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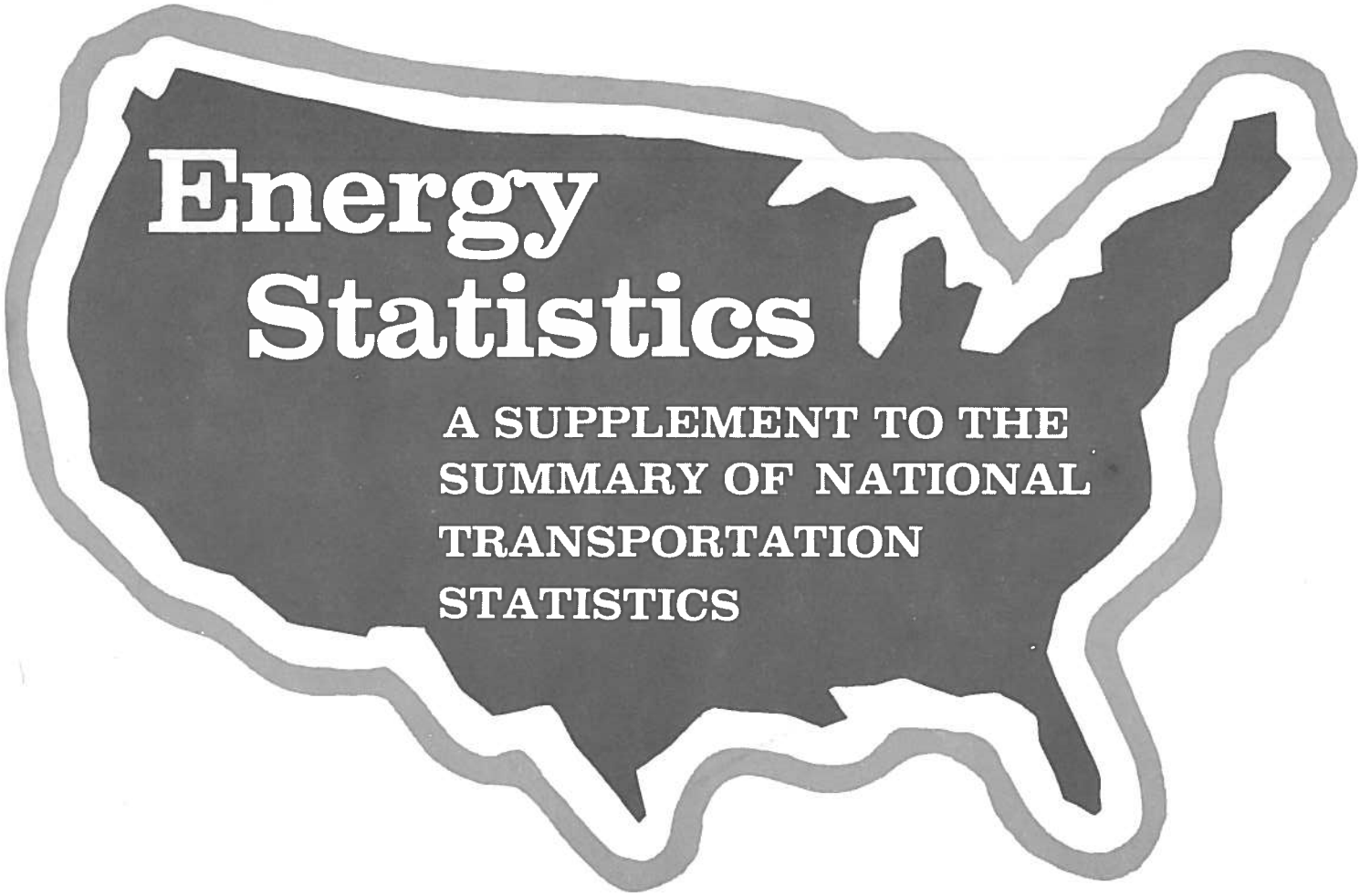

Energy Statistics

A SUPPLEMENT TO THE SUMMARY OF NATIONAL TRANSPORTATION STATISTICS

AUGUST 1974

FINAL REPORT

Prepared for

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY
Assistant Secretary for Policy, Plans,
and International Affairs
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16. Abstract

This annual report is a compendium of selected time-series data describing the transportation, production, processing, and consumption of energy. The statistics have been assembled from a wide variety of sources, including the U.S. Department of the Interior, the Interstate Commerce Commission, and the American Petroleum Institute.

The report is divided into three main sections. The first, entitled "Energy Transport", contains such items as the revenues and expenses of oil pipeline companies, number and capacities of U.S. tank ships, and the total crude oil transported in the U.S. by method of transportation.

The second section, entitled "Reserves, Production, and Refining", reveals the growth over time of the U.S. oil and natural gas reserves, refinery capacity, and yields.

Trends in the demand for fuel and power are displayed in the third section, entitled "Energy Consumption". Throughout this part, the transportation sector is emphasized. Included are the gasoline and oil costs of automobiles of different sizes, the consumption of petroleum by type of product, the electrical energy consumed by the local transit industry, and other important statistics describing the supply and demand for energy.

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INTRODUCTION

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 1974 edition, essentially an updated version of the 1973 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 I, includes financial, inventory, and activity statistics related to the transportation of energy commodities via pipeline, water, truck, and rail. A few examples: Table I-1 presents data on revenues, expenses, and income of the U.S. oil pipeline companies, 1955-1972; Table I-9 shows the annual growth of the world tank ship fleet, 1962-1973; Table I-19 shows the amount of petroleum and coal transported in domestic and foreign waterborne commerce, 1972.

Part II 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 A, "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 II also includes time-series on natural gas reserves and production, U.S. refinery capacity and yields. Table II-10, for example, shows that the average gasoline yield in 1973 was 45.61% of all crude oil inputs to U.S. refineries.

Part III contains U.S. energy consumption statistics. Included in Tables III-1 through III-21 are estimates of the fuel and oil costs for the various modes of transportation. The data in Tables III-22 through III-31 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 III-27.) 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 III. Tables III-32 through III-38 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 III-32 through III-38 deal with commercial and private transportation only. Tables III-39 through III-48 contain 1971 fuel and energy statistics (i.e., production, consumption and processing) for the nine regions of the U.S. shown in Figure 20.

There are no energy intensiveness statistics in this issue because there are no direct measures of the efficiency parameter. Energy intensiveness is a parametric concept used to quantify and compare the relative efficiencies of different means for moving goods and people.

Simple overall energy intensiveness averages for any mode, like most aggregated averages of any type, can be very misleading particularly when considered as the marginal benefit to be derived from the last unit of consumption. Energy intensiveness calculations disaggregated to the level of individual firms, industry subgroups, or particular trips over specific routes can vary widely due to differences in prime mover technology, load factor, deadheading, length of haul, geography of area served, cargo weight versus size, average speed, etc. since they are not measured directly but rather derived utilizing a set of implied assumptions.

Thus, estimated overall industry averages as indices relating to energy intensiveness have limited usefulness both of themselves and for purposes of comparison with each other. The dangers of misinterpretation of such indices is far too great to depend upon only the one variable, energy intensiveness, to be given undue attention as a criterion for transportation system evaluations involving capital investment, operating subsidy, or alternative policies decisions.

PART I. ENERGY TRANSPORT

Table I-1. Revenues, Expenses, and Income of U.S. Oil Pipeline Companies,[1] 1955 - 1972

As of Dec. 31	Number of Companies	Operating Revenues ($000)	Operating Expenses ($000)	Operating Ratio (%)	Operating[2] Income ($000)	Net[3] Income ($000)
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] After taxes
[3] Total Income less fixed and contingent charges

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

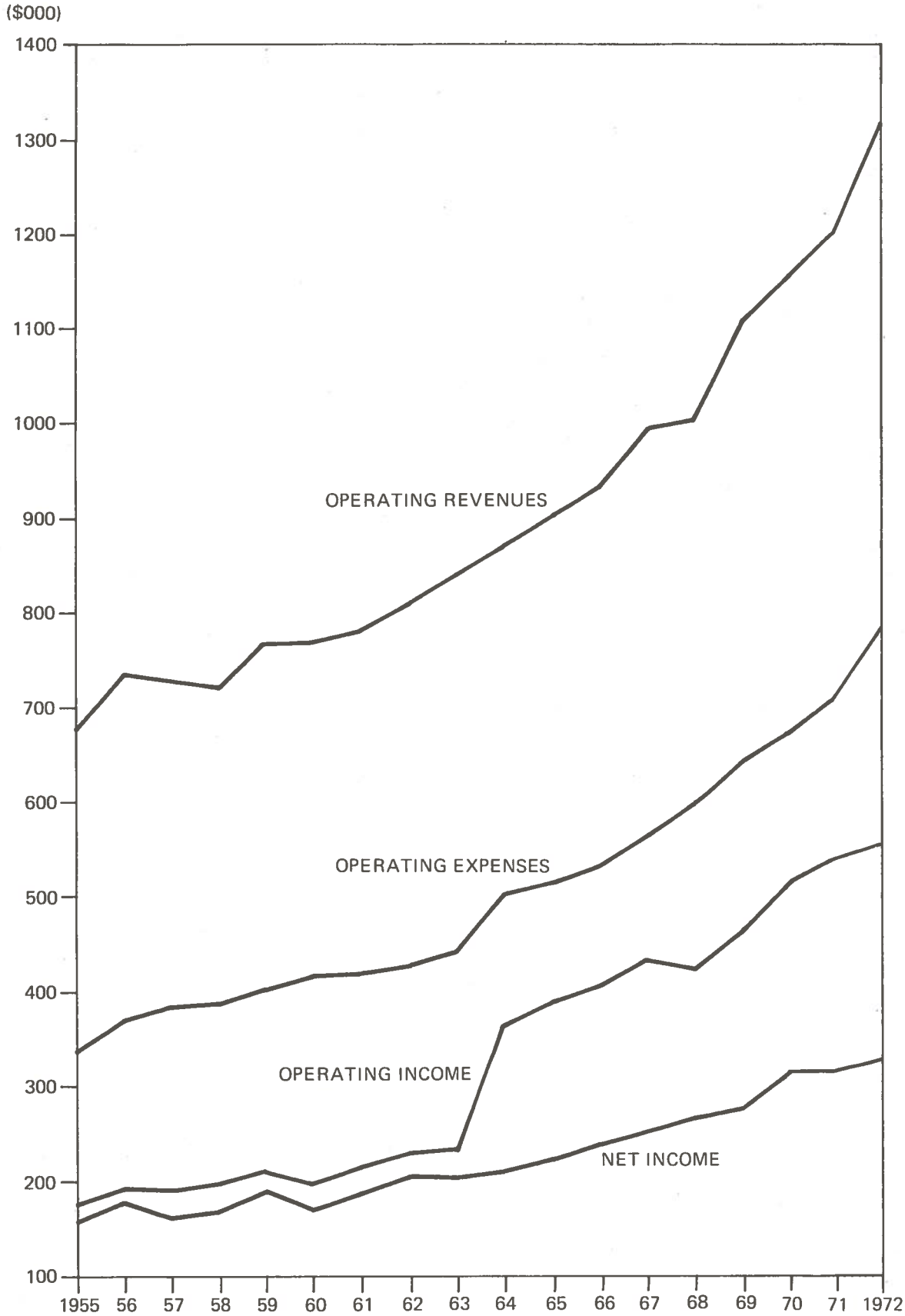


Figure 1. Revenue, Expenses, and Income of U.S. Oil Pipeline Companies, 1955 - 1972

Table I-2. U.S. Railroad Revenue[1] From Petroleum, By Product, 1931 - 1972
(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] [5]	Kerosene[5]	Residual and Distillate Fuel Oils	Other Refined Products	Total Petroleum Revenue	Total All Car Freight Revenue	Petroleum as Percent of of All Car Freight Revenue
1972	4,868,148	3,901,433	8,769,581	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

[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 inculded in the gasoline category were reclassified as other refined products.

Source: Interstate Commerce Commission, *Freight Commodity Statistics*, December 31, 1972, pp. 3 and 6, and equivalent pages in earlier editions.

Table I-3. Energy Transport by Class I Common and Contract Motor Carriers of Property, 1971

	Revenue Freight Originated		Revenue Freight Terminated		Total Freight Traffic (Including Duplications)		Gross Freight Revenue ($)
	Truckloads	Tons	Truckloads	Tons	Truckloads	Tons	
Coal	16,093	454,672	15,981	453,178	16,418	459,154	1,855,424
Anthracite	3,966	202.060	3,914	201,198	4,144	204,395	1,004,541
Raw anthracite	114	1,867	60	1,030	133	2,155	31,601
Cleaned or prepared anthra, (crshd, scrnd, sized)	1,583	155,448	1,577	155,409	1,667	156,616	250,657
Bituminous coal and lignite	12,127	252,612	12,067	251,980	12,274	254,759	850,883
Bituminous coal	11,507	243,755	11,473	243,431	11,614	245,320	572,053
Crude petroleum, natural gas, and natural gasoline	112,774	3,038,034	112,793	3,038,484	112,954	3,040,995	9,808,183
Crude petroleum and natural gas	110,804	2,975,865	110,839	2,976,494	110,974	2,978,723	9,592,367
Natural gasoline	1,970	62,169	1,954	61,990	1,980	62,272	215,816
Petroleum and coal products	4,520,780	109,456,095	4,524,357	109,509,428	4,539,589	109,740,458	404,674,926
Products of petroleum refining	4,343,070	105,061,637	4,347,223	105,121,411	4,358,909	105,299,979	372,275,130
Gsln, jet oth high vola pet fuels exc nat gsln	2,056,493	52,924,760	2,057,274	52,942,642	2,057,640	52,947,756	142,691,797
Kerosene	278,824	6,541,519	278,795	6,541,076	278,877	6,542,175	17,014,198
Distillate fuel oil	671,242	17,069,934	671,313	17,071,129	671,549	17,074,574	48,710,192
Lubricating and similar oils and derivatives	127,196	2,412,680	128,316	2,407,470	134,903	2,507,663	32,000,916
Lubricating greases	55,882	1,239,107	55,690	1,235,243	56,847	1,254,386	8,387,809
Asph, tar & pitches (petro, coke oven, coal tar)	364,340	8,302,593	365,367	8,325,038	366,266	8,337,227	46,648,213
Residual fuel oil & oth low vola.petro fuels	291,711	6,939,081	291,701	6,987,737	292,020	6,993,663	21,703,091
Products of petroleum refining, nec	195,719	4,320,571	197,086	4,349,258	198,994	4,379,058	27,628,718
Liquefied petroleum gases and coal gases	301,663	5,261,392	301,681	5,261,818	301,813	5,263,477	27,490,196
Paving and roofing materials	106,497	2,212,942	106,528	2,214,456	108,222	2,241,451	20,168,373
Paving mixtures and blocks	21,635	577,021	21,654	577,373	21,936	581,267	3,644,541
Asphalt felt and coating	84,862	1,635,921	84,874	1,637,083	86,286	1,660,184	16,523,832
Miscellaneous petroleum and coal products	71,213	2,181,516	70,606	2,173,561	72,458	2,199,028	12,231,423
Coke and coal briquettes	31,889	709,198	31,906	709,260	32,022	711,042	1,848,217
Energy commodities	4,649,647	112,948,801	4,653,131	113,001,090	4,668,961	113,240,697	416,338,533
All commodities	17,870,962	395,775,545	18,042,942	399,228,284	19,104,558	428,358,769	9,499,669,940
Energy commodities as a percent of all commodities	26%	29%	26%	28%	24%	26%	4%

Source: ICC, *Freight Commodity Statistics*, 1971, p. 9.

Table I-4. U.S. Total Petroleum Pipeline Mileage, 1950 - 1972

(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	ICC Lines	All Lines	ICC Lines	All Lines	ICC Lines	All Lines	ICC Lines	All Lines	
1972	59,757	74,475[e]	64,701	86,225[e]	124,458	160,700[e]	42,893	68,800[e]	175,532[1]	229,500[e]	1972
1971	60,946	74,660[e]	61,525	81,530[e]	122,471	156,190[e]	45,759	72,760[e]	174,722[1]	228,950[e]	1971
1970	63,030	75,830[e]	59,335	78,035[e]	122,365	153,865[e]	46,587	74,685[e]	175,735[1]	228,550[e]	1970
1969	61,887	73,830	56,096	73,750	117,983	147,400	45,993	75,221	170,824[1]	222,621	1969
1968	61,807	72,407	53,431	69,487	115,238	141,894	46,886	74,700	169,307[1]	216,596	1968
1967	60,893	70,825	51,475	64,529	112,368	135,354	46,855	74,124	165,478[1]	209,478	1967
1966	63,210	74,257	52,493	65,195	115,803	139,452	47,352	78,587	163,155	218,039	1966
1965	63,981	73,405	50,791	63,665	114,772	137,070	46,640	77,843	161,412	214,913	1965
1964	63,220	72,383	49,477	61,443	112,697	133,826	46,886	77,041	159,583	210,867	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	70,368	45,288	56,106	106,990	126,474	48,063	77,590	155,053	204,064	1962
1961	62,251	70,355	41,830	53,200	104,081	123,555	49,656	76,988	153,737	200,543	1961
1960	62,059	64,799	40,508	49,859	102,567	114,658	49,401	76,286	151,968	190,944	1960
1959	61,860	67,558	37,732	47,171	99,592	114,729	49,567	75,734	149,159	190,463	1959
1958	61,702	70,317	32,865	44,483	94,567	114,800	49,787	75,182	144,354	189,982	1958
1957	61,379	82,000	31,780	42,900	93,159	124,900	52,077	76,900	145,236	201,800	1957
1956	61,885	80,000	29,465	40,000	91,350	120,000	51,336	75,000	142,686	195,000	1956
1955	63,347	78,594	26,382	36,420	89,729	115,014	50,645	73,526	140,374	188,540	1955
1954	64,145	80,012	24,128	34,255	88,273	114,267	50,689	72,456	138,962	186,723	1954
1953	63,408	77,932	20,462	30,555	83,870	108,487	50,030	70,536	133,900	179,023	1953
1952	64,888	75,228	19,305	27,236	84,193	102,464	48,522	68,040	132,715	170,504	1952
1951	64,992	73,573	18,836	26,106	83,828	99,679	47,629	62,472	131,457	162,151	1951
1950	64,622	73,093	16,374	23,325	80,996	96,418	47,593	62,054	128,589	158,472	1950

n/a - not available.
[1]Total mileage includes the following, classified as "other" by the ICC: 1967 -6,255 miles; 1963-6,243 miles.
e - Estimates based on gross expansion rates applied to intra-state lines.

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, "Oil Pipe Lines"; Table 2, 1972, and equivalent tables in earlier editions. American Petroleum Institute, personal communication.

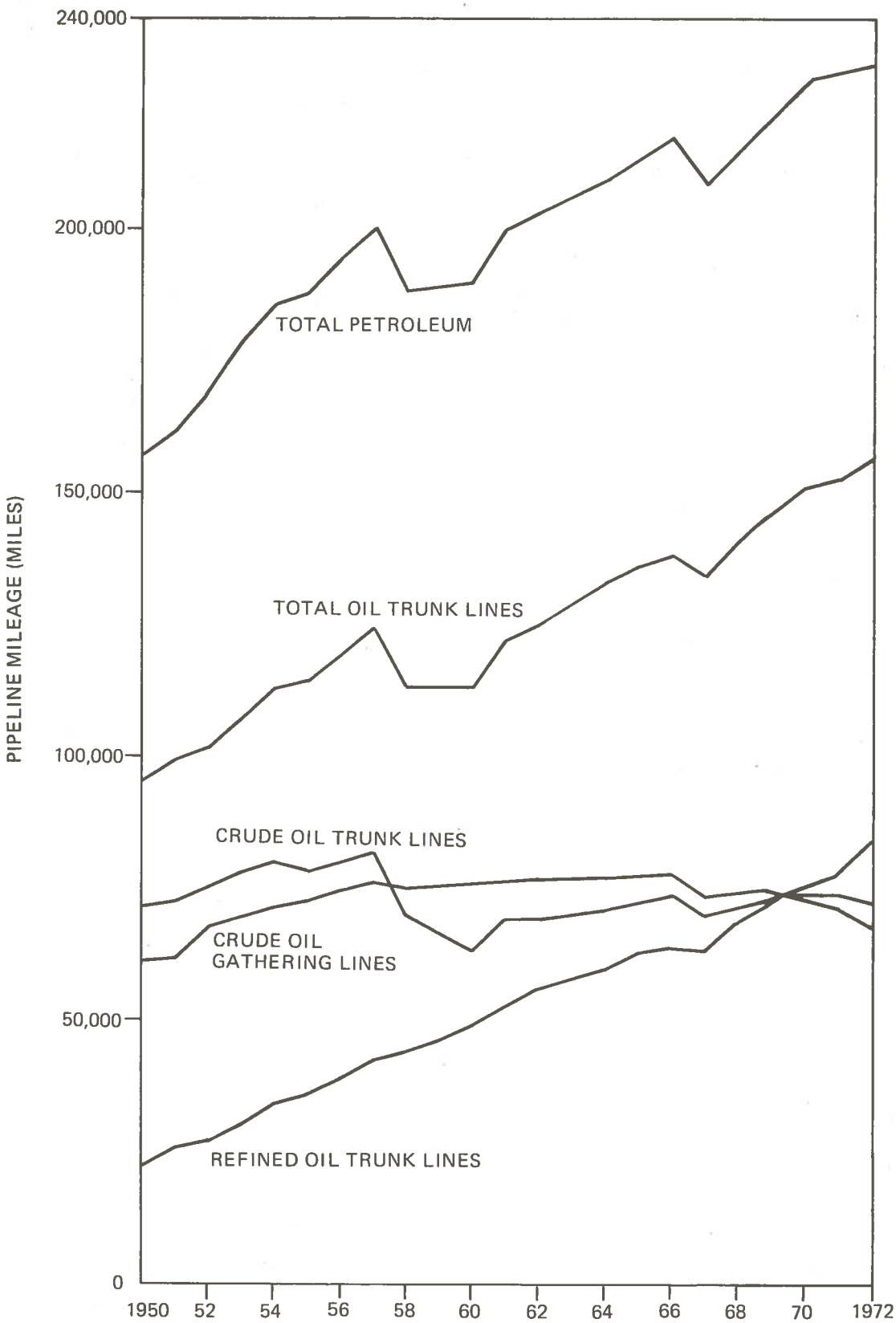
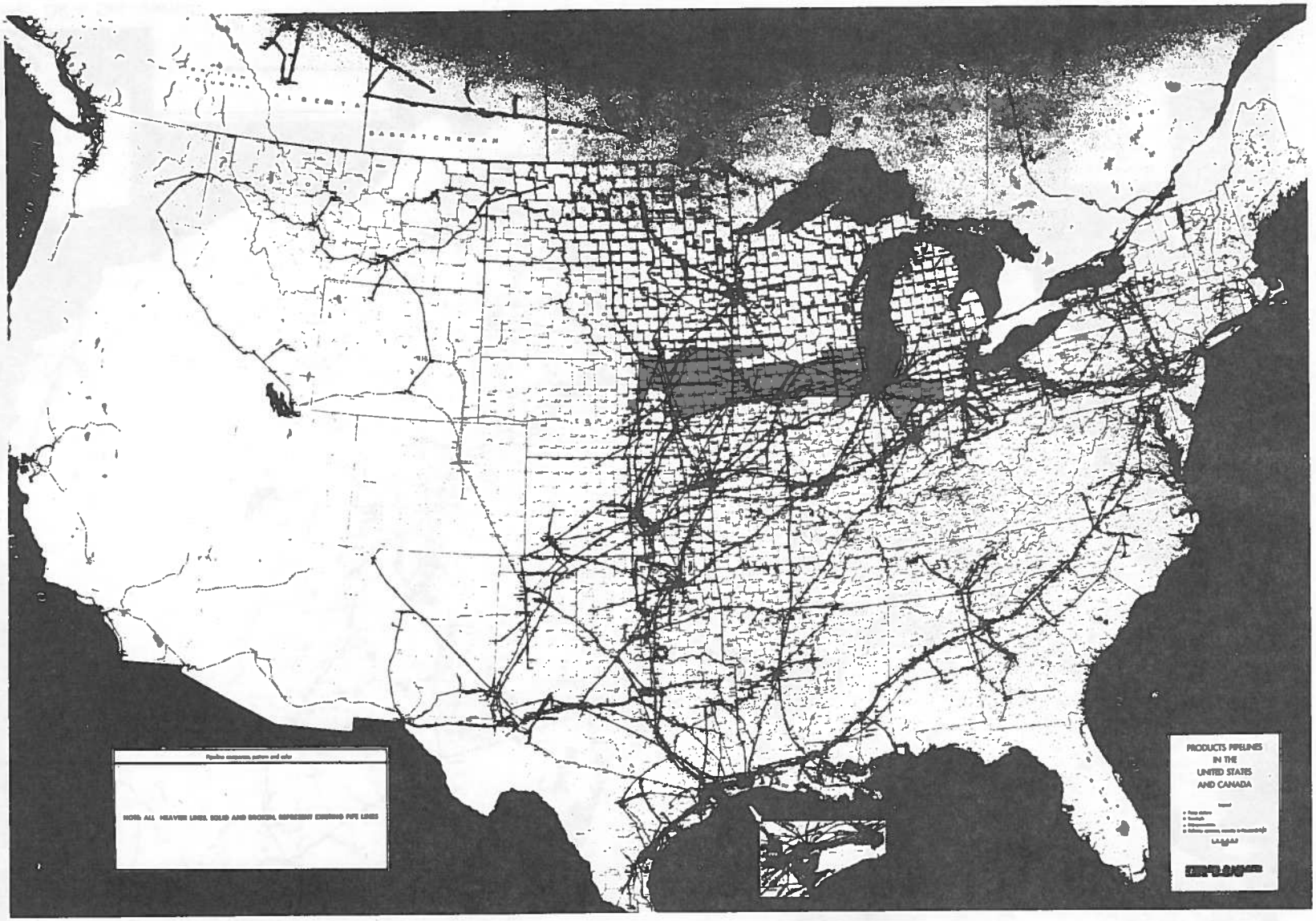
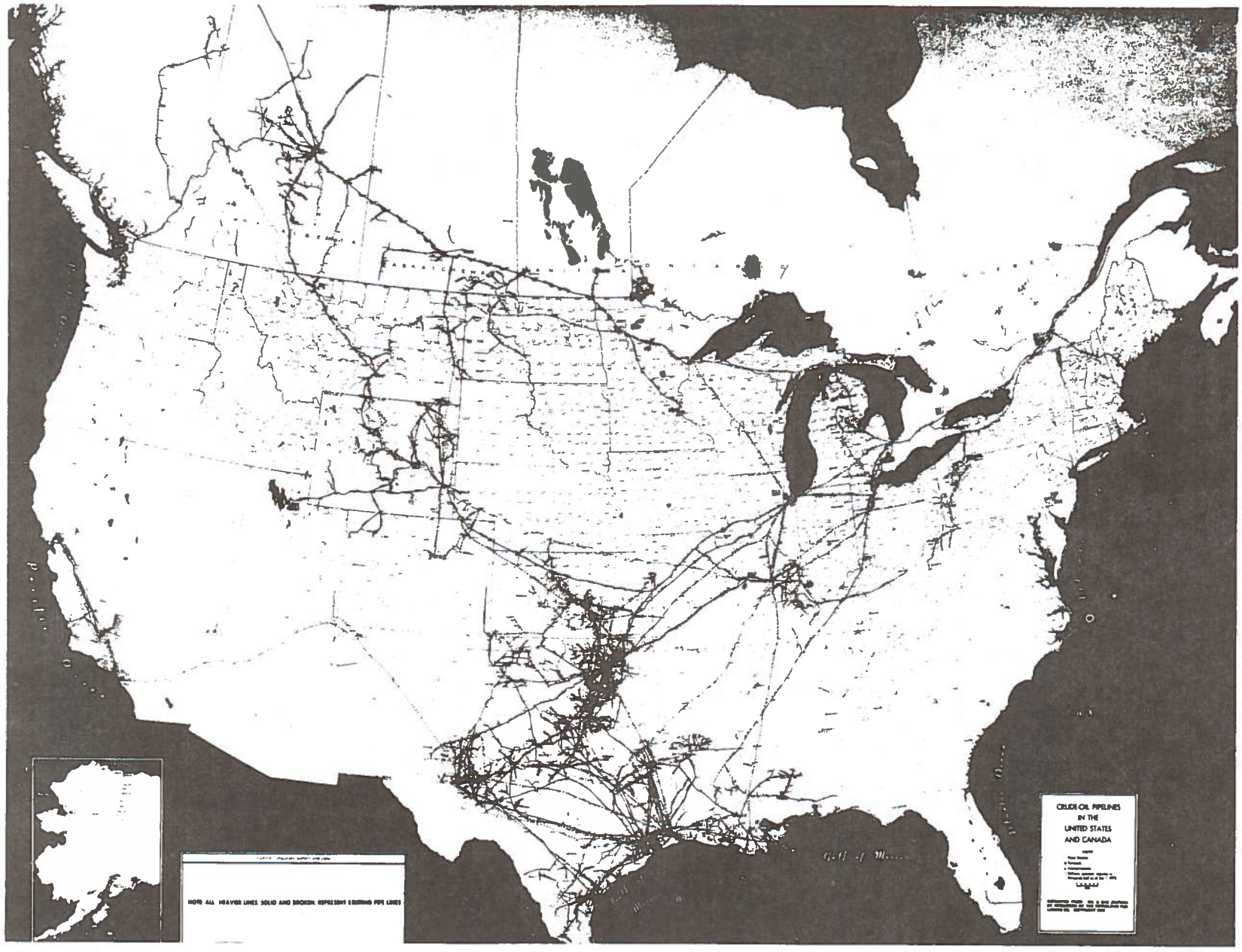


