traffic & Service | | | | | | | | | | |
| Fleet Size | 22.4 | 11.8 | 5.0 | 9.0 | 14.9 | 21.0 | 3.5 | 6.0 | 24.3 | 19.8 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | | | |
| Flying Operations | | | | | | | | | | |
| Crew Salaries & Expenses | \$ 301.79 | \$ 268.51 | \$ 451.48 | \$ 263.45 | \$ 276.99 | \$ 354.22 | \$ 332.40 | \$ 346.57 | \$ 343.37 | \$ 282.51 |
| Fuel, Oil & Taxes | 481.08 | 498.79 | 516.54 | 353.43 | 627.26 | 464.83 | 498.26 | 510.14 | 627.67 | 613.83 |
| Insurance | 11.44 | 24.26 | 40.84 | 81.02 | 17.88 | 22.70 | 21.75 | 28.95 | 23.98 | 27.52 |
| Other | (.57) | — | — | — | .62 | .02 | — | — | (.01) | .88 |
| Total | \$ 793.74 | \$ 791.56 | \$ 1,008.86 | \$ 697.90 | \$ 922.75 | \$ 841.77 | \$ 852.41 | \$ 885.66 | \$ 995.01 | \$ 924.74 |
| Maintenance | | | | | | | | | | |
| Airframe | \$ 45.60 | \$ 90.85 | \$ 187.07 | \$ 77.76 | \$ 54.02 | \$ 128.74 | \$ 66.55 | \$ 119.85 | \$ 109.79 | \$ 43.93 |
| Engine | 420.45 | 201.11 | 5.51 | 398.49 | 41.53 | 155.27 | 78.42 | 21.00 | 232.95 | 108.87 |
| Other | 10.22 | 23.44 | 4.06 | 9.08 | 8.73 | 3.03 | 7.99 | 5.12 | 37.92 | 35.33 |
| Total Direct | \$ 476.27 | \$ 315.40 | \$ 196.64 | \$ 485.33 | \$ 104.28 | \$ 287.04 | \$ 152.96 | \$ 145.97 | \$ 380.66 | \$ 188.13 |
| Maint. Burden | 201.03 | 122.65 | 201.16 | 141.21 | 37.39 | 150.11 | 72.76 | 228.06 | 203.91 | 132.97 |
| Total | \$ 677.30 | \$ 438.05 | \$ 397.80 | \$ 626.54 | \$ 141.57 | \$ 437.15 | \$ 225.72 | \$ 374.03 | \$ 584.57 | \$ 321.10 |
| Cash Acft. Oper. Exp. | \$1,471.04 | \$1,229.61 | \$1,406.66 | \$1,324.44 | \$1,064.42 | \$1,278.92 | \$1,078.13 | \$1,259.69 | \$1,579.58 | \$1,245.84 |
| Depr. & Rentals | 566.96 | 316.02 | 1,180.23 | 306.75 | 453.49 | 502.37 | 339.63 | 546.81 | 572.29 | 627.07 |
| Total Acft. Oper. Exp. | \$2,038.00 | \$1,545.63 | \$2,586.89 | \$1,631.20 | \$1,517.91 | \$1,781.29 | \$1,417.76 | \$1,806.50 | \$2,151.87 | \$1,872.91 |
| Cost Per Rev. Mile | \$ 4.86 | \$ 3.48 | \$ 6.99 | \$ 4.03 | \$ 4.02 | \$ 4.21 | \$ 3.13 | \$ 4.85 | \$ 5.56 | \$ 4.39 |
| Cost Per Sch. Seat Mile | 2.03¢ | 1.74¢ | 2.80¢ | 1.63¢ | 1.71¢ | 1.78¢ | 1.40¢ | 1.94¢ | 2.21¢ | 2.00¢ |
| Fuel and Oil Coast as % of Total Acft. Oper. Exp. | 23.6 | 32.3 | 20.0 | 21.7 | 41.3 | 26.1 | 35.1 | 28.2 | 29.2 | 32.8 |

*Does not include expense of interchange aircraft.

Source: Air Transport World "Jet Operating Data" 1975.

**Table 3-29. Jet Operating Expenses, Including Fuel and Oil Costs:
B-707 and DC-8, Second Quarter 1974**

| | B-707 | | | | | DC-8 | | |
|--|-------------|-------------|---------------|-------------|-------------|------------|------------|------------|
| | AA -100B | AA -300B | NW -300B/C | TW -300B | WA -300C | DL -61 | UA -20 | UA -61 |
| Traffic & Service | | | | | | | | |
| Fleet Size | 50.6 | 7.5 | 7.6 | 10.7 | 4.2 | 11.0 | 23.7 | 29.9 |
| Aircraft Operating Expenses (Dollars Per Total Block Hours) | | | | | | | | |
| Flying Operations | | | | | | | | |
| Crew Salaries & Expenses | \$ 249.68 | \$ 297.53 | \$ 242.99 | \$ 250.90 | \$ 288.69 | \$ 317.04 | \$ 287.79 | \$ 296.58 |
| Fuel, Oil & Taxes | 339.12 | 332.02 | 454.88 | 516.89 | 434.86 | 415.39 | 452.13 | 409.84 |
| Insurance | 5.25 | 5.99 | 4.64 | 4.32 | 7.88 | 9.63 | 1.57 | 5.97 |
| Other | (.48) | (.79) | .39 | .87 | — | — | .02 | .02 |
| Total | \$ 593.57 | \$ 634.75 | \$ 702.90 | \$ 772.98 | \$ 731.43 | \$ 742.06 | \$ 741.51 | \$ 712.41 |
| Maintenance | | | | | | | | |
| Airframe | \$ 48.06 | \$ 58.59 | \$ 49.90 | \$ 50.83 | \$ 62.96 | \$ 64.75 | \$ 92.71 | \$ 84.73 |
| Engine | 64.85 | 71.19 | 120.54 | 49.72 | 28.48 | 44.79 | 58.57 | 72.41 |
| Other | 8.86 | 14.81 | 10.91 | 8.47 | 10.72 | 2.07 | 22.51 | 22.31 |
| Total Direct | \$ 121.77 | \$ 144.59 | \$ 181.35 | \$ 109.02 | \$ 102.16 | \$ 111.61 | \$ 173.79 | \$ 179.45 |
| Maint. Burden | 142.18 | 164.91 | 73.02 | 119.41 | 48.55 | 121.02 | 136.10 | 124.57 |
| Total | \$ 263.95 | \$ 309.50 | \$ 254.37 | \$ 228.43 | \$ 150.71 | \$ 232.63 | \$ 309.89 | \$ 304.02 |
| Cash Acft. Oper. Exp. | \$ 857.52 | \$ 944.25 | \$ 957.27 | \$1,001.41 | \$ 882.14 | \$ 974.69 | \$1,051.40 | \$1,016.43 |
| Depr. & Rentals | 132.02 | 233.90 | 241.78 | 159.86 | 215.23 | 240.38 | 127.89 | 246.61 |
| Total Acft. Oper. Exp. | \$ 989.54 | \$1,178.15 | \$1,199.05 | \$1,161.27 | \$1,097.37 | \$1,215.07 | \$1,179.29 | \$1,263.04 |
| Cost Per Rev. Mile | \$ 2.47 | \$ 2.90 | \$ 3.31 | \$ 2.84 | \$ 2.39 | \$ 3.35 | \$ 2.90 | \$ 3.05 |
| Cost Per Sch. Seat Mile | 1.93¢ | 2.26¢ | 2.47¢ | 1.93¢ | 1.70¢ | 1.72¢ | 2.32¢ | 2.20¢ |
| Fuel and Oil Coast as a % of Total Acft. Oper. Exp. | 34.3 | 28.2 | 37.9 | 44.5 | 39.6 | 34.2 | 38.3 | 32.4 |

Source: Air Transport World, "Jet Operating Data" 1975.

Table 3-30. United States Total Gross Consumption of Energy Resources by Major Sources, ¹ 1947-1974

(Trillion Btu)*

| Year | Anthracite | Bituminous Coal and Lignite | Natural Gas Dry ² | Petroleum ³ | Total Fossil Fuels | Hydro-power ⁴ | Nuclear Power ⁴ | Total Gross Energy Inputs | Percentage Change From Prior Year |
|-------------------|------------|-----------------------------|------------------------------|------------------------|--------------------|--------------------------|----------------------------|---------------------------|-----------------------------------|
| 1947 | 1,224 | 14,600 | 4,518 | 11,367 | 31,709 | 1,326 | — | 33,035 | — |
| 1948 | 1,275 | 13,622 | 5,033 | 12,557 | 32,487 | 1,393 | — | 33,880 | +2.6 |
| 1949 | 958 | 11,673 | 5,289 | 12,119 | 30,039 | 1,449 | — | 31,488 | -7.1 |
| 1950 | 1,013 | 11,900 | 6,150 | 13,489 | 32,552 | 1,440 | — | 33,992 | +8.0 |
| 1951 | 940 | 12,285 | 7,248 | 14,848 | 35,321 | 1,454 | — | 36,775 | +8.2 |
| 1952 | 897 | 10,971 | 7,760 | 15,334 | 34,962 | 1,496 | — | 36,458 | -.9 |
| 1953 | 711 | 11,182 | 8,156 | 16,098 | 36,147 | 1,439 | — | 37,586 | +3.1 |
| 1954 | 683 | 9,512 | 8,548 | 16,132 | 34,875 | 1,388 | — | 36,263 | -3.5 |
| 1955 | 599 | 10,941 | 9,232 | 17,524 | 38,296 | 1,407 | — | 39,703 | +9.5 |
| 1956 | 610 | 11,142 | 9,834 | 18,627 | 40,213 | 1,487 | — | 41,700 | +5.0 |
| 1957 | 528 | 10,640 | 10,416 | 18,570 | 40,154 | 1,551 | 1 | 41,706 | — |
| 1958 | 483 | 9,366 | 10,995 | 19,214 | 40,058 | 1,636 | 2 | 41,696 | — |
| 1959 | 478 | 9,332 | 11,990 | 19,747 | 41,547 | 1,591 | 2 | 43,140 | +3.5 |
| 1960 | 447 | 9,693 | 12,699 | 20,067 | 42,906 | 1,657 | 6 | 44,569 | +3.3 |
| 1961 | 404 | 9,502 | 13,228 | 20,487 | 43,621 | 1,680 | 18 | 45,319 | +1.7 |
| 1962 | 363 | 9,826 | 14,121 | 21,267 | 45,577 | 1,821 | 24 | 47,422 | +4.6 |
| 1963 | 361 | 10,353 | 14,843 | 21,950 | 47,507 | 1,767 | 34 | 49,308 | +4.0 |
| 1964 | 365 | 10,899 | 15,648 | 22,386 | 49,298 | 1,907 | 35 | 51,240 | +3.9 |
| 1965 | 328 | 11,580 | 16,098 | 23,241 | 51,247 | 2,058 | 38 | 53,343 | +4.1 |
| 1966 | 290 | 12,205 | 17,393 | 24,394 | 54,282 | 2,073 | 57 | 56,412 | +5.8 |
| 1967 | 274 | 11,982 | 18,250 | 25,335 | 55,841 | 2,344 | 80 | 58,265 | +3.3 |
| 1968 | 258 | 12,401 | 19,580 | 27,052 | 59,291 | 2,342 | 130 | 61,763 | +6.0 |
| 1969 | 224 | 12,509 | 21,020 | 28,421 | 62,174 | 2,659 | 146 | 64,979 | +5.2 |
| 1970 | 210 | 12,712 | 22,029 | 29,614 | 64,565 | 2,650 | 229 | 67,444 | +3.8 |
| 1971 | 186 | 11,887 | 22,819 | 30,570 | 65,462 | 2,862 | 404 | 68,728 | +1.9 |
| 1972 | 150 | 12,345 | 23,125 | 32,966 | 68,586 | 2,946 | 576 | 72,108 | +5.0 |
| 1973 ^T | 144 | 13,150 | 22,712 | 34,851 | 70,857 | 2,998 | 888 | 74,743 | +4.8 |
| 1974 ^P | 132 | 13,037 | 22,737 | 33,480 | 69,396 | 3,052 | 1,173 | 73,121 | -2.2 |

*One British Thermal Unit (BTU) is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at or near 39.2°F.

¹ Gross energy is that contained in all types of commercial energy at the time it is incorporated in the economy, whether the energy is produced domestically or imported. Gross energy comprises inputs of primary fuels (or their derivatives), and outputs of hydropower and nuclear power converted to theoretical energy inputs. Gross energy includes the energy used for the production, processing, and transportation of energy proper.

² Excludes natural gas liquids.

³ Petroleum products including still gas, liquefied refinery gas, and natural gas liquids.

⁴ Outputs of hydropower (adjusted for net imports or net exports) and nuclear power converted to theoretical energy inputs calculated from national average heat rates for fossil-fueled steam-electric plants provided by the Federal Power Commission. Energy input for nuclear power in 1971 is converted at an average heat rate of 10,660 Btu per net kilowatt-hour based on information from the Atomic Energy Commission. Excludes inputs for power generated by nonutility fuel-burning plants, which are included within the other consuming sectors.

^P Preliminary

^T Revised

Source: U.S. Department of the Interior, *U.S. Energy through the Year 2000*, Dec., 1972; and *News Release*, April 3, 1975, Table 2.

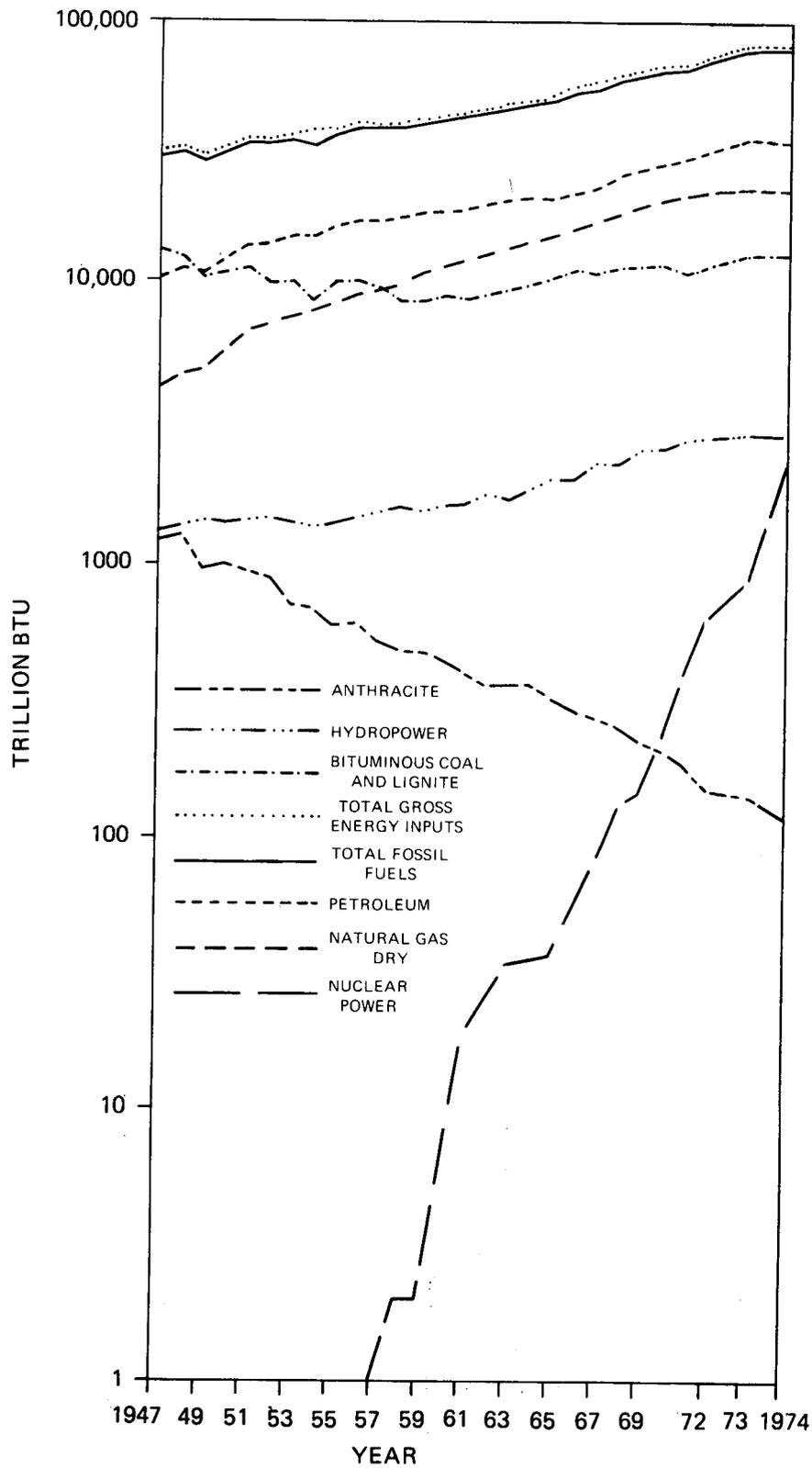


Figure 17. United States Total Gross Consumption of Energy Resources by Major Sources, 1947-1974

**Table 3-31. U.S. Gross Consumption of Energy Resources by Major Sources
and Consuming Sectors, 1973 and 1974
(Trillion Btu)¹**

| Consuming Sectors | Anthracite | Bituminous coal and lignite | Natural gas dry ² | Petroleum ³ | Hydropower ⁴ | Nuclear power ⁴ | Total gross energy inputs ⁵ | Utility electricity distributed ⁶ | Total net energy inputs ⁷ | Percentage change from 1973 |
|---|------------|-----------------------------|------------------------------|------------------------|-------------------------|----------------------------|--|--|--------------------------------------|-----------------------------|
| Household and commercial: | | | | | | | | | | |
| 1973 | 74 | 222 | 7,318 | 6,689 | n/a | n/a | 14,303 | 3,709 | 18,012 | |
| 1974 (preliminary) | 62 | 229 | 7,116 | 6,390 | n/a | n/a | 13,797 | 3,687 | 17,484 | -2.9 |
| Industrial: | | | | | | | | | | |
| 1973 | 33 | 4,344 | 10,970 | 6,059 | 34 | n/a | 21,440 | 2,634 | 24,074 | |
| 1974 (preliminary) | 32 | 4,176 | 11,129 | 5,826 | 34 | n/a | 21,197 | 2,665 | 23,862 | -0.9 |
| Transportation:⁸ | | | | | | | | | | |
| 1973 | — | 3 | 743 | 18,164 | n/a | n/a | 18,910 | 15 | 18,925 | |
| 1974 (preliminary) | — | 2 | 664 | 17,608 | n/a | n/a | 18,274 | 16 | 18,290 | -3.4 |
| Electricity generation, utilities:⁴ | | | | | | | | | | |
| 1973 | 37 | 8,581 | 3,681 | 3,656 | 2,964 | 888 | 19,807 | 6,358 | n/a | |
| 1974 (preliminary) | 38 | 8,630 | 3,328 | 3,448 | 3,018 | 1,173 | 19,635 | 6,368 | n/a | -0.9 |
| Miscellaneous and unaccounted for: | | | | | | | | | | |
| 1973 | — | — | — | 283 | — | — | 283 | n/a | 283 | |
| 1974 (preliminary) | — | — | — | 218 | — | — | 218 | n/a | 218 | |
| Total energy inputs: | | | | | | | | | | |
| 1973 | 144 | 13,150 | 22,712 | 34,851 | 2,998 | 888 | 74,743 | n/a | 61,294 | |
| 1974 (preliminary) | 132 | 13,037 | 22,237 | 33,490 | 3,052 | 1,173 | 73,121 | n/a | 59,854 | -2.2 |

n/a — not available

¹ Gross energy is the total of inputs into the economy of the primary fuels (petroleum, natural gas, and coal, including imports) or their derivatives, plus the generation of hydro and nuclear power converted to equivalent energy inputs (see footnote 4).

² Excludes natural gas liquids.

³ Petroleum products including still gas, liquefied refinery gas, and natural gas liquids.

⁴ Outputs of hydropower (adjusted for net imports or net exports) are converted to theoretical energy inputs calculated from national average heat rates for fossil-fueled steam electric plants provided by the Federal Power Commission using 10,389 Btu per net kilowatt-hour. Energy inputs for nuclear power are converted at an average heat rate of 10,660 Btu per kilowatt-hour based on information from the Atomic Energy Commission. Excludes inputs for power generated by nonutility plants, which are included within the other consuming sectors.

