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Monthly Energy Review



**Office of Energy Information and Analysis,
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National Energy
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Feature articles appearing in previous issues:

Energy Consumption – March 1975

Nuclear Power – April 1975

The Price of Crude Oil – June 1975

U.S. Coal Resources and Reserves – July 1975

Propane, A National Energy Resource – September 1975

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

Curtailments of Natural Gas Service – January 1976

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

Trends in United States Petroleum Imports – September 1976

Crude Oil Entitlements Program – January 1977

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In April, for the second month in a row, domestic energy production exceeded the level for the same month in the previous year. Energy output totaled 4.96 quadrillion Btu (the equivalent of 28.5 million barrels per day of crude oil), up 0.4 percent from the April 1976 level. All of the increase was attributed to an 80-percent growth in nuclear electric power generation, which more than offset minor declines in crude oil, coal, and natural gas production. (Nuclear power provided a record 12.5 percent of the Nation's total electricity output in April.) Average domestic energy output for the January-April period, however, remained 1.8 percent below the output rate for the corresponding 1976 period because of reduced production rates in the first 2 months of the year.

April fossil fuel imports averaged 52 trillion Btu per day (or 8.9 million barrels per day of crude oil equivalent), the highest April level on record. Imports for the period January-April 1977 averaged 55 trillion Btu per day, up 32 percent from the import level for the same 4 months of 1976, and up 46 percent from the level for the corresponding period 2 years ago. Sixty-seven percent of the fossil fuels imported in the January-April 1977 period was crude oil, 27 percent was refined petroleum products, and 6 percent was natural gas. These ratios have changed significantly since 1974 when crude oil constituted 52 percent of the import total, refined products, 41 percent, and natural gas, 7 percent (see Figure 1). The origins of this trend stem from the implementation of the crude oil entitlements program in 1974. (The program was designed to assure refiners

equal access to competitively-priced crude oil under the two-tier crude oil pricing system. This was accomplished mainly by granting entitlement benefits to crude oil importers.*)

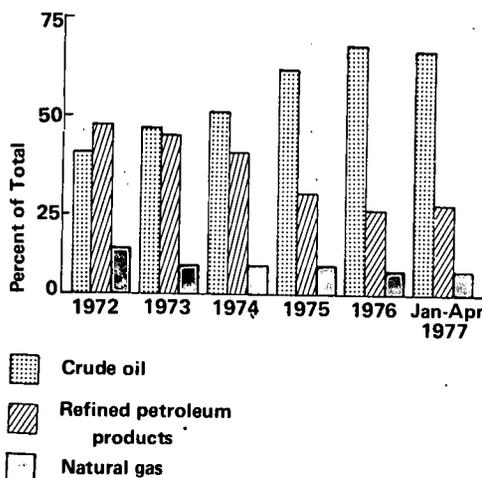
As a consequence of the heavy importing activity, stocks of crude oil and the major heating fuels were built-up substantially during April. Crude oil stocks surpassed the 300-million-barrel mark for the first time in history, and were 5.4 percent above the stock level a year earlier. Distillate fuel oil stocks, totaling 146 million barrels, were up 6.3 percent from levels a year ago. Residual fuel oil stocks, at 67 million barrels, were 1.0 percent higher. The natural gas storage situation continued to improve in April. An unusually large volume of storage injections (twice as high as in April 1976) brought the amount of working gas** in underground storage reservoirs to a level on a par with last April's.

Domestic energy consumption during the first quarter of 1977 averaged 227 trillion Btu per day (or 39 million barrels per day of crude oil equivalent), 5.1 percent greater than the average daily consumption level during the first quarter of 1976. Demand for refined petroleum products was 9.8 percent higher and coal consumption increased 8.5 percent. Constrained natural gas supplies led to a 1.8-percent decrease in consumption of that fuel.

Electricity generation by utilities, for the second successive month, was only 3.1 percent greater than for the same month in 1976, reflecting continued mild weather. (National heating degree-days were 23 percent below normal and 9 percent below the number for April 1976.) This increase is markedly lower than the 8.5-percent growth in average daily electricity production in the first 2 months of the year, and appears to signal a return to historical electricity growth rate patterns.