Figure 2. U.S. Petroleum Pipeline Mileage, 1950 - 1972



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 I-5. Total Mileage[1] of Natural-Gas Pipelines and Utility Main, by States, 1950 - 1972

Division and State	1950	1955	1960	1965	1970	1971	1972
United States	387,470	496,740	630,950	767,520	914,830	933,675[r]	951,223
New England	15,030	17,000	19,140	22,090	25,686	26,008[r]	26,233
Connecticut	3,130	3,720	4,300	4,960	5,728	5,812	5,820
Maine	450	430	390	390	705	465[r]	465
Massachusetts	9,400	10,570	11,910	13,740	15,609	15,824	16,117
New Hampshire	480	540	630	800	1,041	1,249	1,132
Rhode Island	1,370	1,520	1,720	1,990	2,299	2,342	2,373
Vermont	200	220	190	210	304	316	326
Middle Atlantic	69,690	80,710	92,600	102,580	111,644	112,633	113,213
New Jersey	10,190	12,420	15,140	18,320	21,052	21,402	21,776
New York	23,840	28,440	33,020	36,580	39,995	40,193	40,239
Pennsylvania	35,660	39,850	44,440	47,680	50,637	51,038	51,198
East North Central	75,370	90,210	113,420	147,640	178,268	182,028[r]	184,098
Illinois	17,120	21,250	27,770	38,750	46,683	48,249	49,169
Indiana	9,480	11,840	14,800	20,240	25,264	25,519	25,594
Michigan	14,000	16,810	21,860	30,370	37,699	37,940[r]	38,493
Ohio	29,450	34,180	40,150	44,690	49,393	50,565	50,886
Wisconsin	5,320	6,130	8,840	13,590	19,229	19,757	19,956
West North Central	42,010	55,200	67,640	82,250	101,099	103,243	104,625
Iowa	5,650	7,840	9,970	13,630	16,654	16,531	16,894
Kansas	18,600	22,910	25,860	28,780	34,365	34,855	35,116
Minnesota	4,010	5,360	8,090	10,680	14,162	14,859	15,335
Missouri	7,450	9,770	11,950	15,150	18,654	19,310	19,189
Nebraska	4,940	7,320	8,910	10,300	12,627	13,057	13,204
North Dakota	580	930	1,100	1,560	2,332	2,297	2,506
South Dakota	780	1,070	1,760	2,150	2,305	2,334	2,381
South Atlantic	33,460	43,260	59,100	74,180	92,738	95,320	97,214
Delaware	490	560	830	1,160	1,270	1,289	1,284
District of Columbia	1,080	1,140	1,160	1,150	1,164	1,175	1,173
Florida	2,770	3,220	6,400	8,330	11,435	11,673	11,782
Georgia	3,110	6,430	10,580	14,600	19,549	20,347	20,987
Maryland	3,320	4,430	5,400	6,710	7,986	8,193	8,375
North Carolina	1,420	2,290	4,830	7,080	10,605	10,893	11,200
South Carolina	730	1,350	3,320	6,090	8,514	9,082	9,352
Virginia	3,410	4,750	6,490	8,190	10,451	10,682	11,141
West Virginia	17,130	19,090	20,090	20,870	21,764	21,986	21,920
East South Central	21,050	33,390	44,930	54,390	65,441	64,964	67,516
Alabama	3,910	8,220	11,380	13,860	16,607	15,605	17,120
Kentucky	7,360	9,790	13,130	15,470	18,295	18,879	19,366
Mississippi	6,060	9,020	11,420	13,460	16,403	16,148	16,402
Tennessee	3,720	6,360	9,000	11,600	14,136	14,333	14,553
West South Central	72,170	99,330	127,120	150,260	182,752	188,084	191,245
Arkansas	6,780	8,700	10,380	13,060	16,429	16,500	17,018
Louisiana	11,160	17,820	24,970	30,310	36,921	38,093	38,994
Oklahoma	13,200	16,080	19,590	23,850	28,532	30,972	31,474
Texas	41,030	56,730	72,180	83,040	100,870	102,519	103,834
Mountain	19,260	29,630	44,940	59,000	71,848	74,441[r]	77,242
Arizona	4,240	6,770	9,630	11,120	13,379	13,794	14,358
Colorado	3,280	5,530	8,080	12,240	15,870	16,746	17,453
Idaho	20	20	1,490	2,770	3,226	3,310	3,482
Montana	3,530	4,120	5,120	5,970	6,324	6,442	6,813
Nevada	100	300	660	1,940	2,470	2,577	2,664
New Mexico	4,340	8,320	13,160	15,410	19,050	19,686	20,057
Utah	1,580	2,160	3,400	4,940	5,609	5,749	5,897
Wyoming	2,170	2,410	3,400	4,610	5,920	6,137[r]	6,518
Pacific	39,430	48,010	62,060	75,130	85,354	86,954[r]	89,837
Alaska	[a]	[a]	n/a	250	667	484[r]	635
California	34,630	43,070	52,280	60,650	66,328	67,329	69,748
Hawaii	[a]	[a]	440	490	530	537	546
Oregon	2,660	2,720	3,940	6,360	8,014	8,335	8,409
Washington	2,140	2,220	5,400	7,380	9,815	10,269	10,499

[a] Excludes data for Alaska prior to 1959 and Hawaii prior to 1960.
n/a not available.
[r] 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*, 1972, p. 54.

Table I-6. U.S. Tank Ship Fleet (Actual and T2-SE-A1 Equivalents), 1941 - 1972

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

Actual Fleet				T2-SE-A1 Equivalents			
Number	Gross Tons	Deadweight Tons	Average Speed (Knots)	Number	Per Cent of World Total		Year[1]
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, 1972," October, 1973, Table 1, and equivalent tables in earlier editions.

Table I-7. World Tank Ship Fleet (Actual and T2-SE-A1 Equivalents), 1941 - 1972

(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)		
1972	4,336	124,250,300	220,882,000	15.8	14,320.0	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.

Source: Sun Oil Company, Division of Planning and Industry Affairs, "*Analysis of World Tank Ship Fleet,* December 31, 1972," October 1973, Table 1, and equivalent tables in earlier editions.

Table I-8. World Tanker Fleet at End of 1973
(excluding 28.5 million D.W.T. combined carriers)
(2,000 D.W. Tons and over)

By Flag and Ownership

Flag	Ownership					Total 1972	Change 1973 over 1972	Share of Total 1973
	Oil Company	Private	Government	Other	Total 1973			
	Million Tons Deadweight							
Liberia	13.9	45.1	—	0.3	59.3	50.2	+ 9.1	27%
Norway	0.5	20.9	—	—	21.4	19.9	+ 1.5	10%
U.K.	18.0	9.8	0.2	—	28.0	25.3	+ 2.7	13%
Japan	3.3	23.6	—	—	26.9	22.6	+ 4.3	12%
U.S.A.	3.8	4.3	1.6	—	9.7	9.7	—	4%
Panama	3.7	4.0	—	—	7.7	7.6	+ 0.1	3%
France	6.7	2.9	0.1	—	9.7	8.3	+ 1.4	4%
Greece	—	12.7	—	—	12.7	10.5	+ 2.2	6%
Other Western Europe	10.6	16.1	0.1	—	26.8	24.2	+ 2.6	12%
Other Western Hemisphere	5.0	0.4	0.3	—	5.7	4.9	+ 0.8	3%
U.S.S.R., E. Europe & China	—	—	6.4	—	6.4	6.4	—	3%
Other Eastern Hemisphere	1.9	3.7	0.1	—	5.7	4.3	+ 1.4	3%
TOTAL	67.4	143.5	8.8	0.3	220.0	193.9	+26.1	100%
Fleet as at end 1972	59.3	125.4	8.9	0.3	193.9			
Net increase 1973	8.1	18.1	−0.1	—	26.1			

By Age, Size and Propulsion
(million tons deadweight)

Size in '000 D.W.T.	Year of Construction								Propulsion		New Building in Progress and on Order at end 1973*
	Up to end 1945	1946-1950	1951-1955	1956-1960	1961-1965	1966-1970	1971-1973	Total	Motor	Other	
Under 25	3.7	1.0	6.7	7.4	2.5	3.8	1.9	27.0	19.5	7.5	1.1
25- 45	1.0	0.9	4.4	14.7	4.1	1.4	3.0	29.5	10.3	19.2	6.4
45- 65	—	—	0.9	5.1	14.4	1.8	0.2	22.4	7.2	15.2	1.5
65-125	—	—	—	2.2	14.0	21.9	3.5	41.6	25.7	15.9	22.8
125-205	—	—	—	—	0.1	10.2	4.5	14.8	7.6	7.2	22.3
205-285	—	—	—	—	—	26.2	52.0	78.2	6.1	72.1	80.4
285 and over	—	—	—	—	—	1.9	4.6	6.5	—	6.5	63.1
TOTAL	4.7	1.9	12.0	29.4	35.1	67.2	69.7	220.0	76.4	143.6	197.6
MOTOR	0.7	0.8	5.8	8.9	17.4	25.9	16.9	76.4			
OTHER	4.0	1.1	6.2	20.5	17.7	41.3	52.8	143.6			

*Excludes 11.0 million D.W.T. combined carriers

Employment of Tankers 1973
(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%	3.0%	4.0%	1.0%	2.5%	13.5%
Canada	—	0.5%	1.5%	—	0.5%	2.5%
Other Western Hemisphere	—	—	4.0%	0.5%	2.0%	6.5%
Western Europe, N. & W. Africa	—	1.0%	46.5%	3.0%	3.0%	53.5%
E. & S. Africa, S. Asia	—	—	1.5%	—	0.5%	2.0%
Japan	—	—	14.0%	—	3.0%	17.0%
Other Eastern Hemisphere	—	—	4.0%	—	—	4.0%
U.S.S.R., E. Europe & China	—	—	1.0%	—	—	1.0%
TOTAL	3.0%	4.5%	76.5%	4.5%	11.5%	100.0%

Source: British Petroleum Company, *BP Statistical Review of the World Oil Industry*, 1973, p. 14.

Table I-9. World Tanker Fleet by Flag, 1962 - 1973

Flag	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
	Million tons d.w.											
U.S.A.	9·0	9·0	8·7	8·8	8·7	8·7	8·8	9·1	9·5	9·7	9·7	9·7
U.K.	11·1	11·8	11·7	11·8	12·5	13·2	15·4	18·8	21·9	25·2	25·3	28·0
Norway	10·1	10·8	12·2	13·3	14·9	16·6	16·4	15·7	17·2	19·1	19·9	21·4
Other Western Europe	17·6	18·1	18·6	19·0	21·5	22·8	26·3	30·5	35·0	39·9	43·0	49·2
Panama and Liberia	14·1	15·7	18·9	23·3	25·2	27·8	31·5	36·0	43·4	48·8	57·8	67·0
Japan	3·5	4·1	5·0	6·5	8·4	9·8	11·4	13·7	15·6	18·8	22·6	26·9
Rest of World	4·9	5·5	6·5	7·4	8·2	9·0	9·7	11·4	13·1	13·8	15·6	17·8
Total	70·3	75·0	81·6	90·1	99·4	107·9	119·5	135·2	155·7	175·3	193·9	220·0

Source: British Petroleum Company, *BP Statistical Review of the World Oil Industry, 1973*, p. 22, and equivalent tables in earlier editions.

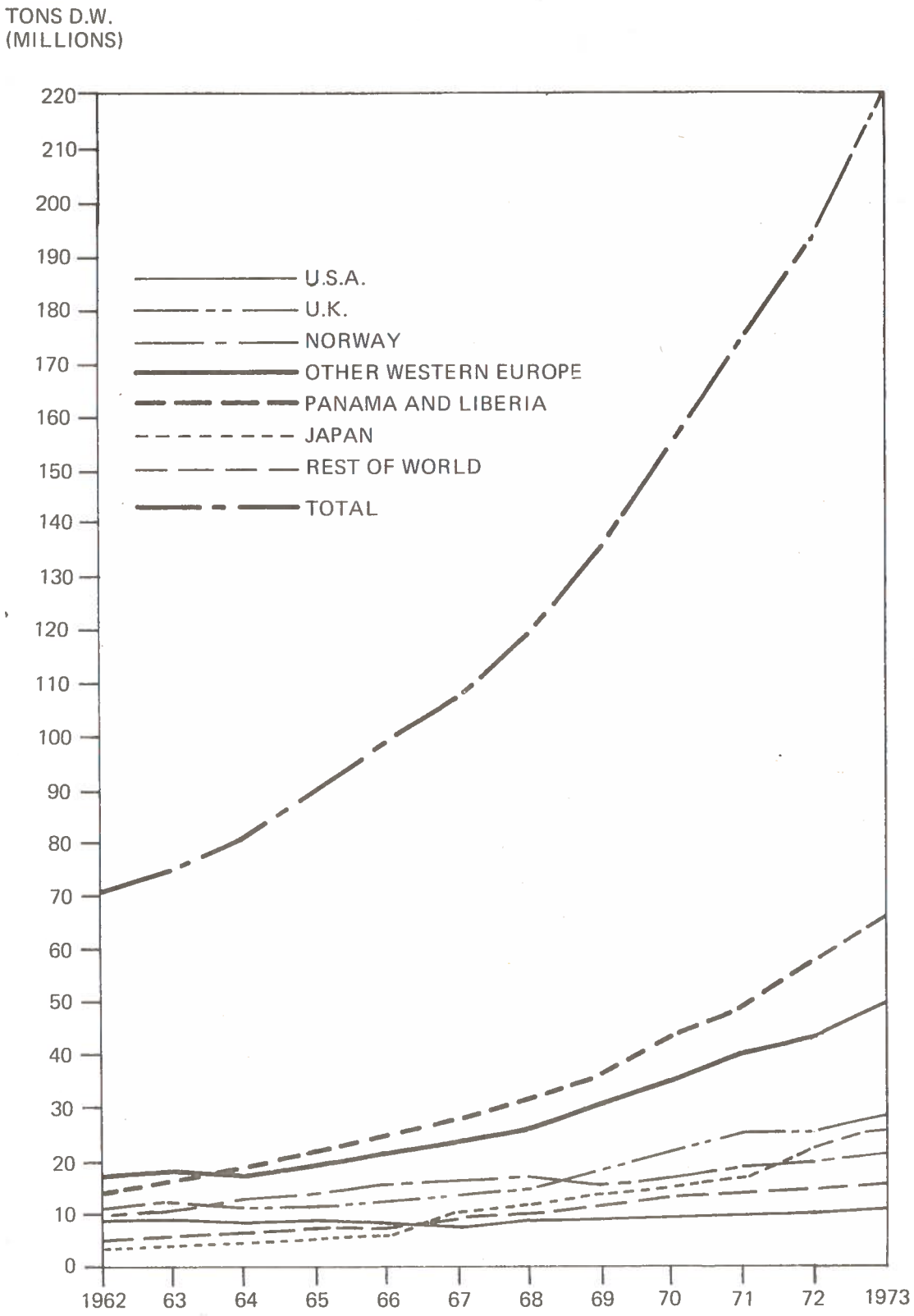


Figure 5. World Tanker Fleet by Flag, 1962 - 1973

Table I-10. Number and Mileage of Privately-Owned U.S. Railroad Tank Cars, 1947 - 1972
(As of December 31)

Year	Number			Mileage		
	Petroleum Tank Cars	Other Tank Cars	Total	Petroleum Tank Cars	Other Tank Cars	Total
1972	71,243	63,251	134,494	860,318,515	580,549,850	1,440,868,365
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."

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 9, "Private Car Lines," December 31, 1972, p. 2, and equivalent tables in earlier editions.

Table I-11. Total Crude Petroleum and Petroleum Products Transported in the U.S. by Method of Transportation, 1938 - 1972

Year	Pipelines		Water Carriers		Trucks[1]		Railroads		Total
	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried
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,"* April, 1974, Table 1.

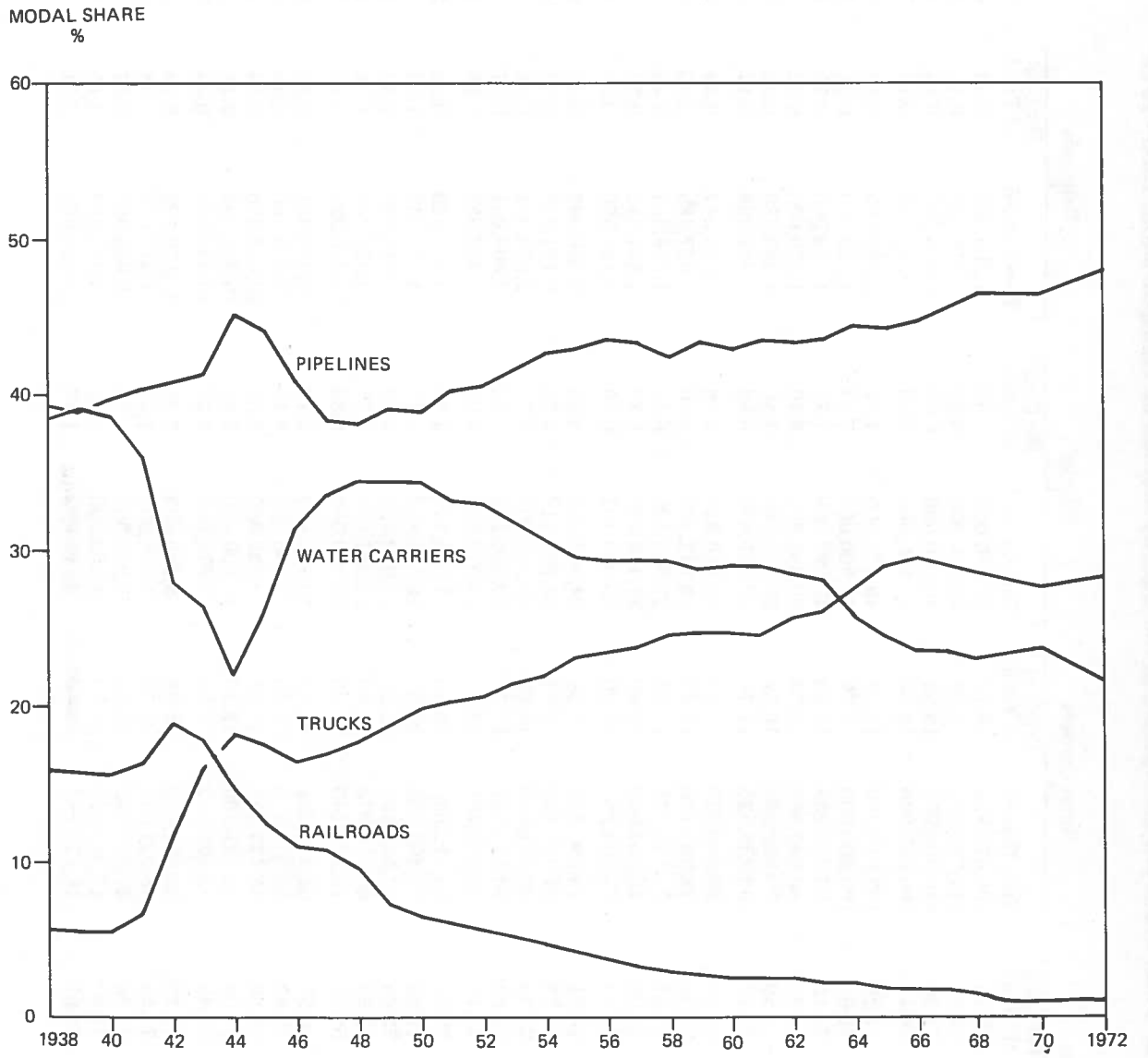


Figure 6. Modal Shares for Total Crude Petroleum and Petroleum Products Transported in the U.S., 1938 - 1972

Table I-12. Total Crude Oil Transported in the U.S., by Method of Transportation, 1938 - 1972

Year	Pipelines		Water Carriers		Trucks[1]		Railroads		Total
	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried	Per Cent of Total	Tons Carried
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*," April 1974, Table 2.

Table I-13. Total Refined Petroleum Products Transported in the U.S., by Method of Transportation, 1938 - 1972

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	
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, Kerosine, distillate and liquefied petroleum gases.
[2] Estimated

Source: Association of Oil Pipe Lines, *"Shifts in Petroleum Transportation,"* April, 1974, Table 3.

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

	December 1973	November 1973	December 1972	January-December (Incl.) 1973	January-December (Incl.) 1972
Turned into lines:					
Gasoline, total	144,695	147,069	138,502	1,759,322	1,636,213
Motor	144,421	146,749	138,326	1,755,306	1,632,196
Aviation	274	320	176	4,016	4,017
Jet fuel, total	17,852	21,326	20,335	249,621	228,476
Naphtha-type	1,014	1,194	1,478	15,112	18,404
Kerosene-type	16,838	20,132	18,857	234,509	210,072
Kerosene	4,875	4,735	5,945	46,883	47,499
Distillate fuel oil	70,561	65,593	69,442	727,019	656,798
Natural gas liquids	38,202	37,002	38,677	438,000	399,176
Delivered from lines:					
Gasoline, total	145,442	148,555	140,130	1,760,580	1,638,756
Motor	145,167	148,165	139,949	1,756,721	1,634,925
Aviation	275	390	181	3,859	3,831
Jet fuel, total	18,250	20,364	20,222	247,035	226,317
Naphtha-type	1,033	1,068	1,414	15,337	18,263
Kerosene-type	17,217	19,296	18,808	231,698	208,054
Kerosene	4,663	4,851	5,332	45,086	46,132
Distillate fuel oil	71,616	66,621	72,675	720,997	659,409
Natural gas liquids	37,551	36,384	38,166	431,228	397,326
Shortage (or overage):					
Gasoline, total	187	(328)	(339)	(2,425)	(2,021)
Motor	162	(325)	(335)	(2,586)	(2,192)
Aviation	25	(3)	(4)	161	171
Jet fuel, total	309	324	124	2,569	1,776
Naphtha-type	2	33	(19)	(100)	(10)
Kerosene-type	307	291	143	2,669	1,786
Kerosene	92	85	165	1,608	1,539
Distillate fuel oil	(439)	(240)	(235)	(847)	(352)
Natural gas liquids	629	(22)	63	1,402	580
Stocks in lines and working tanks at end of month:					
Gasoline, total	45,156	46,090	43,989	45,156	43,989
Motor	44,967	45,875	43,796	44,967	43,796
Aviation	189	215	193	189	193
Jet fuel, total	5,823	6,530	5,806	5,823	5,806
Naphtha-type	576	597	701	576	701
Kerosene-type	5,247	5,933	5,105	5,247	5,105
Kerosene	2,637	2,517	2,448	2,637	2,448
Distillate fuel oil	32,414	33,030	25,545	32,414	25,545
Natural gas liquids	21,565	21,543	16,195	21,565	16,195

Source: Department of Interior, Bureau of Mines; *Mineral Industry Surveys: Crude Petroleum, Petroleum Products, and Natural-Gas-Liquids*, Dec., 1973, Table 11, p. 12.

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

	February 1974	January 1974	February 1973	January-February (Incl.) 1974	January-February (Incl.) 1973
Turned into lines:					
Gasoline, total	119,952	132,997	130,892	252,949	266,941
Motor	119,674	132,729	130,722	252,403	266,533
Aviation	278	268	170	546	408
Jet fuel, total	17,797	20,956	20,760	38,753	43,234
Naphtha-type	1,412	1,226	1,211	2,638	2,429
Kerosene-type	16,385	19,730	19,549	36,115	40,805
Kerosene	4,559	5,136	5,913	9,695	11,821
Distillate fuel oil	57,759	74,801	62,951	132,560	137,253
Natural gas liquids	34,279	38,224	34,541	72,503	73,187
Delivered from lines:					
Gasoline, total	117,785	132,886	129,359	250,671	265,654
Motor	117,535	132,632	129,154	250,167	265,215
Aviation	250	254	205	504	439
Jet fuel, total	17,516	20,092	20,617	37,608	43,027
Naphtha-type	1,357	1,329	1,115	2,686	2,500
Kerosene-type	16,159	18,763	19,502	34,922	40,527
Kerosene	4,788	5,135	5,964	9,923	12,159
Distillate fuel oil	63,754	74,467	65,460	138,221	141,753
Natural gas liquids	34,778	39,088	34,092	73,866	74,885
Shortage (or overage):					
Gasoline, total	(456)	(105)	(67)	(561)	(414)
Motor	(454)	(99)	(81)	(553)	(429)
Aviation	(2)	(6)	14	(8)	15
Jet fuel, total	304	197	192	501	520
Naphtha-type	15	1	3	16	(2)
Kerosene-type	289	196	189	485	522
Kerosene	87	127	186	214	309
Distillate fuel oil	(304)	(103)	(339)	(407)	(598)
Natural gas liquids	272	(18)	204	254	409
Stocks in lines and working tanks at end of month:					
Gasoline, total	47,995	45,372	45,690	47,995	45,690
Motor	47,756	45,163	45,543	47,756	45,543
Aviation	239	209	147	239	147
Jet fuel, total	6,467	6,490	5,493	6,467	5,493
Naphtha-type	512	472	632	512	632
Kerosene-type	5,955	6,018	4,861	5,955	4,861
Kerosene	2,195	2,511	1,801	2,195	1,801
Distillate fuel oil	27,160	32,851	21,643	27,160	21,643
Natural gas liquids	19,948	20,719	14,088	19,948	14,088

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys: Petroleum Statement Monthly*, February, 1974, Table 11, p. 12.

Table I-15. Movements of Petroleum Products by Pipeline Between P.A.D. Districts (thousands of barrels)

Item	December 1973	November 1973	December 1972	January - December (Incl.) 1973	1972
From District 1 to District 2:					
Gasoline, total	3,709	3,927	3,609	45,438	39,239
Motor	3,709	3,921	3,609	45,385	39,187
Aviation	-	6	-	53	52
Jet fuel, total	212	253	279	2,612	2,111
Naphtha-type	35	37	91	595	601
Kerosene-type	177	216	188	2,017	1,510
Kerosene	50	72	46	403	546
Distillate fuel oil	991	1,266	1,056	11,662	9,831
From District 2 to District 1:					
Gasoline, total	871	879	807	10,066	11,276
Motor	871	879	807	10,066	11,276
Jet fuel, total	-	57	-	57	111
Naphtha-type	-	57	-	57	111
Kerosene-type	-	-	-	-	76
Kerosene	-	16	-	49	-
Distillate fuel oil	69	81	93	980	795
Natural gas liquids	1,117	949	757	11,910	9,946
From District 2 to District 3:					
Gasoline, total	1,555	1,446	1,648	18,591	19,000
Motor	1,555	1,446	1,648	18,591	19,000
Jet fuel, total	1	1	81	47	522
Naphtha-type	-	-	80	41	518
Kerosene-type	1	1	1	6	4
Distillate fuel oil	452	426	382	4,743	4,592
Natural gas liquids	330	307	227	3,267	2,640
*From District 2 to District 4:					
Gasoline, total	360	314	-	674	-
Motor	360	314	-	674	-
Distillate fuel oil	27	65	-	92	-
From District 3 to District 1:					
Gasoline, total	27,035	26,645	25,625	329,835	307,159
Motor	27,027	26,636	25,611	329,616	306,852
Aviation	8	9	14	219	307
Jet fuel, total	4,952	5,405	4,971	55,504	49,332
Naphtha-type	116	58	101	747	1,067
Kerosene-type	4,836	5,347	4,870	54,757	48,265
Kerosene	1,022	1,041	1,433	11,134	12,050
Distillate fuel oil	17,591	16,265	18,250	180,331	179,493
Natural gas liquids	1,875	1,471	2,236	18,112	16,603
From District 3 to District 2:					
Gasoline, total	5,957	6,343	4,007	64,857	58,588
Motor	5,852	6,249	3,941	63,660	57,389
Aviation	105	94	66	1,197	1,199
Jet fuel, total	503	175	301	4,614	4,960
Naphtha-type	-	1	-	3	4
Kerosene-type	503	174	301	4,611	4,956
Kerosene	355	525	138	2,505	1,741
Distillate fuel oil	3,097	4,496	948	30,938	13,197
Natural gas liquids	7,706	7,274	9,289	71,698	63,739
From District 3 to District 4:					
Gasoline, total	312	436	394	4,759	4,370
Motor	297	416	376	4,499	4,144
Aviation	15	20	18	260	226
Jet fuel, total	345	319	375	4,175	3,985
Kerosene-type	345	319	375	4,175	3,985
Kerosene	-	1	5	4	20
Distillate fuel oil	68	84	63	688	552
Natural gas liquids	155	131	204	1,259	1,159
From District 3 to District 5:					
Gasoline, total	1,164	939	1,065	11,873	11,543
Motor	1,164	939	1,065	11,873	11,543
Jet fuel, total	122	112	222	1,708	3,115
Naphtha-type	37	37	73	652	1,177
Kerosene-type	85	75	149	1,056	1,938
Distillate fuel oil	322	383	288	4,532	3,850
From District 4 to District 2:					
Gasoline, total	430	304	338	4,552	4,679
Motor	430	304	338	4,552	4,679
Jet fuel, total	16	32	73	310	588
Naphtha-type	16	32	73	310	588
Kerosene	2	6	5	59	52
Distillate fuel oil	320	262	262	3,304	3,390
From District 4 to District 3:					
Natural gas liquids	285	293	273	3,699	3,096
From District 4 to District 5:					
Gasoline, total	595	797	673	7,805	9,250
Motor	595	797	673	7,805	9,250
Jet fuel, total	79	45	65	828	1,325
Naphtha-type	69	8	24	351	880
Kerosene-type	10	37	41	477	445
Distillate fuel oil	440	425	318	3,672	4,270

*First time reported.