⁵ Gross energy resource inputs with electricity generation shown as separate consuming sector.

⁶ Utility electricity generated and imported, distributed to the other consuming sectors as energy resource inputs. Distribution to sectors is based on sales reported to the Edison Electric Institute "Statistical Yearbook of the Electric Utility Industry for 1973." Conversion of electricity to energy equivalent by sector was made at the value of contained energy corresponding to 100 percent thermal efficiency using a theoretical rate of 3,412 Btu/kW-hr.

⁷ Energy inputs into the final consuming sectors — household and commercial, industrial and transportation — consisting of direct fuels and electricity distributed from the electricity generation sector.

Conversion losses in the electric sector constitute the difference between net and gross energy.

⁸ Includes bunkers and military transportation.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, *News Release*, April 3, 1975, Table 2.

Table 3-32. Gross Consumption of Mineral Energy Resources and Electricity from Hydropower and Nuclear Power in the United States, 1947-1974

| Year | Coal Thousand tons | Natural Gas, dry Million Cu. Ft. | Petroleum ¹ Million barrels | Hydropower Million Kilowatt-hours | Nuclear Power Million Kilowatt-hours |
|-------------------|-----------------------|-------------------------------------|---|--------------------------------------|---|
| 1947 | 605,443 | 4,365,608 | 1,989.8 | 84,981 | — |
| 1948 | 570,109 | 4,862,427 | 2,120.0 | 88,535 | — |
| 1949 | 483,238 | 5,109,680 | 2,128.0 | 96,361 | — |
| 1950 | 494,102 | 5,942,429 | 2,375.1 | 102,671 | — |
| 1951 | 505,904 | 7,002,545 | 2,584.2 | 106,554 | — |
| 1952 | 454,057 | 7,497,945 | 2,671.1 | 111,977 | — |
| 1953 | 454,798 | 7,869,867 | 2,775.3 | 111,625 | — |
| 1954 | 389,960 | 8,258,515 | 2,848.9 | 113,980 | — |
| 1955 | 447,012 | 8,920,259 | 3,100.2 | 120,304 | — |
| 1956 | 456,858 | 9,501,857 | 3,232.9 | 129,775 | — |
| 1957 | 434,468 | 10,063,912 | 3,233.8 | 136,959 | 10 |
| 1958 | 385,703 | 10,623,393 | 3,370.9 | 147,581 | 165 |
| 1959 | 385,056 | 11,584,909 | 3,481.2 | 145,002 | 188 |
| 1960 | 398,029 | 12,269,341 | 3,611.2 | 153,958 | 518 |
| 1961 | 390,305 | 12,750,043 | 3,641.3 | 157,754 | 1,692 |
| 1962 | 402,774 | 13,612,325 | 3,796.0 | 172,458 | 2,270 |
| 1963 | 423,325 | 14,341,255 | 3,924.5 | 168,573 | 3,212 |
| 1964 | 445,516 | 15,118,174 | 4,034.2 | 182,258 | 3,341 |
| 1965 | 472,064 | 15,598,427 | 4,202.0 | 196,843 | 3,657 |
| 1966 | 497,666 | 16,853,606 | 4,410.8 | 199,030 | 5,520 |
| 1967 | 491,216 | 17,684,573 | 4,584.5 | 224,650 | 7,655 |
| 1968 | 508,990 | 18,972,915 | 4,901.8 | 225,242 | 12,528 |
| 1969 | 516,084 | 20,387,827 | 5,159.9 | 254,540 | 13,928 |
| 1970 | 525,406 | 21,367,036 | 5,364.5 | 252,571 | 21,801 |
| 1971 | 494,862 | 22,132,453 | 5,552.6 | 269,851 | 37,899 |
| 1972 | 519,800 | 22,429,500 | 5,990.3 | 280,477 | 54,031 |
| 1973 ^r | 556,000 | 22,245,200 | 6,317.3 | 285,331 | 83,292 |
| 1974 ^p | 540,000 | 21,780,000 | 6,080.0 | 290,500 | 110,000 |

^pPreliminary

^rrevised

¹ Petroleum products refined and processed from crude oil, including gas, liquefied refinery gas and natural gas liquids.

Source: U.S. Department of the Interior, *U.S. Energy through the Year 2000*, Dec., 1972; and *News Release*, April 3, 1975, Table 1, and equivalent tables in earlier editions.

Table 3-33. Petroleum Consumption by Sector, 1947-1974

(Trillion Btu)

| Year | Household and Commercial | | | Industrial | | | Transportation ² | Transportation as % of Total | Electrical Generation | Other Not Specified | Total Input |
|-------------------|--------------------------|--------------|-------|------------|--------------|-------|-----------------------------|------------------------------|-----------------------|---------------------|-------------|
| | Fuel use | Non-fuel use | Total | Fuel use | Non-fuel use | Total | | | | | |
| 1947 | 1,925 | 326 | 2,251 | 2,085 | 432 | 2,517 | 5,761 | 50.7 | 468 | 371 | 11,368 |
| 1948 | 2,154 | 385 | 2,539 | 2,102 | 428 | 2,530 | 6,157 | 49.0 | 444 | 889 | 12,559 |
| 1949 | 2,093 | 379 | 2,472 | 2,064 | 402 | 2,466 | 6,183 | 51.0 | 577 | 422 | 12,120 |
| 1950 | 2,603 | 435 | 3,038 | 2,213 | 453 | 2,666 | 6,785 | 50.3 | 662 | 337 | 13,488 |
| 1951 | 2,722 | 480 | 3,202 | 2,509 | 535 | 3,044 | 7,482 | 50.4 | 499 | 621 | 14,848 |
| 1952 | 2,833 | 517 | 3,350 | 2,514 | 520 | 3,034 | 7,868 | 51.3 | 492 | 590 | 15,334 |
| 1953 | 2,869 | 522 | 3,391 | 2,584 | 560 | 3,144 | 8,158 | 50.7 | 577 | 829 | 16,099 |
| 1954 | 3,094 | 556 | 3,650 | 2,542 | 576 | 3,118 | 8,358 | 51.8 | 480 | 531 | 16,137 |
| 1955 | 3,386 | 615 | 4,001 | 2,754 | 652 | 3,406 | 9,109 | 52.0 | 512 | 496 | 17,524 |
| 1956 | 3,523 | 660 | 4,183 | 2,975 | 713 | 3,688 | 9,448 | 50.7 | 497 | 809 | 18,625 |
| 1957 | 3,432 | 637 | 4,069 | 2,715 | 763 | 3,478 | 9,649 | 52.0 | 512 | 862 | 18,570 |
| 1958 | 3,889 | 679 | 4,568 | 2,519 | 773 | 3,292 | 9,819 | 51.0 | 515 | 1,020 | 19,214 |
| 1959 | 3,997 | 721 | 4,718 | 2,674 | 915 | 3,589 | 9,923 | 50.3 | 546 | 971 | 19,747 |
| 1960 | 4,189 | 734 | 4,923 | 2,674 | 1,008 | 3,682 | 10,372 | 51.7 | 564 | 526 | 20,067 |
| 1961 | 4,275 | 753 | 5,028 | 2,634 | 1,048 | 3,682 | 10,575 | 51.6 | 577 | 625 | 20,487 |
| 1962 | 4,423 | 804 | 5,227 | 2,750 | 1,130 | 3,880 | 11,001 | 51.7 | 579 | 580 | 21,267 |
| 1963 | 4,434 | 824 | 5,258 | 2,739 | 1,255 | 3,994 | 11,506 | 52.4 | 600 | 592 | 21,950 |
| 1964 | 4,350 | 841 | 5,191 | 2,922 | 1,262 | 4,184 | 11,791 | 52.7 | 636 | 585 | 22,387 |
| 1965 | 4,744 | 891 | 5,635 | 2,826 | 1,313 | 4,139 | 12,179 | 52.4 | 744 | 545 | 23,242 |
| 1966 | 4,830 | 936 | 5,766 | 2,883 | 1,470 | 4,353 | 12,777 | 52.4 | 905 | 594 | 24,395 |
| 1967 | 5,289 | 917 | 6,206 | 2,820 | 1,612 | 4,432 | 13,408 | 52.9 | 1,013 | 276 | 25,335 |
| 1968 | 5,145 | 984 | 6,129 | 3,186 | 1,780 | 4,966 | 14,535 | 53.7 | 1,180 | 242 | 27,052 |
| 1969 | 5,260 | 1,009 | 6,269 | 3,220 | 1,951 | 5,171 | 15,125 | 53.2 | 1,628 | 229 | 28,422 |
| 1970 | 5,371 | 1,082 | 6,453 | 3,252 | 2,015 | 5,267 | 15,592 | 52.7 | 2,087 | 215 | 29,614 |
| 1971 | 5,331 | 1,108 | 6,439 | 3,196 | 1,898 | 5,094 | 16,286 | 53.3 | 2,543 | 207 | 30,570 |
| 1972 | 5,531 | 1,137 | 6,668 | 3,553 | 2,135 | 5,668 | 17,264 | 52.4 | 3,114 | 233 | 32,966 |
| 1973 ^r | 5,425 | 1,264 | 6,689 | 3,819 | 2,240 | 6,059 | 18,164 | 52.1 | 3,656 | 283 | 34,851 |
| 1974 ^p | 5,148 | 1,241 | 6,390 | 3,648 | 2,177 | 5,826 | 17,608 | 52.6 | 3,448 | 218 | 33,490 |

^pPreliminary.^rrevised.¹Petroleum products refined and processed from crude oil, including still gas, liquefied refinery gas and natural gas liquids.²Includes bunders and military transportation.Source: U.S. Department of the Interior, *U.S. Energy through the Year 2000*, Dec. 1972; and *News Release*, April 3, 1975, Tables 2, 6a, 6b.

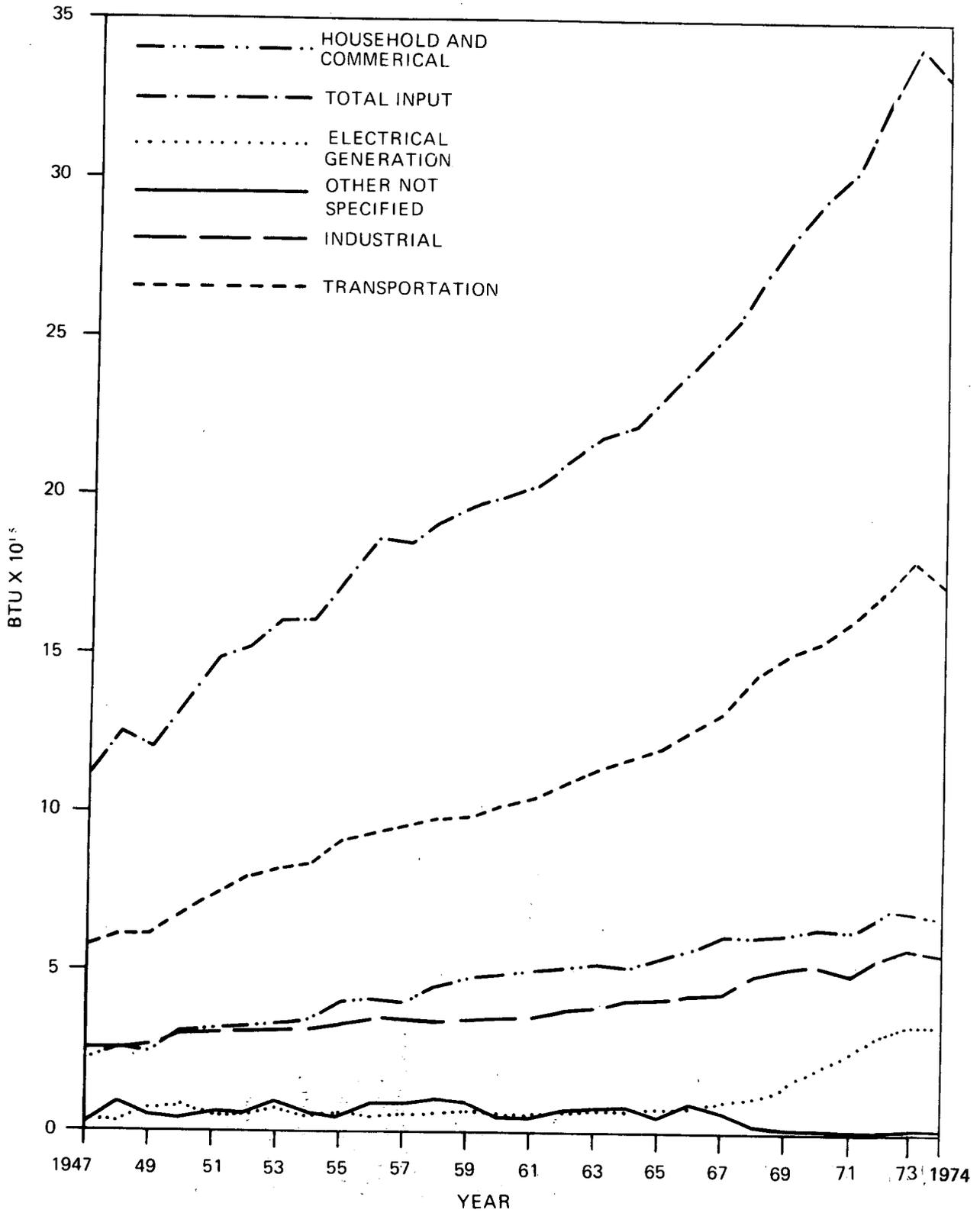


Figure 18. Petroleum Consumption by Sector, 1947-1974

Table 3-34. Petroleum Consumption, by Major Products¹ and by Major Consuming Sectors, 1973

| | Household and Commercial | | Industrial | | Transportation ² | | Electricity generation, utilities | | Miscellaneous and unaccounted for | | Total domestic product demand | |
|--|--------------------------|----------------|-------------------|----------------|-----------------------------|-----------------|-----------------------------------|----------------|-----------------------------------|--------------|-------------------------------|-----------------|
| | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu |
| Fuel and power: | | | | | | | | | | | | |
| Liquefied gases | 186.8 | 749.3 | ³ 46.8 | 187.7 | 33.6 | 134.8 | — | — | 0.2 | 0.7 | 267.4 | 1,072.5 |
| Jet fuels: | | | | | | | | | | | | |
| Naphtha type | — | — | — | — | 79.2 | 424.1 | — | — | — | — | 79.2 | 424.1 |
| Kerosene type | — | — | — | — | 301.1 | 1,707.3 | 6.3 | 35.7 | — | — | 307.4 | 1,743.0 |
| Total | — | — | — | — | 380.3 | 2,131.4 | 6.3 | 35.7 | — | — | 386.6 | 2,167.1 |
| Gasoline | — | — | — | — | 2,452.7 | 12,871.8 | — | — | — | — | 2,452.7 | 12,871.8 |
| Kerosene | 61.3 | 347.6 | 17.6 | 99.8 | — | — | — | — | — | — | 78.9 | 447.4 |
| Distillate fuel | 536.0 | 3,122.2 | 138.7 | 807.9 | 366.0 | 2,132.0 | 71.6 | 417.1 | 16.4 | 95.5 | 1,128.7 | 6,574.7 |
| Residual fuel | 191.8 | 1,205.9 | 200.9 | 1,263.1 | 116.2 | 730.5 | 509.5 | 3,203.2 | 11.8 | 74.2 | 1,030.2 | 6,476.9 |
| Still gas | — | — | 176.8 | 1,060.8 | — | — | — | — | — | — | 176.8 | 1,060.8 |
| Petroleum coke | — | — | 66.4 | 400.0 | — | — | — | — | — | — | 66.4 | 400.0 |
| Total | 975.9 | 5,425.0 | 647.2 | 3,819.3 | 3,348.8 | 18,000.5 | 587.4 | 3,656.0 | 28.4 | 170.4 | 5,587.7 | 31,071.2 |
| Raw material:⁴ | | | | | | | | | | | | |
| Special naphthas | — | — | 32.2 | 169.0 | — | — | — | — | — | — | 32.2 | 169.0 |
| Lubes ⁵ and waxes | — | — | 39.2 | 234.1 | 26.9 | 163.1 | — | — | — | — | 66.1 | 397.2 |
| Petroleum coke ⁶ | — | — | 28.8 | 173.5 | — | — | — | — | — | — | 28.8 | 173.5 |
| Asphalt and road oil | 190.4 | 1,263.5 | — | — | — | — | — | — | — | — | 190.4 | 1,263.5 |
| Petrochemical feedstock offtake: | | | | | | | | | | | | |
| Liquefied refinery gas ⁷ | — | — | 47.2 | 180.7 | — | — | — | — | — | — | 47.2 | 180.7 |
| Liquefied petroleum gas ^{7,8} | — | — | 214.2 | 756.5 | — | — | — | — | — | — | 214.2 | 756.5 |
| Naphtha (-400 degrees) | — | — | 56.8 | 298.1 | — | — | — | — | — | — | 56.8 | 298.1 |
| Still gas | — | — | 12.4 | 74.4 | — | — | — | — | — | — | 12.4 | 74.4 |
| Miscellaneous (+400 degrees) | — | — | 60.7 | 353.6 | — | — | — | — | — | — | 60.7 | 353.6 |
| Total | 190.4 | 1,263.5 | 491.5 | 2,239.9 | 26.9 | 163.1 | — | — | — | — | 708.8 | 3,666.5 |
| Miscellaneous and unaccounted for | — | — | — | — | — | — | — | — | 20.8 | 113.2 | 20.8 | 113.2 |
| Total domestic product demand | 1,166.3 | 6,688.5 | 1,138.7 | 6,059.2 | 3,375.7 | 18,163.6 | 587.4 | 3,656.0 | 49.2 | 283.6 | 6,317.3 | 34,850.9 |

¹ Includes liquefied refinery gas and natural gas liquids.

² Includes bunkers and military transportation.

³ Includes secondary recovery of petroleum and agriculture uses.

⁴ Includes some fuel and power used by raw materials industries.

⁵ Lubricants are distributed on basis of data from Bureau of the Census survey.

⁶ Includes portions of petroleum coke estimated to be consumed in nonfuel uses.

⁷ Includes ethane.

⁸ Includes LP gas for synthetic rubber.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, *News Release*, April 3, 1975, Table 6A.

Table 3-35. Petroleum Consumption by Major Products¹ and by Major Consuming Sectors, 1974 (Preliminary)

| | Household and commercial | | Industrial | | Transportation ² | | Electricity generation, utilities | | Miscellaneous and unaccounted for | | Total domestic product demand | |
|--|--------------------------|--------------|-------------|--------------|-----------------------------|--------------|-----------------------------------|--------------|-----------------------------------|--------------|-------------------------------|--------------|
| | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu | Million bbl | Trillion Btu |
| Fuel and Power: | | | | | | | | | | | | |
| Liquefied gases | 183.0 | 734.0 | 346.3 | 185.7 | 33.2 | 133.2 | — | — | — | — | 262.5 | 1,052.9 |
| Jet fuels | | | | | | | | | | | | |
| Naphtha type | — | — | — | — | 75.0 | 401.6 | — | — | — | — | 75.0 | 401.6 |
| Kerosene type | — | — | — | — | 282.9 | 1,604.1 | 6.0 | 34.0 | — | — | 288.9 | 1,638.1 |
| Total | — | — | — | — | 357.9 | 2,005.7 | 6.0 | 34.0 | — | — | 363.9 | 2,039.7 |
| Gasoline | — | — | — | — | 2,400.2 | 12,596.2 | — | — | — | — | 2,400.2 | 12,596.2 |
| Kerosene | 51.0 | 289.2 | 14.6 | 82.8 | — | — | — | — | — | — | 65.6 | 372.0 |
| Distillate fuel | 515.0 | 2,999.9 | 132.0 | 768.9 | 348.0 | 2,027.1 | 68.0 | 396.1 | 8.6 | 50.1 | 1,071.6 | 6,242.1 |
| Residual fuel | 179.0 | 1,125.4 | 188.0 | 1,182.0 | 109.0 | 685.3 | 480.0 | 3,017.8 | 9.9 | 62.1 | 965.9 | 6,072.6 |
| Still gas | — | — | 173.0 | 1,038.0 | — | — | — | — | — | — | 173.0 | 1,038.0 |
| Petroleum coke | — | — | 64.9 | 391.0 | — | — | — | — | — | — | 64.9 | 391.0 |
| Total | 928.0 | 5,148.5 | 618.8 | 3,648.4 | 3,248.3 | 17,447.5 | 554.0 | 3,447.9 | 18.5 | 112.2 | 5,367.6 | 29,804.5 |
| Raw material:⁴ | | | | | | | | | | | | |
| Special naphthas | — | — | 31.5 | 165.3 | — | — | — | — | — | — | 31.5 | 165.3 |
| Lubes ⁵ and waxes | — | — | 38.2 | 228.1 | 26.4 | 160.1 | — | — | — | — | 64.6 | 388.2 |
| Petroleum code ⁶ | — | — | 28.2 | 169.9 | — | — | — | — | — | — | 28.2 | 169.9 |
| Asphalt and road oil | 187.0 | 1,241.0 | — | — | — | — | — | — | — | — | 187.0 | 1,241.0 |
| Petrochemical feedstock offtake: | | | | | | | | | | | | |
| Liquefied refinery gas ⁷ | — | — | 46.0 | 176.1 | — | — | — | — | — | — | 46.0 | 176.1 |
| Liquefied petroleum gas ^{7,8} | — | — | 209.5 | 740.0 | — | — | — | — | — | — | 209.5 | 740.0 |
| Naphtha (-400 degrees) | — | — | 55.5 | 291.3 | — | — | — | — | — | — | 55.5 | 291.3 |
| Still gas | — | — | 12.1 | 60.5 | — | — | — | — | — | — | 12.1 | 60.5 |
| Miscellaneous (+400 degrees) | — | — | 59.4 | 346.0 | — | — | — | — | — | — | 59.4 | 346.0 |
| Total | 187.0 | 1,241.0 | 480.4 | 2,177.2 | 26.4 | 160.1 | — | — | — | — | 693.8 | 3,578.3 |
| Miscellaneous and unaccounted for | — | — | — | — | — | — | — | — | 19.4 | 106.8 | 19.4 | 106.8 |
| Total domestic product demand | 1,115.0 | 6,389.5 | 1,099.2 | 5,825.6 | 3,274.7 | 17,607.6 | 554.0 | 3,447.9 | 37.9 | 219.0 | 6,080.8 | 33,489.6 |

¹ Includes liquefied refinery gas and natural gas liquids

² Includes bunkers and military transportation.