Retail gasoline prices in April posted their largest increases since July 1975 as prices

Figure 1. U.S. Fossil Fuel Imports



*For a more detailed analysis of the program, see "Crude Oil Entitlements Program," *Monthly Energy Review*, January 1977.

**Gas available for withdrawal.

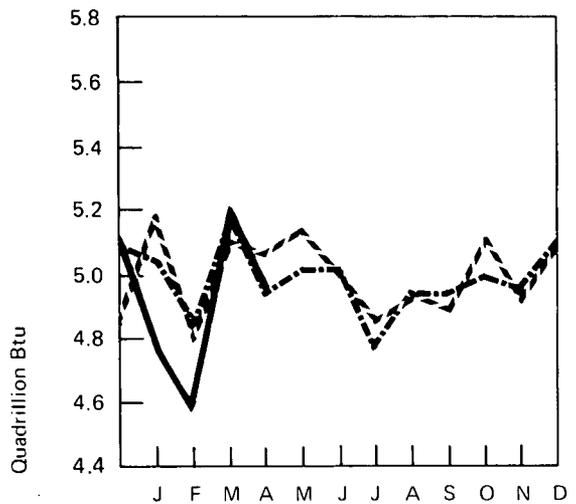
continued to spiral upward. The average selling price of regular gasoline at full service outlets rose 0.9 cent to 62.2 cents per gallon. The selling price at self service outlets jumped to 58.9 cents in April, a gain of 1.2 cents over the previous month's price.

The first purchase price of domestic crude oil averaged \$8.45 per barrel in March, a drop of 12 cents from the previous month's price. The decline reflects a 45-cent per barrel rollback in the upper tier ceiling price effective March 1, the second rollback of the year. (The upper tier ceiling price was rolled back 20 cents per barrel on January 1.) These rollbacks were implemented to bring the average domestic crude price into alignment with the price mandated by the Energy Policy and Conservation Act of 1975.

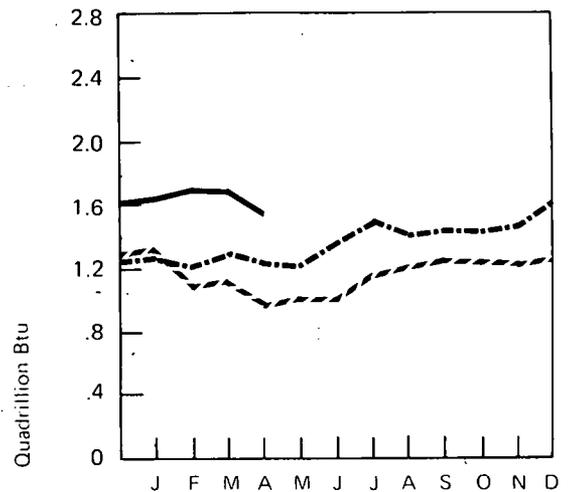
The total world crude oil production rate in March was 60.7 million barrels per day, about 1.4 million barrels above the February total. Average daily OPEC* production increased substantially in March (800,000 barrels per day) for the second month in a row following a slump in January caused by bad weather and the effects of crude oil stockpiling in advance of the two-tier price hike.

*Organization of Petroleum Exporting Countries.