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys: Crude Petroleum, Petroleum Products, and Natural Gas Liquids*, Dec. 1973, Table 12, p. 13.

Table I-15. Movements of Petroleum Products by Pipeline Between P.A.D. Districts - Continued (thousands of barrels)

Item	February 1974	January 1974	February 1973	January - February (Incl.) 1974	January - February (Incl.) 1973
From District 1 to District 2:					
Gasoline, total	2,528	3,533	3,353	6,061	6,719
Motor	2,528	3,533	3,353	6,061	6,713
Aviation	-	-	-	-	6
Jet fuel, total	268	242	380	510	716
Naphtha-type	39	73	104	112	144
Kerosene-type	229	169	276	398	572
Kerosene	7	30	13	37	75
Distillate fuel oil	970	891	825	1,861	1,839
From District 2 to District 1:					
Gasoline, total	865	829	772	1,694	1,469
Motor	865	829	772	1,694	1,469
Jet fuel, total	-	-	-	-	-
Naphtha-type	-	-	-	-	-
Kerosene-type	-	-	-	-	-
Kerosene	-	-	1	-	23
Distillate fuel oil	37	67	127	104	275
Natural gas liquids	758	730	722	1,488	1,459
From District 2 to District 3:					
Gasoline, total	1,424	1,540	1,645	2,964	3,281
Motor	1,424	1,540	1,645	2,964	3,281
Jet fuel, total	41	1	1	42	42
Naphtha-type	40	-	-	40	40
Kerosene-type	1	1	1	2	2
Distillate fuel oil	419	405	346	824	776
Natural gas liquids	266	313	161	579	353
From District 2 to District 4:					
Gasoline, total	176	235	-	411	-
Motor	176	235	-	411	-
Distillate fuel oil	39	49	-	88	-
From District 3 to District 1:					
Gasoline, total	20,272	22,919	21,210	43,191	44,857
Motor	20,272	22,903	21,183	43,175	44,815
Aviation	-	16	27	16	42
Jet fuel, total	4,676	4,810	5,399	9,486	10,518
Naphtha-type	95	75	55	170	85
Kerosene-type	4,581	4,735	5,344	9,316	10,433
Kerosene	978	1,152	1,620	2,130	3,712
Distillate fuel oil	17,517	19,454	16,525	36,971	36,044
Natural gas liquids	1,274	1,405	2,386	2,679	5,210
From District 3 to District 2:					
Gasoline, total	4,687	4,682	4,195	9,369	8,106
Motor	4,606	4,601	4,108	9,207	7,974
Aviation	81	81	87	162	132
Jet fuel, total	330	282	205	612	584
Naphtha-type	-	1	-	1	-
Kerosene-type	330	281	205	611	584
Kerosene	41	159	84	200	208
Distillate fuel oil	1,572	1,972	1,608	3,544	3,592
Natural gas liquids	5,741	8,642	6,180	14,383	12,166
From District 3 to District 4:					
Gasoline, total	231	265	350	496	730
Motor	215	246	329	461	691
Aviation	16	19	21	35	39
Jet fuel, total	288	331	322	619	660
Kerosene-type	288	331	322	619	660
Kerosene	-	1	-	1	1
Distillate fuel oil	40	54	41	94	114
Natural gas liquids	92	178	153	270	364
From District 3 to District 5:					
Gasoline, total	804	977	1,065	1,781	2,235
Motor	804	977	1,065	1,781	2,235
Jet fuel, total	129	177	112	306	259
Naphtha-type	24	50	40	74	109
Kerosene-type	105	127	72	232	150
Distillate fuel oil	380	442	321	822	674
From District 4 to District 2:					
Gasoline, total	334	337	318	671	658
Motor	334	337	318	671	658
Jet fuel, total	32	23	27	55	67
Naphtha-type	29	23	27	52	67
Kerosene-type	3	-	-	3	-
Kerosene	-	10	3	10	11
Distillate fuel oil	308	333	253	641	532
From District 4 to District 3:					
Natural gas liquids	246	250	158	496	313
From District 4 to District 5:					
Gasoline, total	712	883	734	1,595	1,380
Motor	712	883	734	1,595	1,380
Jet fuel, total	96	103	24	199	90
Naphtha-type	28	49	12	77	48
Kerosene-type	68	54	12	122	42
Distillate fuel oil	444	445	234	889	519

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys: Petroleum Statement, Monthly*, February, 1974, Table 12, p. 13.

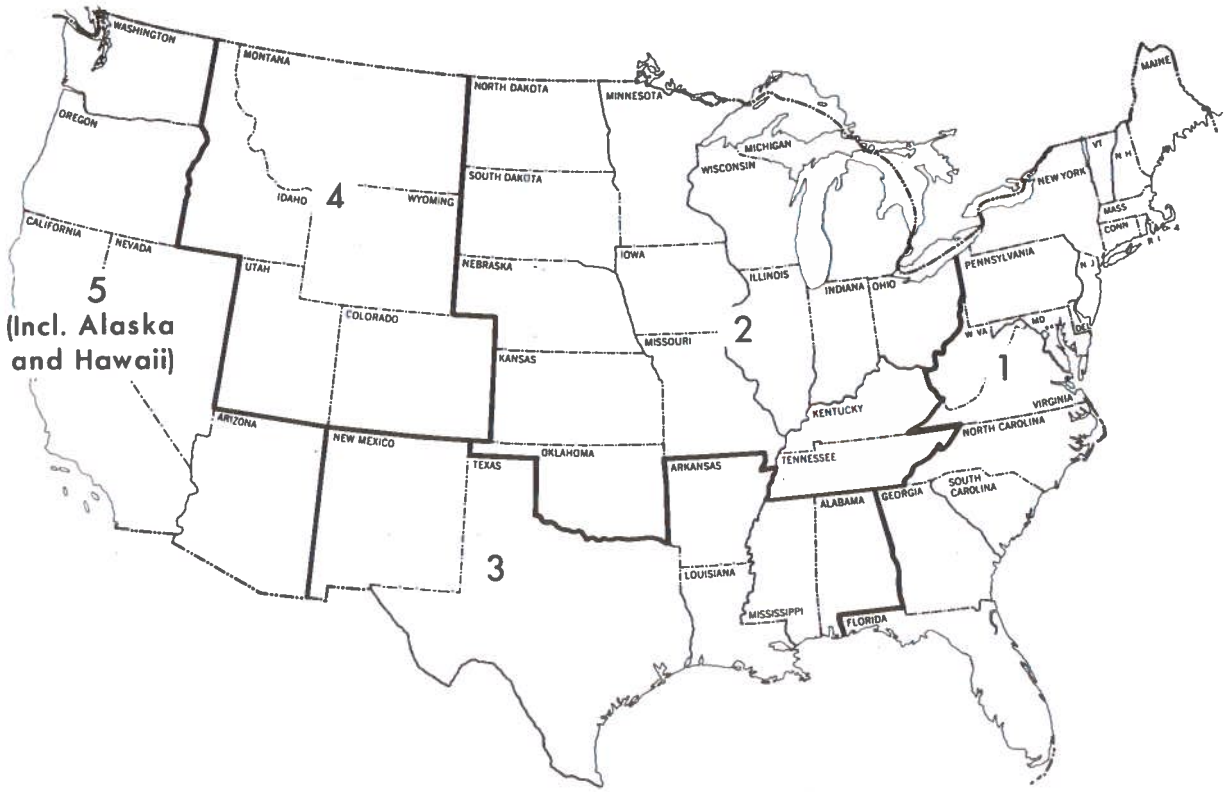


Figure 7. Petroleum Administration for Defense (PAD) Districts

Table I-16. Average Length of Movement on Crude Oil and Petroleum Product Pipelines[1], 1950 - 1972

Year	Crude Oil Trunk Pipelines			Petroleum Products Pipelines			Year
	Barrels	Barrel-Miles (Thousands)	Average Miles	Barrels	Barrel-Miles (Thousands)	Average Miles	
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

Source: Interstate Commerce Commission, *Transport Statistics in the United States*, Part 6, "Oil Pipelines," December 31, 1972, p. 3, and equivalent tables in earlier editions.

Table I-17. U.S. Petroleum Freight Originated by Class I Railroads, by District and Commodity, 1959 - 1972
(thousands of tons)

District and Commodity	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959
Eastern District:														
Crude petroleum[1]	521	100	69	5	1	4	10	19	13	3	16	126	79	24
Gasoline	214	267	270	299	346	416	443	618	855	758	822	1,043	1,059	1,146
Residual and distillate fuel oils	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	1,261	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	1,761	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)	830	803	772	763	620	891	936	1,001	1,095	665	694	693	730	790
Total Eastern District	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]	327	268	229	231	247	298	274	256	247	189	185	185	188	183
Gasoline	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	653	558	651	669	664	634	681	705	712	797	804	765	923	971
Lubricating oils and greases	228	214	219	236	246	261	27	246	265	252	272	236	225	218
Other refined products	1,481	1,205	1,127	1,141	1,075	978	912	807	761	882	875	802	720	734
Asphalt (natural and petroleum)	301	196	237	258	304	335	311	393	520	332	308	237	214	266
Total Southern District	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]	623	508	612	727	819	823	836	786	993	589	1,555	1,716	1,621	1,324
Gasoline	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	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	1,606	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	6,711	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)	1,854	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	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]	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	1,502	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	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	3,095	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	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)	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	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*, December 31, 1972, and equivalent tables in earlier editions.

Table I-18. Movement of Petroleum in U.S. Water-Borne Trade, 1948 - 1972

(Thousands of Short Tons)

Year	Foreign Trade										
	Imports				Exports				Total Imports and Exports		
	Crude Oil and Products				Crude Oil and Products						
	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
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 I-18. Movement of Petroleum in U.S. Water-Borne Trade, 1948 - 1972 - Continued

(Thousands of Short Tons)

Year	Domestic Trade: Coastwise[2] Crude Oil and Products	Coastwise[2] All Other Domestic Trade	Local, Intraport,[3] and Intraterritory Crude Oil and Products	Local, Intraport,[3] and Intraterritory All Other Domestic Trade	Lakewise and Internal Crude Oil and Products	Lakewise and Internal All Other Domestic Trade	Total Domestic Crude Oil and Products	Total Domestic All Other Domestic Trade	Total Domestic All Domestic Trade	All Waterborne Trade, Foreign and Domestic: Crude Oil and Products	All Other Foreign and Domestic Trade	Total Trade	Petroleum as a Per Cent of Total Trade
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.

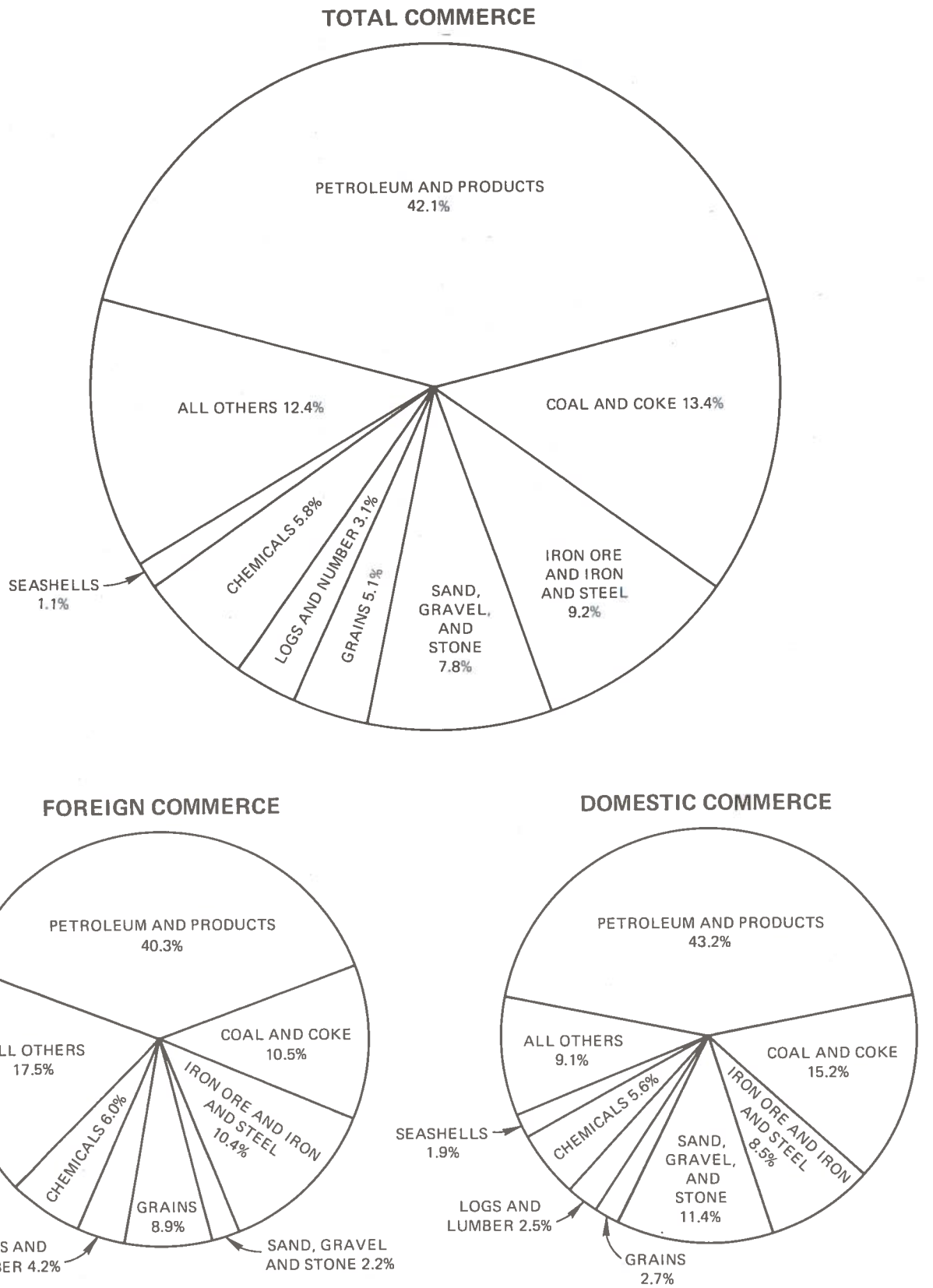
Source: Department of the Army, Corps of Engineers, *Waterborne Commerce of the United States, "National Summaries"*, 1972 and earlier editions for prior years.

Table I-19. Summary of Foreign and Domestic Waterborne Commerce, by Type of Traffic and Commodity, Calendar Year 1972 (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]	1,616,792,605	397,565,612	232,415,232	986,811,761	242,660,087	145,013,420	506,989,242	90,266,095	1,882,917
Coal and lignite	204,910,737	2,467	55,914,457	148,993,813	3,607,001	25,164,185	118,180,502	2,042,125	----------
Crude Petroleum	247,558,074	143,467,507	417,802	103,672,765	39,650,015	----------	60,447,043	3,575,707	----------
Gasoline, including natural gasoline	94,171,223	486,202	70,375	93,614,646	48,152,397	2,320,158	36,305,484	6,798,483	38,124
Jet fuel	13,172,510	----------	----------	13,172,510	6,177,892	305,982	4,294,098	2,353,407	41,131
Kerosene	15,066,492	8,945,173	32,583	6,088,736	3,162,949	25,117	1,842,668	1,046,782	11,220
Distillate fuel oil	103,024,928	17,575,125	121,626	85,328,177	47,088,332	2,349,512	20,919,856	14,890,808	79,669
Residual fuel oil	181,141,421	76,847,168	2,085,001	102,209,252	37,451,606	1,532,170	35,158,479	27,630,754	436,243
Lubricating oils and greases	7,538,457	8,663	1,773,946	5,755,848	3,776,396	1,339	1,888,667	89,435	11
Naphtha, mineral spirits, solvents, nec	3,866,472	----------	----------	3,866,472	2,096,256	4,448	1,263,536	139,477	362,755
Asphalt, tar, and pitches	9,193,800	----------	18,082	9,175,718	4,027,302	248,194	4,204,767	691,875	3,580
Coke, including petroleum coke	1,185,589	----------	----------	1,185,589	2,288	86,213	942,559	154,529	----------
Liquefied petroleum gases, coal gases natural gas, and natural gas liquids	3,283,623	602,521	1,144,181	1,536,921	195,513	62	1,246,773	93,959	614
Asphalt building materials	125,244	18,027	45,717	61,500	54,913	6,587	----------	----------	----------
Petroleum and coal products, nec	2,428,728	187,801	120,296	2,120,631	609,497	57,664	613,942	805,523	34,005

Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1972, pp. 7 and 8.

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



Source: Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, 1972

Figure 8. Principal Commodities Carried by Water, Calendar Year 1972

Table I-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)

Item	December 1973	November 1973	December 1972	January - December (Incl.) 1973	January - December (Incl.) 1972
West Coast to East Coast:					
Crude oil	-	-	-	-	-
Unfinished oils	-	-	-	-	-
Gasoline, total	-	-	-	-	-
Motor	-	-	-	-	-
Aviation	-	-	-	-	-
Special naphthas	-	-	-	4	-
Kerosene	-	-	-	-	-
Distillate fuel oil	-	-	-	-	-
Residual fuel oil	-	-	-	-	160
Jet fuel, total	-	-	-	-	-
Naphtha-type	-	-	-	-	-
Kerosene-type	-	-	-	-	-
Lubricating oil	29	111	24	690	693
Wax	-	-	-	-	-
Asphalt and road oil	-	-	-	-	-
Liquefied gases	-	-	-	-	-
Petrochemical feedstocks	-	-	-	-	-
Other products	-	-	-	242	82
Total	29	111	24	936	935
Gulf Coast to West Coast:					
Crude oil	-	-	-	-	666
Unfinished oils	-	-	152	372	152
Gasoline, total	-	-	-	675	1,273
Motor	-	-	-	675	1,273
Aviation	-	-	-	-	-
Special naphthas	-	-	-	-	-
Kerosene	-	-	-	36	65
Distillate fuel oil	43	-	-	687	98
Residual fuel oil	-	-	-	-	-
Jet fuel, total	801	-	-	801	134
Naphtha-type	110	-	-	110	134
Kerosene-type	691	-	-	691	-
Lubricating oil	199	86	80	1,491	1,586
Wax	-	-	-	-	-
Asphalt and road oil	-	-	-	-	-
Liquefied gases	-	-	-	-	-
Petrochemical feedstocks	-	-	-	4	52
Other products	8	-	-	105	7
Total	1,366	408	232	6,069	4,033
Gulf Coast to East Coast:					
Crude oil	4,155	4,192	8,888	56,614	106,894
Unfinished oils	1,291	1,507	2,260	14,797	25,263
Gasoline, total	17,463	13,751	19,856	207,474	225,013
Motor	17,188	13,566	19,503	204,258	220,966
Aviation	275	185	353	3,216	4,047
Special naphthas	629	451	493	7,192	6,830
Kerosene	1,328	717	2,059	15,078	19,982
Distillate fuel oil	9,078	6,119	14,144	97,292	131,099
Residual fuel oil	2,024	1,370	2,072	15,951	30,389
Jet fuel, total	3,734	3,223	3,551	41,034	45,313
Naphtha-type	1,226	396	410	9,480	12,523
Kerosene-type	2,508	2,827	3,141	31,554	32,790
Lubricating oil	1,198	995	743	12,342	11,464
Wax	32	35	10	573	896
Asphalt and road oil	276	489	356	5,689	5,562
Liquefied gases	131	53	154	1,304	1,665
Petrochemical feedstocks	463	315	232	3,226	2,731
Other products	121	211	111	1,654	1,420
Total	41,923	33,428	54,929	480,220	614,521

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, Dec., 1973

Table I-21. Shipments of Aviation Fuel in 1972 and 1971 (thousands of barrels)

Product and use	Shipments to P. A. D. Districts I	II	III	IV	V	United States Total
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[1]	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
1971:						
I. Aviation gasoline:						
A. For commercial use, total	2,727	3,231	1,714	424	2,209	10,305
1. Airlines	376	97	118	25	146	762
2. Factory	34	29	18	-	14	95
3. General aviation	2,317	3,105	1,578	399	2,049	9,448
B. For military use	2,560	1,065	1,350	258	2,356	7,589
II. Jet fuel:						
A. For commercial use, total*	98,544	56,449	21,743	6,372	72,562	255,670
1. Kerosene-type, total*	94,727	56,002	21,029	6,372	70,508	248,638
a. Airlines*	91,113	53,334	19,558	6,001	69,135	239,141
b. Factory	349	211	131	-	528	1,219
c. General aviation	3,265	2,457	1,340	371	845	8,278
2. Naphtha-type, total	3,817	447	714	-	2,054	7,032
a. Airlines	2,906	295	681	-	1,583	5,465
b. Factory	840	148	23	-	340	1,351
c. General aviation	71	4	10	-	131	216
B. For military use, total[3]	27,890	19,081	15,749	2,591	38,411	103,722
1. JP-4	[3]16,965	17,377	13,924	2,197	[3]28,030	78,493
2. JP-5	10,160	1,687	1,177	31	9,924	22,979
3. Other	765	17	648	363	457	2,250

[1] Excludes shipments for non-aviation use, by P. A. D. District: I, 6,891,000 barrels; II, 1,464,000 barrels; III, 2,000 barrels; IV, 55,000 barrels; V, 409,000 barrels.

[2] Excludes direct imports by the military into: P. A. D. District I, 6,939,000 barrels; P. A. D. District V, 2,129,000 barrels.

[3] Excludes direct imports by the military into: P. A. D. District I, 7,300,000 barrels; P. A. D. District V, 1,946,000 barrels.

*Revised.

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.
5. General aviation - Primarily sales to distributors and airport dealers.
6. Military - Sales to Defense Fuel Supply Center and to other military agencies of the Government.

Source: Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, Petroleum Statement, Monthly, March, 1973.

Table I-22. Inter-Area Total Oil Movements 1973

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.	-	1.5	3.0	4.8	0.2	1.3	1.7	-	-	-	12.5
Canada	67.0	-	-	-	-	-	-	-	-	-	67.0
Caribbean	131.1	25.1	6.2	17.5	0.2	0.3	0.5	-	-	6.6	187.5
Other Western Hemisphere	4.0	-	4.7	-	-	-	-	-	-	1.6	10.3
Western Europe	13.0	-	-	-	3.0	-	-	-	0.5	3.1	19.6
Middle East	40.8	16.0	47.4	513.3	26.0	65.1	215.9	13.9	38.9	11.7	989.0
North Africa	17.8	2.0	8.4	120.8	0.2	-	1.0	-	12.6	0.5	163.3
West Africa	25.2	4.4	20.3	50.3	-	-	5.4	-	0.2	-	105.8
South East Asia	11.8	-	-	0.5	-	-	54.8	2.0	-	-	69.1
U.S.S.R., E. Europe	1.8	-	7.0	48.6	3.6	0.3	2.7	-	1.0	1.8	66.8
Other Eastern Hemisphere	0.7	-	-	-	-	1.2	1.7	-	0.2	0.3	4.1
Total Imports	313.2	49.0	97.0	755.8	33.2	68.2	283.7	15.9	53.4	25.6	1,695.0
					Thousand Barrels Daily						
U.S.A.	-	30	55	85	5	25	30	-	-	-	230
Canada	1,335	-	-	-	-	-	-	-	-	-	1,335
Caribbean	2,540	500	130	355	5	5	10	-	-	85	3,630
Other Western Hemisphere	80	-	100	-	-	-	-	-	-	20	200
Western Europe	265	-	-	-	60	-	-	-	10	70	405
Middle East	820	320	1,000	10,350	535	1,315	4,385	290	775	180	19,970
North Africa	360	40	175	2,545	5	-	20	-	265	10	3,420
West Africa	515	90	415	1,030	-	-	110	-	5	-	2,165
South East Asia	240	-	-	10	-	-	1,115	40	-	-	1,405
U.S.S.R., E. Europe	35	-	145	935	75	5	55	-	20	15	1,285
Other Eastern Hemisphere	15	-	-	-	-	25	35	-	5	5	85
Total Imports	6,205	980	2,020	15,310	685	1,375	5,760	330	1,080	385	34,130

Source: British Petroleum Co., *BP Statistical Review of the World Oil Industry, 1973*, p. 10.

Table I-23. Imports and Exports 1973
Crude Oil and Products

Country/Area	Million Tons				Thousand Barrels Daily			
	Imports		Exports		Imports		Exports	
	Crude	Products	Crude	Products	Crude	Products	Crude	Products
U.S.A.	160.0	153.2	-	12.5	3,245	2,960	-	230
Canada	43.6	5.4	51.5	15.5	865	.15	1,020	315
Caribbean	53.8	2.7	59.0	128.5	1,095	50	1,215	2,415
Other Western Hemisphere	38.0	2.5	7.6	2.7	815	60	150	50
Western Europe	716.2	39.6	-	19.6	14,570	740	-	405
Middle East	6.0	0.5	932.5	56.5	125	10	18,790	1,180
North Africa	1.4	5.3	159.5	3.8	30	105	3,340	80
West Africa	0.5	0.2	105.0	0.8	10	5	2,145	20
E. & S. Africa, S. Asia	39.4	10.7	-	0.5	795	230	-	10
South East Asia	51.0	17.2	55.5	13.6	1,030	345	1,125	280
Japan	247.7	36.0	-	1.2	5,000	760	-	25
Australasia	11.4	4.5	0.3	2.1	240	90	5	45
U.S.S.R., E. Europe & China	21.4	1.2	33.1	33.7	435	20	670	615
*Destination not known	13.6	12.0	-	-	205	180	-	-
Total	1,404.0	291.0	1,404.0	291.0	28,460	5,670	28,460	5,670

*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, 1973,* p. 10.