³ Includes secondary recovery of petroleum and agriculture uses.

⁴ Includes some fuel and power used by raw materials industries.

⁵ Lubricants are distributed on basis of data from Bureau of the Census survey.

⁶ Includes portions of petroleum coke estimated to be consumed in nonfuel uses.

⁷ Includes ethane.

⁸ Includes LP gas for synthetic rubber.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, *News Release*, April 3, 1975, Table 6B.

Table 3-36. Energy Consumption: Transportation Sector, 1947-1974

| Year | Coal ¹ | | Petroleum ² | | Natural gas ³ | | Total fossil fuels | Utility electricity purchased | | Total energy input | % of Total U.S. Energy Consumption |
|-------------------|---------------------|--------------|------------------------|--------------|--------------------------|--------------|--------------------|-------------------------------|--------------|--------------------|------------------------------------|
| | Thousand short tons | Trillion Btu | Million barrels | Trillion Btu | Million cubic feet | Trillion Btu | Trillion Btu | Billion Kilowatt-hours | Trillion Btu | Trillion Btu | |
| 1947 | 113,324 | 3,030 | 1,050.3 | 5,761 | Neg | — | 8,791 | 8 | 29 | 8,820 | 26.7 |
| 1948 | 98,295 | 2,624 | 1,126.6 | 6,157 | Neg | — | 8,781 | 8 | 27 | 8,808 | 26.0 |
| 1949 | 70,915 | 1,892 | 1,137.8 | 6,183 | Neg | — | 8,075 | 7 | 25 | 8,100 | 25.7 |
| 1950 | 63,783 | 1,701 | 1,248.8 | 6,785 | 125,546 | 130 | 8,616 | 7 | 24 | 8,640 | 25.4 |
| 1951 | 56,903 | 1,525 | 1,377.5 | 7,482 | 192,496 | 199 | 9,206 | 7 | 23 | 9,229 | 25.1 |
| 1952 | 40,428 | 1,086 | 1,451.3 | 7,868 | 207,207 | 214 | 9,168 | 6 | 22 | 9,190 | 25.2 |
| 1953 | 30,074 | 809 | 1,511.5 | 8,158 | 230,314 | 238 | 9,205 | 6 | 20 | 9,225 | 24.5 |
| 1954 | 19,060 | 516 | 1,551.4 | 8,358 | 230,615 | 239 | 9,113 | 6 | 18 | 9,131 | 25.2 |
| 1955 | 17,429 | 464 | 1,691.4 | 9,109 | 245,246 | 253 | 9,826 | 6 | 19 | 9,845 | 24.8 |
| 1956 | 14,187 | 378 | 1,756.2 | 9,448 | 295,972 | 306 | 10,132 | 5 | 17 | 10,149 | 24.3 |
| 1957 | 10,126 | 270 | 1,832.0 | 9,649 | 299,235 | 310 | 10,229 | 4 | 15 | 10,244 | 24.6 |
| 1958 | 5,015 | 133 | 1,825.1 | 9,819 | 312,221 | 323 | 10,275 | 5 | 16 | 10,291 | 24.7 |
| 1959 | 3,861 | 102 | 1,849.4 | 9,923 | 349,348 | 362 | 10,387 | 5 | 17 | 10,404 | 24.1 |
| 1960 | 3,294 | 87 | 1,934.1 | 10,372 | 347,075 | 359 | 10,818 | 5 | 18 | 10,836 | 24.3 |
| 1961 | 770 | 21 | 1,971.9 | 10,575 | 377,607 | 390 | 10,986 | 6 | 19 | 11,005 | 24.3 |
| 1962 | 687 | 18 | 2,051.3 | 11,001 | 382,496 | 396 | 11,415 | 5 | 18 | 11,433 | 24.1 |
| 1963 | 670 | 18 | 2,146.7 | 11,506 | 423,783 | 438 | 11,962 | 6 | 19 | 11,981 | 24.3 |
| 1964 | 711 | 19 | 2,198.9 | 11,791 | 435,570 | 451 | 12,261 | 6 | 20 | 12,281 | 24.0 |
| 1965 | 655 | 18 | 2,271.9 | 12,179 | 500,524 | 517 | 12,714 | 5 | 18 | 12,732 | 23.9 |
| 1966 | 609 | 16 | 2,382.6 | 12,777 | 535,353 | 552 | 13,345 | 5 | 16 | 13,361 | 23.7 |
| 1967 | 467 | 13 | 2,497.1 | 13,408 | 575,752 | 594 | 14,015 | 5 | 17 | 14,032 | 24.1 |
| 1968 | 417 | 11 | 2,703.8 | 14,535 | 590,965 | 610 | 15,156 | 5 | 18 | 15,174 | 24.6 |
| 1969 | 313 | 8 | 2,815.8 | 15,125 | 630,962 | 651 | 15,784 | 5 | 17 | 15,801 | 24.3 |
| 1970 | 298 | 8 | 2,902.8 | 15,592 | 722,166 | 745 | 16,345 | 5 | 16 | 16,361 | 24.3 |
| 1971 | 207 | 6 | 3,032.0 | 16,286 | 742,592 | 766 | 17,058 | 5 | 17 | 17,075 | 24.8 |
| 1972 | 163 | 4 | 3,213.0 | 17,264 | 766,156 | 790 | 18,058 | 5 | 17 | 18,075 | 25.0 |
| 1973 ^r | 116 | 3 | 3,348.8 | 18,164 | 728,177 | 743 | 18,910 | 4 | 15 | 18,925 | 25.3 |
| 1974 ^p | 80 | 2 | 3,248.3 | 17,608 | 650,000 | 664 | 18,274 | 5 | 16 | 18,290 | 25.0 |

^pPreliminary.^rrevised.¹Includes anthracite, bituminous, and lignite coals.²Includes bunkers and military transportation.³Consumption of natural gas by pipelines.Source: U.S. Department of the Interior, *U.S. Energy to the Year 2000*, Dec., 1972 and *News Release*, April 3, 1975, Tables 2, 3, 4, 5, and equivalent tables in earlier editions.

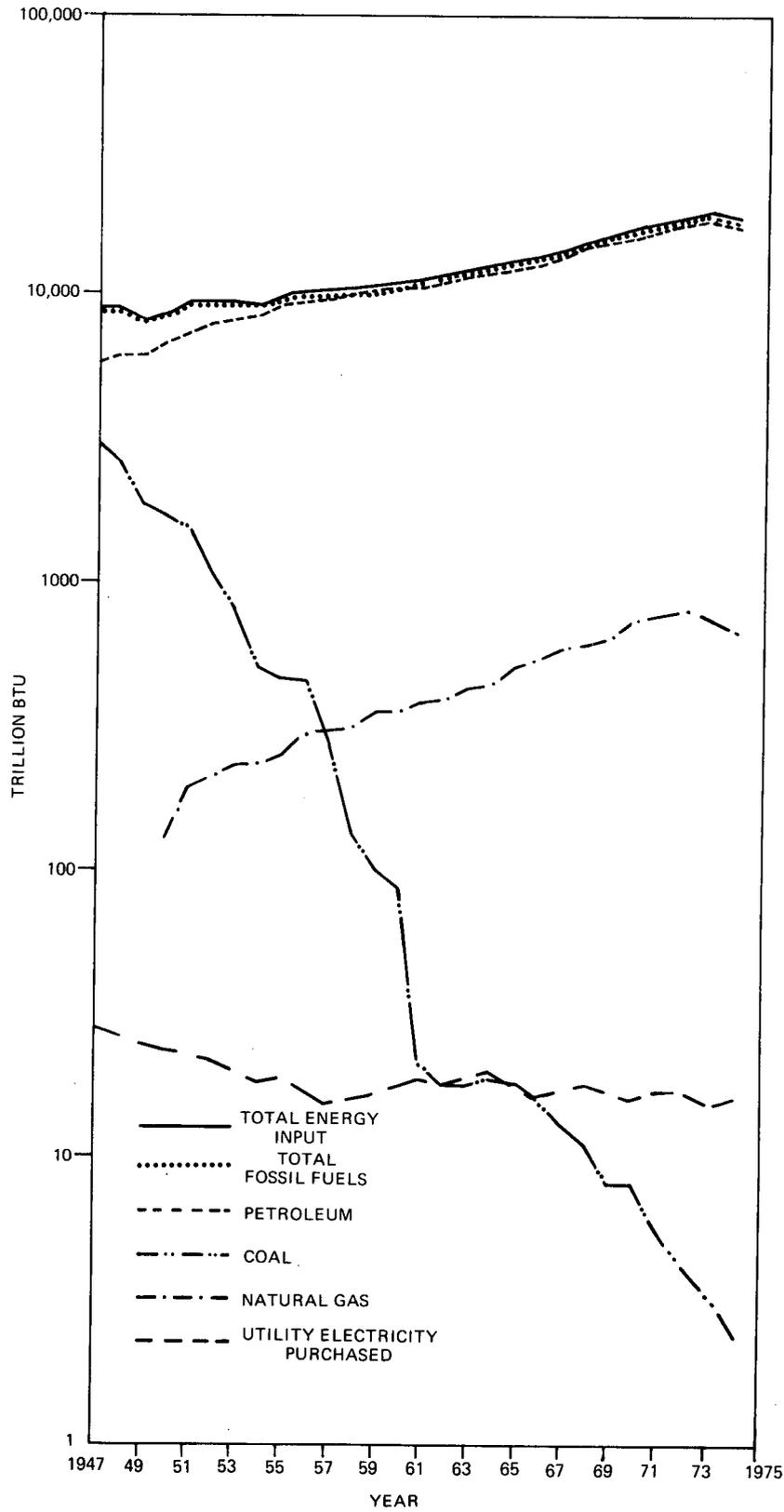


Figure 19. Energy Consumption: Transportation Sector

Table 3-37. Domestic Supply and Demand for Petroleum¹, 1973 and 1974

| | 1973 | | 1974 (preliminary) | | Percentage change from 1973 |
|--|----------------|-----------------|--------------------|-----------------|-----------------------------|
| | Million bbl | Trillion Btu | Million bbl | Trillion Btu | |
| Supply, crude oil:² | | | | | |
| Production | 3,360.9 | 18,848.9 | 3,210.5 | 18,001.9 | -4.5 |
| Exports | -0.7 | -3.9 | -1.0 | -5.6 | |
| Imports | 1,184.0 | 6,640.2 | 1,268.7 | 7,113.8 | +7.2 |
| Stock change: Withdrawals (+), Additions (-) | +3.9 | +21.9 | -22.2 | -124.5 | |
| Losses, transfers for use as fuel, and unaccounted for | -10.8 | -60.6 | -9.5 | -53.3 | |
| Total | 4,537.3 | 25,446.5 | 4,446.5 | 24,932.3 | -2.0 |
| Refinery input: | | | | | |
| Crude oil ² | 4,537.3 | 25,446.5 | 4,446.5 | 24,932.3 | -2.0 |
| Transfers in, natural gas liquids ³ | 297.5 | 1,325.5 | 291.0 | 1,296.2 | -2.2 |
| Other hydrocarbons | 10.7 | 59.2 | 13.9 | 77.0 | +29.9 |
| Total | 4,845.5 | 26,831.2 | 4,751.4 | 26,305.5 | -1.9 |
| Supply, refined products: | | | | | |
| Refinery output | 4,845.5 | 26,831.2 | 4,751.4 | 26,305.5 | -1.9 |
| Unfinished oil reruns net | 45.8 | 287.9 | 36.1 | 227.0 | -21.2 |
| Processing gain, net | 165.5 | 916.4 | 169.4 | 937.9 | +2.4 |
| Total | 5,056.8 | 28,035.5 | 4,956.9 | 27,470.4 | -2.0 |
| Exports ⁴ | -83.7 | -484.9 | -79.9 | -462.9 | -4.5 |
| Imports ⁴ | 1,099.5 | 6,567.6 | 967.3 | 5,777.9 | -12.0 |
| Stock change, including natural gas liquids | -53.2 | -284.9 | -65.2 | -349.2 | |
| Transfers in, natural gas liquids ^{3,5} | 336.9 | 1,232.8 | 329.0 | 1,203.8 | -2.3 |
| Losses, gains, and unaccounted for | -39.0 | -215.2 | -27.3 | -150.4 | |
| Total | 6,317.3 | 34,850.9 | 6,080.8 | 33,489.6 | -3.7 |
| Demand by major consuming sectors: | | | | | |
| Fuel and power: | | | | | |
| Household and commercial | 975.9 | 5,425.0 | 928.0 | 5,148.5 | -4.9 |
| Industrial | 647.2 | 3,819.3 | 618.8 | 3,648.4 | -4.4 |
| Transportation ⁶ | 3,348.8 | 18,000.3 | 3,248.3 | 17,447.5 | -3.0 |
| Electricity generation, utilities | 587.4 | 3,656.0 | 554.0 | 3,447.9 | -5.7 |
| Other, not specified | 28.4 | 170.4 | 18.5 | 112.2 | -34.9 |
| Total | 5,587.7 | 31,071.2 | 5,367.6 | 29,804.5 | -3.9 |
| Raw material:⁷ | | | | | |
| Petrochemical feedstock offtake | 391.3 | 1,663.3 | 382.5 | 1,613.9 | -2.2 |
| Other nonfuel use | 317.5 | 2,003.2 | 311.3 | 1,964.4 | -2.0 |
| Total | 708.8 | 3,666.5 | 693.8 | 3,578.3 | -2.1 |
| Miscellaneous and unaccounted for | 20.8 | 113.2 | 19.4 | 106.8 | |
| Total domestic product demand | 6,317.3 | 34,850.9 | 6,080.8 | 33,489.6 | -3.7 |

¹ Supply and demand for crude oil and petroleum products. Petroleum products include products refined and processed from crude oil, including still gas and liquefied refinery gas; also gas liquids transferred from natural gas.

² Btu value for crude oil for each year shown is based on average British thermal unit value of total output of petroleum products (including refinery fuel and losses) adjusted to exclude natural gas liquids inputs and their implicitly derived values.

³ Btu values for natural gas liquids for each year shown are implicitly derived from weighted averages of major natural gas liquids, with natural gasoline and cycle products converted at 110,000 Btu per gallon, liquefied petroleum gases at 95,500 Btu per gallon, and ethane at 73,390 Btu per gallon.

⁴ Btu values for imported and exported refined products for each year shown are based on the average values of the respective products.

⁵ Includes natural gas liquids other than those channeled into refinery input as follows: Petrochemical feedstocks, direct uses for fuel and power, and other uses.

⁶ Includes bunkers and military transportation.

⁷ Includes some fuel and power use by raw materials industries.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, Office of Assistant Director-Fuels, *News Release*, April 3, 1975, Table 5.

Table 3-38. Domestic Supply and Demand for Natural Gas, 1973 and 1974

| | 1973 | | 1974 (preliminary) | | Percentage change from 1973 |
|--|-----------------------|-----------------|-----------------------|-----------------|-----------------------------------|
| | Million cubic feet | Trillion Btu | Million cubic feet | Trillion Btu | |
| Supply: | | | | | |
| Production ¹ | 22,647,549 | 24,745.7 | 21,900,000 | 23,951.4 | -3.3 |
| Exports | -77,169 | -78.8 | -80,000 | -82.0 | +3.7 |
| Imports | 1,032,901 | 1,054.6 | 940,000 | 960.0 | -9.0 |
| Stock change: Withdrawals (+), Additions (-) | -441,504 | -450.8 | -90,000 | -92.0 | |
| Transfers out, extraction loss ² | -916,551 | -2,558.3 | -890,000 | -2,500.0 | -2.9 |
| Losses, gains, unaccounted for | — | — | — | — | |
| Total | 22,245,226 | 22,712.4 | 21,780,000 | 22,237.4 | -2.1 |
| Demand by major consuming sectors: | | | | | |
| Fuel and power: | | | | | |
| Household and commercial | 7,167,428 | 7,317.9 | 6,970,000 | 7,116.4 | -2.8 |
| Industrial ³ | 9,144,606 | 9,336.7 | 9,299,300 | 9,494.6 | +1.7 |
| Transportation | 728,177 | 743.5 | 650,000 | 663.6 | -10.7 |
| Electricity generation, utilities | 3,605,333 | 3,681.0 | 3,260,000 | 3,328.5 | -9.6 |
| Total | 20,645,544 | 21,079.1 | 20,179,300 | 20,603.1 | -2.3 |
| Raw material: Industrial:⁴ | | | | | |
| Carbon black | 49,682 | 50.7 | 45,700 | 46.7 | -8.0 |
| Other chemicals ⁵ | 1,550,000 | 1,582.6 | 1,555,000 | 1,587.6 | +0.3 |
| Total | 1,599,682 | 1,633.3 | 1,600,700 | 1,634.3 | Negligible |
| Grand Total | 22,245,226 | 22,712.4 | 21,780,000 | 22,237.4 | -2.1 |

¹ Marketed production includes wet gas sold or consumed by producers, losses in transmission, producers addition to storage, and increase in gas pipeline fill; excludes repressuring and quantities vented and flared. British thermal unit value of production is for wet gas prior to extraction of natural gas liquids. Higher Btu values assigned to extraction loss are reflected in value of natural gas liquids production for each year.

² Extraction loss from cycling plants represents offtake gas for natural gas liquids as reported to the Bureau of Mines. Energy equivalent of extraction loss is based on annual outputs of natural gasoline and associated products at 110,000 Btu per gallon, annual outputs of LPG at 95,500 Btu per gallon, and annual outputs of ethane at 73,390 Btu per gallon. (Prior to 1967, ethane production was included with LPG in converting to Btu value.)

³ Includes transmission losses and unaccounted for of 195,863 million cubic feet in 1973 and 200,000 million cubic feet in 1974.

⁴ Includes some fuel and power used by raw material industries.

⁵ Estimated from partial data.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels-Mineral Supply, *News Release*, April 3, 1975, Table 4.