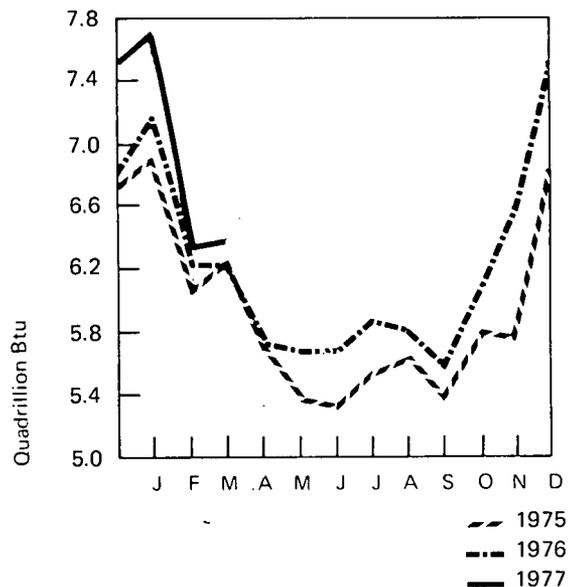
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy***
Quadrillion (10 ¹⁵) Btu				
1972	TOTAL	62.937	11.563	71.895
1973	TOTAL	62.373	14.519	74.551
1974	TOTAL	61.138	14.114	72.601
1975	January	5.199	1.334	6.927
	February	4.793	1.093	6.054
	March	5.118	1.128	6.267
	April	5.060	0.971	5.685
	May	5.148	1.030	5.368
	June	4.999	1.027	5.315
	July	4.849	1.164	5.550
	August	4.942	1.220	5.634
	September	4.896	1.272	5.388
	October	5.118	1.232	5.801
	November	4.918	1.210	5.747
	December	5.095	1.255	6.821
	TOTAL	60.134	13.935	70.557
1976	January	5.056	1.296	R7.167
	February	4.834	1.210	R6.239
	March	5.194	1.301	R6.246
	April	4.937	1.245	R5.723
	May	5.034	1.232	R5.651
	June	5.035	1.391	R5.688
	July	4.777	1.507	R5.879
	August	4.952	1.416	R5.815
	September	4.949	1.465	R5.597
	October	5.003	1.448	6.096
	November	4.948	1.498	R6.578
	December	5.112	1.610	R7.489
	TOTAL	59.830	16.619	R74.169
1977	January	4.762	1.651	R7.703
	February	R†4.568	R†1.713	R††6.342
	March	R†5.209	R†1.706	††6.392
	April	†4.956	†1.555	NA
	TOTAL	19.495 (4 months)	6.625 (4 months)	20.436 (3 months)

*See Explanatory Note 1.

**See Explanatory Note 2.

***See Explanatory Note 3.

†Preliminary data.

††Partially estimated.

R=Revised data.

NA=Not available.

Source: FEA.

Part 2 Crude Oil and Refined Petroleum Products

Crude Oil and Refined Petroleum Products

Total domestic demand for petroleum products in April averaged 17.6 million barrels per day, 5.4 percent above demand for the same month in 1976 and 3.4 percent above FEA's forecast. Demand was 14.3 percent below the winter peak of 20.5 million barrels per day which occurred in December.

Imports of crude oil and petroleum products were particularly high in April at 8.4 million barrels per day, an increase of 27.0 percent over last April's level. Production of domestic crude oil was 8.1 million barrels per day, 0.3 percent below April 1976 production.

Motor gasoline demand in April increased to 7.2 million barrels per day, 1.2 percent above demand a year ago and 3.1 percent above FEA's forecast. Gasoline stocks totaled 255.6 million barrels at the end of the month, 31.6 million barrels higher than April 1976 stocks. This level appears adequate for the approaching summer driving season.

Residual fuel oil demand in April was 2.9 million barrels per day, 19 percent above the FEA forecast for the month and 18 percent above last April's level. This high consumption reflects the strong growth in the economy and the substitution of oil for natural gas as boiler fuel. Demand for distillate fuel oil in April, at 3.0 million barrels per day, was 7.8 percent below the FEA forecast but 5.7 percent above demand in April 1976.