PART II. RESERVES, PRODUCTION, AND REFINING

Table II-1. Estimated Reserves of Crude Oil in the United States, 1972 and 1973 (thousands of barrels of 42 U.S. gallons)

State (1)	Proved Reserves as of 12/31/72 (2)	Changes in Proved Reserves During 1973: Revisions Plus (3a)	Revisions Minus (3b)	Extensions (4)	New Field Discoveries (5)	New Reservoir Discoveries in Old Fields (6)	Production[a] (7)	Proved Reserves as of 12/31/73 (8)	Net Changes in Proved Reserves During 1973 (9)	Indicated Additional Reserves From Known Reservoirs[b] (10)	State (11)
Alabama	56,734	2,221	1,568	5,400	1,776	—	10,960	53,603	(3,131)	22,041	Alabama
Alaska	10,096,282	85,754	—	—	1,500	1,000	72,323	10,112,213	15,931	36,000	Alaska
Arkansas	113,100	12,401	6,503	3,540	60	75	17,121	105,552	(7,548)	21,444	Arkansas
California[c]	3,553,735	300,198	82,632	16,740	30,000	5,800	335,741	3,488,100	(65,635)	1,560,150	California[c]
Coastal Region	513,322	148,204	68,080	14,050	—	5,550	76,762	536,284	22,962	202,750	Coastal Region
Los Angeles Basin	1,282,048	53,081	5,047	—		—	132,214	1,197,868	(84,180)	418,000	Los Angeles Basin
San Joaquin Basin	1,758,365	98,913	9,505	2,690	30,000	250	126,765	1,753,948	(4,417)	939,400	San Joaquin Basin
Colorado	326,411	10,613	6,139	7,174	3,496	99	36,864	304,790	(21,621)	93,790	Colorado
Florida	208,149	6,093	3,644	5,697	160	—	32,596	183,859	(24,290)	161,203	Florida
Illinois	174,883	11,084	7,387	1,375	1,257	238	29,107	152,343	(22,540)	6,500	Illinois
Indiana	29,383	2,142	938	625	292	516	5,398	26,622	(2,761)	2,800	Indiana
Kansas	453,394	27,113	20,859	5,565	2,459	5	66,588	401,089	(52,305)	1,500	Kansas
Kentucky	48,193	1,364	1,370	325	15	275	8,822	39,980	(8,213)	3,000	Kentucky
Louisiana[c]	5,028,478	163,460	100,254	118,853	31,900	54,112	719,723	4,576,826	(451,652)	233,877	Louisiana[c]
North	281,451	9,392	3,115	620	103	—	36,063	252,388	(29,063)	31,645	North
South	4,747,027	154,068	97,139	118,233	31,797	54,112	683,660	4,324,438	(422,589)	202,232	South
Michigan	62,002	7,612	483	10,000	7,035	—	13,722	72,444	10,442	7,500	Michigan
Mississippi	312,458	32,604	6,569	3,235	2,422	410	53,511	291,049	(21,409)	22,952	Mississippi
Montana	241,248	18,176	7,145	650	930	—	34,516	219,343	(21,905)	51,420	Montana
Nebraska	30,553	5,333	1,513	1,068	61	—	7,336	28,166	(2,387)	4,145	Nebraska
New Mexico	582,593	191,767	38,915	2,687	322	754	96,214	642,994	60,401	319,510	New Mexico
Northwest	24,246	4,923	207	—	36	—	5,138	23,860	(386)	4,025	Northwest
Southeast	558,347	186,844	38,708	2,687	286	754	91,076	619,134	60,787	315,485	Southeast
New York	9,246	—	—	—	—	—	958	8,288	(958)	2,000	New York
North Dakota	166,033	28,493	3,739	8,470	5	—	19,742	179,520	13,487	14,670	North Dakota
Ohio	127,385	—	—	6,275	—	44	8,793	124,911	(2,474)	—	Ohio
Oklahoma	1,303,004	153,522	22,818	15,584	1,251	—	179,579	1,270,964	(32,040)	261,000	Oklahoma
Pennsylvania	37,345	5,550	—	—	—	—	3,282	39,613	2,268	54,770	Pennsylvania
Texas[c]	12,144,057	1,042,727	319,278	106,682	17,825	22,904	1,258,304	11,756,613	(387,444)	2,083,344	Texas[c]
District 1	147,324	15,616	1,740	2,966	253	100	20,370	144,149	(3,175)	36,702	District 1
District 2	636,768	153,082	44,923	1,519	763	4,226	74,310	677,125	40,357	5,720	District 2
District 3	1,536,426	206,594	102,290	12,777	1,907	3,878	169,864	1,489,428	(46,998)	31,928	District 3
District 4	343,752	37,083	39,922	6,073	95	8,921	51,580	304,422	(39,330)	36,865	District 4
District 5	98,963	51,070	3,290	—	300	2	20,583	126,462	27,499	36,000	District 5
District 6	2,208,438	5,777	5,602	3,554	220	101	163,240	2,049,248	(159,190)	199,055	District 6
District 7-B	235,962	21,718	3,268	13,724	2,513	720	35,499	235,870	(92)	10,500	District 7-B
District 7-C	239,270	13,091	35,112	16,317	5,017	161	33,748	204,996	(34,274)	9,028	District 7-C
District 8	3,402,358	102,706	55,192	30,060	940	1,449	276,783	3,205,538	(196,820)	1,016,630	District 8
District 8-A	2,793,503	341,161	17,988	9,579	2,804	2,056	345,807	2,785,308	(8,195)	686,861	District 8-A
District 9	324,018	80,775	8,147	9,333	2,655	1,045	45,971	363,708	39,690	10,555	District 9
District 10	177,275	14,054	1,804	780	358	245	20,549	170,359	(6,916)	3,500	District 10
Utah	244,397	14,660	9,566	47,000	60	65	32,104	264,512	20,115	44,100	Utah
West Virginia	34,040	—	—	530	—	15	2,459	32,126	(1,914)	5,000	West Virginia
Wyoming	949,779	89,219	20,578	22,501	12,646	1,404	138,208	916,763	(33,016)	131,644	Wyoming
Miscellaneous[d]	6,526	1,779	210	165	625	100	1,429	7,556	1,030	—	Miscellaneous[d]
Total U.S.	36,339,408	2,213,885	662,108	390,141	116,097	87,816	3,185,400	35,299,839	(1,039,569)	5,144,360	Total U.S.
Gulf of Mexico[e]	2,565,862	103,353	52,249	68,337	31,780	20,145	389,703	2,347,525	(218,337)	40,532	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 economically be 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, 1973. Volume 28, May 1974.

Table II-2. Annual Estimates of Proved Crude Oil Reserves in the United States 1946 through 1973
(thousands of barrels of 42 U.S. gallons)

Year (1)	Proved Reserves at Beginning of Year (2)	Revisions (3)	Extensions (4)	New Field Discoveries (5)	New Reservoir Discoveries in Old Fields (6)	Total of Discoveries, Revisions, and Extensions (7)	Production a (8)	Proved Reserves at End of Year (9)	Net Change From Previous Year (10)
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	(699,553)
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)

a Production is the amount originally estimated and used by the committee in prior volumes of the reserves report.

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, 1973.* Volume 28, May 1974, Part I, Table II, p. 24.

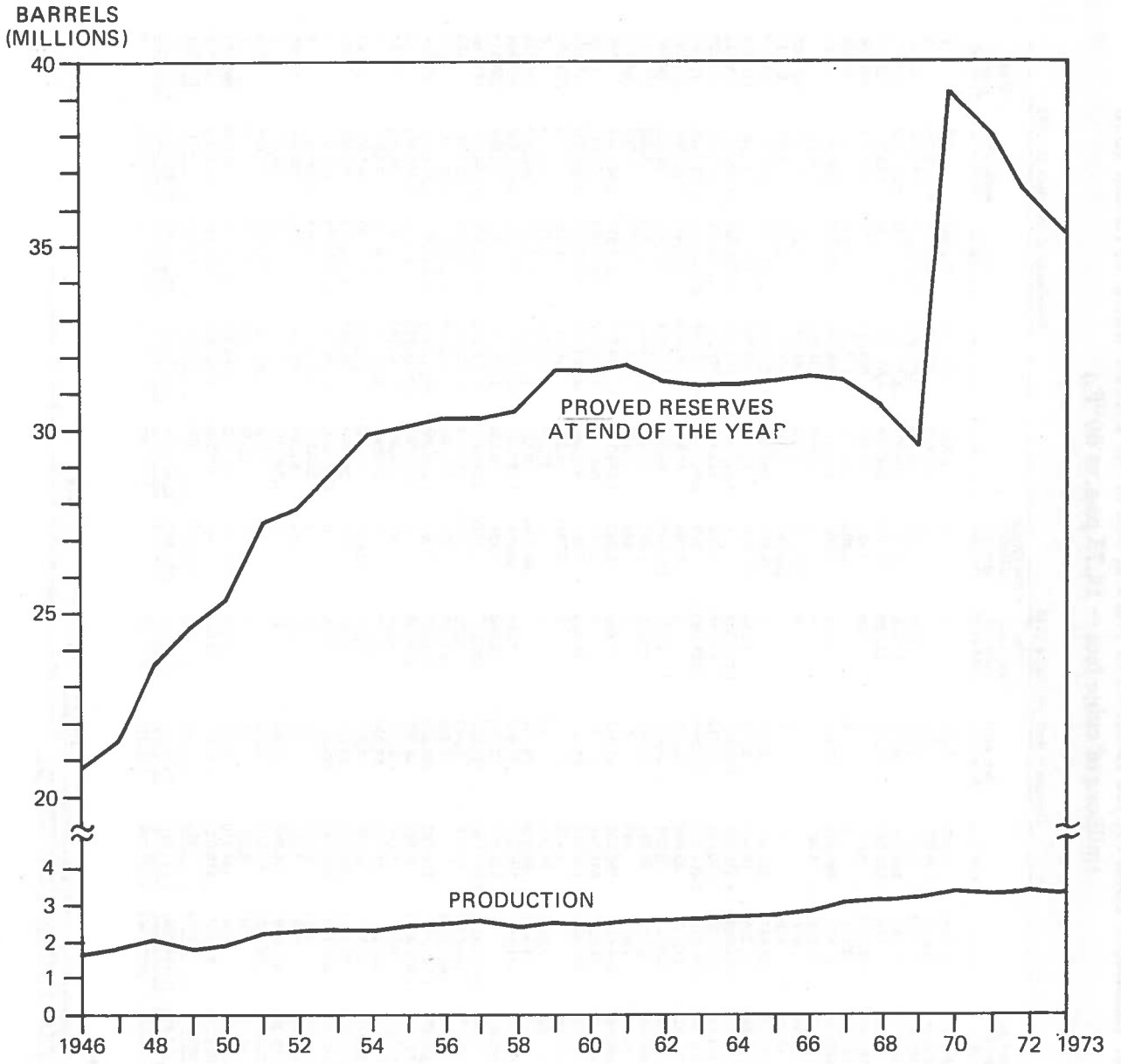


Figure 9. Production and Proved Crude Oil Reserves in the U.S., 1946 - 1973

Table II-3. Estimated Total Proved Reserves of Natural Gas in the United States, 1972 and 1973 (millions of cubic feet — 14.73 psia, at 60°F.)

State	Reserves as of 12-31-72	Changes in Reserves During 1973						Reserves as of December 31, 1973			
		Revisions	Extensions	New Field Discoveries	New Reservoir Discoveries in Old Fields	Net Change in Underground Storage[c]	Production[e]	Total Gas	Non-Associated	Associated-Dissolved	Underground Storage[d]
Alabama	245,714	(30,585)	114,138	6,000	0	0	7,892	327,375	309,338	18,037	0
Alaska	31,455,443	71,398	246,000	600	0	0	130,815	31,642,626	5,210,166	26,432,460	0
Arkansas	2,455,877	(39,597)	13,870	1,000	1,050	739	163,586	2,269,353	2,082,558	152,294	34,501
California	5,328,862	50,488	192,094	99,000	11,850	(4,101)	478,356	5,199,837	2,380,028	2,540,137	279,672
San Joaquin Basin [a]	4,073,942	71,419	184,090	99,000	11,350	(7,175)	356,719	4,075,907	2,299,263	1,672,704	103,940
Coastal Region [a]	761,580	(23,683)	8,004	0	500	8,882	70,361	684,922	77,795	477,521	129,606
Los Angeles Basin [a]	493,340	2,752	0	0	0	(5,808)	51,276	439,008	2,970	389,912	46,126
Colorado	1,655,200	47,889	269,512	26,358	1,556	2,060	134,276	1,868,299	1,592,362	250,904	25,033
Florida	180,629	(2,262)	4,207	0	0	0	33,660	148,914	0	148,914	0
Illinois	545,361	1,978	0	0	0	(163,974)	2,840	380,525	1,103	24,195	355,227
Indiana	87,324	509	0	0	0	(19,787)	1,364	66,682	2,178	3,789	60,715
Kansas	11,938,716	323,943	311,385	31,124	0	16,687	899,460	11,722,395	11,411,765	203,533	107,097
Kentucky	938,082	(2,265)	19,869	2,051	1,559	(31,979)	62,396	864,921	709,030	43,187	112,704
Louisiana [1] [a]	74,971,334	(609,005)	1,451,403	549,696	1,239,234	6,547	8,457,596	69,151,613	57,239,668	11,732,832	179,113
North	3,320,328	(12,686)	50,163	13,310	11,144	6,305	412,431	2,976,133	1,796,468	1,015,636	164,029
South [a]	71,651,006	(596,319)	1,401,240	536,386	1,228,090	242	8,045,165	66,175,480	55,443,200	10,717,196	15,084
Michigan	1,296,815	17,637	23,660	250,938	0	7,300	47,842	1,548,508	492,825	431,086	624,597
Mississippi	1,104,336	123,374	20,281	36,691	1,741	(11,548)	96,657	1,178,218	968,414	120,711	89,093
Montana	1,064,036	8,122	29,224	16,861	29,852	4,563	60,209	1,092,449	821,513	85,625	185,311
Nebraska	50,260	2,022	525	17	0	438	4,446	48,816	13,779	8,795	26,242
New Mexico	12,335,647	698,650	556,057	61,751	14,663	16,301	1,194,706	12,488,363	9,814,816	2,657,246	16,301
Northwest	8,160,874	11,622	371,245	58	0	1,035	559,448	7,985,386	7,907,504	76,847	1,035
South	4,174,773	687,028	184,812	61,693	14,663	15,266	635,258	4,502,977	1,907,312	2,580,399	15,266
New York	139,184	0	4,725	0	0	(2,784)	4,283	136,842	31,972	70	104,800
North Dakota	441,625	(10,658)	54,306	10	0	0	37,099	448,184	6,372	441,812	0
Ohio	1,146,677	(4,903)	168,378	19,544	0	(60,778)	89,527	1,179,391	649,260	159,383	370,748
Oklahoma	14,492,030	534,587	704,569	127,942	7,390	10,004	1,777,787	14,098,735	11,183,035	2,675,836	239,864
Pennsylvania	1,406,948	0	153,275	12,100	2,000	(1,428)	78,514	1,494,381	876,818	12,050	605,513
Texas [1] [a]	95,042,043	(4,713,311)	1,503,765	746,018	599,637	(1,172)	8,240,478	84,936,502	60,530,423	24,268,979	137,100
District 1	1,620,405	(48,191)	19,419	5,364	15,988	(69)	139,715	1,473,201	1,176,016	296,752	433
District 2	9,496,136	(643,178)	0	27,495	84,386	(251)	514,668	8,449,920	6,138,140	2,311,143	637
District 3 [a]	20,696,874	(1,149,334)	119,722	189,203	254,070	(3,404)	1,580,960	18,526,171	12,621,973	5,841,160	63,038
District 4 [a]	24,334,110	(3,604,937)	41,982	50,387	208,619	0	1,613,946	19,416,215	13,791,775	5,624,440	0
District 5	1,171,395	79,147	3,000	1,280	3,050	4,217	112,308	1,149,781	959,316	158,824	31,641
District 6	5,710,441	(68,572)	61,057	17,080	21,752	0	309,565	5,432,193	3,718,953	1,713,240	0
District 7B	663,560	19,316	44,909	4,977	1,258	(2,854)	79,090	652,076	260,221	364,051	27,804
District 7C	2,581,980	(72,227)	168,441	17,811	1,197	279	266,608	2,430,873	1,633,022	795,924	1,927
District 8	15,481,337	152,165	836,347	329,357	7,652	0	2,010,404	14,796,454	10,428,998	4,367,456	0
District 8A	2,366,951	(17,702)	4,253	326	814	0	233,137	2,121,505	85,268	2,036,237	0
District 9	1,559,594	74,713	7,878	2,447	116	910	143,465	1,502,193	1,100,665	389,908	11,620
District 10	9,359,260	565,489	196,757	100,291	735	0	1,236,612	8,985,920	8,616,076	369,844	0
Utah	1,022,110	(26,556)	67,710	12,505	0	(17)	51,029	1,024,723	541,376	481,697	1,650
Virginia	35,921	0	6,300	100	0	0	5,048	37,273	37,273	0	0
West Virginia	2,345,957	(256)	148,710	8,478	5,371	(20,409)	168,023	2,319,828	1,912,318	52,319	355,191
Wyoming	4,088,728	87,240	113,023	142,843	54,065	382	376,758	4,109,523	3,413,115	641,032	55,376
Miscellaneous [b]	269,987	(3,195)	300	524	400	(101,326)	759	165,931	14,433	837	150,661
Total United States	266,084,846	(3,474,756)	6,177,286	2,152,151	1,970,368	(354,282)	22,605,406	249,950,207	172,245,938	73,587,760	4,116,509
Gulf of Mexico [2]	38,785,667	(327,796)	1,037,769	552,104	901,985	0	4,164,421	36,785,308	32,092,008	4,693,300	0

[1] Includes offshore.
[2] Included with Louisiana and Texas.
[a] Includes offshore reserves.
[b] Includes Arizona, Iowa, Maryland, Minnesota, Missouri, South Dakota, Tennessee and Washington.
[c] The net difference between gas stored in and gas withdrawn from underground storage reservoirs, inclusive of adjustments and native gas transferred from other reserve categories.
[d] Gas held in underground reservoirs (including native and net injected gas) for storage purposes.
[e] Preliminary net production.
( ) 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, 1973*, Volume 28, May 1974, Part II, Table I, p. 114.

Table II-4. Annual Estimates of Proved Natural Gas and Natural Gas Liquids Reserves, 1945 through 1973
United States[b]
(millions of cubic feet — 14.73 psia, at 60°F, and thousands of barrels of 42 U.S. gallons)

	NATURAL GAS Year-End Reserves				NATURAL GAS LIQUIDS Year-End Reserves		
Year	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	249,950,207	4,124,031	2,330,676	6,454,707

a-Not estimated.
b-Includes offshore reserves.

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, 1972*, Volume 28, May 1974, Part II, Tables I and IV, p. 124.

Table II-5. Production and Disposition of Natural Gas in the United States, 1945 - 1972

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)

	Production					Disposition					
	Gross[a]										
Year	Gas Wells	Oil Wells	Total	Repressuring	Net	Losses and Waste[a]	Marketed Production	Field Use	Net Change in Underground Storage	Lost in Transmission	Net Marketed Production
1945	3,887,727	2,014,453	5,902,180	1,061,951	4,840,229	798,227	4,042,002	916,952	25,335	97,981	3,001,734
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[r]	24,088,031[r]	1,310,458	22,777,573[r]	284,561[r]	22,493,012	2,296,777[b]	331,768	338,999[r]	19,525,468[r]
1972	19,042,117	4,955,650	23,997,767	1,236,292	22,761,475	229,777	22,531,698	2,363,556[b]	135,734	328,002	19,704,406

[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."

Source: U.S. Bureau of Mines.

r — Revised

Table II-6. Oil Shale Deposits

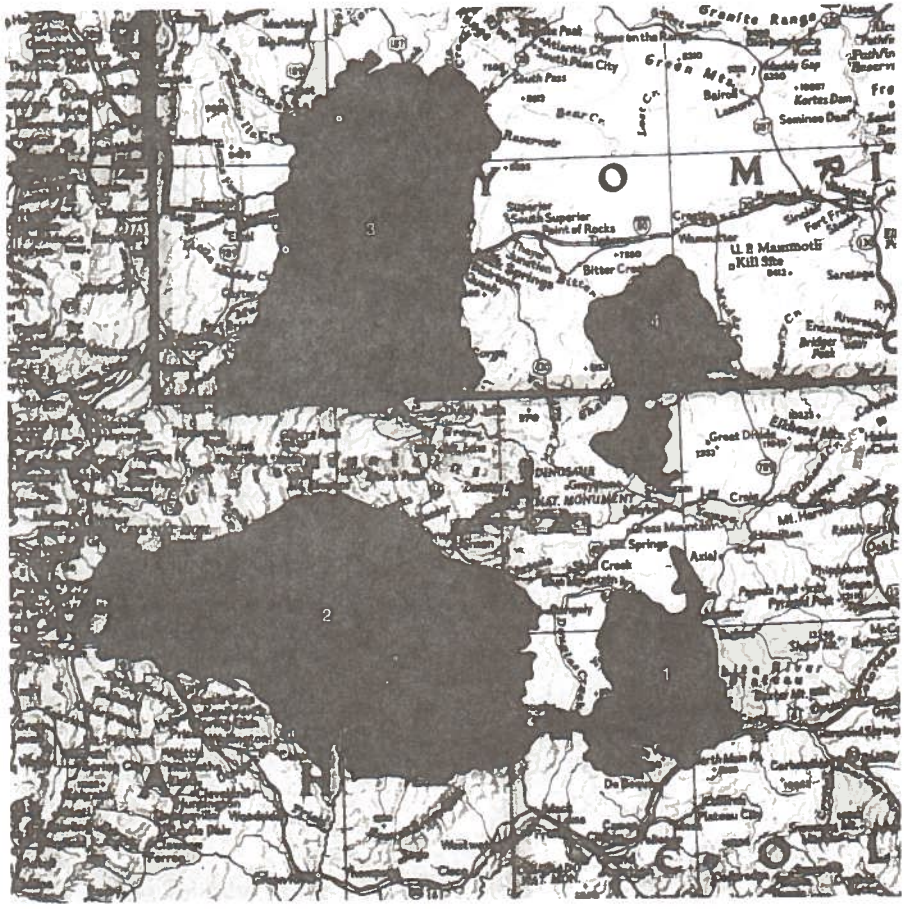
	Billions of Barrels of Oil in Place			
	Colorado	Utah	Wyoming	Total
Intervals 10 ft. or more thick averaging 25 gal./ton or more of oil	480	90	30	600
Intervals 10 ft. or more thick averaging 10 to 25 gal./ton of oil	800	230	400	1,430
Total: intervals 10 ft. or more thick averaging over 10 gal./ton	1,280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

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	

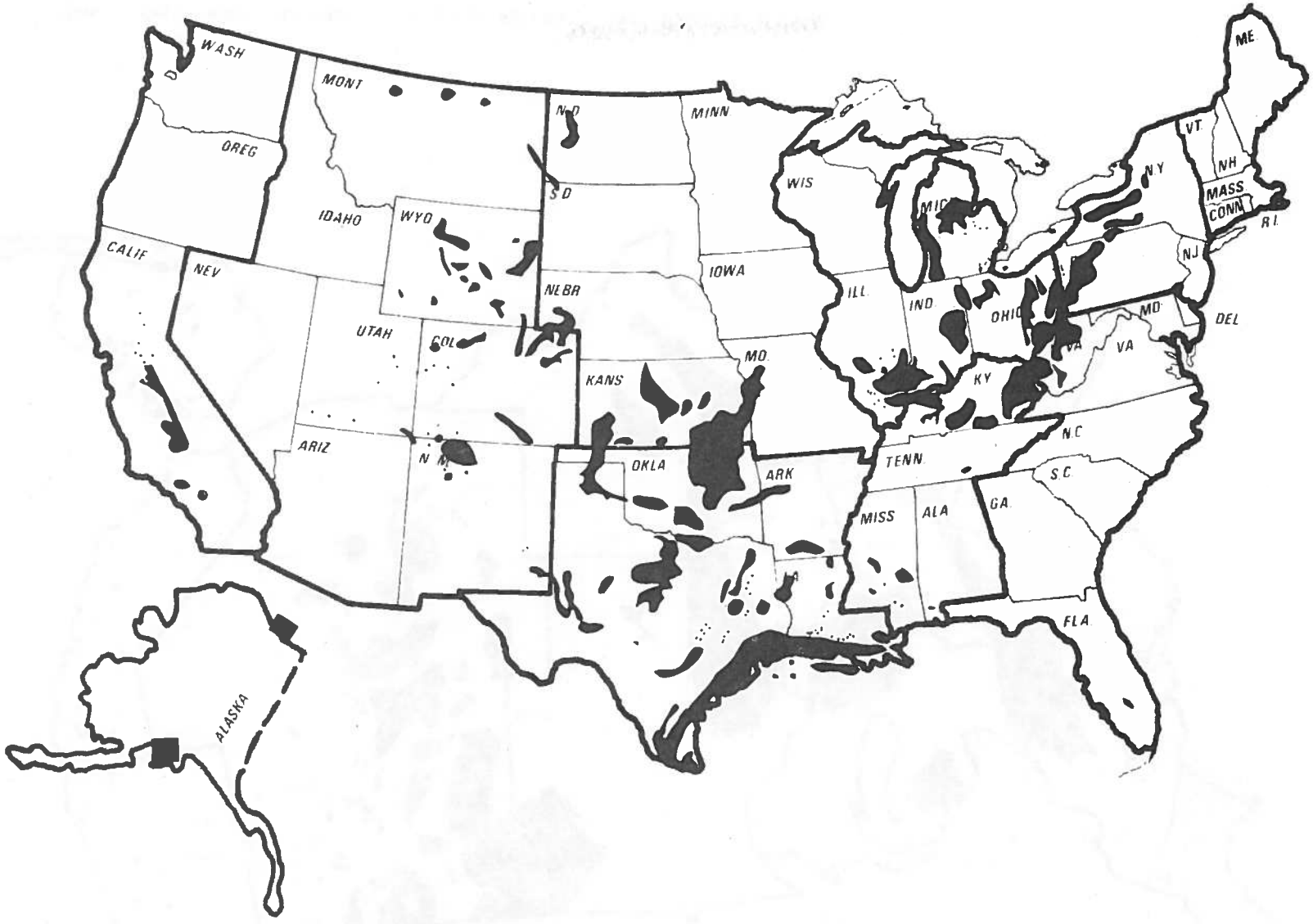
The richest oil shales occur in the Mahogany Zone of Colorado (the Piceance Creek Basin near Rifle) and adjacent portions of Utah. Even here the organic matter represents less than 15 percent of the total shale content; one ton of shale may yield as much as 75 gal. of crude oil, but the average even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

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



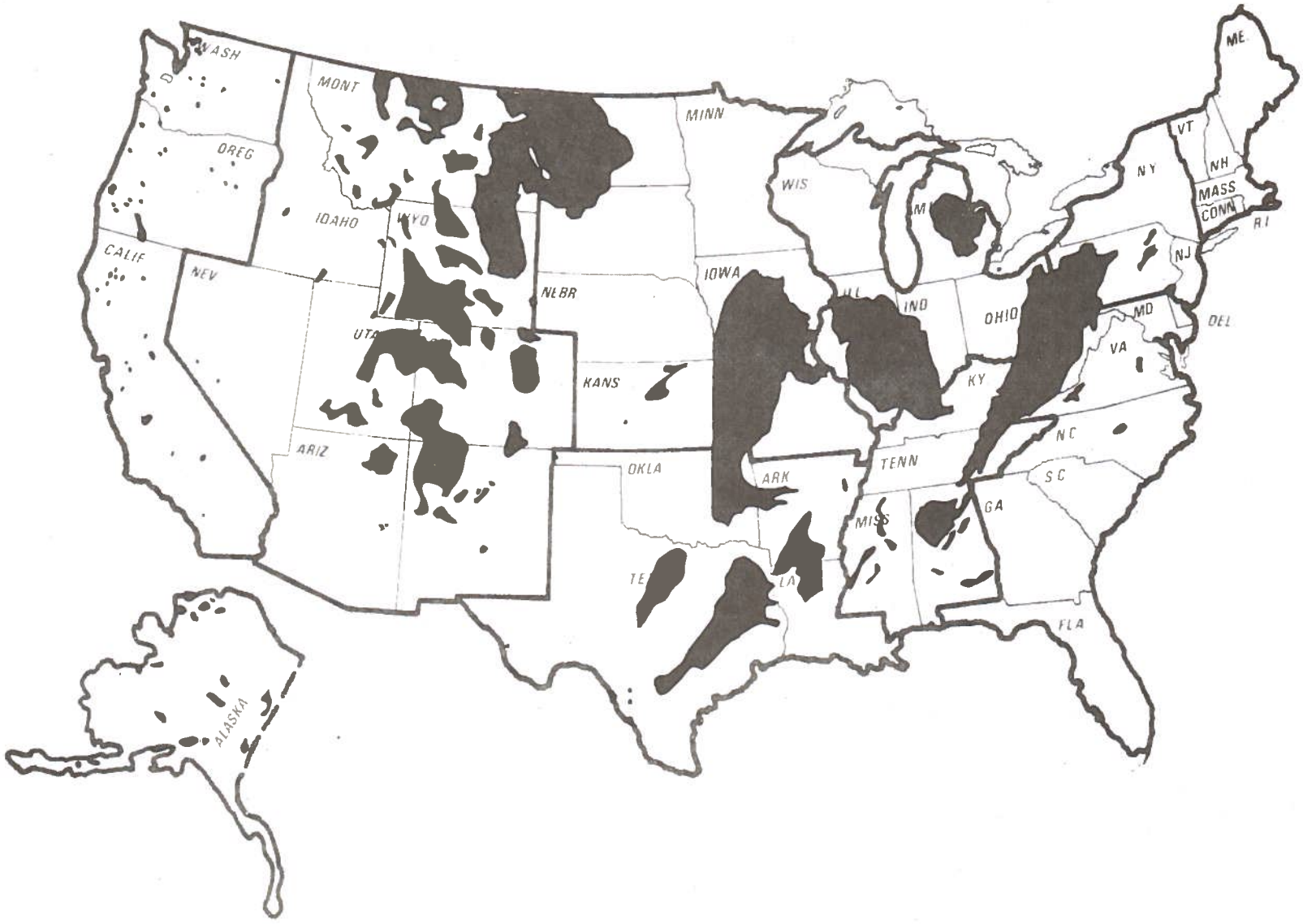
The West's oil shales, rocks containing up to 10 to 15 per cent organic matter, occur in the Green River Formation in the area where Utah, Wyoming, and Colorado join. The Piceance Creek Basin in Colorado (1)—though a small fraction by area of the Green River Formation—contains most of the richest shale 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)

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



Source: Department of the Interior, *U.S. Energy Fact Sheets 1971*, February, 1973, p. 130.