Table 3-39. Domestic Supply and Demand for Coal, 1973 and 1974

| ANTHRACITE | 1973 | | 1974 (preliminary) | | Percentage change from 1973 |
|---|---------------------|-----------------|---------------------|-----------------|-----------------------------|
| | Thousand short tons | Trillion Btu | Thousand short tons | Trillion Btu | |
| Supply: | | | | | |
| Production ¹ | 6,830 | 173.5 | 6,300 | 160.0 | -7.8 |
| Exports ² | -1,159 | -29.5 | -1,100 | -27.9 | -5.1 |
| Imports | — | — | — | — | |
| Stock change: Withdrawals (+), Additions (-) | n/a | n/a | n/a | n/a | |
| Losses, gains, and unaccounted for | — | — | — | — | |
| Total | 5,671 | 144.0 | 5,200 | 132.1 | -8.3 |
| Demand by major consuming sectors:³ | | | | | |
| Household and commercial ⁴ | 2,917 | 74.1 | 1,453 | 62.3 | -15.9 |
| Industrial ⁵ | 1,312 | 33.3 | 1,250 | 31.8 | -4.7 |
| Electricity generation, utilities | 1,442 | 36.6 | 1,497 | 38.0 | +3.8 |
| Total | 5,671 | 144.0 | 5,200 | 132.1 | -8.3 |
| BITUMINOUS COAL AND LIGNITE | | | | | |
| Supply: | | | | | |
| Production ¹ | 591,738 | 14,207.6 | 600,000 | 14,406.0 | +1.4 |
| Exports | -52,903 | -1,430.6 | -60,000 | -1,623.6 | +13.4 |
| Imports | 127 | 3.0 | 2,000 | 47.3 | |
| Stock change: Withdrawals (+), Additions (-) | +12,268 | +266.0 | +7,450 | +167.0 | |
| Losses, gains, and unaccounted for | 4,792 | 104.0 | 1,813 | 40.7 | |
| Total | 556,022 | 13,150.0 | 551,263 | 13,037.4 | -0.9 |
| Demand by major consuming sectors: | | | | | |
| Fuel and power: | | | | | |
| Household and commercial ⁴ | 8,200 | 221.5 | 8,440 | 229.4 | +2.9 |
| Industrial ⁵ | 156,448 | 4,226.1 | 149,450 | 4,061.5 | -4.5 |
| (Coal carbonized for coke) ⁶ | (93,648) | (2,529.7) | (89,668) | (2,436.8) | -4.2 |
| Transportation ⁷ | 116 | 3.1 | 80 | 2.2 | -31.0 |
| Electricity generation, utilities | 386,879 | 8,581.0 | 389,070 | 8,629.6 | +0.6 |
| Total | 551,643 | 13,031.7 | 547,040 | 12,922.7 | -0.8 |
| Raw material: Industrial⁸ | | | | | |
| Crude light oil | 1,131 | 30.6 | 1,087 | 29.5 | -3.9 |
| Crude coal tar | 3,248 | 87.7 | 3,136 | 85.2 | -3.4 |
| Total raw material | 4,379 | 118.3 | 4,223 | 114.7 | -3.6 |
| Grand total | 556,022 | 13,150.0 | 551,263 | 13,037.4 | -0.9 |

n/a — not available

¹ Includes use by producers for power and heat.

² Includes shipments to U.S. Armed Forces in West Germany.

³ Except for small quantities used as raw material for coal chemicals, all anthracite is used for fuel and power.

⁴ Data represent "retail deliveries to other consumers." These are mainly household and commercial users, with some unknown portion of use by small industries.

⁵ Includes consumption by coke plants, steel and rolling mills, and other industrial uses. Adjusted to exclude coal equivalent of raw material use.

⁶ Figures in parentheses are not added into totals.

⁷ Includes bunkers and military transportation.

⁸ Coal equivalent based on British thermal unit value of raw material consumption of coal chemicals listed.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Interfuels and Special Studies, Office of Assistant Director-Fuels, *News Release*, April 3, 1975, table 3.

Table 3-40. Fuel Consumption by Mode of Transport, 1963-1973

| | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|------------------|---------|
| Class I Railroads | | | | | | | | | | | |
| Locomotives | | | | | | | | | | | |
| Diesel Oil, gals × 10 ⁶ | 3,537 | 3,624 | 3,736 | 3,920 | 3,883 | 3,917 | 3,919 | 3,804 | 3,819 | 3,999 | 4,141 |
| Fuel Oil, gals × 10 ⁶ | 90 | 85 | 77 | 65 | 47 | 42 | 33 | — | — | — | — |
| Electricity, KWH × 10 ⁶ | 1,018 | 931 | 933 | 922 | 832 | 750 | 610 | 578 | 534 | 605 ^r | 346 |
| Coal, tons | 7,332 | 6,831 | 3,695 | 3,235 | 2,310 | 1,669 | 1,137 | 1,238 | 1,191 | 1,400 | 1,202 |
| Motor Cars | | | | | | | | | | | |
| Diesel Oil, gals × 10 ⁶ | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 8 | 4 | 3 | 3 |
| Electricity, KWH × 10 ⁶ | 591 | 583 | 576 | 576 | 580 | 567 | 538 | 763 | 756 | 715 | 901 |
| Gasoline, gals | 7,591 | 4,585 | — | — | — | — | — | — | — | — | — |
| Air | | | | | | | | | | | |
| Certificated Carriers | | | | | | | | | | | |
| Aviation Gasoline, gals × 10 ⁶ | 651 | 589 | 519 | 398 | 268 | 128 | 33 | 15 | 12 | 12 | 11 |
| Jet Fuel, gals × 10 ⁶ | 3,291 | 3,830 | 4,650 | 5,670 | 7,523 | 8,891 | 10,113 | 10,085 | 10,140 | 10,302 | 10,671 |
| General Aviation | | | | | | | | | | | |
| Aviation Gasoline, gals × 10 ⁶ | 250 | 262 | 292 | 375 | 396 | 495 | 522 | 551 | 508 | 584 | n/a |
| Jet Fuel, gals × 10 ⁶ | 32 | 41 | 81 | 106 | 138 | n/a | 168 | 208 | 226 | 245 | n/a |
| Highway | | | | | | | | | | | |
| Gasoline, gals × 10⁶ | | | | | | | | | | | |
| Pass. Cars + Taxis | 45,246* | 47,567* | 50,206 | 53,220 | 55,007 | 58,413 | 62,325 | 65,649 | 69,213 | 73,121 | 77,619 |
| Motorcycles | — | — | 69 | 92 | 103 | 111 | 123 | 135 | 301 | 342 | 392 |
| Diesel + Gasoline, gals × 10⁶ | | | | | | | | | | | |
| Commercial Buses | 606 | 622 | 645 | 637 | 646 | 655 | 657 | 644 | 631 | 561 | 520 |
| School Buses | 232 | 242 | 249 | 259 | 264 | 277 | 290 | 300 | 316 | 320 | 327 |
| Single-unit Trucks ¹ | 12,348 | 13,199 | 13,504 | 13,636 | 14,470 | 15,674 | 16,528 | 17,237 | 18,221 | 22,118 | 22,755 |
| Combination Trucks | 6,084 | 6,271 | 6,431 | 6,779 | 7,203 | 7,808 | 8,199 | 8,363 | 8,865 | 8,600 | 8,860 |
| Water | | | | | | | | | | | |
| Vessels | | | | | | | | | | | |
| Residual Fuel Oil, gals × 10 ⁶ | 3,213 | 3,487 | 3,093 | 3,093 | 3,389 | 3,678 | 3,506 | 3,774 | 3,307 | 3,273 | 3,859 |
| Distillate Fuel Oil, gals × 10 ⁶ | 636 | 672 | 652 | 699 | 734 | 766 | 793 | 819 | 880 | 1,013 | 1,125 |
| Gasoline, gals × 10 ⁶ | n/a | n/a | n/a | 485 | 501 | 533 | 569 | 598 | 645 | 687 | 717 |
| Transit | | | | | | | | | | | |
| Electricity, KWH × 10⁶ | | | | | | | | | | | |
| Rapid Transit | 2,125 | 2,171 | 2,185 | 2,075 | 2,194 | 2,250 | 2,291 | 2,261 | 2,262 | 2,149 | 2,098 |
| Surface Rail | 255 | 222 | 218 | 226 | 180 | 179 | 173 | 157 | 153 | 146 | 140 |
| Trolley | 262 | 204 | 181 | 166 | 157 | 157 | 154 | 143 | 141 | 133 | 93 |
| Gallons of Motor Fuel, gals × 10⁶ | | | | | | | | | | | |
| Gasoline | 103 | 96 | 92 | 76 | 58 | 46 | 40 | 37 | 29 | 26 | 22 |
| Diesel Oil | 235 | 242 | 248 | 256 | 270 | 274 | 274 | 271 | 257 | 247 | 273 |
| Propane | 36 | 33 | 33 | 34 | 33 | 32 | 32 | 31 | 27 | 24 | 15 |
| Pipelines (Gas & Oil) | | | | | | | | | | | |
| Natural Gas, Cu. Ft. × 10 ⁶ | 423,783 | 433,204 | 500,024 | 535,353 | 575,752 | 590,965 | 630,962 | 722,166 | 742,592 | 766,156 | 728,177 |

¹ Includes non-freight truck movements.

r = revised

*Includes Motorcycles.

n/a = not available

Sources: Association of American Railroads, Civil Aeronautics Board, Federal Highway Administration, American Petroleum Institute, American Public Transit Association, American Gas Association, Federal Aviation Administration.

Table 3-41. Highway Use of Motor Fuel¹, 1973

| Item | Passenger vehicles | | | | | Cargo vehicles | | | | | |
|--|-----------------------------|--------------|---------------------------------|------------|--------|------------------------|-----------|--------------------|--------------|------------|--------------------|
| | Personal passenger vehicles | | | Commercial | Buses | | All buses | Cargo vehicles | | | All motor vehicles |
| | Passenger cars | Motor-cycles | All personal passenger vehicles | | School | All passenger vehicles | | Single-unit trucks | Combinations | All trucks | |
| Number of vehicles registered (thousands) | 101,762 | 4,356 | 106,119 | 89.5 | 336.0 | 425.5 | 106,544 | 22,205 | 1,028 | 23,233 | 129,777 |
| Average miles traveled per vehicle | 9,992 | 4,498 | 9,767 | 28,469 | 7,178 | 11,662 | 9,774 | 9,868 | 46,716 | 11,538 | 10,083 |
| Fuel consumed (million gallons) | 77,619 | 392 | 78,011 | 520 | 327 | 847 | 78,858 | 22,755 | 8,860 | 31,615 | 110,473 |
| Average fuel consumption per vehicle (gallons) | 763 | 90 | 736 | 5,810 | 973 | 1,991 | 741 | 1,025 | 8,620 | 1,361 | 857 |
| Average miles traveled per gallon of fuel consumed | 13.10 | 50.00 | 13.29 | 4.90 | 7.37 | 5.86 | 13.21 | 9.63 | 5.42 | 8.45 | 11.85 |

¹ For the 50 States and District of Columbia.

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, 1973, Table VM-1.

**Table 3-42. Electrical Energy and Motor Fuel Consumed by the
Transit Industry of the United States
At Five Year Intervals 1940 – 1955 and Annually 1955 – 1974**

| Calendar Year | Kilowatt Hours Consumed (In Millions) | | | | Gallons of Motor Fuel Used (In Thousands) | | |
|-------------------|--|---------------|------------------|-------|--|---------------|---------|
| | Heavy Rail | Light Rail | Trolley Coach | Total | Gasoline | Diesel Oil | Propane |
| 1940 | 1,977 | 4,050 | 307 | 6,334 | n/a | n/a | 0 |
| 1945 | 1,966 | 4,547 | 520 | 7,033 | 510,000 | 11,800 | 0 |
| 1950 | 2,000 | 2,410 | 841 | 5,251 | 430,000 ^(a) | 98,600 | (a) |
| 1955 | 1,900 | 910 | 720 | 3,530 | 246,000 | 172,600 | 30,300 |
| 1956 | 1,960 | 700 | 680 | 3,340 | 219,400 | 183,500 | 30,300 |
| 1957 | 1,980 | 560 | 600 | 3,140 | 198,400 | 190,000 | 34,200 |
| 1958 | 2,073 | 485 | 535 | 3,093 | 181,700 | 192,700 | 35,100 |
| 1959 | 2,067 | 431 | 464 | 2,962 | 167,800 | 196,600 | 36,600 |
| 1960 | 2,098 | 393 | 417 | 2,908 | 153,600 | 208,100 | 38,300 |
| 1961 | 2,108 | 362 | 381 | 2,851 | 125,900 | 217,500 | 35,700 |
| 1962 | 2,115 | 325 | 346 | 2,786 | 108,400 | 229,000 | 36,100 |
| 1963 | 2,125 | 255 | 262 | 2,642 | 102,500 | 235,300 | 35,900 |
| 1964 | 2,171 | 222 | 204 | 2,597 | 95,900 | 242,200 | 33,400 |
| 1965 | 2,185 | 218 | 181 | 2,584 | 91,500 | 248,400 | 32,700 |
| 1966 | 2,075 | 226 | 166 | 2,467 | 76,000 | 256,000 | 33,600 |
| 1967 | 2,194 | 180 | 157 | 2,531 | 57,800 | 270,300 | 33,000 |
| 1968 | 2,250 | 179 | 157 | 2,586 | 45,700 | 274,200 | 32,200 |
| 1969 | 2,291 | 173 | 154 | 2,618 | 40,000 | 273,800 | 31,600 |
| 1970 | 2,261 | 157 | 143 | 2,561 | 37,200 | 270,600 | 31,000 |
| 1971 | 2,262 | 153 | 141 | 2,556 | 29,400 | 256,800 | 26,500 |
| 1972 | 2,149 | 146 | 133 | 2,428 | 25,600 | 247,300 | 24,400 |
| 1973 | 2,098 | 140 | 93 | 2,331 | 22,426 | 272,525 | 15,152 |
| 1974 ^P | n/a | n/a | n/a | 2,978 | 24,245 | 292,992 | 3,142 |

n/a = not available

^PPreliminary

(a) Propane included with gasoline

Source: American Public Transit Association, *Transit Fact Book*, '74-'75.

**Table 3-43. Consumption of Jet Fuel by the Certificated Route Air Carriers,
Scheduled plus Non-scheduled Service, 1960-1973
(000 gallons)**

| | Certificated route air carriers | | | | | | | | | | | | | | |
|-------|--|---------------------------------|--------------------------|----------------|--------------|-----------|------------------|--------------------|------------------|------------------|-----------------------|---|-----------|---------------------------------|-----------------------|
| | Total certificated route air carriers | Domestic operations | | | | | | | | | | International and territorial operations | | | |
| | | Total domestic operations | Passenger/cargo carriers | | | | | | | | | All-cargo carriers | Total | Passenger/ cargo carriers | All-cargo carriers |
| | | | Total | Domestic trunk | | | Local service | Other ² | Intra- Alaska | Intra- Hawaii | All-cargo carriers | | | | |
| | | | Total | Big Four | Other trunks | | | | | | | | | | |
| 1960 | 1,330,564 | 988,036 | 988,003 | 963,878 | 651,574 | 312,305 | 20,025 | 11 | 1,470 | 2,619 | 33 | 342,528 | 342,513 | 15 | |
| 1961 | 2,072,591 | 1,514,457 | 1,503,856 | 1,475,536 | 1,081,527 | 394,009 | 23,677 | 55 | 1,576 | 3,012 | 10,601 | 558,135 | 556,095 | 2,040 | |
| 1962 | 2,808,437 | 2,080,040 | 2,046,922 | 2,016,397 | 1,457,538 | 558,859 | 24,646 | 984 | 1,679 | 3,215 | 33,119 | 728,397 | 714,102 | 14,295 | |
| 1963 | 3,290,513 | 2,375,557 | 2,342,101 | 2,310,013 | 1,665,901 | 644,112 | 24,298 | 1,819 | 1,825 | 4,145 | 33,456 | 914,956 | 896,203 | 18,753 | |
| 1964 | 3,829,510 | 2,759,529 | 2,722,315 | 2,679,016 | 1,903,627 | 775,389 | 33,341 | 2,474 | 2,185 | 5,299 | 37,214 | 1,069,982 | 1,043,699 | 26,283 | |
| 1965 | 4,650,340 | 3,420,095 | 3,367,915 | 3,305,661 | 2,317,962 | 987,699 | 51,267 | 3,142 | 2,367 | 5,478 | 52,180 | 1,230,245 | 1,194,765 | 35,480 | |
| 1966 | 5,669,485 | 4,079,711 | 3,993,205 | 3,856,317 | 2,622,880 | 1,233,436 | 117,041 | 3,983 | 2,696 | 13,168 | 86,506 | 1,589,774 | 1,529,713 | 60,061 | |
| 1967 | 7,522,739 ¹ | 5,422,095 ¹ | 5,324,794 ¹ | 5,054,561 | 3,447,674 | 1,606,887 | 241,997 | 4,597 | 3,623 | 20,016 | 97,301 | 2,100,644 | 1,983,292 | 117,352 | |
| 1968 | 8,980,577 ¹ | 6,561,655 ¹ | 6,454,803 ¹ | 6,012,886 | 4,044,156 | 1,968,730 | 407,860 | 4,036 | 5,702 | 24,319 | 106,852 | 2,418,922 | 2,267,156 | 151,766 | |
| 1969 | 10,112,684 ¹ | 7,534,865 ¹ | 7,441,547 ¹ | 6,856,018 | 4,524,675 | 2,331,343 | 542,277 | 2,707 | 9,747 | 30,799 | 93,318 | 2,577,819 | 2,354,729 | 223,090 | |
| 1969* | 10,112,553 ¹ | 7,978,471 ¹ | 7,885,153 ¹ | 7,271,930 | 4,689,640 | 2,582,290 | 542,277 | 30,532 | 9,615 | 30,799 | 93,318 | 2,134,082 | 1,910,992 | 223,090 | |
| 1970 | 10,084,693 ¹ | 7,842,744 ¹ | 7,782,536 ¹ | 7,105,591 | 4,740,271 | 2,365,320 | 608,617 | 29,635 | 8,803 | 29,890 | 60,208 | 2,241,949 | 2,013,883 | 228,066 | |
| 1971 | 10,140,053 ¹ | 7,786,820 ¹ | 7,728,254 ¹ | 7,049,669 | 4,452,320 | 2,597,349 | 610,577 | 28,322 | 10,664 | 29,022 | 58,566 | 2,353,233 | 2,113,192 | 240,041 | |
| 1972 | 10,302,068 ¹ | 7,954,285 ¹ | 7,886,394 ¹ | 7,172,149 | 4,533,072 | 2,639,077 | 614,849 | 27,729 | 11,474 | 33,193 | 67,891 | 2,347,783 | 2,009,232 | 248,551 | |
| 1973 | 10,670,950 ¹ | 8,326,267 ¹ | 8,235,747 ¹ | 7,446,623 | 4,576,051 | 2,870,572 | 710,261 | 29,659 | 11,907 | 37,297 | 90,520 | 2,344,683 | 2,143,033 | 201,650 | |

Note: Individual figures may not add to totals because of rounding.

¹ Data for other carrier (Aspen) which commenced scheduled operations June 22, 1967 and (Alaska) from January 1, 1970 are included.

² Includes Helicopter carriers

*Compiled on a 50-state basis, 1969 and after.

Source: C.A.B., *Handbook of Airline Statistics*, 1972, p. 67, 1973 preliminary.