Crude Oil

		Crude Input to Refineries	Domestic Production*	Imports*	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	11,696	9,441	2,216	**246,395
1973	AVERAGE	12,431	9,208	3,244	**242,478
1974	AVERAGE	12,133	8,774	3,477	**265,020
1975	January	12,297	8,455	4,029	260,462
	February	12,135	8,591	3,828	276,755
	March	11,905	8,493	3,656	279,989
	April	11,803	8,457	3,378	281,908
	May	11,983	8,379	3,486	280,961
	June	12,417	8,421	3,905	276,132
	July	12,915	8,336	4,192	264,157
	August	13,046	8,249	4,581	256,616
	September	12,945	8,280	4,689	259,446
	October	12,365	8,324	4,389	269,584
	November	12,689	8,278	4,623	270,950
	December	12,779	8,254	4,476	271,354
	AVERAGE	12,442	8,375	4,105	
1976	January	12,560	8,211	4,595	289,296
	February	12,834	8,196	4,208	277,414
	March	12,877	8,175	4,738	283,112
	April	12,727	8,080	4,790	286,628
	May	12,920	8,168	4,669	283,982
	June	13,799	8,144	5,621	281,715
	July	13,901	8,104	5,792	282,599
	August	13,888	8,074	5,556	277,272
	September	13,716	8,185	5,875	284,357
	October	13,319	8,049	5,699	297,683
	November	14,101	8,043	5,946	298,836
	December	14,333	8,006	5,925	285,471
	AVERAGE	13,416	8,119	5,287	
1977	January	14,140	7,790	6,028	294,037
	February	R14,893	R7,920	R6,647	283,300
	March	R14,443	R7,763	R6,261	R291,466
	April	14,314	8,052	6,567	302,232
	AVERAGE (4 months)	14,437	7,879	6,367	

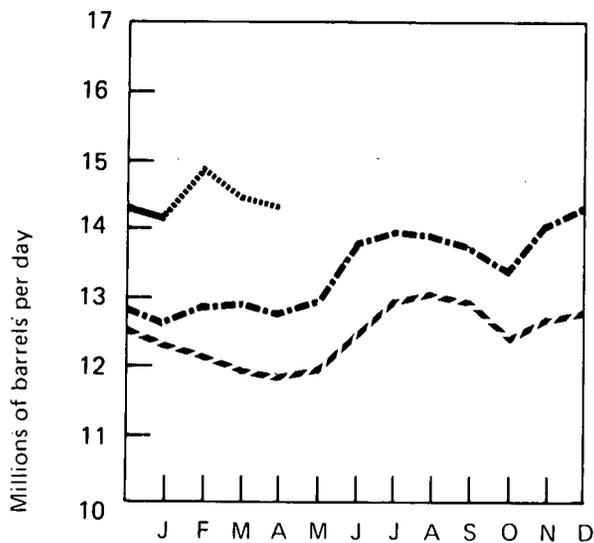
*See Definitions.

**Total as of December 31.

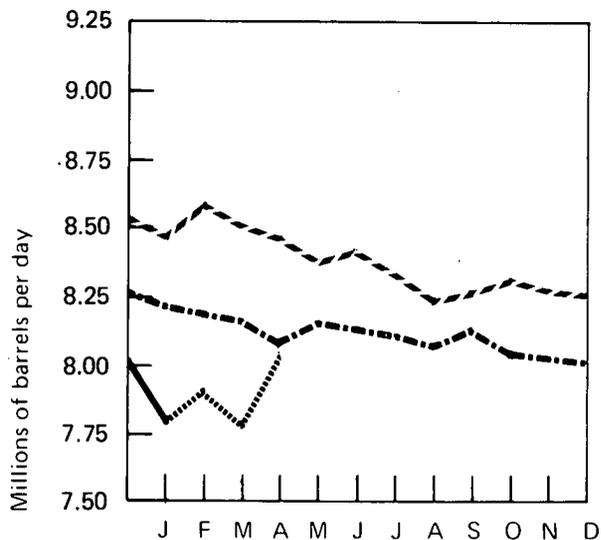
R=Revised data.

Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February and March 1977; April 1977 data are FEA estimates based on American Petroleum Institute data.