Figure 11. Oil and Gas Fields in the United States



Source: Department of the Interior, *U.S. Energy Fact Sheets 1971*, February, 1973, p. 129.

Figure 12. Coal Fields of the United States

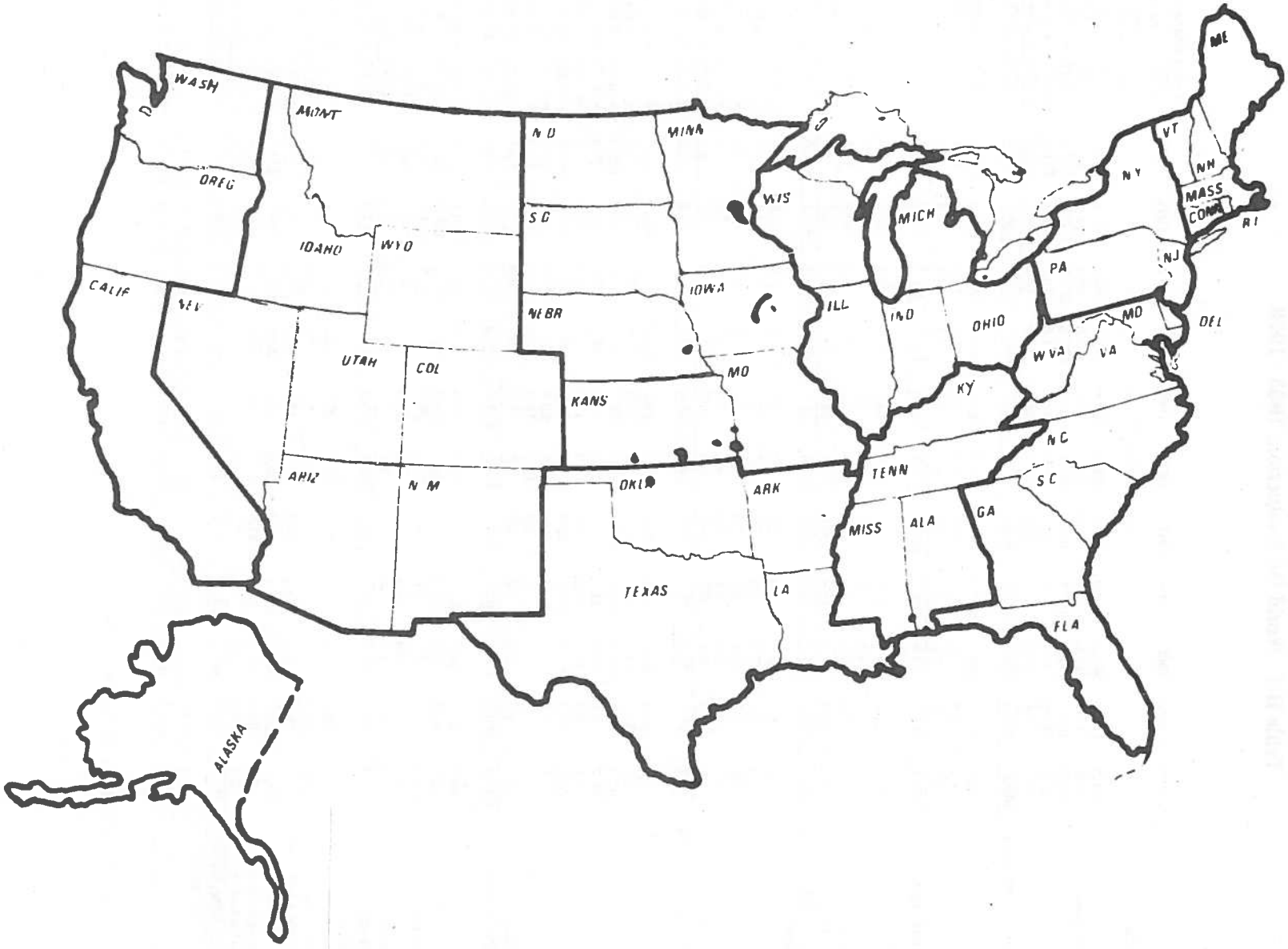


Figure 13. Principal Uranium Deposits of the United States

Table II-7. World Oil Production, 1963 - 1973

Country/Area	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	Yearly Change 1973 over 1963	Yearly Change 1973 over 1968
	MILLION TONS												
NORTH AMERICA													
U.S.A.													
Crude Oil	374.5	379.2	387.6	412.0	437.5	452.9	458.8	478.6	469.9	470.1	456.2	+ 2.0%	+ 0.2%
Natural Gas Liquids	39.5	41.7	43.6	46.1	50.5	53.8	56.4	58.9	60.1	62.1	61.7	+ 4.6%	+ 2.8%
	414.0	420.9	431.2	458.1	488.0	506.7	515.2	537.5	530.0	532.2	517.9	+ 2.3%	+ 0.4%
Canada	38.2	40.8	44.6	49.2	53.8	58.2	62.2	71.5	76.6	88.8	101.8	+10.3%	+11.8%
Mexico	17.1	17.6	17.8	18.3	20.2	21.7	22.8	23.9	23.9	24.8	27.0	+ 4.7%	+ 4.5%
TOTAL NORTH AMERICA	469.3	479.3	493.6	525.6	562.0	586.6	600.2	632.9	630.5	645.8	646.7	+ 3.3%	+ 2.0%
CARIBBEAN													
Venezuela	170.1	177.4	182.1	177.0	186.1	189.9	188.7	195.2	187.7	171.5	178.8	+ 0.5%	- 1.2%
Colombia	8.4	8.7	10.2	10.0	9.6	8.8	10.7	11.2	11.0	10.0	10.1	+ 1.9%	+ 2.7%
Trinidad	6.9	7.1	7.0	7.9	9.3	9.5	8.2	7.3	6.7	7.3	8.5	+ 2.1%	- 2.2%
TOTAL CARIBBEAN	185.4	193.2	199.3	194.9	205.0	208.2	207.6	213.7	205.4	188.8	197.4	+ 0.6%	- 1.1%
SOUTH AMERICA													
Argentina	13.9	14.3	14.0	15.0	16.4	17.9	18.6	20.4	22.1	22.6	22.0	+ 4.7%	+ 4.1%
Brazil	5.1	4.5	4.6	5.6	7.1	8.0	8.5	8.0	8.3	8.1	8.1	+ 4.7%	+ 0.3%
Other South America	5.3	5.5	5.6	5.8	7.1	7.8	7.2	6.4	6.4	10.8	17.3	+12.6%	+17.2%
TOTAL SOUTH AMERICA	24.3	24.3	24.2	26.4	30.6	33.7	34.3	34.8	36.8	41.5	47.4	+ 6.9%	+ 7.0%
TOTAL WESTERN HEMISPHERE	679.0	696.8	717.1	746.9	797.6	828.5	842.1	881.4	872.7	876.1	891.5	+ 2.8%	+ 1.5%
WESTERN EUROPE													
France	2.5	2.8	3.0	2.9	2.8	2.7	2.5	2.3	1.9	1.5	1.3	- 6.7%	-14.1%
W. Germany	7.4	7.7	7.9	7.9	7.9	8.0	7.9	7.5	7.4	7.1	6.6	- 1.1%	- 3.6%
Austria	2.6	2.7	2.8	2.7	2.7	2.7	2.7	2.8	2.5	2.5	2.6	- 0.2%	- 1.1%
Turkey	0.7	0.9	1.6	2.1	2.8	3.1	3.6	3.5	3.5	3.4	3.5	+17.0%	+ 2.5%
Other Western Europe	5.9	7.5	6.8	6.5	6.5	6.5	6.7	6.7	6.5	7.7	8.6	+ 3.9%	+ 5.9%
TOTAL WESTERN EUROPE	19.1	21.6	22.1	22.1	22.7	23.0	23.4	22.8	21.8	22.2	22.6	+ 1.7%	- 0.3%
MIDDLE EAST													
Iran	73.1	85.4	95.0	105.2	129.6	141.8	168.1	191.3	227.0	251.9	293.1	+14.9%	+15.6%
Iraq	56.7	61.7	64.4	68.1	60.3	73.9	74.9	76.9	83.5	72.1	97.1	+ 5.5%	+ 5.6%
Kuwait	97.2	106.7	109.1	114.4	115.2	122.1	129.5	137.5	147.1	151.2	138.4	+ 3.6%	+ 2.6%
Neutral Zone	16.7	18.8	19.4	21.7	21.5	21.0	21.7	26.0	28.3	29.3	26.5	+ 4.7%	+ 4.7%
Qatar	9.1	10.2	11.1	13.8	15.5	16.3	17.0	17.7	20.5	23.2	27.3	+11.6%	+10.9%
Saudi Arabia	80.5	86.2	100.6	118.8	129.0	140.9	148.6	176.2	223.4	285.4	364.7	+16.3%	+20.9%
Abu Dhabi	2.6	9.0	13.5	17.3	18.3	23.9	28.9	33.4	44.9	50.6	62.6	+37.2%	+21.2%
Oman	-------	------	------	------	2.9	12.1	16.4	16.6	14.4	14.2	14.7	*	+ 4.1%
Other Middle East	2.4	2.5	3.0	3.3	3.6	5.3	9.5	12.6	16.2	17.5	20.8	+24.2%	+31.4%
TOTAL MIDDLE EAST	338.3	380.5	416.1	462.6	495.9	557.3	614.6	688.2	805.3	895.4	1,045.2	+11.9%	+13.4%
AFRICA													
Algeria	23.9	26.5	26.6	34.2	39.1	42.9	44.5	48.5	36.5	50.1	51.0	+ 7.9%	+ 3.5%
Libya	22.4	41.4	58.9	72.3	84.0	125.7	149.8	159.8	133.1	108.2	105.1	+16.7%	- 3.5%
Other North Africa	5.8	6.6	6.7	7.0	8.6	14.5	20.9	27.7	25.2	21.6	18.2	+12.2%	+ 4.7%
Nigeria	3.8	6.0	13.5	20.4	15.6	7.2	26.4	52.9	74.7	88.9	100.1	+38.7%	+69.2%
Other West Africa	1.8	2.4	2.0	2.2	4.1	5.8	7.5	10.9	11.5	13.6	17.1	+25.3%	+24.0%
TOTAL AFRICA	57.7	82.9	107.7	136.1	151.4	196.1	249.1	299.8	281.0	282.4	291.5	+17.6%	+ 8.2%
SOUTH EAST ASIA													
Indonesia	22.5	23.3	24.0	23.5	25.2	29.7	37.1	42.2	44.1	53.4	64.2	+11.1%	+16.7%
Other South East Asia	4.0	3.6	4.0	4.7	5.4	6.2	6.8	7.8	11.0	12.3	16.3	+14.9%	+21.2%
TOTAL SOUTH EAST ASIA	26.5	26.9	28.0	28.2	30.6	35.9	43.9	50.0	55.1	65.7	80.5	+11.7%	+17.5%
U.S.S.R.	206.1	223.6	243.0	265.1	288.0	309.0	328.0	353.0	372.0	394.0	421.0	+ 7.4%	+ 6.4%
Eastern Europe and China	22.4	24.2	25.2	26.7	27.0	29.7	32.0	37.6	43.7	48.8	57.2	+ 9.8%	+14.0%
Other Eastern Hemisphere	3.5	4.2	5.1	7.0	8.5	9.5	10.3	17.6	24.3	26.7	27.9	+23.1%	+24.0%
TOTAL EASTERN HEMISPHERE	673.6	763.9	847.2	947.8	1,024.1	1,160.5	1,301.3	1,469.0	1,603.2	1,735.2	1,945.9	+11.2%	+10.9%
WORLD (excl U.S.S.R., E. Europe and China)	1,124.1	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	2,359.2	+ 7.7%	+ 7.4%
WORLD	1,352.6	1,460.7	1,564.3	1,694.7	1,821.7	1,989.0	2,143.4	2,350.4	2,475.9	2,611.3	2,837.4	+ 7.7%	+ 7.4%

* Greater than 300%

Source: British Petroleum Corp. BP *Statistical Review of the World Oil Industry*, 1973, pp 18, 19.

Table II-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 1973 (Included in Column 1)	Inoperable Refinery Capacity				
		September 30 1973 (1)	December 31 1973 (2)	March 31 1974 (3)	June 30 1974 (4)	September 30 1974 (5)	(6)	Sept. 30 1973 (7)	Dec. 31 1973 (8)	Mar. 31 1974 (9)	Jun. 30 1974 (10)	Sept. 30 1974 (11)
	East Coast	1,397,000	1,463,000	1,463,000	1,463,250	1,463,250	--------	15,000	15,000	15,000	15,000	15,000
	Appalachian No. 1	188,710	188,710	190,210	190,210	190,210	7,600	-----	-----	-----	-----	-----
I.	Total	1,585,710	1,651,710	1,653,210	1,653,460	1,653,460	7,600	15,000	15,000	15,000	15,000	15,000
	Appalachian No. 2	60,000	60,000	60,000	60,000	60,000	-----	-----	-----	-----	-----	-----
	Ind., Ill., Ky.	2,521,010	2,489,050	2,489,550	2,522,050	2,525,850	81,400	85,500	132,500	132,500	132,500	132,500
	Minn., Wisc., Daks.	272,608	285,058	287,958	290,958	291,958	5,000	-----	-----	-----	-----	-----
	Okla., Kan., Mo.	977,788	984,888	995,288	1,000,288	1,013,788	8,400	500	500	500	500	500
II.	Total	3,831,406	3,818,996	3,832,796	3,873,296	3,891,596	94,800	86,000	133,000	133,000	133,000	133,000
	Inland Texas	456,300	461,700	467,900	467,900	485,600	-----	13,500	13,500	13,500	13,500	13,500
	Texas Gulf Coast	3,211,600	3,291,600	3,331,600	3,331,600	3,331,600	20,000	-----	-----	-----	-----	-----
	Louisiana Gulf Coast	1,826,100	1,827,100	1,828,100	1,830,100	1,868,100	15,100	-----	-----	-----	-----	-----
	No. La. & Ark.	173,343	173,234	173,434	188,534	188,734	2,436	1,400	1,400	1,400	1,400	1,400
	New Mexico	62,720	62,720	62,720	122,720	122,720	-----	-----	-----	-----	-----	-----
III.	Total	5,730,063	5,816,354	5,863,754	5,940,854	5,996,754	37,536	14,900	14,900	14,900	14,900	14,900
IV.	Other Rocky Mt.	479,568	507,096	518,096	518,096	525,946	23,524	-----	-----	-----	-----	-----
V.	West Coast	2,233,569	2,255,169	2,271,669	2,279,169	2,279,169	21,679	-----	-----	-----	-----	-----
	Total United States	13,860,316	14,049,325	14,139,525	14,264,875	14,346,925	185,139	115,900	162,900	162,900	162,900	162,900

Source: American Petroleum Institute, *Weekly Statistical Bulletin*, Nov. 30, 1973.

See Appendix B for new definition of operable refinery capacity.

Table II-9. Number and Capacity of U.S. Refineries, 1918 - 1973

Year	Number of Refineries As of January 1					Capacity as of January 1 (Barrels Per Day)					Daily Average Crude Oil Runs To Stills (barrels)
	Operating	Shutdown	Total Operating and Shutdown	Building[1]	Total Operating, and Shutdown and Building	Operating	Shutdown[2]	Total Operating and Shutdown	Building[3]	Total Operating, Shutdown and Building	
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	5	287	13,034,818	402,650	13,437,468	223,470	13,660,938	11,696,000
1971	253	26	279	2	281	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.

Source: Bureau of Mines, "Petroleum Refineries in the United States and Puerto Rico: January 1, 1973," July 24, 1973, p. 3 for 1973 and equivalent tables in earlier editions; and the "Annual Petroleum Statement."

Table II-10. Total Input at U.S. Refineries and Percent Yields of Products, 1956 - 1973

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
(In Thousands of 42 Gallon Barrels)			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	Prior		23.14	14.39	1.93	12.98	1957
2,789,404	+32,493	2,821,897	45.17	3.90	years		22.38	12.88	1.82	13.85	1958
2,917,661	+25,868	2,943,529	44.85	3.76	not		23.06	11.82	1.91	14.60	1959[3]
2,917,661	+25,868	2,943,529	44.85	3.76	available		23.06	11.82	1.91	14.60	1959[4]
2,952,534	+22,094	2,974,628	45.16	4.56[5]	on a		22.42	11.17	2.00	14.69	1960
2,987,158	+19,260	3,006,418	44.67	4.70	comparable		23.15	10.50	1.97	15.01	1961
3,069,631	+27,733[6]	3,097,364	44.80	5.05	basis.		23.23	9.55	1.98	15.39	1962
3,170,652	+31,934	3,202,586	44.14	5.14			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
											1972
353,035	+ 3,331	356,366	46.54	2.42	1.60	5.22	22.07	8.04	1.53	12.58	January
329,332	+ 7,842	337,174	44.45	1.98	1.96	5.78	22.81	8.28	1.46	13.28	February
351,703	- 793	350,910	45.17	1.99	1.97	6.03	22.65	7.31	1.54	13.34	March
335,533	- 211	335,322	45.45	1.75	2.09	5.75	22.15	6.61	1.55	14.65	April
355,806	- 150	355,656	45.82	1.44	1.93	5.80	22.53	5.79	1.60	15.09	May
355,236	- 1,508	353,728	46.38	1.39	1.93	5.35	22.24	5.60	1.58	15.53	June
368,445	+ 7,819	376,264	48.06	1.48	1.70	5.49	20.83	5.54	1.44	15.46	July
369,377	+ 8,303	377,680	47.74	1.53	1.80	5.07	21.19	5.53	1.53	15.61	August
363,364	+ 2,784	366,148	47.46	1.82	1.59	5.05	21.49	5.82	1.46	15.31	September
367,999	+ 6,775	374,774	47.05	1.68	1.62	5.18	22.51	6.16	1.50	14.30	October
355,538	+ 6,107	361,645	45.88	2.15	1.59	5.05	22.55	7.38	1.49	13.91	November
375,495	+11,219	386,714	44.65	2.30	1.49	5.01	23.55	9.01	1.43	12.56	December
4,280,863	+51,518	4,332,381	46.24	1.83	1.76	5.39	22.21	6.75	1.51	14.31	Total
											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

[1]This 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.
[2]Excludes natural gas liquids and benzol blended and the re-running of unfinished gasoline. Beginning with 1968, other hydrocarbons are excluded.
[3]These figures and those for preceding years are on a 48 state basis.
[4]These figures and those for subsequent years are on a 50 state basis.
[5]These figures and those through 1964 include commercial jet fuel.
[6]Includes net re-running of unfinished gasoline beginning with January 1962.
[7]Beginning with 1964 Special Naphthas are excluded.

Source: American Petroleum Institute, *Annual Statistical Review*, 1956 - 1973.

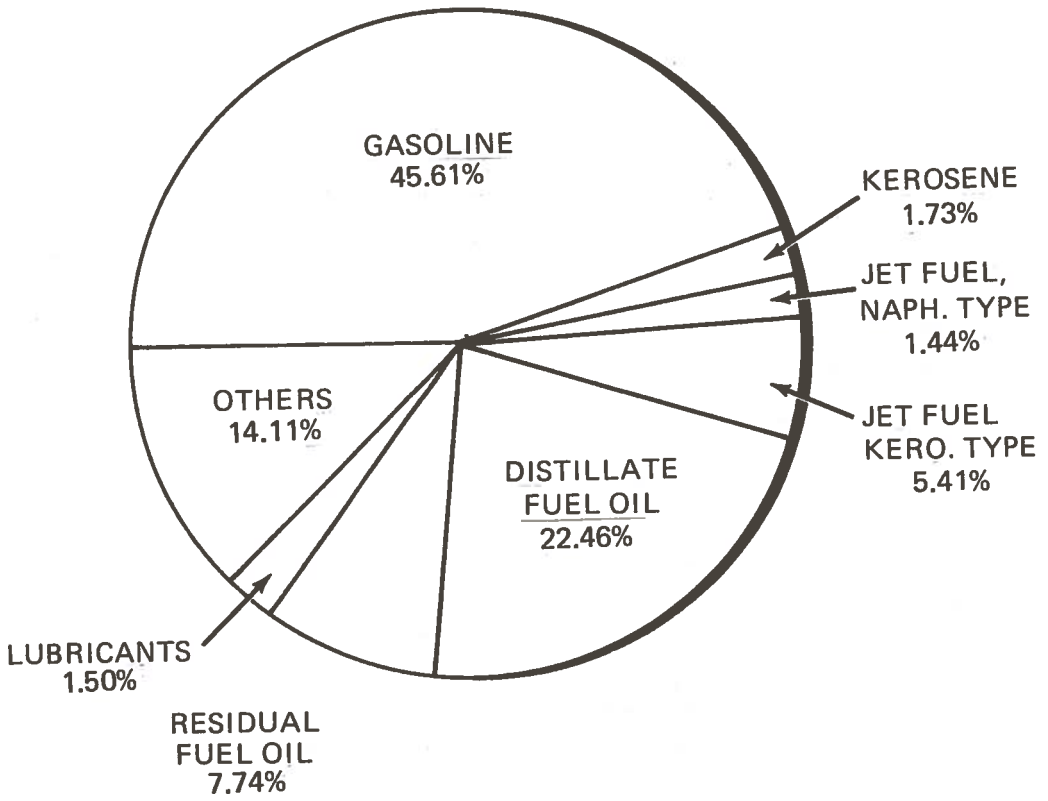


Figure 14. Percentage Yields of Petroleum Products at U.S. Refineries, 1973

Table II-11. Total Estimated Remaining Coal Resources of the United States, January 1, 1967

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	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
	Bituminous Coal	Subbituminous Coal	Lignite	Anthracite and Semi-Anthracite	Total				
Alabama	13,518	0	20	0	13,538	20,000	33,538	6,000	39,538
Alaska	19,415	110,674	([2])	([3])	130,089	130,000	260,089	5,000	265,089
Arkansas	1,640	0	350	430	2,420	4,000	6,420	0	6,420
Colorado	62,389	18,248	0	78	80,715	146,000	226,715	145,000	371,715
Georgia	18	0	0	0	18	60	78	0	78
Illinois	139,756	0	0	0	139,756	100,000	239,756	0	239,756
Indiana	34,779	0	0	0	34,779	22,000	56,779	0	56,779
Iowa	6,519	0	0	0	6,519	14,000	20,519	0	20,519
Kansas	18,686	0	([4])	0	18,686	4,000	22,686	0	22,686
Kentucky	65,952	0	0	0	65,952	52,000	117,952	0	117,952
Maryland	1,172	0	0	0	1,172	400	1,572	0	1,572
Michigan	205	0	0	0	205	500	705	0	705
Missouri	23,359	0	0	0	23,359	0	23,359	0	23,359
Montana	2,299	131,877	87,525	0	221,701	157,000	378,701	0	378,701
New Mexico	10,760	50,715	0	4	61,479	27,000	88,479	21,000	109,479
North Carolina	110	0	0	0	110	20	130	5	130
North Dakota	0	0	350,680	0	350,680	180,000	530,680	0	530,685
Ohio	41,864	0	0	0	41,864	2,000	43,864	0	43,864
Oklahoma	3,299	0	([4])	0	3,299	20,000	23,299	10,000	33,299
Oregon	48	284	0	0	332	100	432	0	432
Pennsylvania	57,533	0	0	12,117	69,650	10,000	79,650	0	79,650
South Dakota	0	0	2,031	0	2,031	1,000	3,031	0	3,031
Tennessee	2,652	0	0	0	2,652	2,000	4,652	0	4,652
Texas	6,048	0	6,878	0	12,926	14,000	26,926	0	26,926
Utah	32,100	150	0	0	32,250	48,000	80,250	35,000	115,250
Virginia	9,710	0	0	335	10,045	3,000	13,045	100	13,145
Washington	1,867	4,194	117	5	6,183	30,000	36,183	15,000	51,183
West Virginia	102,034	0	0	0	102,034	0	102,034	0	102,034
Wyoming	12,699	108,011	([2])	0	120,710	325,000	445,710	100,000	545,710
Other States	618[6]	4,057[7]	46[8]	0	4,721	1,000	5,721	0	5,721
Total	671,049	428,210	447,647	12,969	1,559,875	1,313,080	2,872,955	337,105	3,210,060

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

[2] Small resources and production 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. (See Barnes, 1951).

[4] Small resources of lignite in beds generally less than 30 inches thick.

[5] After Ashley (1944).

[6] Arizona, California, Idaho, Nebraska, and Nevada.

[7] Arizona, California, and Idaho.

[8] California, Idaho, Louisiana, Mississippi, and Nevada.

Source: "Coal Resources of the United States, Jan. 1, 1967," Geological Survey Bulletin 1275, Washington, 1969, pp 12-13.

Table II-12. Coal—Production, by States: 1961 to 1971

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

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

Source: *Minerals Yearbook*, U.S. Bureau of Mines, Statistical Abstract of the U.S. Department of the Interior

Table II-13. Number and Production of Bituminous Coal and Lignite Mines, by State, Size of Output, and Type of Mining

(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	4	4,392	6	2,006	2	318	—	—	1	24	3	11	16	6,751
Strip	2	2,063	10	3,610	22	3,394	15	1,090	32	906	14	57	95	11,121
Auger	—	—	—	—	—	—	—	—	3	67	1	6	4	73
Total	6	6,455	16	5,616	24	3,712	15	1,090	36	997	18	74	115	17,945
Alaska: Strip	1	650	—	—	—	—	—	—	2	46	1	2	4	698
Arizona: Strip	1	1,146	—	—	—	—	—	—	—	—	—	—	1	1,146
Arkansas:														
Underground	—	—	—	—	—	—	—	—	1	41	—	—	1	41
Strip	—	—	—	—	—	—	2	136	4	100	—	—	6	236
Total	—	—	—	—	—	—	2	136	5	141	—	—	7	276
Colorado:														
Underground	1	510	6	1,922	4	608	1	51	10	201	10	38	32	3,329
Strip	3	1,738	—	—	1	134	2	113	1	17	2	4	9	2,008
Total[1]	4	2,248	6	1,922	5	743	3	164	11	218	12	42	41	5,337
Illinois:														
Underground	20	28,311	2	723	1	167	2	179	2	66	—	—	28	29,446
Strip	19	27,186	4	1,337	1	182	1	147	2	63	8	41	36	28,956
Total	39	55,497	6	2,060	2	349	3	326	4	129	8	41	64	58,402
Indiana:														
Underground	2	1,620	—	—	—	—	2	145	—	—	—	—	4	1,765
Strip	12	18,624	2	454	1	117	5	307	5	87	9	43	34	19,631
Total	14	20,243	2	454	1	117	7	452	5	87	9	43	38	21,396
Iowa:														
Underground	—	—	1	246	1	172	—	—	—	—	—	—	2	418
Strip	—	—	—	—	1	115	5	308	4	139	1	10	11	571
Total	—	—	1	246	2	287	5	308	4	139	1	10	13	989
Kansas: Strip	1	765	—	—	2	381	—	—	—	—	1	5	4	1,151
Kentucky:														
Underground	27	24,496	33	9,701	39	5,712	68	4,710	317	6,902	383	1,694	867	53,216
Strip	18	28,941	28	9,019	46	6,021	89	6,273	237	5,655	195	857	613	56,766
Auger	—	—	2	404	9	1,728	28	2,167	100	4,209	126	899	265	9,406
Total[1]	45	53,437	63	19,124	94	13,462	185	13,150	654	16,766	704	3,450	1,745	119,389
Maryland:														
Underground	—	—	—	—	—	—	1	68	4	95	5	13	10	176
Strip	—	—	1	202	3	429	5	321	13	332	17	81	39	1,365
Auger	—	—	—	—	—	—	1	57	2	38	3	7	6	102
Total[1]	—	—	1	202	3	429	7	447	19	465	25	100	55	1,644
Missouri: Strip	4	3,185	2	785	—	—	—	—	3	58	1	8	10	4,036
Montana:														
Underground	—	—	—	—	—	—	—	—	—	—	4	20	4	20
Strip	2	6,657	1	325	—	—	1	50	1	11	1	2	6	7,044
Total	2	6,657	1	325	—	—	1	50	1	11	5	22	10	7,064
New Mexico:														
Underground	1	977	—	—	—	—	—	—	—	—	—	—	1	977
Strip	2	7,198	—	—	—	—	—	—	—	—	—	—	2	7,198
Total	3	8,175	—	—	—	—	—	—	—	—	—	—	3	8,175
North Dakota: Strip	5	5,351	1	368	2	312	—	—	1	19	6	24	15	6,076

See footnotes at end of table.