**Table 3-44. Consumption of Aviation Gasoline by the Certificated Route Air Carriers,
Scheduled Plus Non-scheduled Service, 1960-1973
(000 gallons)**

| Certificated route air carriers | | | | | | | | | | | | | | |
|--|---------------------------------|--------------------------|----------------------|----------|--------------|------------------|--------------------|------------------|------------------|-----------------------|---|---------|---------------------------------|-----------------------|
| Total certificated route air carriers | Domestic Operations | | | | | | | | | | International and territorial operations | | | |
| | Total domestic operations | Passenger/cargo carriers | | | | | | | | | All-cargo carriers | Total | Passenger/ cargo carriers | All-cargo carriers |
| | | Total | Domestic trunk | | | Local service | Other ² | Intra- Alaska | Intra- Hawaii | All-cargo carriers | | | | |
| | | | Total | Big Four | Other trunks | | | | | | | | | |
| 1960 | 1,189,192 | 966,201 | 922,480 | 842,324 | 576,948 | 265,376 | 68,007 | 2,258 | 3,850 | 5,881 | 43,721 | 222,991 | 204,526 | 18,465 |
| 1961 | 950,668 | 798,338 | 752,078 | 662,402 | 451,724 | 210,677 | 79,359 | 2,414 | 4,090 | 3,560 | 46,260 | 152,330 | 128,394 | 23,936 |
| 1962 | 737,896 | 633,344 | 583,398 | 478,230 | 336,293 | 141,937 | 95,291 | 1,234 | 4,804 | 3,537 | 49,945 | 104,552 | 90,598 | 13,954 |
| 1963 | 651,150 | 581,620 | 554,177 | 434,544 | 311,927 | 122,617 | 109,538 | 420 | 5,485 | 4,090 | 27,443 | 69,530 | 61,275 | 8,255 |
| 1964 | 589,497 | 537,790 | 506,916 | 377,925 | 254,393 | 123,532 | 117,865 | 338 | 5,775 | 5,014 | 30,873 | 51,707 | 46,010 | 5,697 |
| 1965 | 518,684 | 468,739 | 448,022 | 311,511 | 206,906 | 104,606 | 124,985 | 261 | 5,394 | 5,870 | 20,718 | 49,944 | 41,114 | 8,831 |
| 1966 | 397,558 | 342,501 | 331,869 | 209,118 | 129,845 | 79,274 | 114,882 | 176 | 5,261 | 2,432 | 10,632 | 55,067 | 31,258 | 23,799 |
| 1967 | 267,634 ¹ | 232,412 ¹ | 223,355 ¹ | 141,597 | 86,118 | 55,479 | 76,691 | 149 | 4,918 | — | 9,057 | 35,222 | 17,900 | 17,321 |
| 1968 | 127,873 ¹ | 115,293 ¹ | 113,234 ¹ | 68,617 | 52,474 | 16,143 | 41,641 | 348 | 2,628 | — | 2,059 | 12,580 | 8,840 | 3,740 |
| 1969 | 32,566 ¹ | 29,831 ¹ | 26,324 ¹ | 5,785 | 2,644 | 3,141 | 19,059 | 532 | 948 | — | 3,507 | 2,735 | 907 | 1,828 |
| 1969* | 32,697 ¹ | 30,777 ¹ | 27,270 ¹ | 5,785 | 2,644 | 3,141 | 19,059 | 1,308 | 1,079 | — | 3,507 | 1,920 | 92 | 1,828 |
| 1970 | 14,479 ¹ | 13,849 ¹ | 13,839 ¹ | 1,312 | 277 | 1,035 | 9,509 | 1,347 | 2,036 | — | 10 | 630 | — | 630 |
| 1971 | 12,142 ¹ | 12,134 ¹ | 12,134 ¹ | 887 | 38 | 849 | 8,574 | 973 | 1,700 | — | — | 8 | 8 | — |
| 1972 | 12,923 ¹ | 12,054 ¹ | 12,054 ¹ | 10 | 10 | — | 8,972 | 1,602 | 1,400 | — | — | 869 | 869 | — |
| 1973 | 10,895 ¹ | 10,509 ¹ | 10,509 ¹ | 11 | 11 | — | 7,493 | 1,460 | 1,345 | — | — | 386 | 386 | — |

Note: Individual figures may not add to totals because of rounding.

¹ Data for other carrier (Aspen) which commenced scheduled operations June 22, 1967 and (Alaska) from January 1, 1970 are included.

² Includes Helicopter carriers.

*Compiled on a 50state basis, 1969 and after.

Source: C.A.B. *Handbook of Airline Statistics*, 1972, p. 66, 1973 preliminary.

**Table 3-45. Consumption of Aviation Gasoline and Jet Fuel by the Certificated Carriers,
Scheduled Plus Non-Scheduled Service, 1960-1973**
(000 gallons)

| Year | Certificated Route Air Carriers | | | | | | | | | | | | | | | |
|-------|--|---------------------------------|--------------------------|----------------|------------------------|-----------|---------|--------------------|---------------------|--------------------|---|------------------|-----------------------|---------|---------------------------------|-----------------------|
| | Total Certificated Route Air Carriers | Domestic Operations | | | | | | | | | International and Territorial Operations | | | | | |
| | | Total Domestic Operations | Passenger/Cargo Carriers | | | | | | Local Service | Other ¹ | Intra- Alaska | Intra- Hawaii | All-Cargo Carriers | Total | Passenger/ Cargo Carriers | All-Cargo Carriers |
| | | | Total | Domestic Trunk | | | Other | Intra- Alaska | | | | | | | | |
| Total | Total | Big Four | Other Trunks | | | | | | | | | | | | | |
| 1960 | 2,519,757 | 1,954,236 | 1,910,482 | 1,806,202 | 1,228,522 | 577,680 | 88,032 | 2,269 | 5,320 | 8,499 | 43,754 | 565,520 | 547,040 | 18,480 | | |
| 1961 | 3,023,259 | 2,312,794 | 2,255,933 | 2,137,938 | 1,533,251 | 604,686 | 103,036 | 2,469 | 5,666 | 6,572 | 56,861 | 710,465 | 684,489 | 25,976 | | |
| 1962 | 3,546,333 | 2,713,384 | 2,630,320 | 2,494,627 | 1,793,831 | 700,796 | 119,937 | 2,218 | 6,483 | 6,752 | 83,064 | 832,949 | 804,700 | 28,249 | | |
| 1963 | 3,941,663 | 2,957,177 | 2,896,278 | 2,744,556 | 1,977,828 | 766,728 | 133,836 | 2,239 | 7,310 | 8,235 | 60,899 | 984,486 | 957,479 | 27,008 | | |
| 1964 | 4,419,007 | 3,297,318 | 3,229,231 | 3,056,941 | 2,158,020 | 898,921 | 151,206 | 2,812 | 7,959 | 10,313 | 68,087 | 1,121,689 | 1,089,709 | 31,090 | | |
| 1965 | 5,169,023 | 3,888,834 | 3,815,937 | 3,617,172 | 2,524,868 | 1,092,304 | 176,252 | 3,403 | 7,761 | 11,348 | 72,878 | 1,280,189 | 1,235,878 | 44,311 | | |
| 1966 | 6,067,042 | 4,422,212 | 4,325,073 | 4,065,435 | 2,752,725 | 1,312,710 | 231,923 | 4,158 | 7,957 | 15,600 | 97,138 | 1,644,831 | 1,560,971 | 83,860 | | |
| 1967 | 7,790,373 | 5,654,507 | 5,548,149 | 5,196,158 | 3,533,792 | 1,662,366 | 318,688 | 4,746 | 8,540 | 20,016 | 106,357 | 2,135,866 | 2,001,193 | 134,673 | | |
| 1968 | 9,108,451 | 6,676,948 | 6,568,037 | 6,081,503 | 4,096,630 | 1,984,873 | 449,501 | 4,383 | 8,331 | 24,319 | 108,912 | 2,431,502 | 2,275,996 | 155,506 | | |
| 1969 | 10,145,250 | 7,564,696 | 7,467,871 | 6,861,803 | 4,527,319 | 2,334,484 | 561,336 | 3,239 | 10,694 | 30,799 | 96,825 | 2,580,554 | 2,355,636 | 224,918 | | |
| 1969* | 10,145,250 | 8,009,247 | 7,912,423 | 7,277,715 | 4,692,284 | 2,585,431 | 561,336 | 31,879 | 10,694 | 30,799 | 96,825 | 2,136,003 | 1,911,084 | 224,918 | | |
| 1970 | 10,099,172 | 7,856,593 | 7,796,375 | 7,106,903 | 4,740,548 | 2,366,355 | 618,126 | 30,617 | 10,839 | 29,890 | 60,218 | 2,242,579 | 2,013,883 | 228,696 | | |
| 1971 | 10,152,195 | 7,798,954 | 7,740,388 | 7,050,556 | 4,452,358 | 2,598,198 | 619,151 | 29,295 | 12,364 | 29,022 | 58,566 | 2,353,241 | 2,113,200 | 240,041 | | |
| 1972 | 10,314,991 | 7,966,339 | 7,898,448 | 7,172,159 | 4,533,082 | 2,639,077 | 650,821 | 29,331 | 12,944 | 33,193 | 67,891 | 2,348,652 | 2,100,101 | 248,551 | | |
| 1973 | 10,699,779 | 8,354,484 | 8,263,964 | 7,450,949 | 4,576,063 [†] | 2,874,886 | 727,633 | 1,480 ^x | 44,661 ^x | 37,297 | 90,520 | 2,345,294 | 2,143,420 | 201,875 | | |

Note: Individual figures may not add because of rounding.

¹ Includes Helicopter Carriers.

[†] Includes American, Eastern, TWA, United Airlines only.

* Compiled on a 50-state basis, 1969 and after.

^x Alaska Airline data transferred from Other to Intra-Alaska.

Source: C.A.B. Handbook of Airline Statistics, Advance Information for 1973.

**Table 3-46. Consumption of Oil by the Certificated Carriers,
Scheduled Plus Non-Scheduled Service, 1960-1973
(000 gallons)**

| Year | Certificated Route Air Carriers | | | | | | | | | | | | | |
|-------|--|---------------------------------|--------------------------|--------|-------|------------------|------------------|--------------------|------------------|------------------|-----------------------|---|---------------------------------|---------------------------------|
| | Total Certificated Route Air Carriers | Domestic Operations | | | | | | | | | | International and Territorial Operations | | |
| | | Total Domestic Operations | Passenger/Cargo Carriers | | | | | | | | All-Cargo Carriers | Total | Passenger/ Cargo Carriers | All-Cargo Carriers |
| | | | Domestic Trunk | | | | Local Service | Other ¹ | Intra- Alaska | Intra- Hawaii | | | | |
| Total | Total | Big Four | Other Trunks | Total | Total | Intra- Alaska | | | | | Intra- Hawaii | All-Cargo Carriers | Total | Passenger/ Cargo Carriers |
| 1960 | 16,287 | 13,172 | 12,688 | 11,718 | 8,310 | 3,409 | 795 | 31 | 52 | 89 | 483 | 3,115 | 2,857 | 258 |
| 1961 | 12,558 | 10,503 | 9,946 | 8,859 | 6,614 | 2,244 | 939 | 30 | 58 | 56 | 557 | 2,055 | 1,696 | 359 |
| 1962 | 10,820 | 9,295 | 8,654 | 7,285 | 5,415 | 1,870 | 1,217 | 17 | 73 | 58 | 641 | 1,525 | 1,289 | 235 |
| 1963 | 9,786 | 8,765 | 8,383 | 6,704 | 4,939 | 1,765 | 1,534 | 7 | 70 | 65 | 383 | 1,021 | 888 | 133 |
| 1964 | 9,044 | 8,245 | 7,810 | 5,835 | 3,960 | 1,875 | 1,820 | 5 | 72 | 78 | 435 | 799 | 701 | 98 |
| 1965 | 8,001 | 7,235 | 6,943 | 4,831 | 3,165 | 1,666 | 1,936 | 4 | 73 | 99 | 292 | 766 | 626 | 140 |
| 1966 | 6,202 | 5,326 | 5,153 | 3,297 | 1,991 | 1,307 | 1,701 | 3 | 111 | 41 | 173 | 876 | 548 | 329 |
| 1967 | 4,432 | 3,743 | 3,597 | 2,450 | 1,342 | 1,108 | 1,066 | 4 | 74 | 4 | 146 | 689 | 436 | 253 |
| 1968 | 3,000 | 2,528 | 2,474 | 1,760 | 1,168 | 592 | 659 | 5 | 46 | 5 | 54 | 472 | 402 | 70 |
| 1969 | 2,014 | 1,699 | 1,638 | 1,135 | 555 | 580 | 445 | 7 | 45 | 6 | 61 | 316 | 278 | 38 |
| 1969* | 2,014 | 1,752 | 1,690 | 1,172 | 566 | 606 | 445 | 22 | 45 | 6 | 61 | 263 | 225 | 38 |
| 1970 | 1,435 | 1,150 | 1,144 | 867 | 519 | 348 | 218 | 15 | 38 | 6 | 6 | 285 | 249 | 36 |
| 1971 | 1,545 | 1,247 | 1,239 | 975 | 580 | 395 | 217 | 17 | 24 | 6 | 8 | 298 | 280 | 18 |
| 1972 | 1,412 | 1,109 | 1,105 | 844 | 520 | 324 | 203 | 26 | 25 | 7 | 4 | 303 | 289 | 14 |
| 1973 | 1,490 | 1,187 | 1,187 | 896 | 564 | 332 | 236 | 32 | 17 | 6 | 1/ | 303 | 292 | 11 |

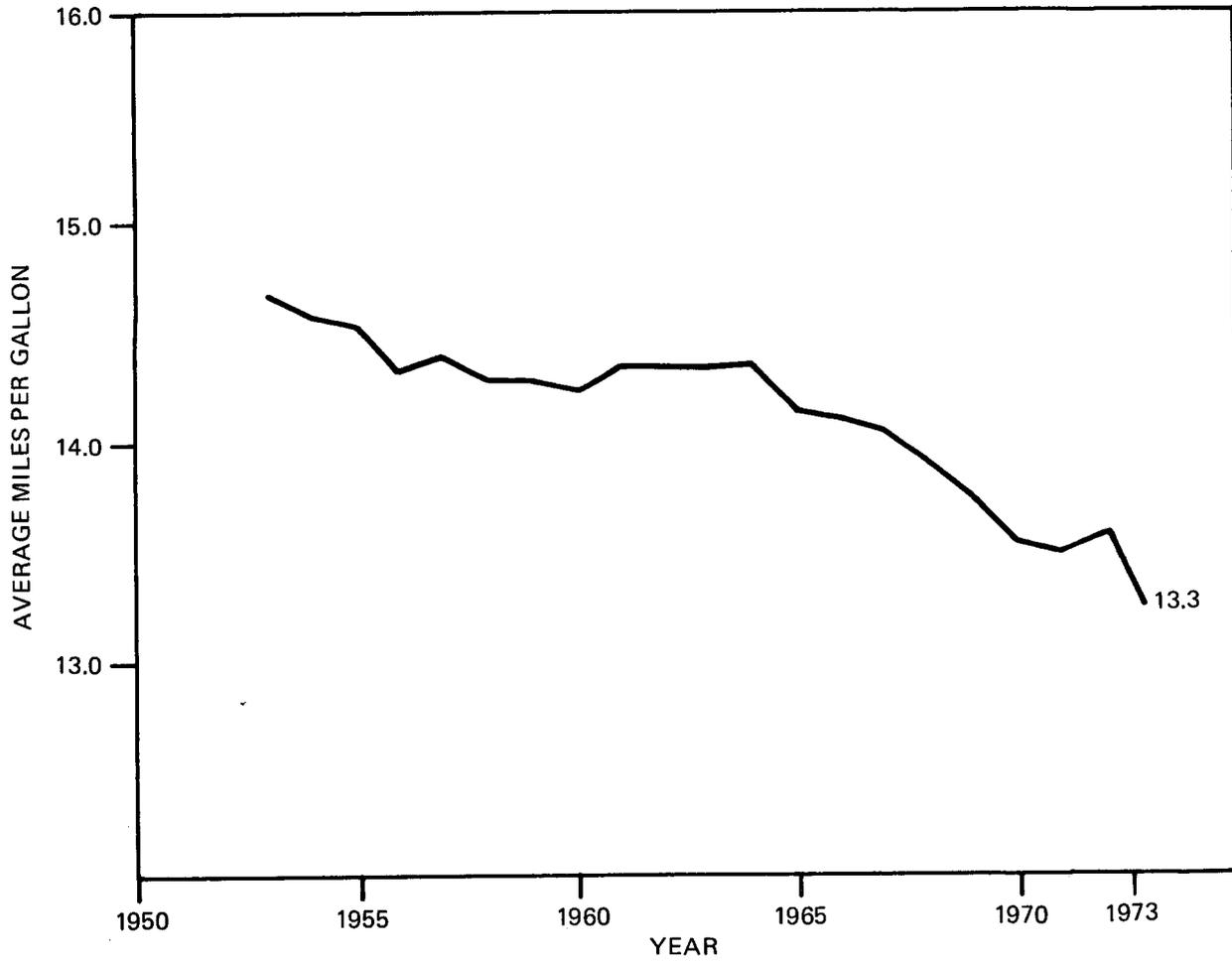
Note: Individual figures may not add to totals because of rounding.

1/Less than 500 gallons

¹ Includes Helicopter carriers

*Data compiled on 50 state basis, 1969 and after.

Source: C.A.B., *Handbook of Airline Statistics*, Advance Information for 1973.



Source: Federal Highway Administration (annual report)
"Highway Statistics".

Figure 20. Average Fuel Efficiency of U.S. Passenger Car Fleet, 1953-1973

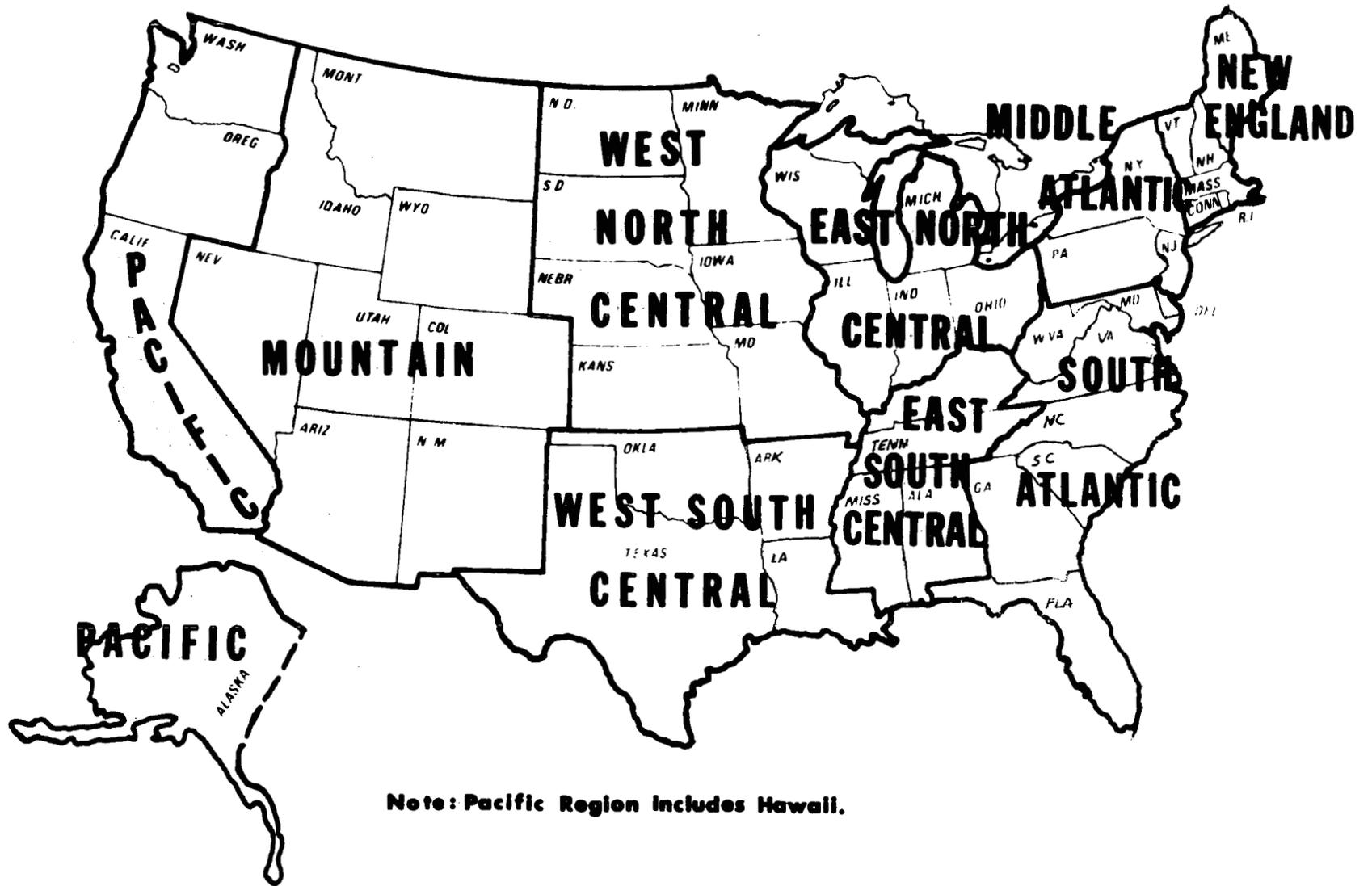


Figure 21. Regional Divisions of the United States

**Table 3-47. United States National Fuel and Energy Statistics, Summary
Population, 1972: 208,230,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) | |
|---|----------------------------------|---|--------------------------------|--|-----------------------|--|-----|
| Reserves | 7,384,460 | 420,457,450 | 36,339,408 | 6,786,559 | 266,084,846 | 546,378 | |
| Production: | | | | | | | |
| Quantity | 7,106 | 595,386 | 3,455,368 | 638,216 | 22,531,698 | 25,758 | |
| Value, thousands | 85,251 | 4,561,983 | 11,706,510 | 1,433,074 | 4,185,869 | 162,272 | |
| Average number of active operations — Coal mines: | 5,182 | Crude oil wells: | 508,433 | Natural gas wells: | 121,153 | Uranium mines: | 212 |
| Labor force — Total: | 90,271,600 | Fuel sector (excluding processing): | 400,000 | | | | |
| | | Petroleum Refineries | Natural Gas Processing Plants | Uranium Mills | | | |
| Processing plants: | | | | | | | |
| Number | | 252 | 786 | 18 | | | |
| Daily capacity | | 13,454,471 bbl | 73,260 MMcf | 30,250 tons of ore | | | |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 2,960 | 11,748 | 1,168,900 | 7,412,543 | 0 |
| Industrial | 1,371 | 159,253 | 1,062,200 | 10,272,082 | 3,389 |
| Transportation | 0 | 163 | 3,213,000 | 766,156 | 0 |
| Electric power | 1,584 | 348,612 | 503,700 | 3,978,673 | 334,508 |
| Miscellaneous | 0 | 0 | 42,500 | 0 | 0 |
| Total | 5,915 | 519,776 | 5,990,300 | 22,429,454 | 337,897 |