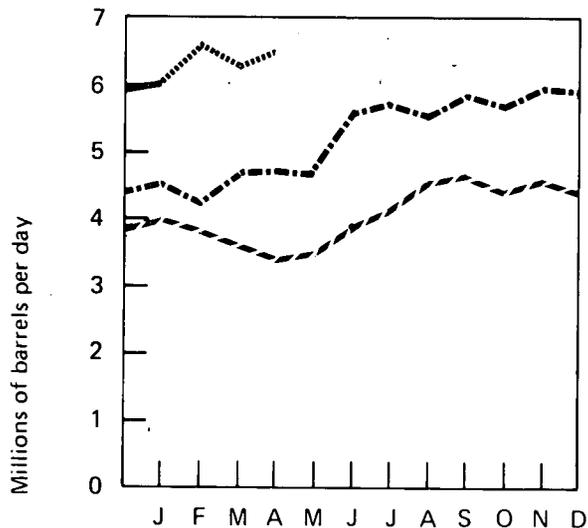
Crude Input to Refineries



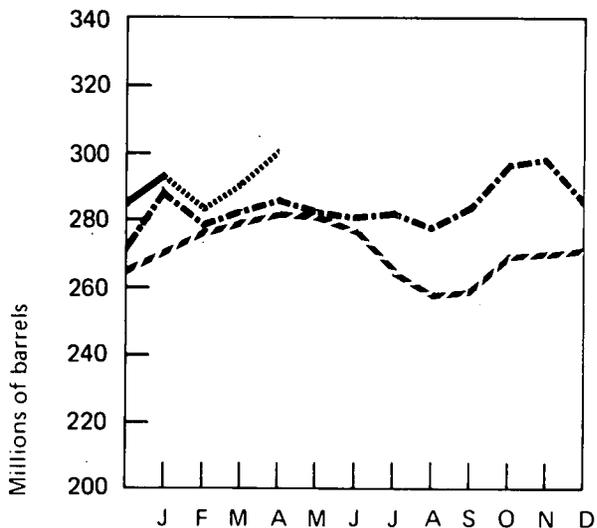
Domestic Production



Imports



Stocks



- - - 1975 BOM
 - · - 1976 BOM
 ——— 1977 BOM
 ····· 1977 FEA, API

Total Refined Petroleum Products

		Domestic Demand	Imports*
		Thousands of barrels per day	
1972	AVERAGE	16,367	2,525
1973	AVERAGE	17,308	3,012
1974	AVERAGE	16,653	2,635
1975	January	18,004	2,832
	February	17,084	2,348
	March	16,315	2,074
	April	16,048	1,662
	May	15,155	1,728
	June	15,610	1,502
	July	15,740	1,767
	August	15,806	1,717
	September	15,768	2,115
	October	16,377	1,940
	November	15,777	1,796
	December	18,185	1,949
	AVERAGE	16,322	1,951
1976	January	18,599	2,070
	February	17,429	2,423
	March	17,299	1,946
	April	16,672	1,806
	May	15,977	1,654
	June	16,836	1,858
	July	16,613	2,098
	August	16,642	1,826
	September	16,825	2,038
	October	17,052	1,808
	November	18,847	2,114
	December	20,506	2,468
	AVERAGE	17,443	2,007
1977	January	20,452	2,566
	February	R19,931	R3,230
	March	R18,217	R2,576
	April	17,566	1,808
	AVERAGE (4 months)	19,032	2,534

Total Petroleum Imports

(Crude Oil and Refined Products)