Table II-13. Number and Production of Bituminous Coal and Lignite Mines, by State, Size of Output, and Type of Mining - 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	11	10,615	4	1,559	2	228	2	144	9	284	7	31	35	12,86
Strip	18	19,920	26	7,752	28	3,863	51	3,845	72	2,023	42	193	237	37,59
Auger	—	—	—	—	2	212	2	101	20	605	6	57	30	97
Total[1]	29	30,535	30	9,312	32	4,302	55	4,090	101	2,912	55	281	302	51,43
Oklahoma:														
Underground	—	—	—	—	1	158	—	—	2	35	—	—	3	19
Strip	2	1,528	—	—	2	339	2	170	—	—	1	2	7	2,03
Auger	—	—	—	—	—	—	—	—	—	—	1	2	1	
Total[1]	2	1,528	—	—	3	498	2	170	2	35	2	4	11	2,23
Pennsylvania:														
Underground	31	28,957	31	10,396	20	2,777	16	1,165	32	773	51	221	181	44,289
Strip	4	4,239	15	3,999	49	6,752	103	6,866	215	5,425	141	720	527	28,002
Auger	—	—	—	—	—	—	—	—	18	330	39	214	57	544
Total[1]	35	33,196	46	14,395	69	9,529	119	8,031	265	6,528	231	1,156	765	72,835
Tennessee:														
Underground	1	1,050	2	580	3	446	8	574	29	735	35	158	78	3,543
Strip	—	—	2	473	17	2,340	31	2,075	25	436	22	88	97	5,412
Auger	—	—	—	—	—	—	1	96	7	203	3	17	11	316
Total[1]	1	1,050	4	1,053	20	2,786	40	2,745	61	1,375	60	263	186	9,271
Utah:														
Underground	2	1,462	7	2,011	6	1,016	1	65	4	66	1	2	21	4,620
Strip	—	—	—	—	—	—	—	—	—	—	1	6	1	6
Total	2	1,462	7	2,011	6	1,016	1	65	4	66	2	8	22	4,626
Virginia:														
Underground	6	5,848	21	6,915	15	2,025	32	2,165	183	4,180	98	498	355	21,631
Strip	—	—	3	843	6	926	24	1,656	129	3,506	50	236	212	7,168
Auger	—	—	—	—	2	260	5	312	47	1,017	49	240	103	1,829
Total[1]	6	5,848	24	7,758	23	3,211	61	4,134	359	8,704	197	975	670	30,628
Washington:														
Underground	—	—	—	—	—	—	—	—	1	30	1	2	2	32
Strip	1	1,093	—	—	—	—	—	—	—	—	1	9	2	1,102
Total	1	1,093	—	—	—	—	—	—	1	30	2	11	4	1,134
West Virginia:														
Underground	46	45,787	84	26,638	67	9,661	76	5,285	177	4,327	174	740	624	92,437
Strip	4	2,909	19	4,659	43	6,038	62	4,573	129	3,250	56	318	313	21,747
Auger	—	—	—	—	8	1,074	25	1,615	41	1,197	39	188	113	4,074
Total[1]	50	48,695	103	31,297	118	16,773	163	11,473	347	8,774	269	1,245	1,050	118,258
Wyoming:														
Underground	—	—	—	—	—	—	1	88	1	45	2	8	4	141
Strip	5	6,953	2	734	1	191	—	—	1	22	—	—	9	7,899
Auger	—	—	—	—	—	—	—	—	1	12	—	—	1	12
Total	5	6,953	2	734	1	191	1	88	3	79	2	8	14	8,052
United States:														
Underground	152	154,025	197	62,697	162	23,288	210	14,639	773	17,804	774	3,436	2,268	275,888
Strip	104	140,146	116	34,560	225	31,534	399	27,933	876	22,094	570	2,706	2,290	258,972
Auger	—	—	2	404	21	3,274	62	4,348	239	7,678	267	1,630	591	17,332
Total[1]	256	294,171	315	97,661	408	58,096	671	46,920	1,888	47,576	1,611	7,772	5,149	552,192

[1] Data may not add to totals shown because of individual rounding.

Source: Surface Mining and Our Environment, U.S. Dept. of Interior, 1967.

Table II-14. Coal Production and Use

(in millions of tons)

Consumption	1967	1968	1969	1970	1971
Electric power	272	295	308	320	326
Total domestic	480	499	507	517	495
Export	50	51	56	71	57
Total	530	550	564	588	552
Production	548	540	545	602	560
Inventory change, errors	+18	-10	-19	+14	+8
Average value/t, f.o.b.	$4.60	$4.65	$5.30	$6.25	$6.36
Average export value	n.a.	n.a.	$10.44	$13.40	$15.79

Source: *Minerals Yearbook*, U.S. Dept. of Interior-Bureau of Mines

Table II-15. Natural Uranium Resources[1]

(In thousands of tons U_3O_8)

	United States	Free world excluding United States	Total free world
Less than \$10/lb. U_3O_8:			
Reasonably assured[2]	200	485	685
Estimated additional[3]	325	355	680
Total	525	840	1,365
Less than \$15/lb. U_3O_8:[4]			
Reasonably assured	350	1,050	1,400
Estimated additional	525	655	1,180
Total	875	1,705	2,580

[1] AEC 1960 projections.
[2] Demonstrated reserves.
[3] Based on geologic and exploration data.
[4] Includes less than \$10/lb. U_3O_8.

Source: Civilian nuclear power. The 1967 supplement to the 1962 report to the President. February 1967, U.S. Atomic Energy Commission, p. 15.

Table II-16. Uranium Ore Reserves

State	Tons of ore	Percent U_3O_8	Tons of U_3O_8
New Mexico	29,400,000	0.25	72,600
Wyoming	32,000,000	0.20	62,700
Utah	3,000,000	0.32	9,600
Colorado	2,800,000	0.28	7,700
Texas	1,300,000	0.28	3,700
North and South Dakota	400,000	0.30	1,260
Others: (Arizona, Alaska, Washington, Nevada, California, Oregon, Montana, and Idaho)	1,400,000	0.25	3,440
Total	70,300,000	0.23	161,000

Source: AEC press release.

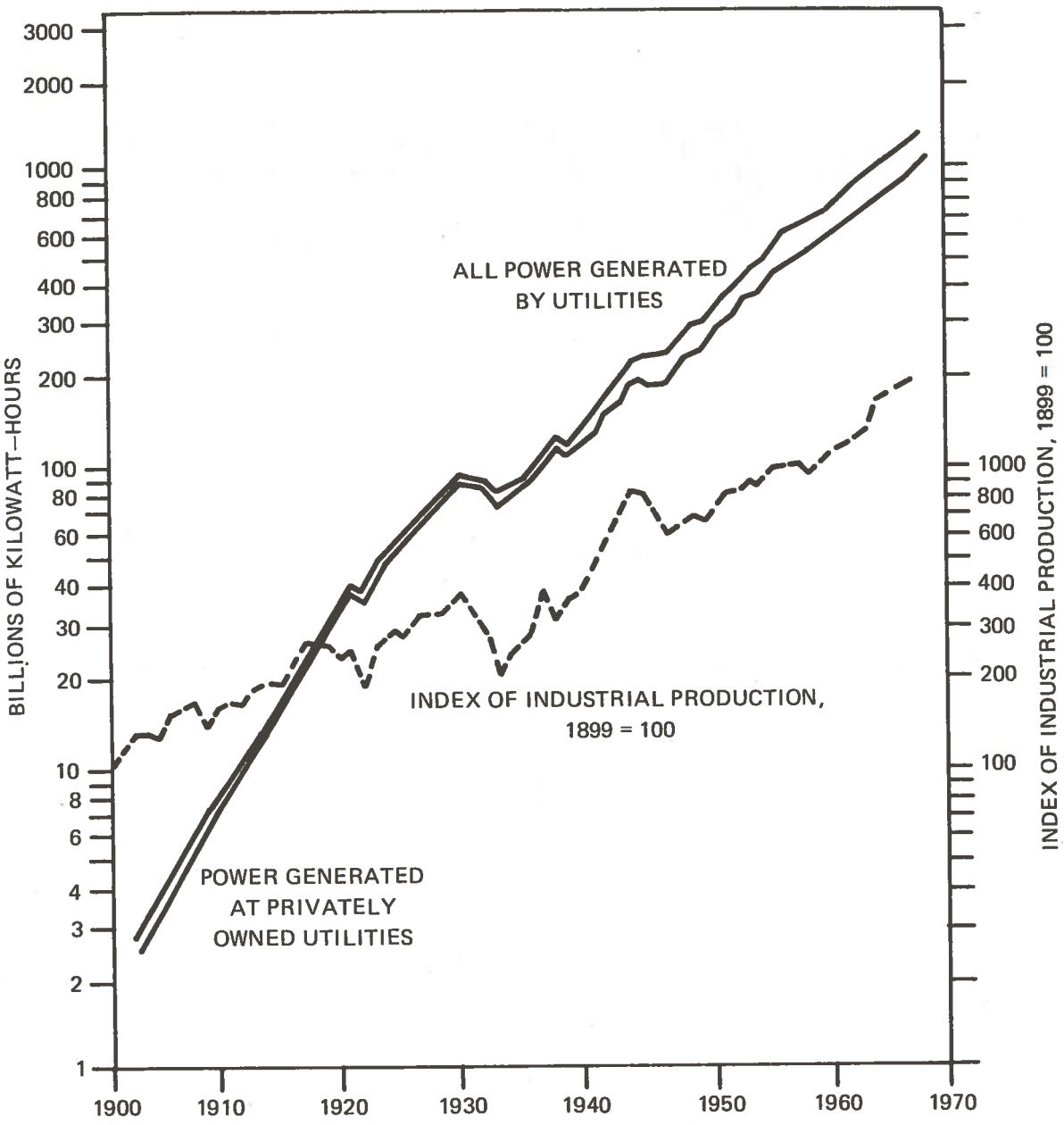
Table II-17. Water Power — Developed and Estimated Undeveloped, by Geographic Division: 1945 to 1971

[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
Developed Water Power[1]								
United States	15,892	18,675	25,742	33,180	44,490	50,248	51,952	53,404
New England[3]	1,170	1,239	1,385	1,520	1,495	1,495	1,473	1,511
Middle Atlantic	1,668	1,678	1,789	2,472	4,815	4,231	4,264	4,252
East North Central	818	901	943	929	886	933	936	944
West North Central	617	629	962	1,594	2,982	2,785	2,728	2,726
South Atlantic	2,664	2,767	3,536	3,773	5,170	5,271	5,265	5,473
East South Central	2,229	2,729	3,576	3,750	4,497	5,111	5,224	5,225
West South Central	374	466	948	944	1,661	1,840	1,946	2,096
Mountain	2,007	2,286	3,706	4,621	5,560	6,097	6,202	6,219
Pacific	4,345	5,979	8,898	13,578	17,424	22,485	23,914	24,958
Undeveloped Water Power								
United States	77,130[2]	87,604	86,895	114,200	124,087	128,900	127,990	125,203
New England	3,348	3,250	2,586	2,900	3,240	3,300	3,330	3,318
Middle Atlantic	5,175	6,572	8,023	7,600	4,986	4,545	4,455	4,269
East North Central	2,574	2,344	3,051	3,000	1,351	1,288	1,576	1,305
West North Central	4,735	5,775	6,284	6,400	4,146	4,604	4,390	4,329
South Atlantic	7,462	8,161	7,943	8,400	9,977	9,708	9,556	9,059
East South Central	4,552	4,736	3,707	4,600	4,287	3,660	3,810	3,877
West South Central	2,894	3,568	3,506	3,900	3,056	3,394	3,279	3,029
Mountain	17,755	23,440	20,668	23,600	26,530	26,923	26,655	26,174
Pacific	28,635	29,768	31,127	53,800	66,514	71,478	70,939	69,843

[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, statistical abstract of the U.S., 1969.



Source: *Historical Statistics of the United States;* FPC, *Statistics of Electric Utilities in the United States,* 1963 and *Statistical Abstracts.*

Figure 15. Electric Power Generating Capacity, 1900 - 1970

PART III. ENERGY CONSUMPTION

Table III-1. Estimated Cost of Operating a *Standard* Size 1967 Model Automobile, Including Cost of Gasoline and Oil[1] (total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles) Total Cost	First Year (14,500 miles) Cost Per Mile	Second Year (13,000 miles) Total Cost	Second Year (13,000 miles) Cost Per Mile	Totals and Averages for Ten Years (100,000 miles) Total Cost	Totals and Averages for Ten Years (100,000 miles) 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 C for bases of estimates.

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

Table III-2. Estimated Cost of Operating a *Standard* Size 1972 Model Automobile, Including Cost of Gasoline and Oil[1] (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 C for bases of estimates.

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

Table III-3. Estimated Cost of Operating a *Compact* Size 1972 Model Automobile, Including Cost of Gasoline and Oil[1] (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 C for bases of estimates.

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

Table III-4. Estimated Cost of Operating a *Subcompact* Size 1972 Model Automobile, Including Cost of Gasoline and Oil[1] (total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles) Total Cost	First Year (14,500 miles) Cost Per Mile	Second Year (13,000 miles) Total Cost	Second Year (13,000 miles) Cost Per Mile	Totals and Averages For Ten Years (100,000 miles) Total Cost	Totals and Averages For Ten Years (100,000 miles) 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 C for bases of estimates.

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

Table III-5. Estimated Cost of Operating a *Standard* Size 1974 Model Automobile, Including Cost of Gasoline and Oil[1]
(total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles) Total Cost	First Year (14,500 miles) Cost Per Mile	Second Year (13,000 miles) Total Cost	Second Year (13,000 miles) Cost Per Mile	Totals And Averages For Ten Years (100,000 miles) Total Cost	Totals And Averages For Ten Years (100,000 miles) 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 C for bases of estimates.

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

Table III-6. Estimated Cost of Operating a *Compact* Size 1974 Model Automobile, Including Cost of Gasoline and Oil[1] (total costs in dollars, costs per mile in cents)

Item	First Year (14,500 miles) Total Cost	First Year (14,500 miles) Cost Per Mile	Second Year (13,000 miles) Total Cost	Second Year (13,000 miles) Cost Per Mile	Totals And Averages For Ten Years (100,000 miles) Total Cost	Totals And Averages For Ten Years (100,000 miles) 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	1,314.26	9.06	1,305.07	10.04	11,721.15	11.72
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	218.12	1.51	93.26	0.72	879.98	0.88
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	37.76	0.26	33.86	0.26	278.40	0.28
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 C for bases of estimates.

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

Table III-7. Estimated Cost of Operating a *Subcompact* Size 1974 Model Automobile, Including Cost of Gasoline and Oil[1] (total costs in dollars, costs per mile in cents)

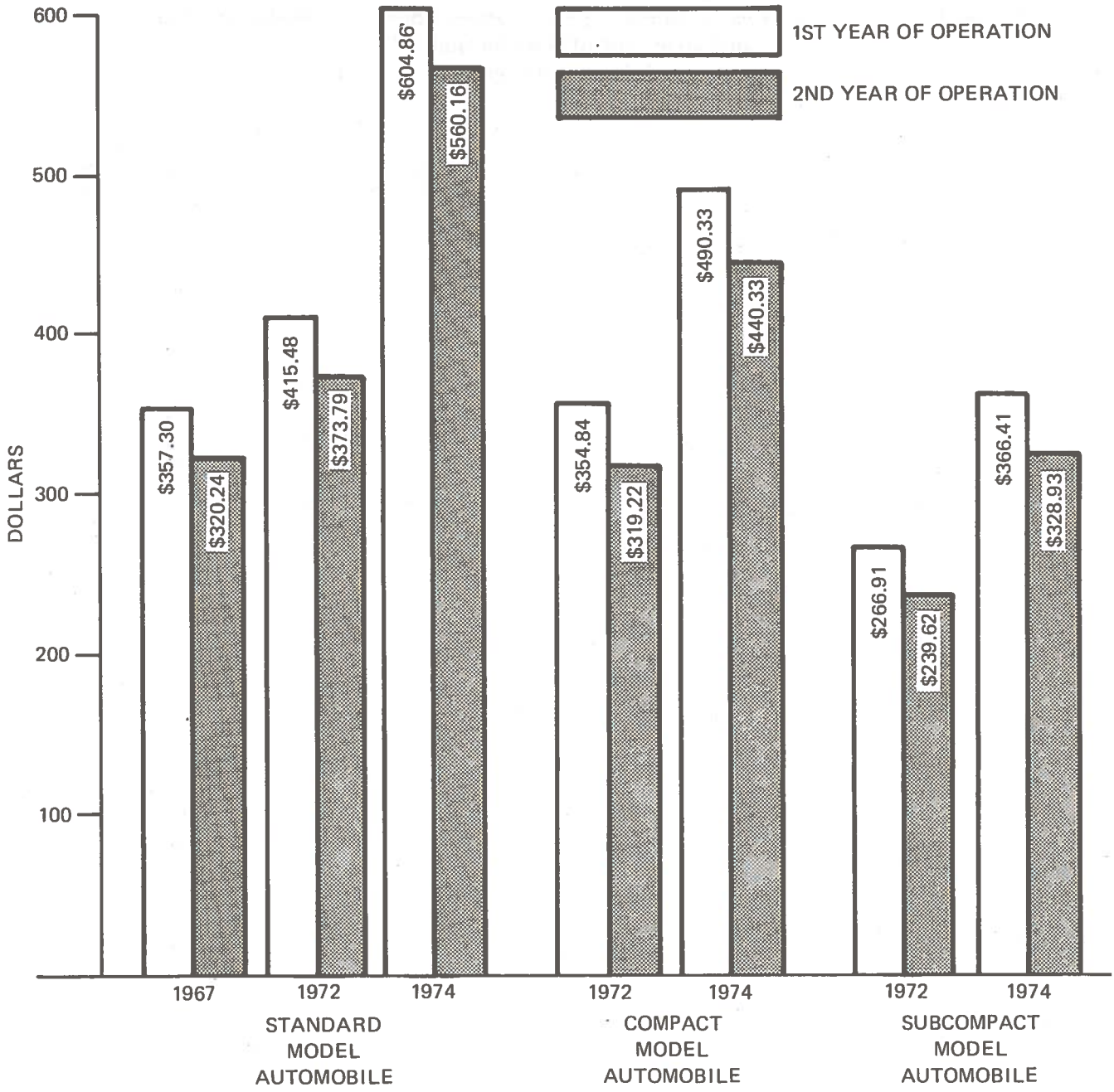
Item	First Year (14,500 miles) Total Cost	First Year (14,500 miles) Cost Per Mile	Second Year (13,000 miles) Total Cost	Second Year (13,000 miles) Cost Per Mile	Totals And Averages For Ten Years (100,000 miles) Total Cost	Totals And Averages For Ten Years (100,000 miles) Cost Per Mile
Costs Excluding 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 C 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 C for bases of these estimates.

Figure 15. Estimated Annual Automobile Gasoline and Oil Costs, Including Taxes, by Size and Year of Operation

Table III-8. Expenditures for Fuel by Class I Common Motor Carriers of General Freight Engaged in Intercity Service, All Districts, 1969-1972

	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

Source: ICC, *Transport Statistics,* Part 7, "Motor Carriers", December 31, 1972, p. 24, and equivalent tables in earlier editions.

Table III-9. Average Price of Railroad Fuel,* Class I Railroads 1962-1972

	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	—

*Average costs exclude nonlocomotive fuel use beginning in 1964.

Source: A.A.R. *Statistics of Railroads of Class I, 1962-1972.*

Table III-10. Jet Operating Expenses, Including Fuel & Oil Costs: B-727, B-737 and DC-9, Quarter Ending Sept. 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 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 III-10. Jet Operating Expenses, Including Fuel & Oil Costs: B-727, B-737 and DC-9, Quarter Ending Sept. 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 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

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

Table III-11. Jet Operating Expenses, Including Fuel & Oil Costs: B-774, Quarter Ending September 30, 1970

	B-747				
	AA	CO	PA	TW	UA
	Domestic	Domestic	Combined	Combined	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 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 III-12. Jet Operating Expenses, Including Fuel & Oil Costs: B-737 and DC-9, Quarter Ending March 31, 1971

	B-737					DC-9											
	TS	FL	PI	UA	WA	AL -31	CO -30	DL -32	EA -30	HA -31	RW -30	NC -30	NE -30	OZ -30	SO -10	TT -10	TW -10
Traffic & Service																	
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 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 III-13. Jet Operating Expenses, Including Fuel & Oil Costs: B-747, Quarter Ending Dec. 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	$ 291.37	254.11	430.99	225.96	549.76	312.19	322.51	475.76	581.83	224.01
Maint. Burden	132.64	26.46	63.40	225.27	44.17	186.95	66.17	191.59	185.04	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. 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 III-14. Jet Operating Expenses, Including Fuel & 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 III-15. Jet Operating Expenses, Including Fuel & 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 Combined	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 III-16. Jet Operating Expenses, Including Fuel & Oil Costs: B-727-200, B-737 and DC-9-30, 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 III-17. Jet Operating Expenses, Including Fuel & 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 III-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 III-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 III-20. Jet Operating Expenses, Including Fuel & 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 III-21. Jet Operating Expenses, Including Fuel & 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	$ 941.05	717.60	1,505.58	415.72	413.16	255.79	174.62	212.29
Maint. Burden	160.17	13.84	165.66	333.14	94.02	74.49	223.49	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.	$1,970.48	1.436.40	2,562.07	1,560.74	1,278.83	1,196.78	1.435.28	1,161.70
Depr. & Rentals	768.24	559.64	1,088.23	591.78	563.57	384.07	654.45	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 III-21. Jet Operating Expenses, Including Fuel & 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	$ 127.97	284.93	465.95	228.29	215.82	258.89	51.60	416.10	174.08
Maint. Burden	212.56	202.77	161.65	123.62	207.82	108.02	24.90	183.10	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 III-22. United States Total Gross Consumption of Energy Resources by Major Sources,[1] 1947-1973

(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
p1973	140	13,380	23,558	34,689	71,767	2,941	853	75,561	+4.8

*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.

pPreliminary

Source: U.S. Department of the Interior, *U.S. Energy through the Year 2000*, Dec., 1972; and *News Release*, March 10, 1974, Table 2.

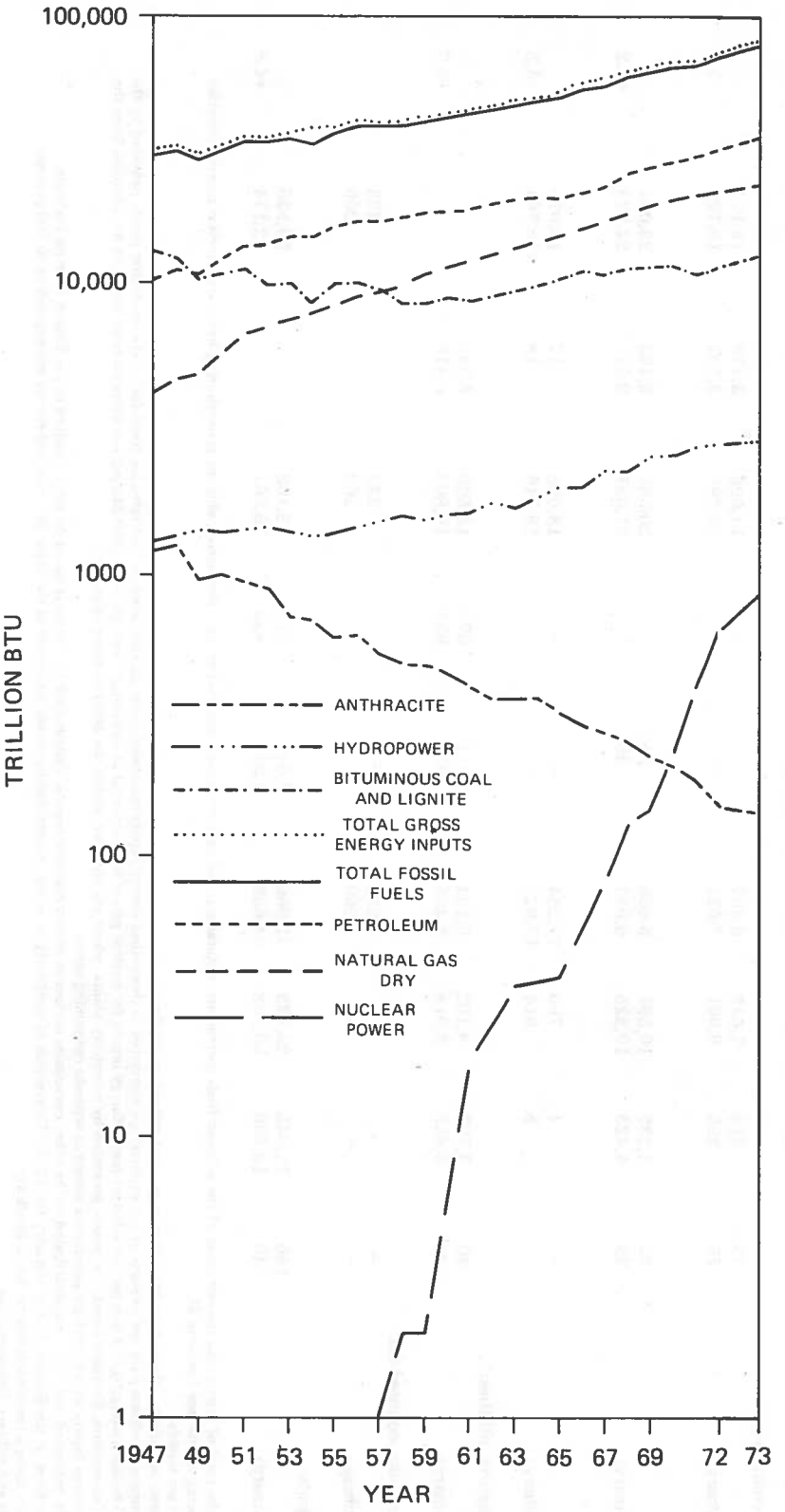


Figure 16. United States Total Gross Consumption of Energy Resources by Major Sources, 1947-1973

Table III-23. U.S. Gross Consumption of Energy Resources by Major Sources and Consuming Sectors, 1972 and 1973 (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	Percentage change from 1972
Household and commercial:										
1972	75	312	7,642	6,667	—	—	14,696	3,478	18,174	
1973 (preliminary)	75	295	8,001	7,024	—	—	15,395	3,727	19,122	+5.2
Industrial:										
1972	35	4,232	10,591	5,668	35	—	20,561	2,493	23,054	
1973 (preliminary)	29	4,425	10,825	6,043	35	—	21,357	2,671	24,028	+4.2
Transportation:[7]										
1972	—	4	790	17,264	—	—	18,058	17	18,075	
1973 (preliminary)	—	5	814	17,927	—	—	18,746	18	18,764	+3.8
Electricity generation, utilities:[4]										
1972	40	7,797	4,102	3,134	2,911	576	18,560	5,988		
1973 (preliminary)	36	8,655	3,918	3,435	2,906	853	19,803	6,416		+6.7
Miscellaneous and unaccounted for:										
1972	—	—	—	233	—	—	233		233	
1973 (preliminary)	—	—	—	260	—	—	260		260	
Total energy inputs:										
1972	150	12,345	23,125	32,966	2,946	576	72,108		59,536	
1973 (preliminary)	140	13,380	23,558	34,689	2,941	853	75,561		62,174	+4.8

[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 Comission using 10,379 Btu per net kilowatt-hour. Energy inputs for nuclear power are 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 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 in the Edison Electric Institute "Statistical Year Book of the Electric Utility Industry for 1972." 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/kwhr.
[7] Includes bunkers and military transportation.

Source: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, *News Release*, March 10, 1974, Table 2.

Table III-24. Gross Consumption of Mineral Energy Resources and Electricity from Hydropower and Nuclear Power in the United States, 1947-1973

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[p]	563,400	22,850,000	6,295.5	280,000	80,000

[p]Preliminary.
[1] Petroleum products refined and processed from crude oil, including still 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*, March 10, 1974, Table 1, and equivalent tables in earlier editions.