Salient Energy Statistics - 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|------------|--------------------------------|-----------------------|-------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 75.2 | 312.2 | 6,667.4 | 7,642.4 | 0 | 14,697.2 | 3,478.0 | 18,175.2 |
| Industrial | 34.8 | 4,231.8 | 5,668.0 | 10,590.5 | 35.0 | 20,560.1 | 2,493.0 | 23,053.1 |
| Transportation | 0 | 4.3 | 17,263.9 | 789.9 | 0 | 18,058.1 | 17.0 | 18,075.1 |
| Electric power | 40.2 | 7,796.4 | 3,133.8 | 4,102.0 | 3,487.0 | 18,559.4 | — | — |
| Miscellaneous | 0 | 0 | 232.6 | 0 | 0 | 232.6 | — | 232.6 |
| Total | 150.2 | 12,344.7 | 32,965.7 | 23,124.8 | 3,522.0 | 72,107.4 | 5,988.0 | 59,536.0 |
| Percentages | 0.2 | 17.1 | 45.7 | 32.1 | 4.9 | 100.0 | — | — |
| | | Fossil Fuel | Nuclear | Hydropower | Total | | | |
| Generating plants: | | | | | | | | |
| Number | | 2,401 | 26 | 1,176 | 3,603 | | | |
| Installed capacity (thousand kW) | | 327,740 | 15,300 | 56,566 | 399,606 | | | |
| Production (million kW-hr) | | 1,420,558 | 54,031 | 272,734 | 1,747,323 | | | |

Total gross energy input: 72,107.4 trillion Btu
Total gross energy input per capita: 346 million Btu

Total net energy input: 59,536.0 trillion Btu
Total net energy input per capita: 286 million Btu

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-48. New England Fuel and Energy Statistics
Population, 1972: 12,105,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|-------------------------------------|--|-----------------------|--|
| Reserves | 0 | 0 | 0 | 0 | 0 | 0 |
| Production: | | | | | | |
| Quantity | 0 | 0 | 0 | 0 | 0 | 0 |
| Value, thousands | 0 | 0 | 0 | 0 | 0 | 0 |
| Average number of active operations — Coal mines: | 0 | | Crude oil wells: | 0 | Natural gas wells: | 0 |
| Uranium mines: | | | | | | 0 |
| Labor force — Total: | 5,405,000 | | Fuel sector (excluding processing): | 0 | | |
| | | Petroleum Refineries | | Natural Gas Processing Plants | | Uranium Mills |
| Processing plants: | | | | | | |
| Number | | 1 | | 0 | | 0 |
| Daily capacity | | 7,500 bbl | | 0 MMcf | | 0 tons of ore |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 21 | 170,740 | 190,850 | 0 |
| Industrial | 0 | 192 | 32,177 | 69,504 | 0 |
| Transportation | 0 | 0 | 153,030 | 713 | 0 |
| Electric power | 0 | 1,332 | 88,020 | 8,978 | 14,587 |
| Miscellaneous | 89 | 0 | 1,157 | 0 | 0 |
| Total | 89 | 1,545 | 445,124 | 270,045 | 14,587 |

Salient Energy Statistics — 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|------------|--------------------------------|-----------------------|--------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 0.6 | 1,010.1 | 196.7 | 0 | 1,207.4 | 163.6 | 1,371.0 |
| Industrial | 0 | 5.2 | 197.3 | 71.7 | 0 | 274.2 | 78.4 | 352.6 |
| Transportation | 0 | 0 | 822.2 | 0.7 | 0 | 822.9 | 0.1 | 823.0 |
| Electric power | 0 | 29.8 | 551.7 | 9.3 | 153.9 | 744.7 | — | — |
| Miscellaneous | 2.1 | 0 | 6.8 | 0 | 0 | 8.9 | — | 8.9 |
| Total | 2.1 | 35.6 | 2,588.1 | 278.4 | 153.9 | 3,058.1 | 242.1 | 2,555.5 |
| Percentages | 0.1 | 1.2 | 84.6 | 9.1 | 5.0 | 100.0 | — | — |
| | | Fossil Fuel | | Nuclear | | Hydropower | | Total |
| Generating plants: | | | | | | | | |
| Number | | 140 | | 6 | | 141 | | 287 |
| Installed capacity (thousand kW) | | 11,406 | | 3,469 | | 1,480 | | 16,355 |
| Production (million kW-hr) | | 53,499 | | 9,500 | | 5,087 | | 68,086 |

Total gross energy input: 3,058.1 trillion Btu.
Total gross energy input per capita: 253 million Btu

Total net energy input: 2,555.5 trillion Btu
Total net energy input per capita: 211 million Btu

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-49. Middle Atlantic States Fuel and Energy Statistics
Population, 1972: 37,621,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) | |
|---|----------------------------------|---|--------------------------------|--|-----------------------|--|---|
| Reserves | 7,120,000 | 23,880,010 | 46,951 | 735 | 1,546,132 | 0 | |
| Production: | | | | | | | |
| Quantity | 7,106 | 75,939 | 4,459 | W | 77,637 | 0 | |
| Value, thousands | 85,251 | 694,267 | 21,311 | W | 23,588 | 0 | |
| Average number of active operations — Coal mines: | 1,139 | Crude oil wells: | 38,023 | Natural gas wells: | 17,250 | Uranium mines: | 0 |
| Labor force — Total: | 16,602,600 | Fuel sector (excluding processing): | 28,532 | | | | |
| | | Petroleum Refineries | Natural Gas Processing Plants | Uranium Mills | | | |
| Processing plants: | | | | | | | |
| Number | | 18 | 2 | 0 | | | |
| Daily capacity | | 1,345,220 bbl | 5 MMcf | 0 tons of ore | | | |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 499 | 321,224 | 1,120,203 | 0 |
| Industrial | 0 | 35,970 | 61,685 | 620,298 | 0 |
| Transportation | 0 | 0 | 465,315 | 31,685 | 0 |
| Electric power | 0 | 42,220 | 169,105 | 106,020 | 39,961 |
| Miscellaneous | 5,529 | 0 | 2,893 | 0 | 0 |
| Total | 5,529 | 78,689 | 1,020,222 | 1,878,206 | 39,961 |

Salient Energy Statistics - 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|--------------|--------------------------------|-----------------------|----------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 13.7 | 1,911.5 | 1,154.9 | 0 | 3,080.1 | 486.9 | 3,567.0 |
| Industrial | 0 | 980.7 | 363.7 | 639.5 | 0 | 1,983.9 | 334.0 | 2,317.9 |
| Transportation | 0 | 0 | 2,511.5 | 32.7 | 0 | 2,544.2 | 13.6 | 2,557.8 |
| Electric power | 0 | 943.1 | 1,050.1 | 109.3 | 417.9 | 2,520.4 | — | — |
| Miscellaneous | 140.5 | 0 | 17.2 | 0 | 0 | 157.7 | — | 157.7 |
| Total | 140.5 | 1,937.5 | 5,854.0 | 1,936.4 | 417.9 | 10,286.3 | 834.5 | 8,600.4 |
| Percentages | 1.4 | 18.5 | 57.1 | 18.9 | 4.1 | 100.0 | — | — |
| | | Fossil Fuel | Nuclear | Hydropower | Total | | | |
| Generating plants: | | | | | | | | |
| Number | | 226 | 7 | 130 | 363 | | | |
| Installed capacity (thousand kW) | | 49,932 | 2,140 | 5,967 | 58,039 | | | |
| Production (million kW-hr) | | 194,494 | 11,110 | 28,851 | 234,455 | | | |

Total gross energy input: 10,286.3 trillion Btu
Total gross energy input per capita: 273 million Btu

Total net energy input: 8,600.4 trillion Btu
Total net energy input per capita: 229 million Btu

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-50. South Atlantic States Fuel and Energy Statistics
Population, 1972: 31,920,000**

| Salient Fuel Statistics - 1972 | | | | | | | | |
|---|---|---|---|--|--|--|---------------------------------------|--|
| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) | | |
| Reserves | 137,490 | 44,150,480 | ¹ 242,189 | 90,884 | ² 2,562,507 | 0 | | |
| Production: | | | | | | | | |
| Quantity | 0 | 159,411 | 19,574 | W | 233,503 | 0 | | |
| Value, thousands | 0 | 1,628,835 | ³ 12,047 | W | 70,395 | 0 | | |
| Average number of active operations — Coal mines: 1,683 Crude oil wells: 12,279 Natural gas wells: 21,470 Uranium mines: 0 | | | | | | | | |
| Labor force — Total: 14,467,800 Fuel sector (excluding processing): 63,964 | | | | | | | | |
| | Petroleum Refineries | | Natural Gas Processing Plants | | Uranium Mills | | | |
| Processing plants: | | | | | | | | |
| Number | | 10 | | 5 | | 0 | | |
| Daily capacity | | 249,200 bbl | | 1,274 MMcf | | 0 tons of ore | | |
| CONSUMPTION | | | | | | | | |
| | Anthracite ⁴ (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) | | | |
| Household-commercial | 0 | 1,388 | 143,098 | 546,880 | 0 | | | |
| Industrial | 0 | 19,788 | 80,452 | 722,908 | 0 | | | |
| Transportation | 0 | 0 | 491,391 | 47,722 | 0 | | | |
| Electric power | 0 | 71,152 | 139,690 | 264,416 | 22,823 | | | |
| Miscellaneous | 103 | 0 | 5,731 | 0 | 0 | | | |
| Total | 103 | 92,328 | 860,362 | 1,581,926 | 22,823 | | | |
| Salient Energy Statistics - 1972 | | | | | | | | |
| ENERGY CONSUMPTION, TRILLION BTU | | | | | | | | |
| | Anthracite ⁴ | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
| Household-commercial | 0 | 37.8 | 818.5 | 563.9 | 0 | 1,420.2 | 615.0 | 2,035.2 |
| Industrial | 0 | 539.6 | 462.2 | 745.3 | 0 | 1,747.1 | 343.9 | 2,091.0 |
| Transportation | 0 | 0 | 2,637.5 | 49.2 | 0 | 2,686.7 | 0.7 | 2,687.4 |
| Electric power | 0 | 1,589.3 | 873.2 | 272.6 | 238.4 | 2,973.5 | — | — |
| Miscellaneous | 2.6 | 0 | 31.4 | 0 | 0 | 34.0 | — | 34.0 |
| Total | 2.6 | 2,166.7 | 4,822.8 | 1,631.0 | 238.4 | 8,861.5 | 959.6 | 6,847.6 |
| Percentages | insig. | 24.5 | 54.4 | 18.4 | 2.7 | 100.0 | — | — |
| | Fossil Fuel | | Nuclear | | Hydropower | | Total | |
| Generating plants: | | | | | | | | |
| Number | 265 | | 3 | | 129 | | 397 | |
| Installed capacity (thousand kW) | 59,691 | | 2,376 | | 5,505 | | 67,572 | |
| Production (million kW-hr) | 275,818 | | 5,343 | | 17,480 | | 298,641 | |
| Total gross energy input: 8,861.5 trillion Btu | | | | Total net energy input: 6,847.6 trillion Btu | | | | |
| Total gross energy input per capita: 278 million Btu | | | | Total net energy input per capita: 215 million Btu | | | | |

¹ Virginia withheld.

² Maryland withheld.

³ Florida withheld.

⁴ Florida, North Carolina, South Carolina, and West Virginia withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-51. East North Central States Energy and Fuel Statistics
Population, 1972: 40,791,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|--------------------------------|--|-----------------------|--|
| Reserves | 0 | 97,482,640 | 393,653 | 19,854 | 3,076,177 | 0 |
| Production: | | | | | | |
| Quantity | 0 | 142,439 | 63,352 | 1,228 | 125,765 | 0 |
| Value, thousands | 0 | 850,988 | 218,712 | 3,261 | 46,166 | 0 |
| Average number of active operations — Coal mines: | 405 | | Crude oil wells: 48,002 | Natural gas wells: 10,065 | | Uranium mines: 0 |
| Labor force — Total: | 17,451,600 | Fuel sector (excluding processing): 19,637 | | | | |
| | Petroleum Refineries | | Natural Gas Processing Plants | | Uranium Mills | |
| Processing plants: | | | | | | |
| Number | | 33 | | 6 | | 0 |
| Daily capacity | | 2,283,950 bbl | | 692 MMcf | | 0 tons of ore |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 4,931 | 217,120 | 2,277,443 | 0 |
| Industrial | 0 | 68,642 | 69,485 | 1,624,510 | 0 |
| Transportation | 0 | 0 | 556,382 | 71,539 | 0 |
| Electric power | 0 | 125,161 | 28,827 | 194,484 | 22,765 |
| Miscellaneous | 344 | 0 | 4,011 | 0 | 0 |
| Total | 344 | 198,734 | 875,825 | 4,167,976 | 22,765 |

Salient Energy Statistics -- 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|-------------|--------------------------------|-----------------------|----------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 134.5 | 1,227.1 | 2,348.0 | 0 | 3,709.6 | 602.5 | 4,312.1 |
| Industrial | 0 | 1,871.6 | 393.0 | 1,674.9 | 0 | 3,939.5 | 550.8 | 4,490.3 |
| Transportation | 0 | 0 | 2,965.8 | 73.8 | 0 | 3,039.4 | 1.7 | 3,041.1 |
| Electric power | 0 | 2,795.5 | 174.7 | 200.5 | 241.5 | 3,412.2 | — | — |
| Miscellaneous | 8.6 | 0 | 20.7 | 0 | 0 | 29.3 | — | 29.3 |
| Total | 8.6 | 4,801.6 | 4,781.1 | 4,297.2 | 241.5 | 14,130.0 | 1,155.0 | 11,872.8 |
| Percentages | 0.1 | 34.0 | 33.8 | 30.4 | 1.7 | 100.0 | — | — |
| | Fossil Fuel | | Nuclear | | Hydropower | | Total | |
| Generating plants: | | | | | | | | |
| Number | | 417 | | 6 | | 158 | | 581 |
| Installed capacity (thousand kW) | | 67,197 | | 5,436 | | 840 | | 73,473 |
| Production (million kW-hr) | | 299,045 | | 18,486 | | 4,279 | | 321,810 |

Total gross energy input: 14,130.0 trillion Btu
Total gross energy input per capita: 346 million Btu

Total net energy input: 11,872.8 trillion Btu
Total net energy input per capita: 291 million Btu

¹ Illinois withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-52. West North Central States Fuel and Energy Statistics
Population, 1972: 16,618,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|--------------------------------|--|-------------------------|--|
| Reserves | 0 | 30,191,220 | ¹ 649,980 | 440,079 | ² 12,430,601 | 0 |
| Production: | | | | | | |
| Quantity | 0 | 13,261 | 103,352 | ³ 30,604 | 925,227 | 0 |
| Value, thousands | 0 | 49,056 | ⁴ 357,222 | ³ 56,340 | 133,935 | 0 |
| Average number of active operations — Coal mines: 40 Crude oil wells: 43,765 Natural gas wells: 8,674 Uranium mines: 4 | | | | | | |
| Labor force — Total: | 7,268,700 | Fuel sector (excluding processing): 10,279 | | | | |
| | Petroleum Refineries | | Natural Gas Processing Plants | | Uranium Mills | |
| Processing plants: | | | | | | |
| Number | | 17 | | 35 | | 0 |
| Daily capacity | | 714,550 bbl | | 5,644 MMcf | | 0 tons of ore |

CONSUMPTION

| | Anthracite ⁵ (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|---|---|---|-----------------------|--|
| Household-commercial | 0 | 665 | 109,418 | 854,798 | 0 |
| Industrial | 0 | 5,807 | 26,045 | 682,803 | 0 |
| Transportation | 0 | 0 | 279,252 | 130,844 | 0 |
| Electric power | 0 | 31,582 | 5,396 | 404,763 | 17,884 |
| Miscellaneous | 11 | 0 | 2,260 | 0 | 0 |
| Total | 11 | 38,054 | 422,371 | 2,073,208 | 17,884 |

Salient Energy Statistics - 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite ⁵ | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------|-------------------------|--------------------------------|-----------------------|----------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 18.1 | 572.8 | 881.3 | 0 | 1,472.2 | 247.9 | 1,720.1 |
| Industrial | 0 | 158.3 | 143.7 | 704.0 | 0 | 1,006.0 | 134.2 | 1,140.2 |
| Transportation | 0 | 0 | 1,487.2 | 134.9 | 0 | 1,622.1 | 0.1 | 1,622.2 |
| Electric power | 0 | 705.4 | 32.2 | 417.3 | 186.6 | 1,341.5 | — | — |
| Miscellaneous | 0.3 | 0 | 11.5 | 0 | 0 | 11.8 | — | 11.8 |
| Total | 0.3 | 881.8 | 2,247.4 | 2,137.5 | 186.6 | 5,453.6 | 382.2 | 4,494.3 |
| Percentages | — | 16.2 | 41.2 | 39.2 | 3.4 | 100.0 | — | — |

| | Fossil Fuel | Nuclear | Hydropower | Total |
|----------------------------------|-------------|---------|------------|---------|
| Generating plants: | | | | |
| Number | 686 | 1 | 63 | 750 |
| Installed capacity (thousand kW) | 24,249 | 569 | 3,089 | 27,907 |
| Production (million kW-hr) | 93,027 | 3,558 | 14,325 | 110,910 |

Total gross energy input: 5,453.6 trillion Btu
Total gross energy input per capita: 328 million Btu

Total net energy input: 4,494.3 trillion Btu
Total net energy input per capita: 270 million Btu

- ¹ Missouri and South Dakota withheld.
² Iowa, Minnesota, Missouri, and South Dakota withheld.
³ Nebraska and North Dakota withheld.
⁴ Missouri withheld.
⁵ Iowa and Missouri withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Data*, IC 8647.