Thousands of barrels per day

4,741

6,256

6,112

6,861

6,176

5,730

5,040

5,214

5,407

5,959

6,298

6,804

6,329

6,419

6,425

6,056

6,665

6,631

6,684

6,596

6,323

7,479

7,890

7,382

7,913

7,507

8,060

8,393

7,294

8,594

R9,877

R8,837

8,375

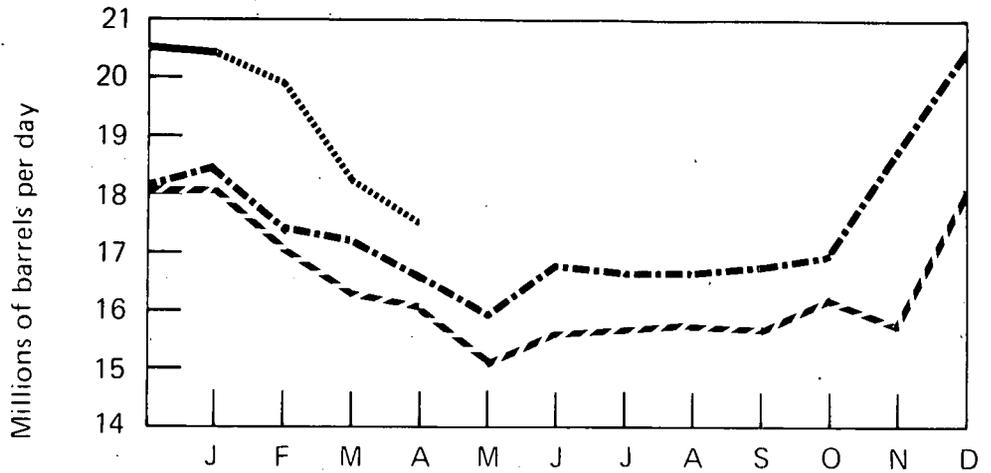
8,901

*See Definitions.

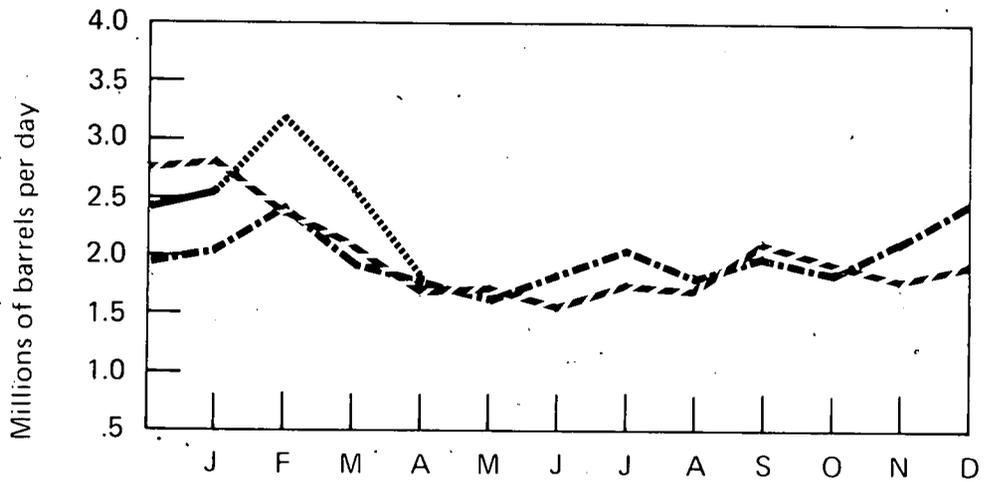
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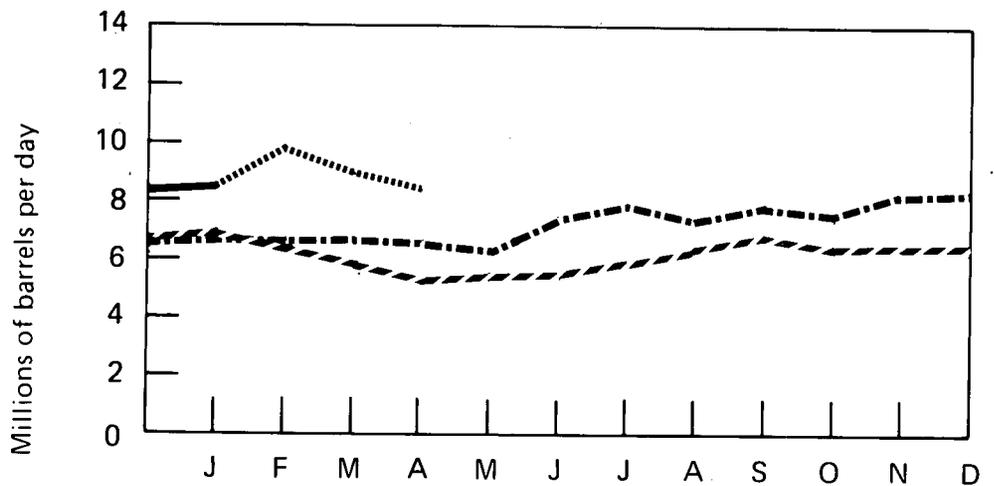
Total Refined Product Domestic Demand