Table III-25. Petroleum Consumption by Sector, 1947-1973

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[p]	5,796	1,228	7,024	3,805	2,238	6,043	17,927	51.7	3,435	261	34,689

[p]Preliminary.
[1] Petroleum products refined and processed from crude oil, including still gas, liquefied refinery gas and natural gas liquids.
[2] Includes bunders and military transportation.

Source: U.S. Department of the Interior, *U.S. Energy through the Year 2000*, Dec. 1972; and *News Release*, March 10, 1973, Tables 2, 6a, 6b.

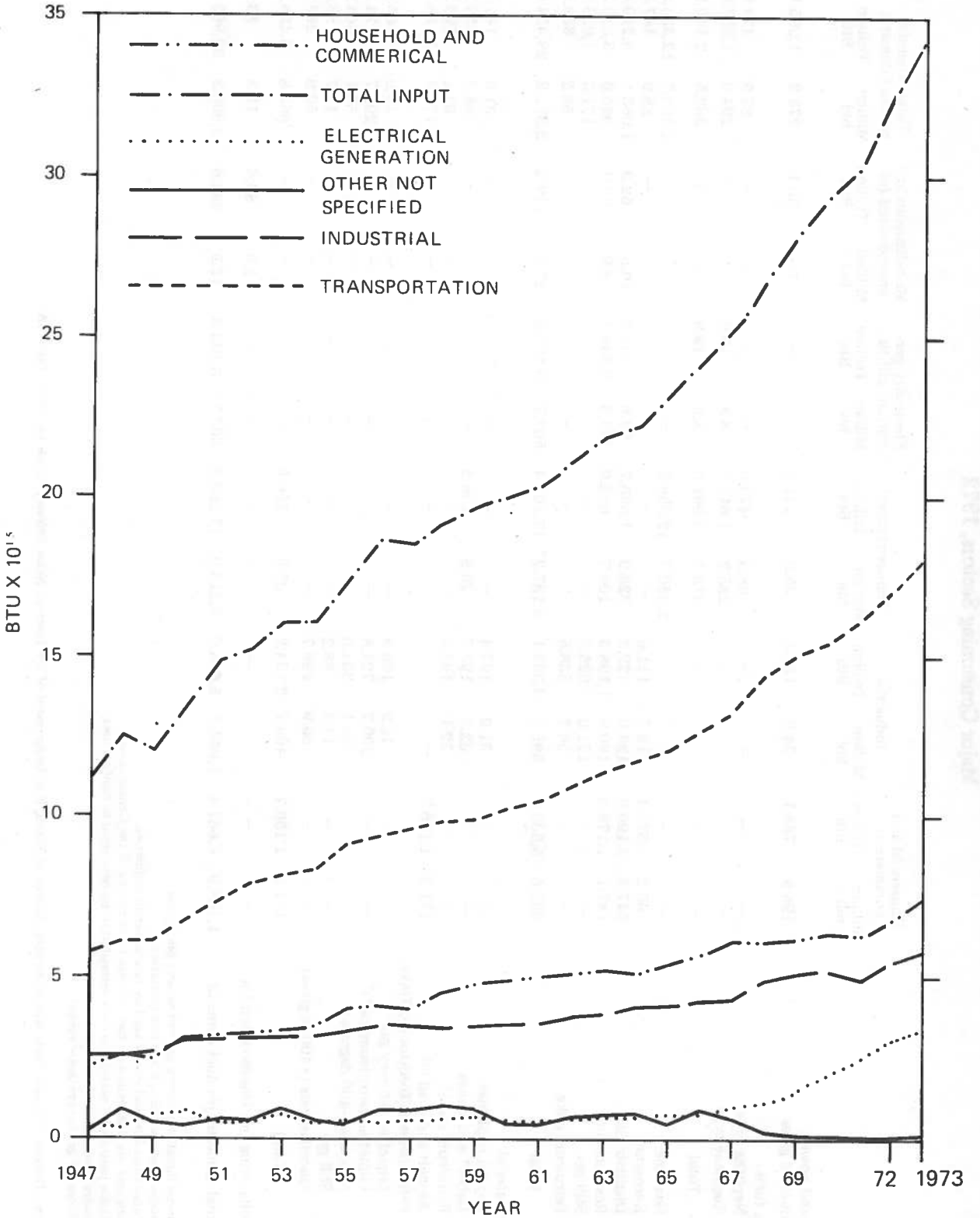


Figure 17. Petroleum Consumption by Sector 1947-1973

Table III-26. Petroleum Consumption, by Major Products[1] and by Major Consuming Sectors, 1972

	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	196.5	788.1	34.0	136.4	35.2	141.2	—	—	7.5	30.1	273.2	1,095.8
Jet fuels:												
Naphtha type	—	—	—	—	88.5	473.9	—	—	—	—	88.5	473.9
Kerosene type	—	—	—	—	285.2	1,617.1	8.8	49.9	—	—	294.0	1,667.0
Total	—	—	—	—	373.7	2,091.0	8.8	49.9	—	—	382.5	2,140.9
Gasoline	—	—	—	—	2,350.7	12,336.5	—	—	—	—	2,350.7	12,336.5
Kerosene	66.2	375.4	19.7	111.6	—	—	—	—	—	—	85.9	487.0
Distillate fuel	547.8	3,190.9	124.0	722.3	323.9	1,886.7	59.6	347.2	10.8	62.9	1,066.1	6,210.0
Residual fuel	187.1	1,176.3	190.6	1,198.3	103.7	652.0	435.3	2,736.7	8.9	56.0	925.6	5,819.3
Still gas	—	—	171.0	1,026.0	—	—	—	—	—	—	171.0	1,026.0
Petroleum coke	—	—	56.2	338.5	—	—	—	—	—	—	56.2	338.5
Total	997.6	5,530.7	595.5	3,533.1	3,187.2	17,107.4	503.7	3,133.8	27.2	149.0	5,311.2	29,454.0
Raw material:[3]												
Special naphthas	—	—	31.9	167.4	—	—	—	—	—	—	31.9	167.4
Lubes[4] and waxes	—	—	32.4	193.7	25.8	156.5	—	—	—	—	58.2	350.2
Petroleum coke[5]	—	—	32.1	193.4	—	—	—	—	—	—	32.1	193.4
Asphalt and road oil	171.3	1,136.7	—	—	—	—	—	—	—	—	171.3	1,136.7
Petrochemical feedstock offtake:												
Liquefied refinery gas[6]	—	—	45.9	165.8	—	—	—	—	—	—	45.9	165.8
Liquefied petroleum gas[6,7]	—	—	200.7	724.8	—	—	—	—	—	—	200.7	724.8
Naphtha (-400 degrees)	—	—	58.1	304.9	—	—	—	—	—	—	58.1	304.9
Still gas	—	—	14.7	88.2	—	—	—	—	—	—	14.7	88.2
Miscellaneous (+400 degrees)	—	—	50.9	296.7	—	—	—	—	—	—	50.9	296.7
Total	171.3	1,136.7	466.7	2,134.9	25.8	156.5	—	—	—	—	663.8	3,428.1
Miscellaneous and Unaccounted for	—	—	—	—	—	—	—	—	15.3	83.6	15.3	83.6
Total domestic product demand	1,168.9	6,667.4	1,062.2	5,668.0	3,213.0	17,263.9	503.7	3,133.8	42.5	232.6	5,990.3	32,965.7

[1] Includes liquefied refinery gas and natural gas liquids.
[2] Includes bunkers and military transportation.
[3] Includes some fuel and power used by raw materials industries.
[4] Lubricants are distributed on basis of data from Bureau of the Census survey.
[5] Includes portions of petroleum coke estimated to be consumed in nonfuel uses.
[6] Includes ethane.
[7] Includes LP gas for synthetic rubber.

Source: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, *News Release*, March 10, 1974, Table 6A.

Table III-27. Petroleum Consumption by Major Products[1] and by Major Consuming Sectors, 1973 (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	203.0	814.2	36.8	147.6	36.7	147.2	—	—	7.7	30.9	284.2	1,139.9
Jet fuels:												
Naphtha type	—	—	—	—	98.4	526.9	—	—	—	—	98.4	526.9
Kerosine type	—	—	—	—	273.5	1,550.7	9.5	53.9	—	—	283.0	1,604.6
Total	—	—	—	—	371.9	2,077.6	9.5	53.9	—	—	381.4	2,131.5
Gasoline	—	—	—	—	2,448.8	12,851.3	—	—	—	—	2,448.8	12,851.3
Kerosine	60.7	344.2	18.5	104.9	—	—	—	—	—	—	79.2	449.1
Distillate fuel	575.2	3,350.5	129.8	756.1	337.2	1,964.2	65.7	382.7	11.2	65.3	1,119.1	6,518.8
Residual fuel	204.7	1,286.9	208.8	1,312.7	113.5	713.6	476.9	2,998.3	9.7	61.0	1,013.6	6,372.5
Still gas	—	—	180.0	1,080.0	—	—	—	—	—	—	180.0	1,080.0
Petroleum coke	—	—	67.0	403.6	—	—	—	—	—	—	67.0	403.6
Total	1,043.6	5,795.8	640.9	3,804.9	3,308.1	17,753.9	552.1	3,434.9	28.6	157.2	5,573.3	30,946.7
Raw material:[3]												
Special naphthas	—	—	32.7	171.6	—	—	—	—	—	—	32.7	171.6
Lubes[4] and waxes	—	—	36.5	218.2	28.5	172.9	—	—	—	—	65.0	391.1
Petroleum coke[5]	—	—	30.2	181.9	—	—	—	—	—	—	30.2	181.9
Asphalt and road oil	185.0	1,227.7	—	—	—	—	—	—	—	—	185.0	1,227.7
Petrochemical feedstock offtake:												
Liquefied refinery gas[6]	—	—	48.0	173.4	—	—	—	—	—	—	48.0	173.4
Liquefied petroleum gas[6,7]	—	—	213.5	771.1	—	—	—	—	—	—	213.5	771.1
Naphtha (-400 degrees)	—	—	55.3	290.2	—	—	—	—	—	—	55.3	290.2
Still gas	—	—	12.7	76.2	—	—	—	—	—	—	12.7	76.2
Miscellaneous (+400 degrees)	—	—	61.0	355.3	—	—	—	—	—	—	61.0	355.3
Total	185.0	1,227.7	489.9	2,237.9	28.5	172.9	—	—	—	—	703.4	3,638.5
Miscellaneous and unaccounted for	—	—	—	—	—	—	—	—	18.8	103.6	18.8	103.6
Total domestic product demand	1,228.6	7,023.5	1,130.8	6,042.8	3,336.6	17,926.8	552.1	3,434.9	47.4	260.8	6,295.5	34,688.8

[1] Includes liquefied refinery gas and natural gas liquids.
[2] Includes bunkers and military transportation.
[3] Includes some fuel and power used by raw materials industries.
[4] Lubricants are distributed on basis of data from Bureau of the Census survey.
[5] Includes portions of petroleum coke estimated to be consumed in nonfuel uses.
[6] Includes ethane.
[7] Includes LP gas for synthetic rubber.

Source: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, *News Release*, March 10, 1974, Table 6B.

Table III-28. Energy Consumption: Transportation Sector 1947-1973

Year	Coal[1]		Petroleum[2]		Natural gas[3]		Total fossil fuels	Utility electricity purchased		Total energy input	
	Thousand short tons	Trillion Btu	Million barrels	Trillion Btu	Million cubic feet	Trillion Btu	Trillion Btu	Billion Kilowatt-hours	Trillion Btu	Trillion Btu	% of Total U.S. Energy Consumption
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[p]	175	5	3,336.6	17,927	790,000	814	18,746	5	18	18,764	24.8

[p]Preliminary.
[1]Includes anthracite, bituminous, and lignite coals.
[2]Includes bunkers and military transportation.
[3]Consumption of natural gas by pipelines

Source: U.S. Department of the Interior, *U.S. Energy to the Year 2000*, Dec., 1972 and *News Release*, March 10, 1974, Tables 2, 3, 4, 5, and equivalent tables in earlier editions.

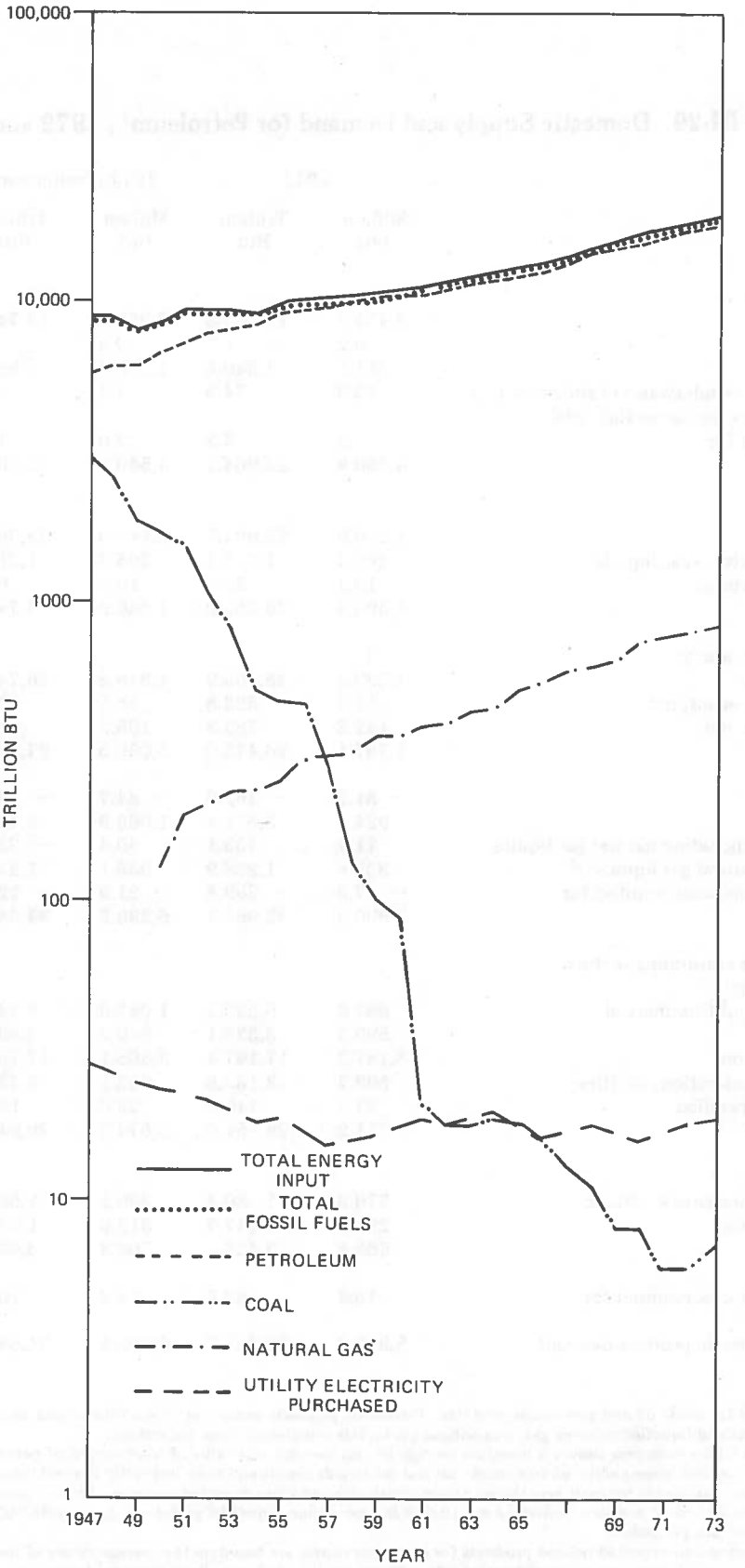


Figure 18. Energy Consumption: Transportation Sector

Table III-29. Domestic Supply and Demand for Petroleum[1], 1972 and 1973

	1972		1973 (Preliminary)		Percentage change from 1972
	Million bbl	Trillion Btu	Million bbl	Trillion Btu	
Supply, crude oil:[2]					
Production	3,455.4	19,343.6	3,355.7	18,749.1	— 2.9
Exports	— 0.2	— 1.1	— 0.5	— 2.8	
Imports	811.1	4,540.5	1,178.4	6,584.0	+45.3
Stock change: withdrawals (+) additions (—)	13.3	74.5	4.7	26.3	
Losses, transfers for use as fuel, and unaccounted for	1.3	7.2	2.0	11.2	
Total	4,280.9	23,964.7	4,540.3	25,367.8	+ 6.1
Refinery Input:					
Crude oil[2]	4,280.9	23,964.7	4,540.3	25,367.8	+ 6.1
Transfers in, natural gas liquids[3]	302.4	1,345.4	295.6	1,315.1	— 2.2
Other hydrocarbons	10.1	55.8	10.9	60.1	+ 7.9
Total	4,593.4	25,365.9	4,846.8	26,743.0	+ 5.5
Supply, refined products:					
Refinery output	4,593.4	25,365.9	4,846.8	26,743.0	+ 5.5
Unfinished oil reruns, net	51.5	323.8	48.5	304.9	— 5.8
Processing gain, net	142.2	785.3	165.2	911.5	
Total	4,787.1	26,475.0	5,060.5	27,959.4	+ 5.7
Exports[4]	— 81.2	— 462.9	— 84.7	— 482.9	+ 4.3
Imports[4]	924.2	5,571.4	1,065.9	6,425.6	+15.3
Stock change, including natural gas liquids	71.7	403.1	— 60.4	— 333.7	
Transfers in, natural gas liquids[3,5]	335.8	1,238.9	336.1	1,241.1	+ 0.1
Losses, gains, and unaccounted for	— 47.3	— 259.8	— 21.9	— 120.7	
Total	5,990.3	32,965.7	6,295.5	34,688.8	+ 5.1
Demand by major consuming sectors:					
Fuel and power:					
Household and Commercial	997.6	5,530.7	1,043.6	5,795.8	+ 4.6
Industrial	595.5	3,533.1	640.9	3,804.9	+ 7.6
Transportation[6]	3,187.2	17,107.4	3,308.1	17,753.9	+ 3.8
Electricity generation, utilities	503.7	3,133.8	552.1	3,434.9	+ 9.6
Other, not specified	27.2	149.0	28.6	157.2	+ 5.1
Total	5,311.2	29,454.0	5,573.3	30,946.7	+ 4.9
Raw Material:[7]					
Petrochemical feedstock offtake	370.3	1,580.4	390.5	1,666.2	+ 5.5
Other nonfuel use	293.5	1,847.7	312.9	1,972.3	+ 6.6
Total	663.8	3,428.1	703.4	3,638.5	+ 6.0
Miscellaneous and unaccounted for	15.3	83.6	18.8	103.6	
Total domestic product demand	5,990.3	32,965.7	6,295.5	34,688.8	+ 5.1

[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 natural 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: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, March 10, 1974, Table 5.

Table III-30. Domestic Supply and Demand for Natural Gas, 1972 and 1973

	1972		1973 (Preliminary)		
	Million cubic feet	Trillion Btu	Million cubic feet	Trillion Btu	Percentage change from 1972
Supply:					
Production[1]	22,531,698	24,878.3	22,900,000	25,217.7	+1.6
Exports	— 78,013	— 80.4	— 80,000	— 82.5	+2.5
Imports	1,019,496	1,051.1	1,030,000	1,061.9	+1.0
Stock change: Withdrawals (+) Additions (—)	— 135,734	— 139.9	— 80,000	— 82.5	
Transfers out, extraction loss[2]	— 907,993	—2.584.3	— 920,000	—2,566.2	+1.3
Losses, gains, and unaccounted for	—	—	—	—	
Total supply	22,429,454	23,124.8	22,850,000	23,558.4	+1.9
Demand by major consuming sectors:					
Fuel and Power:					
Household and Commercial	7,412,543	7,642.4	7,760,000	8,000.6	+4.7
Industrial[3]	9,618,143	9,916.3	9,800,000	10,103.8	+1.9
Transportation	766,156	789.9	790,000	814.5	+3.1
Electricity generation, utilities	3,978,673	4,102.0	3,800,000	3,917.8	—4.5
Total fuel and power	21,775,515	22,450.6	22,150,000	22,836.7	+1.7
Raw Material: Industrial[4]					
Carbon black	53,939	55.6	50,000	51.6	—7.3
Other chemicals[5]	600,000	618.6	650,000	670.1	+8.3
Total raw materials	653,939	674.2	700,000	721.7	+7.0
Total demand	22,429,454	23,124.8	22,850,000	23,558.4	+1.9

[1] Marketed production includes wet gas sold or consumed by producers, losses in transmission, producers' additions to storage, and increases 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 of natural 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 93,390 Btu per gallon. (Prior to 1967, ethane production was included with LPG in converting to Btu values.)

[3] Includes transmission losses of 328,002 million cubic feet in 1972 and 330,000 million cubic feet in 1973.

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

[5] Estimated from partial data.

Source: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, *News Release*, March 10, 1974, Table 4.

Table III-31. Domestic Supply and Demand for Coal 1972 and 1973

	1972		1973 (Preliminary)		
ANTHRACITE	Thousand short tons	Trillion Btu	Thousand short tons	Trillion Btu	Percentage change from 1972
Supply:					
Production[1]	7,106	180.5	6,500	165.1	− 8.5
Exports[2]	− 1,191	− 30.3	− 1,000	− 25.4	−16.0
Imports	—	—	—	—	—
Stock change: Withdrawals (+) Additions (−)	n/a	n/a	n/a	n/a	n/a
Losses, gains, and unaccounted for	—	—	—	—	—
Total supply	5,915	150.2	5,500	139.7	− 7.0
Demand by major consuming sectors:[3]					
Household and commercial[4]	2,960	75.2	2,950	74.9	− 0.3
Industrial[5]	1,371	34.8	1,150	29.2	−16.1
Electricity generation, utilities	1,584	40.2	1,400	35.6	−11.6
Total demand	5,915	150.2	5,500	139.7	− 7.0
BITUMINOUS COAL AND LIGNITE					
Supply:					
Production[1]	595,386	14,319.0	590,000	14,189.5	− 0.9
Exports	−55,960	−1,514.3	−52,000	−1,407.1	− 7.1
Imports	47	1.1	200	4.8	
Stock change: Withdrawals (+) Additions (−)	−24,100	− 579.6	23,000	541.7	
Losses, gains, and unaccounted for	4,403	118.5	2,150	50.7	
Total supply	519,776	12,344.7	563,350	13,379.6	+ 8.4
Demand by major consuming sectors:					
Fuel and power:					
Household and commercial[4]	11,748	312.2	11,000	294.6	− 6.4
Industrial[5]	154,613	4,108.5	160,425	4,298.0	+ 3.4
(Coal carbonized for coke)[6]	(87,272)	(2,319.1)	(93,200)	(2,496.8)	+ 6.8
Transportation[7]	163	4.3	175	4.7	+ 7.4
Electricity generation, utilities	348,612	7,796.4	387,000	8,655.0	+11.0
Total fuel and power	515,136	12,221.4	558,600	13,252.3	+ 8.4
Raw Material: Industrial[8]					
Crude light oil	1,071	28.5	1,130	30.3	+ 5.5
Crude coal tar	3,569	94.8	3,620	97.0	+ 1.4
Total raw material	4,640	123.3	4,750	127.3	+ 2.4
Total demand	519,776	12,344.7	563,850	13,379.6	+ 8.4

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 "retain 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.
[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 materials used for coal chemicals.

Source: Division of Fossil Fuels-Mineral Supply, Bureau of Mines, U.S. Department of the Interior, *News Release*, March 10, 1974, Table 3.

Table III-32. Fuel Consumption by Mode of Transport, 1962-1972

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Class I Railroads											
Locomotives											
Diesel Oil, gals X 10^6	3,456	3,537	3,624	3,736	3,920	3,883	3,917	3,919	3,804	3,819	3,999
Fuel Oil, gals X 10^6	101	90	85.	77	65	47	42	33	—	—	—
Electricity, KWH X 10^6	1,094	1,018	931	933	922	832	750	610	578	534	607
Coal, tons	8,256	7,332	6,831	3,695	3,235	2,310	1,669	1,137	1,238	1,191	1,400
Motor Cars											
Diesel Oil, gals X 10^6	7	7	7	6	6	6	5	5	8	4	3
Electricity, KWH X 10^6	592	591	583	576	576	580	567	538	763	756	715
Gasoline, gals	7,033	7,591	4,585	—	—	—	—	—	—	—	—
Air											
Certificated Carriers											
Aviation Gasoline, gals X 10^6	738	651	589	519	398	268	128	33	15	12	12
Jet Fuel, gals X 10^6	2,808	3,291	3,830	4,650	5,670	7,523	8,891	10,113	10,085	10,140	10,302
General Aviation											
Aviation Gasoline, gals X 10^6	241	250	262	292	375	396	495	522	551	508	584
Jet Fuel, gals X 10^6	20	32	41	81	106	138	n/a	168	208	226	245
Highway											
Gasoline, gals X 10^6											
Pass. Cars + Taxis	43,771*	45,246*	47,567*	50,206	53,220	55,007	58,413	62,325	65,649	69,213	73,121
Motorcycles	—	—	—	69	92	103	111	123	135	301	342
Diesel + Gasoline, gals X 10^6											
Commercial Buses	610	606	622	645	637	646	655	657	644	631	561
School Buses	227	232	242	249	259	264	277	290	300	316	320
Single-unit Trucks[1]	n/a	12,348	13,199	13,504	13,636	14,470	15,674	16,528	17,237	18,221	22,118
Combination Trucks	n/a	6,084	6,271	6,431	6,779	7,203	7,808	8,199	8,363	8,865	8,600
Water											
Vessels											
Residual Fuel Oil, gals X 10^6	3,545	3,213	3,487	3,093	3,093	3,389	3,678	3,506	3,774	3,307	3,273
Distillate Fuel Oil, gals X 10^6	665	636	672	652	699	734	766	793	819	880	1,013
Gasoline, gals X 10^6	n/a	n/a	n/a	n/a	485	501	533	569	598	645	687
Transit											
Electricity, KWH X 10^6											
Rapid Transit	2,115	2,125	2,171	2,185	2,075	2,194	2,250	2,291	2,261	2,262	2,149
Surface Rail	325	255	222	218	226	180	179	173	157	153	146
Trolley	346	262	204	181	166	157	157	154	143	141	133
Gallons of Motor Fuel, gals X 10^6											
Gasoline	108	103	96	92	76	58	46	40	37	29	26
Diesel Oil	229	235	242	248	256	270	274	274	271	257	247
Propane	36	36	33	33	34	33	32	32	31	27	24
Pipelines (Gas & Oil)											
Natural Gas, Cu. Ft. X 10^6	382,496	423,783	433,204	500,024	535,353	575,752	590,965	630,962	722,166	742,592	766,156

[1] Includes non-freight truck movements.

*Includes Motorcycles.

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

Table III-33. Highway Use of Motor Fuel[1], 1972

Item	Passenger vehicles					Cargo vehicles					
	Personal passenger vehicles				Buses						
	Passenger cars	Motor-cycles	All personal passenger vehicles	Commercial	School	All buses	All passenger vehicles	Single-unit trucks	Combi-nations	All trucks	All motor vehicles
Number of vehicles registered (thousands)	96,860	3,798	100,658	88.8	318.2	407.0	101,065	20,249	990	21,239	122,304
Average miles traveled per vehicle	10,184	4,500	9,969	30,968	7,414	12,553	9,980	10,525	47,084	12,229	10,370
Fuel consumed (million gallons)	73,121	342	73,463	561	320	881	74,344	22,118	8,600	30,718	105,062
Average fuel consumption per vehicle (gallons)	755	90	730	6,318	1,006	2,165	736	1,092	8,687	1,446	859
Average miles traveled per gallon of fuel consumed	13.49	50.00	13.67	4.39	7.37	5.80	13.57	9.63	5.42	8.46	12.07

[1] For the 50 States and District of Columbia.

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, 1972, Table VM-1.

Table III-34. Electrical Energy and Motor Fuel Consumed by the Transit Industry of the United States At Five Year Intervals 1940 — 1955 and Annually 1955 — 1973

Calendar Year	Kilowatt Hours Consumed (In Millions)				Gallons of Motor Fuel Used (In Thousands)		
	Rapid Transit	Surface Railway	Trolley Coach	Total	Gasoline	Diesel Oil	Propane
1940	1,977	4,050	307	6,334	*	*	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[p]	2,098	140	93	2,331	22,426	272,525	15,152

*Data not available

[p]Preliminary

[a]Propane included with gasoline

Source: American Transit Association, *Transit Fact Book*,'73-'74

Table III-35. Consumption of Jet Fuel by the Certificated Route Air Carriers, Scheduled plus Non-scheduled Service, 1960-1972 (000 gallons)

	Certificated route air carriers											International and territorial operations		
		Domestic operations												
			Passenger/cargo carriers											
				Domestic trunk										
	Total certificated route air carriers	Total domestic operations	Total	Total	Big Four	Other trunks	Local service	Other[2]	Intra-Alaska	Intra-Hawaii	All-cargo carriers	Total	Passenger/cargo carriers	All-cargo carriers
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

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

Source: CAB, *Handbook of Airline Statistics*, 1972, p 67, Advance Copy

Table III-36. Consumption of Aviation Gasoline by the Certificated Route Air Carriers, Scheduled Plus Non-scheduled Service, 1960-1973 (000 gallons)

	Certificated route air carriers													
			Domestic Operations									International and territorial operations		
			Passenger/cargo carriers											
				Domestic trunk										
	Total certificated route air carriers	Total domestic operations	Total	Total	Big Four	Other trunks	Local service	Other[2]	Intra-Alaska	Intra-Hawaii	All-cargo carriers	Total	Passenger/cargo carriers	All-cargo carriers
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	—

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

Source: CAB, *Handbook of Airline Statistics*, 1972, p 66, Advance Copy.