**Table 3-53. East South Central States Fuel and Energy Statistics
Population, 1972: 13,155,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|--------------------------------|--|------------------------|--|
| Reserves | 0 | 29,491,600 | ¹ 417,385 | 89,008 | ¹ 2,288,132 | 0 |
| Production: | | | | | | |
| Quantity | 0 | 153,261 | 80,934 | ² 829 | 171,306 | 0 |
| Value, thousands | 0 | 1,106,507 | ¹ 25,553 | ² 2,308 | 45,343 | 0 |
| Average number of active operations — Coal mines: | 1,795 | | Crude oil wells: 18,428 | Natural gas wells: 7,411 | | Uranium mines: 0 |
| Labor force — Total: | 5,376,000 | Fuel sector (excluding processing): 43,523 | | | | |

| | Petroleum Refineries | Natural Gas Processing Plants | Uranium Mills |
|--------------------|----------------------|-------------------------------|---------------|
| Processing plants: | | | |
| Number | 14 | 13 | 0 |
| Daily capacity | 554,500 bbl | 1,284 MMcf | 0 tons of ore |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 894 | 46,749 | 365,561 | 0 |
| Industrial | 0 | 16,207 | 20,275 | 587,070 | 0 |
| Transportation | 0 | 0 | 196,897 | 139,283 | 0 |
| Electric power | 0 | 56,969 | 4,523 | 129,331 | 25,160 |
| Miscellaneous | W | 0 | 1,476 | 0 | 0 |
| Total | W | 74,070 | 269,920 | 1,221,245 | 25,160 |

Salient Energy Statistics -- 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------|------------|--------------------------------|-----------------------|-------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 24.4 | 244.2 | 376.9 | 0 | 645.5 | 253.0 | 898.5 |
| Industrial | 0 | 441.9 | 109.3 | 605.3 | 0 | 1,156.5 | 329.3 | 1,485.8 |
| Transportation | 0 | 0 | 1,049.7 | 143.6 | 0 | 1,193.3 | 0 | 1,193.3 |
| Electric power | 0 | 1,272.5 | 27.0 | 133.3 | 261.0 | 1,693.8 | — | — |
| Miscellaneous | W | 0 | 8.4 | 0 | 0 | 8.4 | — | 8.4 |
| Total | W | 1,738.8 | 1,438.6 | 1,259.1 | 261.0 | 4,697.5 | 582.3 | 3,586.0 |
| Percentages | — | 37.0 | 30.6 | 26.8 | 5.6 | 100.0 | — | — |

| | Fossil Fuel | Nuclear | Hydropower | Total |
|----------------------------------|-------------|---------|------------|---------|
| Generating plants: | | | | |
| Number | 77 | 0 | 52 | 129 |
| Installed capacity (thousand kW) | 30,288 | 0 | 5,259 | 35,147 |
| Production (million kW-hr) | 142,272 | 0 | 25,160 | 167,432 |

Total gross energy input: 4,697.5 trillion Btu
Total gross energy input per capita: 357 million Btu

Total net energy input: 3,586.0 trillion Btu
Total net energy input per capita: 273 million Btu

¹ Tennessee withheld.

² Kentucky withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-54. West South Central States Fuel and Energy Statistics
Population, 1972: 19,983,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|---|--|-----------------------|--|
| Reserves | 96,400 | 5,135,440 | 18,588,639 | 5,370,359 | 186,961,284 | 32,498 |
| Production: | | | | | | |
| Quantity | 0 | 7,097 | 2,419,664 | 512,650 | 18,603,927 | W |
| Value, thousands | 0 | ¹ 23,788 | 8,505,104 | 1,159,774 | 3,369,643 | W |
| Average number of active operations — Coal mines: | 26 | | Crude oil wells: 275,897 | Natural gas wells: 42,327 | | Uranium mines: 14 |
| Labor force — Total: | 8,276,300 | | Fuel sector (excluding processing): 183,987 | | | |
| | | Petroleum Refineries | Natural Gas Processing Plants | Uranium Mills | | |
| Processing plants: | | | | | | |
| Number | | 79 | 590 | 3 | | |
| Daily capacity | | 5,594,098 bbl | 56,984 MMcf | 3,750 tons of ore | | |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 4 | 72,679 | 647,680 | 0 |
| Industrial | 0 | 926 | 243,944 | 4,478,641 | 0 |
| Transportation | 0 | 0 | 383,188 | 221,659 | 0 |
| Electric power | 0 | 2,270 | 6,754 | 1,999,777 | 3,921 |
| Miscellaneous | W | 0 | 3,624 | 0 | 0 |
| Total | W | 3,200 | 710,189 | 7,347,757 | 3,921 |

Salient Energy Statistics -- 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|------------|--------------------------------|-----------------------|-------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 0.1 | 372.4 | 667.8 | 0 | 1,040.3 | 400.1 | 1,440.4 |
| Industrial | 0 | 25.2 | 1,035.2 | 4,617.4 | 0 | 5,677.8 | 290.3 | 5,968.1 |
| Transportation | 0 | 0 | 2,038.4 | 228.5 | 0 | 2,266.9 | insig. | 2,266.9 |
| Electric power | 0 | 50.7 | 41.1 | 2,061.8 | 40.7 | 2,194.3 | — | — |
| Miscellaneous | W | 0 | 19.9 | 0 | 0 | 19.9 | — | 19.9 |
| Total | W | 76.0 | 3,507.0 | 7,575.5 | 40.7 | 11,199.2 | 690.4 | 9,695.3 |
| Percentages | — | 0.7 | 31.3 | 67.6 | 0.4 | 100.0 | — | — |
| | | Fossil Fuel | Nuclear | Hydropower | Total | | | |
| Generating plants: | | | | | | | | |
| Number | | 288 | 0 | 43 | 331 | | | |
| Installed capacity (thousand kW) | | 47,653 | 0 | 2,280 | 49,933 | | | |
| Production (million kW-hr) | | 204,370 | 0 | 3,921 | 208,291 | | | |

Total gross energy input: 11,199.2 trillion Btu
Total gross energy input per capita: 560 million Btu

Total net energy input: 9,695.3 trillion Btu
Total net energy input per capita: 485 million Btu

¹ Texas withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-55. Mountain States Fuel and Energy Statistics
Population, 1972: 8,880,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|--------------------------------|--|-------------------------|--|
| Reserves | 30,040 | 176,529,890 | ¹ 2,344,428 | 648,472 | ² 20,165,721 | ³ 495,906 |
| Production: | | | | | | |
| Quantity | 0 | 40,675 | 344,118 | ⁴ 54,097 | 1,781,459 | 22,725 |
| Value, thousands | 0 | ² 165,887 | ⁵ 1,105,943 | ⁴ 111,296 | 299,018 | 143,168 |
| Average number of active operations - Coal mines: | 90 | | Crude oil wells: 32,602 | Natural gas wells: 12,820 | | Uranium mines: 191 |
| Labor force - Total: | 3,667,200 | Fuel sector (excluding processing): 27,911 | | | | |
| | | Petroleum Refineries | Natural Gas Processing Plants | Uranium Mills | | |
| Processing plants: | | | | | | |
| Number | | 33 | 84 | 7 | | |
| Daily capacity | | 508,753 bbl | 5,556 MMcf | 26,000 tons of ore | | |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 652 | 40,819 | 431,050 | 0 |
| Industrial | 0 | 4,577 | 21,122 | 561,208 | 0 |
| Transportation | 0 | 0 | 168,167 | 77,898 | 0 |
| Electric power | 0 | 20,092 | 4,727 | 251,621 | 29,276 |
| Miscellaneous | 0 | 0 | 2,327 | 0 | 0 |
| Total | 0 | 25,321 | 237,162 | 1,321,777 | 29,276 |

Salient Energy Statistics - 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------|------------|--------------------------------|-----------------------|-------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 17.8 | 225.3 | 444.5 | 0 | 687.6 | 169.8 | 857.4 |
| Industrial | 0 | 124.8 | 122.3 | 578.6 | 0 | 825.7 | 102.4 | 928.1 |
| Transportation | 0 | 0 | 900.0 | 80.3 | 0 | 980.3 | 0.3 | 980.6 |
| Electric power | 0 | 448.7 | 29.1 | 259.4 | 303.9 | 1,041.1 | - | - |
| Miscellaneous | 0 | 0 | 12.6 | 0 | 0 | 12.6 | - | 12.6 |
| Total | 0 | 591.3 | 1,289.3 | 1,362.8 | 303.9 | 3,547.3 | 272.5 | 2,778.7 |
| Percentages | 0 | 10.7 | 36.3 | 38.4 | 8.6 | 100.0 | - | - |

| | Fossil Fuel | Nuclear | Hydropower | Total |
|----------------------------------|-------------|---------|------------|--------|
| Generating plants: | | | | |
| Number | 165 | 0 | 173 | 338 |
| Installed capacity (thousand kW) | 13,369 | 0 | 6,601 | 19,970 |
| Production (million kW-hr) | 61,571 | 0 | 29,276 | 90,847 |

Total gross energy input: 3,547.3 trillion Btu
Total gross energy input per capita: 399 million Btu

Total net energy input: 2,778.7 trillion Btu
Total net energy input per capita: 313 million Btu

- ¹ Arizona and Nevada withheld.
² Arizona withheld.
³ Arizona, Montana, and Nevada withheld.
⁴ Montana withheld.
⁵ Nevada withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

**Table 3-56. Pacific Coast Fuel and Energy Statistics
Population, 1972: 27,155,000**

Salient Fuel Statistics - 1972

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Crude Oil (thousand bbl) | Natural Gas Liquids (thousand bbl) | Natural Gas (MMcf) | Uranium (thousand pounds recoverable U ₃ O ₈) |
|---|----------------------------------|---|--------------------------------|--|-------------------------|--|
| Reserves | 0 | 13,596,170 | 13,650,017 | 127,168 | 36,784,305 ¹ | W |
| Production: | | | | | | |
| Quantity | 0 | 3,302 | 419,915 | 14,913 | 612,874 | W |
| Value, thousands | 0 | 17,424 ² | 1,175,874 | 46,524 | 197,781 | W |
| Average number of active operations — Coal mines: | 4 | | Crude oil wells: 39,447 | Natural gas wells: 1,136 | | Uranium mines: W |
| Labor force — Total: | 11,756,100 | Fuel sector (excluding processing): 22,167 | | | | |
| | | Petroleum Refineries | Natural Gas Processing Plants | | Uranium Mills | |
| Processing plants: | | | | | | |
| Number | | 47 | 51 | | 1 | |
| Daily capacity | | 2,196,700 bbl | 1,821 MMcf | | 500 tons of ore | |

CONSUMPTION

| | Anthracite (thousand tons) | Bituminous Coal and Lignite (thousand tons) | Petroleum Products (thousand bbl) | Natural Gas (MMcf) | Hydropower and Nuclear (million kW-hr) |
|----------------------|----------------------------------|---|---|-----------------------|--|
| Household-commercial | 0 | 96 | 61,713 | 978,078 | 0 |
| Industrial | 0 | 2,395 | 52,466 | 925,140 | 0 |
| Transportation | 0 | 0 | 455,863 | 44,813 | 0 |
| Electric power | 0 | 267 | 56,640 | 619,283 | 150,389 |
| Miscellaneous | W | 0 | 3,772 | 0 | 0 |
| Total | W | 2,758 | 630,454 | 2,567,314 | 150,389 |

Salient Energy Statistics - 1972

ENERGY CONSUMPTION, TRILLION BTU

| | Anthracite | Bituminous Coal and Lignite | Petroleum Products | Natural Gas | Hydropower- Nuclear | Total Gross Inputs | Utility Electricity Distributed | Total Net Inputs (three sectors) |
|----------------------------------|------------|--------------------------------|-----------------------|-------------|------------------------|-----------------------|---------------------------------------|--|
| Household-commercial | 0 | 2.6 | 363.0 | 1,008.4 | 0 | 1,374.0 | 539.6 | 1,913.6 |
| Industrial | 0 | 65.2 | 303.6 | 953.8 | 0 | 1,322.6 | 329.8 | 1,652.4 |
| Transportation | 0 | 0. | 2,470.7 | 46.2 | 0 | 2,516.9 | 0.3 | 2,517.2 |
| Electric power | 0 | 6.0 | 355.6 | 638.5 | 1,562.6 | 2,562.7 | — | — |
| Miscellaneous | W | 0 | 21.0 | 0 | 0 | 21.0 | — | 21.0 |
| Total | W | 73.8 | 3,513.9 | 2,646.9 | 1,562.6 | 7,797.2 | 869.7 | 6,104.2 |
| Percentages | --- | 1.0 | 45.1 | 33.9 | 20.0 | 100.0 | — | — |
| | | Fossil Fuel | | Nuclear | | Hydropower | | Total |
| Generating plants: | | | | | | | | |
| Number | | 137 | | 3 | | 287 | | 427 |
| Installed capacity (thousand kW) | | 23,955 | | 1,310 | | 25,545 | | 50,810 |
| Production (million kW-hr) | | 96,462 | | 6,034 | | 144,355 | | 246,851 |

Total gross energy input: 7,797.2 trillion Btu
Total gross energy input per capita: 287 million Btu

Total net energy input: 6,104.2 trillion Btu
Total net energy input per capita: 225 million Btu

¹ Washington withheld.

² Alaska withheld.

Source: U.S. Department of the Interior, Bureau of Mines, *Fuel and Energy Data*, IC 8647.

APPENDIX A

Energy Intensiveness Tables

Table A-1. Energy Intensiveness For Automobiles and Buses, 1974-1980

| Vehicle Type | Gross Weight (1000 lbs.) | Trip Length (Statute Miles) | Average Trip Hrs @ MPH | Fuel Type ¹ | Vehicle Statute Miles/Gal | Specific Energy, Stop/Start | | | | | |
|----------------------------|-----------------------------|--------------------------------|---------------------------|------------------------|---------------------------|-----------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| | | | | | | Number of Seats | | Seat-Miles/Gallon | | BTU's Seat-Mile | |
| | | | | | | Available (Full Load) | 1972 Actual Aver. Oper. | Available (Full Load) | 1972 Actual Aver. Oper. | Available (Full Load) | 1972 Actual Aver. Oper. |
| Urban, Subcompact Auto | 2.0-2.4 | 10.0 | .24/25 | Gas | 24.0 | 4.0 | 1.6 | 96 | 38.4 | 1,302 | 3,255 |
| Urban, Compact Auto | 2.5-3.4 | 10.0 | .24/25 | Gas | 18.0 | 5.0 | 1.6 | 90 | 28.8 | 1,389 | 4,340 |
| Urban, Standard Auto | 3.5-4.4 | 10.0 | .24/25 | Gas | 14.4 | 6.0 | 1.6 | 86.4 | 23.0 | 1,447 | 5,435 |
| Urban, Luxury Auto | 4.5-6.0 | 10.0 | .24/25 | Gas | 9.0 | 6.0 | 1.6 | 54 | 14.4 | 2,315 | 8,681 |
| Urban, Bus | (18.5 Empty) 20.3-3-26.0 | 13.0 | 1.25/ 10.3 | Diesel | 3.6-4.0 | 50 | 12 | 180 | 48 | 771 | 2,891 |
| Intercity, Bus | (28.7 Empty) 45.0 | 100.0 | 1.81/55 | Diesel | 6.0 | 46 | 19.4 | 276 | 116.4 | 503 | 1,192 |
| Intercity, Subcompact Auto | 2.0-2.4 | 100.0 | 1.81/55 | Gas | 30.0 | 4.0 | 2.0 | 120 | 60 | 1,042 | 2,083 |
| Intercity, Compact Auto | 2.5-3.4 | 100.0 | 1.81/55 | Gas | 22.5 | 5.0 | 2.2 | 112.5 | 49.5 | 1,111 | 2,525 |
| Intercity, Standard Auto | 3.5-4.4 | 100.0 | 1.81/55 | Gas | 18.0 | 6.0 | 2.6 | 108 | 46.8 | 1,157 | 2,671 |
| Intercity, Luxury Auto | 4.5-6.0 | 100.0 | 1.81/55 | Gas | 13.0 | 6.0 | 3.0 | 72 | 36 | 1,736 | 3,472 |

¹ Gasoline = 125 x 10³ BTU/gallon, Diesel = 138.8 x 10³ BTU/gallon

Source: U.S. Department of Transportation/National Aeronautics and Space Administration, Reference Paper: *Transportation Vehicle Energy Intensities*, June 20, 1974.

Table A-2. Energy Intensiveness For Passenger Aircraft, 1974-1980

| Mode | Number of Seats | Gross Weight (1000 lbs) | Specific Trip Length (S.M.) | Average Trip Time (Hrs) ¹ | Vehicle Statute Mi./Gal. | Energy, Available Seat-Mi. Per Gal. | Stop/Start BTU/Avail. Seat-Mi (x1000) ² | Fuel Type | Data Provided By |
|--|-----------------|-------------------------|-----------------------------|--------------------------------------|--------------------------|-------------------------------------|--|-----------|------------------|
| Aircraft ³ | | | | | | | | | |
| Helicopter ⁴ | 24-26 | 19 | 13 | 0.15 | .58-.71 | 14-18 | 6.65-8.87 | Kero | NASA ARC |
| Gen Avia Single Eng. Recip. ⁵ | 4-6 | 2.3-3.8 | 100 | 0.6-0.8 | 10.5-15.1 | 42-72 | 1.49-2.56 | Avgas | NASA ARC |
| Gen Avia Twin Eng. Recip. ⁵ | 6-11 | 3.6-8.8 | 250 | 1.2-1.5 | 4.8-10.2 | 40-61 | 1.75-2.70 | Avgas | NASA ARC |
| Turbo Prop | 98 | 113 | 250 | 0.8 | .38 | 37 | 3.32 | Kero | NASA ARC |
| Turbo Prop | 98 | 113 | 500 | 1.3 | .47 | 46 | 2.68 | Kero | NASA ARC |
| Twin Eng. Turbo Fan (NB) | 68-106 | 77.7-116 | 250 | 0.8 | .34-.44 | 30-38 | 3.22-4.15 | Kero | NASA ARC |
| Twin Eng. Turbo Fan (NB) | 68-106 | 77.7-116 | 500 | 1.3 | .44-.54 | 37-47 | 2.61-3.35 | Kero | NASA ARC |
| Twin Eng. Turbo Fan (NB) | 68-106 | 77.7-116 | 1000 | 2.3 | .51-.61 | 41-54 | 2.30-2.97 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (NB) | 131-200 | 173-150 | 250 | 0.8 | .15-.22 | 27-30 | 4.06-4.62 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (NB) | 131-200 | 173-350 | 500 | 1.3 | .21-.29 | 35-41 | 3.00-3.48 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (NB) | 131-200 | 173-350 | 1000 | 2.3 | .26-.34 | 44-51 | 2.40-2.78 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (WB) | 256-385 | 426-775 | 250 | 0.8 | .09-.15 | 33-42 | 2.96-3.75 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (WB) | 256-385 | 426-775 | 500 | 1.3 | .11-.19 | 44-51 | 2.40-2.80 | Kero | NASA ARC |
| 3 & 4 Eng. Turbo Fan (WB) | 256-385 | 426-775 | 1000 | 2.3 | .14-.22 | 54-60 | 2.07-2.30 | Kero | NASA ARC |
| 3 Eng. Turbo Fan Charter (WB) | 400 | 426 | 250 | 0.8 | .14 | 57 | 2.18 | Kero | NASA ARC |
| 3 Eng. Turbo Fan Charter (WB) | 400 | 426 | 500 | 1.3 | .17 | 70 | 1.77 | Kero | NASA ARC |
| 3 Eng. Turbo Fan Charter (WB) | 400 | 426 | 1000 | 2.3 | .20 | 79 | 1.57 | Kero | NASA ARC |

¹ Commercial Transport Trip Times obtained from "Official Airline Guide," January 15, 1974, schedule times plotted versus trip distance.

² Kerosene at 18,400 BTU/lb and 6.7 lb/gallon; Avgas at 18,700 BTU/lb and 5.75 lb/gallon.

³ With the exception of helicopter and general aviation data, all other fuel consumption data obtained directly from manufacturers.

⁴ From CAB "Aircraft Operating Cost and Performance Report," August 1972.

⁵ Based on Manufacturer's published performance data for cruise at 75% power, block time and speed estimated at 90% of cruise speed to allow for takeoff and landing.

Source: U.S. Department of Transportation/National Aeronautics and Space Administration, Reference Paper: *Transportation Vehicle Energy Intensities*, June 20, 1974.

Table A-3. Energy Intensiveness for Passenger Trains, 1974-1980

| Vehicle Type | Gross Weight (1000 lbs) | Trip Length (Statute Miles) | Average Trip Time (Hrs) | Fuel Type | Vehicle Statute Miles/Gal | Number of Seats | Specific Energy Stop/Start Cycle | |
|------------------|-------------------------|-----------------------------|-------------------------|-----------|---------------------------|-----------------|----------------------------------|------------------|
| | | | | | | | Seat-Miles Gallon | BTU's/ Seat-Mile |
| Urban Train | 79 | .75 | .02 | Elect. | 57,600 BTU/mi | 50-60 | 106 | 1320 |
| Metroliner | 1050 | 75 | 1.0 | Elect. | 0.83 | 382 | 318 | 440 |
| New Tokaido Line | 2000 | 140 | 1.4 | Elect. | 0.4 | 1400 | 305 | 427 |
| Std. Diesel | 1200 | 50 | 0.75 | Diesel | 0.66 | 360 | 240 | 583 |

Source: U.S. Department of Transportation/National Aeronautics and Space Administration, Reference Paper: *Transportation Vehicle Energy Intensities*, June 20, 1974.