Refined Product Imports



Total Petroleum Imports



- 1975 BOM
- .- 1976 BOM
- 1977 BOM
- 1977 FEA, API

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

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC**	Total OPEC	Arab Members of OPEC
Thousands of barrels per day											
1973											
Direct	134.2	212.7	222.7	164.3	458.9	487.3	70.6	1,124.7	106.5	2,981.9	914.4
Indirect	17.0	25.0	211.0	144.0	149.0	253.0	13.0	509.0	88.0	1,409.0	463.0
Total	151.2	237.7	433.7	308.3	607.9	740.3	83.6	1,633.7	194.5	4,390.9	1,377.4
1974											
Direct	190.2	300.1	468.8	4.4	697.6	460.6	70.5	979.3	88.3	3,259.8	748.5
Indirect	16.9	40.8	262.2	35.9	214.6	214.6	17.3	478.5	128.7	1,409.5	357.9
Total	207.1	340.9	731.0	40.3	912.2	675.2	87.8	1,457.8	217.0	4,669.3	1,106.4
1975											
Direct											
January	280.1	293.9	394.1	18.7	882.3	847.6	46.9	1,016.1	130.6	3,910.3	1,267.0
February	239.4	318.7	297.1	82.2	846.1	794.5	105.9	763.2	135.5	3,582.6	1,260.3
March	295.8	286.4	180.6	174.7	835.5	637.4	113.2	722.2	168.7	3,414.5	1,281.8
April	225.9	351.1	345.9	124.9	618.7	427.6	70.4	823.9	61.6	3,050.0	853.1
May	345.4	358.7	225.5	211.4	643.5	335.2	124.7	801.3	159.1	3,204.8	1,041.2
June	346.8	480.9	231.5	182.9	619.1	500.5	77.3	711.3	130.7	3,281.0	1,131.1
July	346.6	463.4	217.4	248.0	714.9	587.7	107.2	679.0	115.6	3,479.8	1,301.7
August	268.8	472.4	203.4	407.0	804.1	748.5	259.5	521.8	90.5	3,776.0	1,718.0
September	284.1	410.0	276.7	456.6	817.0	730.7	216.1	624.4	145.1	3,960.7	1,701.7
October	235.6	402.2	310.7	236.3	772.5	961.1	93.3	514.9	109.2	3,634.8	1,575.4
November	295.7	396.9	472.9	275.6	801.7	933.9	69.1	584.7	72.2	3,902.7	1,585.0
December	211.0	390.6	186.2	354.6	784.9	1,074.7	114.2	622.1	130.1	3,868.4	1,777.7
Total Direct	281.5	388.4	280.4	232.0	761.5	715.0	116.7	697.6	116.1	3,589.2	1,381.3
Indirect	6.7	49.3	244.4	97.3	76.3	176.6	37.5	332.5	143.2	1,163.8	408.8
Total	288.2	437.7	524.8	329.3	837.8	891.6	154.2	1,030.1	259.3	4,753.0	1,790.1
1976											
Direct											
January	345.5	478.0	387.5	451.3	781.7	1,111.9	118.8	533.7	86.3	4,294.7	2,045.7
February	357.4	465.3	241.2	328.4	830.9	1,080.9	118.5	838.6	102.8	4,364.0	1,925.3
March	347.2	552.0	292.5	372.2	896.8	1,145.0	159.4	468.1	111.8	4,345.0	2,058.5
April	446.5	467.6	323.3	356.2	997.0	1,027.5	195.5	496.8	81.6	4,392.0	2,036.2
May	410.6	485.5	183.7	362.0	855.1	1,141.5	214.5	487.7	135.9	4,276.5	2,138.8
June	501.2	603.6	323.2	487.8	1,127.6	1,205.0	290.1	668.0	70.5	5,277.0	2,486.5
July	451.0	581.0	374.3	487.1	1,136.7	1,327.7	305.2	808.0	208.8	5,679.8	2,711.4
August	510.0	554.5	294.2	463.5	1,029.4	1,317.6	228.1	704.0	133.6	5,234.9	2,597.4
September	435.3	570.2	274.6	491.0	1,173.0	1,288.1	335.1	932.4	198.7	5,698.4	2,748.2
October	357.2	487.4	284.2	456.2	1,097.5	1,366.2	304.4	772.8	232.7	5,358.5	2,578.8
November	502.0	647.1	316.8	533.9	1,173.8	1,316.1	341.1	810.8	170.7	5,812.3	2,768.4
December	379.9	556.4	289.5	637.2	1,193.6	1,404.0	448.0	868.4	194.8	5,971.8	2,956.6
Total Direct	428.3	537.4	298.5	453.3	1,025.2	1,229.8	255.2	699.2	134.0	5,060.9	2,421.0
Indirect	10.0	32.0	248.0	76.0	94.0	136.0	68.0	273.0	82.0	1,019.0	352.0
TOTAL	438.3	569.4	546.5	529.3	1,119.2	1,365.8	323.2	972.2	216.0	6,079.9	2,773.0
1977											
Direct											
January	493.0	571.6	316.4	543.8	1,278.2	1,346.1	297.4	785.6	344.4	5,976.5	2,932.1
Indirect	11.0	35.0	270.0	83.0	103.0	150.0	74.0	300.0	90.0	1,116.0	385.0
Total	504.0	606.6	586.4	626.8	1,381.2	1,496.1	371.4	1,085.6	434.4	7,092.5	3,317.1