Table III-37. Consumption of Aviation Gasoline and Jet Fuel by the Certificated Carriers, Scheduled Plus Non-Scheduled Service, 1960-1972 (000 gallons)

	Certificated Route Air Carriers											International and Territorial Operations		
		Domestic Operations												
			Passenger/Cargo Carriers											
				Domestic Trunk										
Year	Total Certificated Route Air Carriers	Total Domestic Operations	Total	Total	Big Four	Other Trunks	Local Service	Other[1]	Intra-Alaska	Intra-Hawaii	All-Cargo Carriers	Total	Passenger/Cargo Carriers	All-Cargo Carriers
1960	2,519,757[4]	1,954,236[4]	1,910,482[4]	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[4]	2,312,794[4]	2,255,933[4]	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[4]	2,713,384[4]	2,630,320[4]	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[4]	2,957,177[4]	2,896,278[4]	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

Note: Individual figures may not add because of rounding.

[1] Includes Helicopter Carriers.

*Compiled on a 50-state basis.

Source: *C.A.B. Handbook of Airline Statistics*, 1972, P. 65, Advance Copy.

Table III-38. Consumption of Oil by the Certificated Carriers, Scheduled Plus Non-Scheduled Service, 1960-1972 (000 gallons)

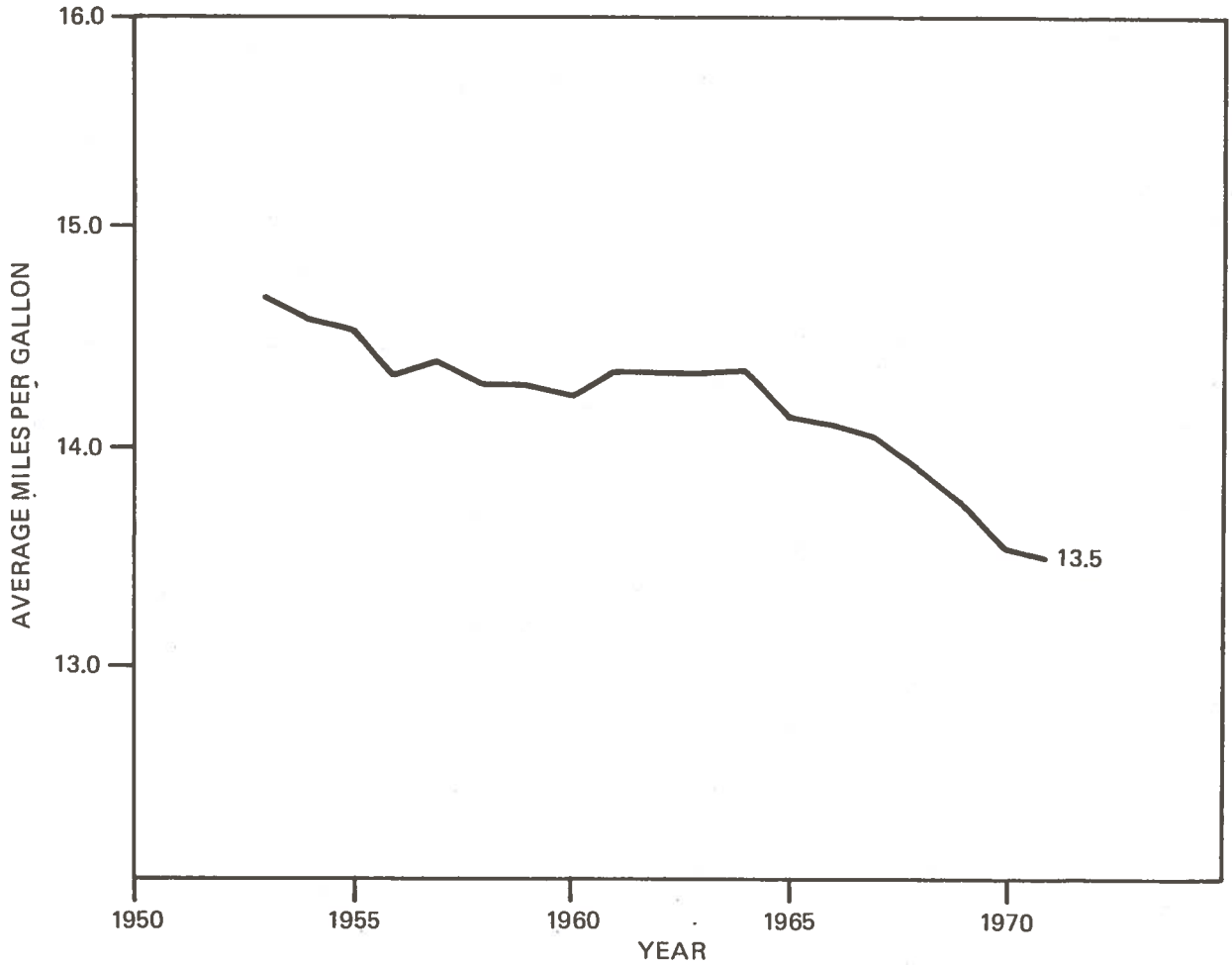
	Certificated Route Air Carriers													
		Domestic Operations												
			Passenger/Cargo Carriers									International and Territorial Operations		
				Domestic Trunk										
Year	Total Certificated Route Air Carriers	Total Domestic Operations	Total	Total	Big Four	Other Trunks	Local Service	Other[1]	Intra-Alaska	Intra-Hawaii	All-Cargo Carriers	Total	Passenger/ Cargo Carriers	All-Cargo Carriers
1960	16,287[4]	13,172[4]	12,688[4]	11,718	8,310	3,409	795	31	52	89	483	3,115	2,857	258
1961	12,558[4]	10,503[4]	9,946[4]	8,859	6,614	2,244	939	30	58	56	557	2,055	1,696	359
1962	10,820[4]	9,295[4]	8,654[4]	7,285	5,415	1,870	1,217	17	73	58	641	1,525	1,289	235
1963	9,786[4]	8,765[4]	8,383[4]	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

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

[1] Includes Helicopter carriers.

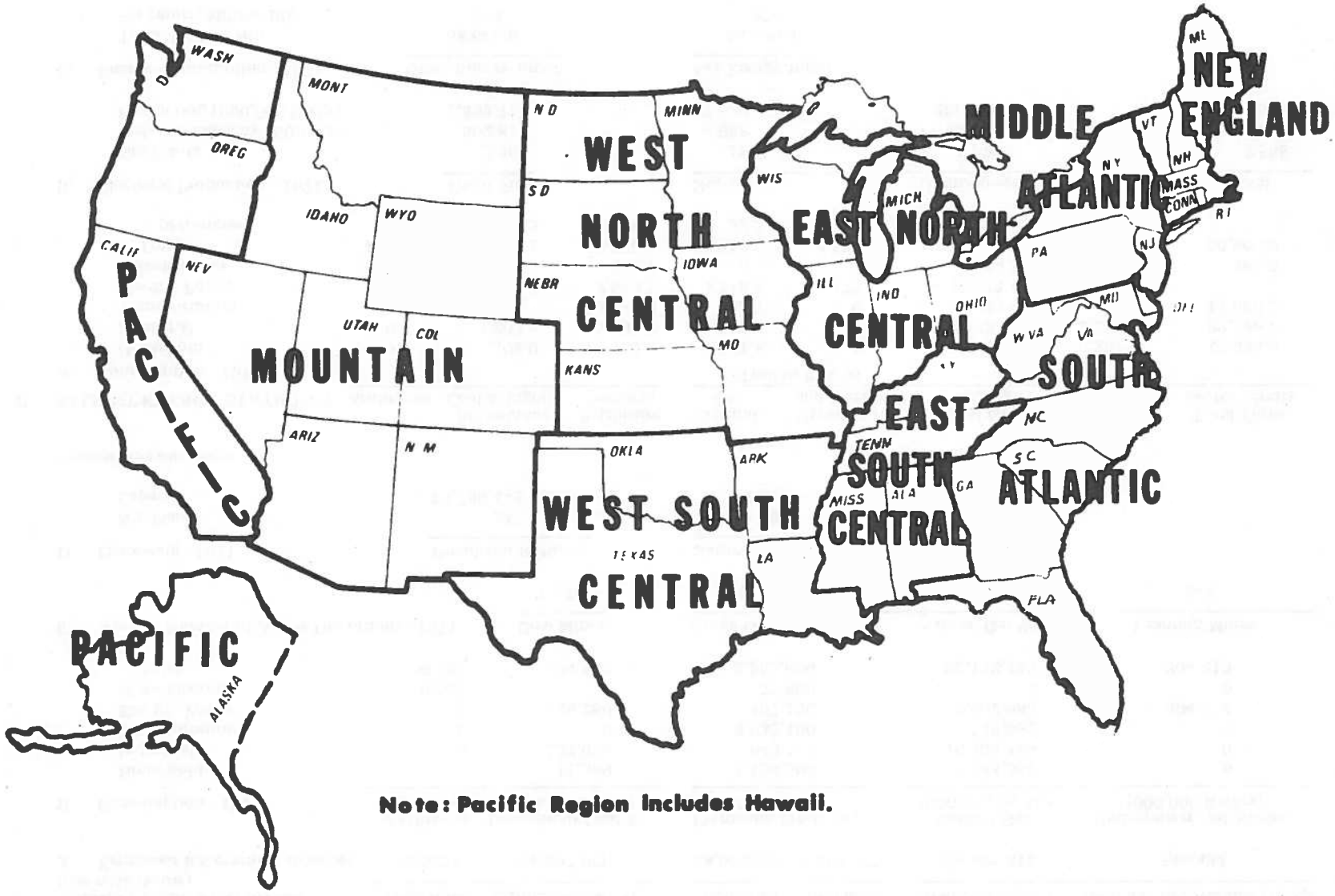
*Data compiled on 50 state basis.

Source: *C.A.B., Handbook of Airline Statistics*, 1972, P. 68, Advance Copy.



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

Figure 19. Average Fuel Efficiency of U.S. Passenger Car Fleet 1953-1970



Note: Pacific Region includes Hawaii.

Figure 20. Regional Divisions of the United States

Table III-39. National Fuel and Energy Statistics

POPULATION, 1971: 206,255,000

I. SALIENT FUEL STATISTICS (See note below)

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	8,035,300	578,397,000	38,062,957	7,304,227	278,805,618	546,424

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	11,359	1,126,500	7,144,389	0
Industrial	0	157,024	949,100	10,252,489	0
Transportation	0	0	3,032,100	742,592	0
Electric Power	0	326,280	407,100	3,992,983	304,219
Miscellaneous	6,523	0	37,800	0	0
Total	6,523	494,862[1]	5,552,600	22,132,453	304,219

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	5,576	515,890	119,251	247

D. Processing - 1971	Petroleum Refinery		Natural Gas Liquids	
No. Plants	247		805	
Capacity	13,709,442	bbls/day	75,134	000,000 cu. ft./day

[1] Includes 199 adjustment.

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	303.9	6,439.5	7,401.8	0	14,145.2	3,201.7	17,346.9
Industrial	0	4,203.3	5,094.4	10,534.6	0	19,832.3	2,288.0	22,120.3
Transportation	0	0	16,286.3	765.7	0	17,052.0	17.2	17,069.2
Electric Power	0	7,373.9	2,543.1	4,116.5	3,177.5	17,211.0	...	...
Miscellaneous	157.8	0	206.7	0	0	364.5	...	364.5
Total	157.8	11,881.1	30,570.0	22,818.6	3,177.5	68,605.0	5,506.9	56,900.9
percentages	0.2	17.3	44.6	33.3	4.6	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	2,363	19	1,176	3,558
Installed Capacity (000 Kw)	302,811	8,688	55,898	367,397
Production (000,000 Kwhr)	1,309,717	37,899	266,320	1,613,936

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	68,605.0	56,900.9
Per capita, Million Btu	333	276

Note: Includes the following undistributed: Crude oil: Reserves, 7,308,000 barrels. Natural gas liquids: Production, 26,433,000 barrels. Natural reserves, 444,686,000 cubic feet. Uranium (recoverable U_3O_8): Reserves, 18,454,000 pounds; production, 2,986,000 pounds.

Source: U.S. Department of the Interior, Bureau of Mines, *Energy Fact Sheet*

Table III-40. New England Fuel and Energy Statistics

POPULATION, 1971: 12,022,000

I. SALIENT FUEL STATISTICS

A. Estimated Recoverable Reserves

Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
0	0	0	0	0	0

B. Consumption - 1971

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	21	164,190	184,641	0
Industrial	0	240	32,279	57,282	0
Transportation	0	0	128,181	723	0
Electric Power	0	2,184	77,881	12,989	13,488
Miscellaneous	89	0	788	0	0
Total	89	2,445	403,319 ≈ 1.1 X 16^6 b/d.	255,635	13,488

C. Average Number of Active Operations - 1971

Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
0	0	0	0

D. Processing - 1971

	Petroleum Refinery	Natural Gas Liquids	
No. Plants	1	0	
Capacity	10,000 bbls/day	0	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971

	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	0.6	970.6	190.3	0	1,161.5	149.1	1,310.6
Industrial	0	6.4	198.4	59.2	0	264.0	72.6	336.6
Transportation	0	0	689.7	0.7	0	690.4	0.1	690.5
Electric Power	0	49.4	487.9	13.4	142.0	692.7	...	...
Miscellaneous	2.1	0	4.4	0	0	6.5	...	6.5
Total	2.1	56.4	2,351.0	263.6	142.0	2,815.1	221.8	2,344.2
percentages	0.1	2.0	83.5	9.4	5.0	100.0	...	...

B. Electrical Production - 1971

	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	137	3	140	280
Installed Capacity (000Kw)	10,898	1,447	1.230	13,575
Production (000,000 Kwhr)	50,449	9,202	4,286	63,937

C. Energy Consumption - 1971

	Gross Energy Input	Net Energy Input
Total, Trillion Btu	2,815.1	2,344.2
Per Capita, Million Btu	234	195

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-41. Middle Atlantic States Fuel and Energy Statistics

POPULATION, 1971: 37,570,000

I. SALIENT FUEL STATISTICS

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	7,751,000	41,308,000	56,824	817	1,535,023	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	696	309,652	1,081,296	0
Industrial	0	36,348	72,680	583,642	0
Transportation	0	0	403,285	32,187	0
Electric Power	0	40,508	145,581	148,306	36,427
Miscellaneous	5,527	0	2,216	0	0
Total	5,527	77,852	933,414	1,845,431	36,427

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	1,189	35,660	17,186	0

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	19	2	
Capacity	1,421,404 bbls/day	8	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	18.5	1,845.4	1,114.8	0	2,978.7	454.7	3,433.4
Industrial	0	973.0	434.3	601.8	0	2,009.1	314.7	2,323.8
Transportation	0	0	2,187.3	33.1	0	2,220.4	13.8	2,234.2
Electric Power	0	915.5	908.3	152.9	376.3	2,353.0	...	...
Miscellaneous	132.6	0	13.3	0	0	145.9	...	145.9
Total	132.6	1,907.0	5,388.6	1,902.6	376.3	9,707.1	783.2	8,137.3
percentages	1.4	19.6	55.5	19.6	3.9	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	214	7	131	352
Installed Capacity (000 Kw)	45,897	2,140	5,966	54,003
Production (000,000 Kwhr)	185,946	10,792	25,635	222,373

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	9,707.1	8,137.3
Per capita, Million Btu	258	217

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheets, 1971*

Table III-42. South Atlantic States Fuel and Energy Statistics

POPULATION, 1971: 31,243,000

I. SALIENT FUEL STATISTICS	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	85,000	49,987,000	255,853	93,528	2,442,859	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	1,367	143,686	527,202	0
Industrial	0	20,978	59,913	628,727	0
Transportation	0	0	433,294	39,691	0
Electric Power	0	68,009	103,246	337,727	18,606
Miscellaneous	162	0	6,535	0	0
Total	162	90,354	746,674	1,533,347	18,606

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	1,775	13,573	21,154	0

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	9	5	
Capacity	253,900 bbls/day	1,255	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
A. Consumption - 1971				(Trillion BTU's)				
Household	0	36.7	823.6	543.5	0	1,403.8	563.9	1,967.7
Industrial	0	561.6	336.8	648.2	0	1,546.6	317.6	1,864.2
Transportation	0	0	2,331.6	41.0	0	2,372.6	0.7	2,373.3
Electric Power	0	1,537.0	646.0	348.2	191.8	2,723.0	...	...
Miscellaneous	3.8	0	36.6	0	0	40.4	...	40.4
Total	3.8	2,135.3	4,174.6	1,580.9	191.8	8,086.4	882.2	6,245.6
percentages	insignificant	26.4	51.6	19.6	2.4	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	259	1	129	389
Installed Capacity (000 Kw)	53,613	739	5,505	59,857
Production (000,000 Kwhr)	246,621	2,414	16,192	265,227

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	8,086.4	6,245.6
Per capita, Million Btu	259	200

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-43. East North Central States Energy and Fuel Statistics

POPULATION, 1971: 40,721,000

I. SALIENT FUEL STATISTICS

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	0	126,254,000	427,527	13,553	2,670,485	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	5,926	207,426	2,174,330	0
Industrial	0	63,879	59,624	1,561,329	0
Transportation	0	0	501,438	69,318	0
Electric Power	0	118,164	24,141	277,116	12,296
Miscellaneous	346	0	3,097	0	0
Total	346	187,969	795,726	4,082,093	12,296

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	404	47,450	9,414	0

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	36	6	
Capacity	2,261,287 bbls/day	1,289	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	158.7	1,180.6	2,241.9	0	3,581.2	559.5	4,140.7
Industrial	0	1.709.0	338.1	1,609.6	0	3,657.6	495.5	4,153.1
Transportation	0	0	2,667.6	71.5	0	2,739.1	1.8	2,740.9
Electric Power	0	2,670.5	148.4	285.7	129.4	3,234.0	...	...
Miscellaneous	8.4	0	16.6	0	0	25.0	...	25.0
Total	8.4	4,539.1	4,351.3	4,208.7	129.4	13,236.9	1,056.8	11,059.7
percentages	insignificant	34.3	32.9	31.8	1.0	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	416	4	159	579
Installed Capacity (000 Kw)	63,681	2,483	840	67,004
Production (000,000 Kwhr)	290,458	8,230	4,066	302,754

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	13,236.9	11,059.7
Per Capita, Million Btu	325	272

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-44. West North Central States Fuel and Energy Statistics

POPULATION, 1971: 16,547,000

I. SALIENT FUEL STATISTICS

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	0	30,638,000	711,687	325,140	13,098,314	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	870	102,749	811,119	0
Industrial	0	5,018	20,816	657,865	0
Transportation	0	0	251,069	125,635	0
Electric Power	0	29,519	3,410	426,639	15,976
Miscellaneous	72	0	2,439	0	0
Total	72	35,407	380,483	2,021,258	15,976

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	42	45,354	8,645	0

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	18	34	
Capacity	703,773 bbls/day	5,569	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	23.3	541.0	836.2	0	1,400.5	232.0	1,632.5
Industrial	0	134.3	115.2	678.2	0	927.7	124.2	1,051.9
Transportation	0	0	1,337.8	129.5	0	1,467.3	0.1	1,467.4
Electric Power	0	667.1	20.7	439.9	163.7	1,291.4	...	...
Miscellaneous	1.8	0	12.6	0	0	14.4	...	14.4
Total	1.8	824.7	2,027.3	2,083.8	163.7	5,101.3	356.3	4,166.2
percentages	insignificant	16.2	39.7	40.9	3.2	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	677	1	65	743
Installed Capacity (000 Kw)	21,911	569	3,093	25,573
Production (000,000 Kwhr)	87,036	1,189	14,787	103,012

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	5,101.3	4,166.2
Per capita, Million Btu	308	252

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-45. East South Central States Fuel and Energy Statistics

POPULATION, 1971: 12,977,000

I. SALIENT FUEL STATISTICS	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	0	29,414,000	456,394	86,248	2,254,232	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	991	43,579	356,141	0
Industrial	0	15,191	22,251	535,204	0
Transportation	0	0	171,849	141,918	0
Electric Power	0	56,009	1,403	140,332	22,868
Miscellaneous	255	0	1,370	0	0
Total	255	72,191	240,452	1,173,595	22,868

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	2,046	19,022	7,833	0

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	14	13	
Capacity	587,693 bbls/day	1,182	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
A. Consumption - 1971				(Trillion BTU's)				
Household	0	26.5	228.3	367.2	0	622.0	236.0	858.0
Industrial	0	406.7	113.8	551.8	0	1,072.3	297.4	1,369.7
Transportation	0	0	915.4	146.3	0	1,061.7	0	1,061.7
Electric Power	0	1,265.8	8.6	144.6	234.4	1,653.4	...	...
Miscellaneous	6.1	0	7.7	0	0	13.8	...	13.8
Total	6.1	1,699.0	1,273.8	1,209.9	234.4	4,423.2	533.4	3,303.2
percentages	0.1	38.4	28.8	27.4	5.3	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	72	0	52	124
Installed Capacity (000 Kw)	28,279	0	5,217	33,496
Production (000,000 Kwhr)	128,244	0	22,868	151,112

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	4,423.2	3,303.2
Per Capita, Million Btu	341	255

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-46. West South Central States Fuel and Energy Statistics

POPULATION, 1971: 19,695,000

I. SALIENT FUEL STATISTICS	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	180,000	10,298,000[1]	19,944,785	5,916,469	198,240,895	29,128

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	4	67,819	638,717	0
Industrial	0	883	198,596	4,485,966	0
Transportation	0	0	333,506	212,804	0
Electric Power	0	0	4,416	1,856,391	4,064
Miscellaneous	37	0	2,241	0	0
Total	37	887	606,578	7,193,878	4,064

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	18[2]	281,092	41,622	([2])

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	75	606	
Capacity	5,718,993 bbls/day	58,165	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
A. Consumption - 1971				(Trillion BTU's)				
Household	0	0.1	348.2	694.6	0	1,042.9	354.8	1,397.7
Industrial	0	23.6	839.1	4,589.0	0	5,451.7	261.2	5,712.9
Transportation	0	0	1,772.8	219.5	0	1,992.3	0	1,992.3
Electric Power	0	0	27.7	1,913.8	41.7	1,983.2	...	...
Miscellaneous	2.2	0	12.0	0	0	14.2	...	14.2
Total	2.2	23.7	2,999.8	7,416.9	41.7	10,484.3	616.0	9,117.1
percentages	insignificant	0.2	28.6	70.8	0.4	100.0	...	...

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	290	0	42	332
Installed Capacity (000 Kw)	43,291	0	2,260	45,551
Production (000,000 Kwhr)	184,677	0	4,064	188,741

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	10,484.3	9,117.1
Per capita, Million Btu	532	463

[1] Louisiana not available.
[2] Texas withheld.

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-47. Mountain States Fuel and Energy Statistics

POPULATION, 1971: 8,548,000

I. SALIENT FUEL STATISTICS

	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	19,000	228,358,000	2,380,634	716,927	21,024,284	498,842

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	793	39,464	410,609	0
Industrial	0	4,088	18,135	510,309	0
Transportation	0	0	144,826	71,404	0
Electric Power	0	16,700	3,519	221,225	29,265
Miscellaneous	0	0	1,609	0	0
Total	0	21,581	207,553	1,213,547	29,265

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	94	32,958	12,395	246

D. Processing - 1971	Petroleum Refinery	Natural Gas Liquids	
No. Plants	32	84	
Capacity	517,072 bbls/day	5,667	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS

A. Consumption - 1971	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
				(Trillion BTU's)				
Household	0	21.2	219.9	423.2	0	664.3	151.6	815.9
Industrial	0	109.4	104.0	526.0	0	739.4	96.5	835.9
Transportation	0	0	778.6	73.9	0	852.5	.3	852.8
Electric Power	0	377.4	21.1	228.0	299.8	926.3	. . .	. . .
Miscellaneous	0	0	9.3	0	0	9.3	. . .	9.3
Total	0	508.0	1,132.9	1,251.1	299.8	3,191.8	248.4	2,513.9
percentages	0	15.9	35.5	39.2	9.4	100.0	. . .	. . .

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	163	0	173	336
Installed Capacity (000 Kw)	12,429	0	6,581	19,010
Production (000,000 Kwhr)	50,769	0	29,265	80,034

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	3,191 8	2,513.9
Per Capita, Million Btu	373	294

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

Table III-48. Pacific Coast Fuel and Energy Statistics

POPULATION, 1971: 26,932,000

I. SALIENT FUEL STATISTICS	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Crude Oil (000 bbls)	Natural Gas Liquids (000 bbls)	Natural Gas (000,000 cu. ft.)	Uranium (000 lbs. Recoverable U_3O_8)
A. Estimated Recoverable Reserves	300	62,140,000	13,821,945	151,545	37,094,840	0

B. Consumption - 1971	Anthracite (000 tons)	Bituminous Coal & Lignite (000 tons)	Petroleum Products (000 bbls)	Natural Gas (000,000 cu. ft.)	Hydropower and Nuclear (000,000 Kwhrs)
Household	0	108	63,533	960,264	0
Industrial	0	2,625	48,964	893,166	0
Transportation	0	0	431,967	48,842	0
Electric Power	0	1,344	43,551	572,258	151,229
Miscellaneous	35	0	2,229	0	0
Total	35	4,077	590,244	2,474,530	151,229

C. Average Number of Active Operations - 1971	Coal Mines	Crude Oil Wells	Natural Gas Wells	Uranium Mines
	8	40,781	1,002	1

D. Processing - 1971	Petroleum Refinery		Natural Gas Liquids	
No. Plants	43		55	
Capacity	2,235,320	bbls/day	1,999	000,000 cu. ft./day

II. SALIENT ENERGY STATISTICS	Anthracite	Bituminous Coal & Lignite	Petroleum Products	Natural Gas	Hydropower and Nuclear	Total Gross Inputs	Utility Electricity Distributed	Total Three Sector Inputs
A. Consumption - 1971				(Trillion BTU's)				
Household	0	2.9	370.8	990.1	0	1,363.8	500.1	1,863.9
Industrial	0	70.3	251.5	920.9	0	1,242.7	308.3	1,551.0
Transportation	0	0	2,352.2	50.2	0	2,402.4	0.4	2,402.8
Electric Power	0	30.4	273.4	590.0	1,552.3	2,446.1	. . .	. . .
Miscellaneous	0.8	0	11.4	0	0	12.2	. . .	12.2
Total	0.8	103.6	3,259.3	2,551.2	1,552.3	7,467.2	808.8	5,829.9
percentages	insignificant	1.4	43.6	34.2	20.8	100.0	. . .	. . .

B. Electrical Production - 1971	Fossil Fuel	Nuclear	Hydropower	Total
No. Plants	135	3	285	423
Installed Capacity (000 Kw)	22,812	1,310	25,206	49,328
Production (000,000 Kwhr)	85,517	6,072	145,157	236,746

C. Energy Consumption - 1971	Gross Energy Input	Net Energy Input
Total, Trillion Btu	7,467.2	5,829.9
Per Capita, Million Btu	277	216

Source: U.S. Department of the Interior, Bureau of Mines, Division of Fossil Fuels, *Energy Fact Sheet, 1971*

APPENDIX A

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

APPENDIX A

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 nonhydrocardons 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.

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 - 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 information on fluid contacts, the lowest known structural occurrence of nydrocarbons 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.

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 B

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

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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 C

Automobile Operating Costs - Bases for Estimates in Tables

APPENDIX C

1967 Automobile Operating Costs — Bases for Estimates in Table III-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 C

1972 — Automobile Operating Costs — Bases for Estimates in Tables III-2, III-3, and III-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).		

Source: Federal Highway Administration, *Cost of Operating an Automobile*, April 1972.

APPENDIX C

1974 Automobile Operating Costs — Bases for Estimates in Tables III-5, III-6, and III-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.

APPENDIX D

Some Facts About Prudhoe Bay and the Trans-Alaska Pipeline

Some Facts About Prudhoe Bay 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.

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