Table A-4. Energy Intensiveness For Trucks, 1974-1980

| Vehicle Type | Cargo Density Lbs/Ft ³ | Maximum Payload in Tons | Trip Length (Statute Miles) | Average Trip Time Hrs @ MPH | Type of Fuel | Vehicle Statute Miles/Gallon | Specific Energy Stop/Start Cycle | |
|------------------|-----------------------------------|-------------------------|-----------------------------|-----------------------------|--------------|------------------------------|----------------------------------|----------------|
| | | | | | | | Ton-Miles Per Gallon | BTU's/Ton Mile |
| Urban, Truck | 20-100 | 8 | 10 | .4/25 | Gas | 8 | 64 | 1,953 |
| Urban, Truck | 20-100 | 8 | 10 | .4/25 | Diesel | 12 | 96 | 1,446 |
| Urban, Truck | 10-30 | 3.1 | 10 | .4/25 | Gas | 8 | 25 | 5,040 |
| Intercity, Truck | 20-100 | 25 | 100 | 1.8/55 | Diesel | 5 | 125 | 1,110 |
| Intercity, Truck | 15 | 14.3 | 100 | 1.8/55 | Diesel | 4.8 | 69 | 2,023 |

Source: U.S. Department of Transportation/National Aeronautics and Space Administration, Reference Paper: *Transportation Vehicle Energy Intensities*, June 20, 1974.

Table A-5. Energy Intensiveness For Freight Aircraft, 1974-1980

| Mode | Maximum Payload (Tons) | Payload Gross Density (lb/ft ³) | Specific Trip Length (S. Mi.) | Average Trip Time (Hrs) ¹ | Vehicle Statute Mi/Gal | Specific Energy, Stop/Start Cycle | | Fuel Type | Data Provided By |
|-----------------------|------------------------|---|-------------------------------|--------------------------------------|------------------------|-----------------------------------|---------------------------------|-----------|------------------|
| | | | | | | Ton-Mi Per Gal | BTU/Ton Mi (x1000) ² | | |
| Aircraft ³ | | | | | | | | | |
| Turbofan, Narrow Body | 20.6-58.7 | 8.3-11.6 | 500 | 1.3 | .19-.44 | 8.4-11.1 | 11.1-14.7 | Kero | NASA ARC |
| Turbofan, Narrow Body | 20.6-58.7 | 8.3-11.6 | 1000 | 2.3 | .22-.53 | 9.6-12.8 | 9.6-12.9 | Kero | NASA ARC |
| Turbofan, Narrow Body | 46.8-58.7 | 10.9-11.6 | 2000 | 4.4 | .23-.27 | 12.6-13.6 | 9.1-9.8 | Kero | NASA ARC |
| Turbofan, Wide Body | 77.9-126.0 | 10.0 | 1000 | 2.3 | .12-.23 | 13.7-15.0 | 8.2-9.0 | Kero | NASA ARC |
| Turbofan, Wide Body | 77.9-126.0 | 10.0 | 2000 | 4.4 | .13-.24 | 14.2-16.0 | 7.7-8.7 | Kero | NASA ARC |

¹ Trip times assumed same as passenger schedules obtained from "Official Airline Guide," January 15, 1974, schedule times plotted against trip distance.

² Kerosene at 18,400 BTU/lb and 6.7 lb/gallon.

³ All fuel consumption data obtained directly from aircraft manufacturers for all-freighter or convertible-freighter aircraft models.

Table A-6. Energy Intensiveness For Freight Trains, 1974-1980

| Vehicle Type | Cargo Density #/Ft ³ | Maximum Payload, Tons | Trip Length, Statute Miles | Average Trip Time, Hrs @ MPH | Type of Fuel | Vehicle Statute Miles/Gallon | Specific Energy Start/Stop Cycle | |
|-----------------|---------------------------------|-----------------------|----------------------------|------------------------------|--------------|------------------------------|----------------------------------|-----------------|
| | | | | | | | Ton-Miles Per Gallon | BTU's Ton-Miles |
| Intercity Train | | | | | | | | |
| Config I: | 25 | 1000 | 100 | 2.26 @ 44 | Diesel | 0.14 | 273 | 550 |
| Config II: | 25 | 7000 | 100 | 2.85 @ 35 | Diesel | 0.17 | 420 | 330 |

¹ Trip times assumed same as passenger schedules obtained from "Official Airline Guide," January 15, 1974, schedule times plotted against trip distance.

² Kerosene at 18,400 BTU/lb and 6.7 lb/gallon.

³ All fuel consumption data obtained directly from aircraft manufacturers for all-freighter or convertible-freighter aircraft models.

Source: U.S. Department of Transportation/National Aeronautics and Space Administration, Reference Paper: *Transportation Vehicle Energy Intensities*, June 20, 1974.

APPENDIX B

**Definitions of Natural Gas and Crude Oil; Natural Gas and Crude Oil Reserves;
Natural Gas and Crude Oil Production**

APPENDIX B

Definitions of Natural Gas and Crude Oil; Natural Gas and Crude Oil Reserves; Natural Gas and Crude Oil Production

NATURAL GAS

Natural gas is a mixture of hydrocarbons and varying quantities of nonhydrocarbons that exists either in the gaseous phase or in solution with crude oil in natural underground reservoirs. Natural gas may be subclassified as follows:

Associated Gas — Natural gas, commonly known as gas-cap gas, which overlies and is in contact with crude oil in the reservoir.*

Dissolved Gas — Natural gas which is in solution with crude oil in the reservoir.

Nonassociated Gas — Natural gas which is in reservoirs that do not contain significant quantities of crude oil.

Dissolved gas and associated gas may be produced concurrently from the same well bore. In such situations, it is not feasible to measure the production of dissolved gas and associated gas separately; therefore, production is reported under the heading of associated-dissolved or casinghead gas. Reserves and productive capacity estimates for associated and dissolved gas are also reported as totals for associated-dissolved gas combined.

For statistical purposes, all natural gas volumes are reported in cubic feet on a pressure base of 14.73 psia, at 60° F.

NATURAL GAS - PROVED RESERVES

Proved reserves of natural gas as of December 31 of any given year are the estimated quantities of natural gas which geological and engineering data demonstrate with reasonable certainty to be recoverable in the future from known natural oil and gas reservoirs under existing economic and operating conditions.

Reservoirs are considered proved if economic producibility is supported by either actual production or conclusive formation tests. The area of a reservoir considered proved includes: (1) that portion delineated by drilling and defined by gas-oil, gas-water, or oil-water contacts; and (2) the adjoining portions not yet drilled but which can be reasonably judged as economically productive on the basis of available geological and engineering data. In the absence of information on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.

Reserve estimates are prepared for total recoverable natural gas, nonassociated gas, and associated-dissolved gas. Estimates do not include (1) gaseous equivalents of natural gas liquids expected to be recovered from reservoir natural gas as it is produced; (2) natural gas being held in underground storage; or (3) nonhydrocarbon gases.

Classifications of reservoirs by regulatory agencies are used as the basis for dividing total reserves between nonassociated and associated-dissolved reserves. In the absence of classification by a regulatory agency, allocations are based on the natural occurrence of the gaseous hydrocarbons in reservoirs as determined by the operator.

*Where reservoir conditions are such that the production of associated gas does not substantially affect the recovery of crude oil in the reservoir, such gas may be reclassified as nonassociated gas by a regulatory agency. In this event, reserves and production are reported in accordance with the classification used by the regulatory agency.

NATURAL GAS - PRODUCTION

Statistics pertaining to natural gas production represent volumes of gas produced from natural oil and gas reservoirs during given periods of time with adjustments (where applicable) to reflect (1) the volume of gas returned to natural reservoirs, and (2) the reduction of volume resulting from the removal of natural gas liquids and nonhydrocarbon gases. The volume of natural gas withdrawn from underground storage facilities is not included in natural gas production statistics.

CRUDE OIL

Crude oil is technically defined as a mixture of hydrocarbons that existed in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. For statistical purposes, volumes reported as crude oil include:

1. Liquids technically defined as crude oil;
2. Small amounts of hydrocarbons that existed in the gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators; and
3. Small amounts of nonhydrocarbons produced with the oil.

Statistical data pertaining to crude oil production, reserves, and productive capacity are reported as liquid equivalents at the surface (excluding basic sediment and water) measured in terms of barrels of 42 U.S. gallons at atmospheric pressure, and corrected to 60° F.

CRUDE OIL - INDICATED ADDITIONAL RESERVES

With the present state of industry technology, certain quantities of crude oil (other than those defined and reported as proved reserves) may be economically recoverable from the following potential sources:

Known productive reservoirs in existing fields expected to respond to improved recovery techniques such as fluid injection where (a) an improved recovery technique has been installed but its effect cannot yet be fully evaluated; or (b) an improved technique has not been installed but knowledge of reservoir characteristics and the results of a known technique installed in a similar situation are available for use in estimating procedure.

Crude oil potentially available from these sources is reported as "indicated additional reserves." The economic recoverability of these reserves is not considered to be established with sufficient conclusiveness to allow them to be included in proved reserves; however, if and when improved recovery techniques are successfully applied to known reservoirs, the corresponding indicated additional reserves will be reclassified and added to the inventory of "proved" reserves.

CRUDE OIL - PROVED RESERVES

Proved reserves of crude oil as of December 31 of any given year are the estimated quantities of all liquids statistically reported as crude oil, which geological and engineering data demonstrate with reasonable certainty to be recoverable in the future from known reservoirs under existing economic and operating conditions.

Reservoirs are considered proved if economic producibility is supported by either actual production or conclusive formation tests. The area of an oil reservoir considered proved includes: (1) that portion delineated by drilling and defined by gas-oil or oil-water contacts, if any; and (2) the immediately adjoining portions not yet drilled but which can be reasonably judged as economically productive on the basis of available geological and engineering data. In the absence of infor-

mation on fluid contacts, the lowest known structural occurrence of hydrocarbons controls the lower proved limit of the reservoir.

Reserves of crude oil which can be produced economically through application of improved recovery techniques such as fluid injection are included in the "proved" classification if successful testing by a pilot project, or the operation of an installed program in the reservoir, provide support for the engineering analysis on which the project or program was based.

Estimates of proved crude oil reserves do not include the following: (1) oil that may become available from known reservoirs but is reported separately as "indicated additional reserves"; (2) natural gas liquids; (3) oil the recovery of which is subject to reasonable doubt because of uncertainty as to geology, reservoir characteristics, or economic factors; (4) oil that may occur in untested prospects; and (5) oil that may be recovered from oil shales, coal, gilsonite, etc.

CRUDE OIL - PRODUCTION

Crude oil production is the volume of liquids statistically reported as crude oil, which is produced from oil reservoirs during given periods of time. The amount of such production for a given period is generally established by measurement of volumes delivered from lease storage tanks (i.e., the point of custody transfer) to pipelines, trucks, or other media for transport to refineries or terminals with adjustments for (1) net differences between opening and closing lease inventories, and (2) basic sediment and water (BS&W).

Source: American Petroleum Institute, *Standard Definitions for Petroleum Statistics*, July 1, 1969

APPENDIX C

**New Definitions of Refinery Operable Capacity as Announced by the
American Petroleum Institute, July 12, 1973**

APPENDIX C

New Definitions of Refinery Operable Capacity as Announced by the American Petroleum Institute, July 12, 1973

Under the old definitions, developed more than 25 years ago and used by both the Bureau of Mines and API, refinery capacity was determined by the amount of crude oil which could be processed in crude distillation units. The new definitions state that in addition to crude oil, other liquid hydrocarbons which are processed in crude distillation units must also be counted as input when figuring the utilization of refinery capacity.

A key provision of the new definitions reads as follows:

“For statistical reporting related to the utilization of operable refinery capacity, input to crude oil processing units includes all crude oil run through crude oil distillation units, and crude oil charged to other processing units. In addition to crude oil, such input includes lease condensate, natural gas plant liquids, unfinished oils, and other liquid hydrocarbons (such as shale oil, tar sands oils, gilsonite, etc.) that are processed through crude oil distillation units.”

The definition continues:

“Any oils not specifically identified above, and components blended by mechanical means to finished products, are not classified as input to crude oil processing units.”

Another key provision deals with environmental constraints:

“Operable capacity is limited by the environmental constraints expected to be applicable to refinery operations.” Thus, if a refinery has a potential capacity of 100,000 barrels a day, but in order to be in compliance with local environmental regulations can process no more than 95,000 bpd, its operable capacity would be rated as 95,000 bpd.

The new definition of operable capacity includes (a) capacity that is in operation; (b) capacity not in operation or not under active repairs but capable of being placed in operation within approximately 30 days; and (c) capacity not in operation but under active repairs which can be completed within approximately 90 days.

Source: American Petroleum Institute, *News Release*, July 12, 1973

APPENDIX D

Automobile Operating Costs - Bases for Estimates in Tables

APPENDIX D

1967 Automobile Operating Costs — Bases for Estimates in Table 3-1

| Item | |
|------------------------------|---|
| Automobile Description | The vehicle used as an example was a 1967 model 4-door sedan that costs \$2,806 excluding accessories and taxes. |
| Repairs and Maintenance | These include minor routine maintenance such as lubrications, brake adjustments, and washing; replacement of minor parts such as spark plugs, wiper blades, fan belts, radiator hose, points and condenser, etc.; intermediate repairs such as starter and alternator overhaul, brake relining, universal joint replacement, etc.; and major repairs such as automatic transmission overhaul and engine rebuilding. Also included is fender and body work that averages \$13.50 per year. |
| Replacement Tires | Purchase of 11 new tires and 2 tubes during the life of the car was assumed. |
| Accessories | Accessories provided include a radio, a set of seat covers, and floor mats. |
| Gasoline | Gasoline consumption was set at 14.3 miles per gallon. |
| Oil | Oil consumption is associated with gasoline consumption at a rate of 72 to 1. |
| Insurance | Coverage includes \$50,000 combined public liability, property damage, and comprehensive for the full 10 years. Uninsured motorist coverage, and \$50 deductible collision insurance was assumed for the first 5 years. |
| Garaging, Parking, and Tolls | Monthly charges of \$10.00 for garage rental or indirect cost of owner's garage; parking fee average of \$54.00 per year assigned proportionate to annual travel; and tolls averaging \$6.50 per year were included. |
| Taxes | Taxes included are the Federal gasoline tax at 4 cents per gallon, and the weighted average of State gasoline taxes (since gasoline would be bought in different States); Maryland registration fee of \$15.00 per year, that includes a \$5.00 property tax component; Maryland titling tax at 3 percent of retail price; Federal excise taxes on motor vehicles, tires, tubes, and oil. |
| Benefit Period | The cost of certain major items are spread over a period of benefit rather than being charged entirely to the year in which the expenditure was actually made. |

Source: Federal Highway Administration, *Cost of Operating an Automobile, January 1968.*

APPENDIX D

1972 — Automobile Operating Costs — Bases for Estimates in Tables 3-2, 3-3, and 3-4

| Item | Standard Size Automobile | Compact Size Automobile | Subcompact Size Automobile |
|------------------------------|---|--|--|
| Automobile Description | 1972 model 4-door sedan Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, whitewall tires, and body protective molding. Purchase price \$4,379. | 1972 model 2-door sedan Equipped with: 6-cylinder engine, automatic transmission, power steering, radio, and body protective molding. Purchase price \$2,696. | 1972 model 2-door sedan Equipped with: standard equipment plus radio and body protective molding. Purchase price \$2,064. |
| Repairs and Maintenance | Includes routine maintenance such as lubrications, repacking wheel bearings, flushing cooling system, and aiming headlamps, replacement of minor parts such as spark plugs, fan belts, radiator hoses, distributor cap, fuel filter, and pollution control filters; minor repairs such as brake jobs, water pump, carburetor overhaul and universal joints; and major repairs such as a complete "valve job". | | |
| Replacement Tires | Purchase of 7 new regular tires and 4 new snow tires during the lives of the cars was assumed. | | |
| Accessories | Purchase of floor mats the first year, seat covers the sixth year, and miscellaneous items totaling \$2.00 per year was assumed. | | |
| Gasoline | Consumption rate of 13.60 miles per gallon was used. | Consumption rate of 15.97 miles per gallon was used. | Consumption rate of 21.43 miles per gallon was used. |
| Oil | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 186 gallons of gasoline. | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 166 gallons of gasoline. | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 135 gallons of gasoline. |
| Insurance | Coverage includes \$50,000 combined public liability (\$15,000/\$30,000 bodily injury, and \$5,000 property damage), \$1,000 medical payments, uninsured motorist coverage, and full comprehensive coverage for the 10-year period. Deductible collision insurance was assumed for the first 5 years (\$100 deductible). | | |
| Garaging, Parking, and Tolls | Includes monthly charges of \$10.00 for garage rental or indirect cost of the owners garaging facility; plus parking fee average of \$54.00 per year, and toll average of \$6.94 per year, both of which were assigned in proportion to annual travel. | | |
| Taxes | Includes Federal excise taxes on tires (10 cents per pound), lubricating oil (6 cents per gallon), and gasoline (4 cents per gallon); plus the Maryland tax on gasoline (7 cents per gallon), titling tax (4 percent of retail price), and registration fee (\$20.00 for 3,700 pounds or less shipping weight, or \$30.00 for vehicles over 3,700 pounds). | | |

APPENDIX D

1974 Automobile Operating Costs — Bases for Estimates in Tables 3-5, 3-6, and 3-7

| Item | Standard Size Automobile | Compact Size Automobile | Subcompact Size Automobile |
|------------------------------|--|---|--|
| Automobile Description | 1974 model 4-door sedan. Equipped with: V-8 engine, automatic transmission, power steering and brakes, air conditioning, tinted glass, radio, clock, white-wall tires, wheel covers, and body protective molding. Purchase price — \$4,251. | 1974 model 2-door sedan. Equipped with: 6 cylinder engine, automatic transmission, power steering, radio, vinyl top, wheel covers, and body protective molding. Purchase price — \$2,910. | 1974 model 2-door sedan. Equipped with: Standard equipment plus radio, wheel covers, and body protective molding. Purchase price — \$2,410. |
| Repairs and Maintenance | Includes routine maintenance such as lubrications, repacking wheel bearings, flushing cooling system, and aiming headlamps; replacement of minor parts such as spark plugs, fan belts, radiator hoses, distributor cap, fuel filter, and pollution control equipment; minor repairs such as brake jobs, water pump, carburetor overhaul, and universal joints; and major repairs such as a complete "valve job." Costs were calculated using 1974 parts prices and a \$12 per hour labor rate. | | |
| Replacement Tires | Purchase of 7 new regular tires and 4 new snow tires during the lives of the cars was assumed. | | |
| Accessories | Purchase of floor mats the first year, seat covers the sixth year, and miscellaneous items totaling \$2.20 per year was assumed. | | |
| Gasoline | Consumption rate of 12.92 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used. | Consumption rate of 15.97 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used. | Consumption rate of 21.43 miles per gallon and a gasoline price of 52.1 cents per gallon including taxes were used. |
| Oil | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 159 gallons of gasoline. A price of \$1.00 per quart was used. | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 150 gallons of gasoline. A price of \$1.00 per quart was used. | Consumption was associated with gasoline consumption at a rate of 1 gallon of oil for every 135 gallons of gasoline. A price of \$1.00 per quart was used. |
| Insurance | Coverage includes \$50,000 combined public liability (\$15,000/\$30,000 bodily injury, and \$5,000 property damage), \$2,500 personal injury protection, uninsured motorist coverage, and full comprehensive coverage for the 10-year period. Deductible collision insurance was assumed for the first 5 years (\$100 deductible). | | |
| Garaging, Parking, and Tolls | Includes monthly charges of \$11.00 for garage rental or indirect cost of the owner's garaging facility; plus parking fee average of \$57.00 per year, and toll average of \$7.00 per year, both of which were assigned in proportion to annual travel. | | |
| Taxes | Includes Federal excise taxes on tires (10 cents per pound), lubricating oil (6 cents per gallon), and gasoline (4 cents per gallon); plus the Maryland tax on gasoline (9 cents per gallon), titling tax (4 percent of retail price), and registration fee (\$20.00 for 3,700 pounds or less shipping weight, or \$30.00 for vehicles over 3,700 pounds). | | |

Source: Federal Highway Administration, *Cost of Operating an Automobile*, April 1974.

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