*Indirect imports refer to U.S. imports of petroleum products, primarily from Caribbean and European areas, that have been refined from crude oil produced in other areas. U.S. imports of these products have been prorated to each OPEC country of origin based on the share of total crude oil supply in the Caribbean and European areas which was imported from each OPEC country. 1977 indirect import data are estimated.

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

Sources: Bureau of Mines and FEA.

U.S. Petroleum Imports from Non-OPEC Sources

	Bahamas	Canada	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Other	Total
	Thousands of barrels per day							
1973	170.8	1,312.9	573.6	99.3	250.6	329.2	537.8	3,274.2
1974	159.3	1,067.6	509.6	90.4	241.2	391.7	392.6	2,852.4
1975								
January	216.1	949.1	549.4	99.0	232.9	563.5	319.5	2,929.5
February	213.9	854.5	315.2	148.8	255.1	490.3	315.7	2,593.5
March	162.6	746.9	279.5	139.0	185.7	506.4	295.7	2,315.8
April	168.9	704.3	237.7	73.1	171.8	353.3	273.9	1,983.0
May	122.3	574.2	242.9	77.9	237.1	413.4	304.2	1,971.7
June	130.0	872.7	261.6	75.1	204.5	352.6	229.6	2,126.1
July	178.3	889.1	368.3	104.9	281.1	320.8	358.7	2,501.2
August	135.8	887.9	333.1	72.9	289.4	399.1	364.9	2,483.1
September	143.6	918.0	428.6	66.9	283.2	389.7	614.3	2,844.3
October	135.8	946.3	357.8	105.8	222.2	336.3	557.6	2,661.8
November	88.8	893.1	280.0	60.6	265.5	353.0	518.8	2,459.8
December	119.5	907.3	238.0	50.9	262.5	405.9	375.0	2,359.1
Total	152.0	845.2	323.6	89.7	240.9	406.5	377.5	2,435.4
1976								
January	134.1	681.7	291.7	71.0	343.2	468.4	380.2	2,370.3
February	127.6	644.9	262.4	122.2	326.3	462.3	321.7	2,267.4
March	90.4	590.2	328.7	114.0	315.6	424.5	475.5	2,338.9
April	131.9	578.4	274.9	68.5	291.9	341.2	516.5	2,203.3
May	95.2	614.9	214.1	70.6	257.5	388.5	405.7	2,046.5
June	104.2	653.3	190.4	54.3	319.3	427.5	453.0	2,202.0
July	112.8	581.7	259.1	77.9	279.2	386.5	513.4	2,210.6
August	98.5	580.9	268.7	81.5	163.6	437.2	516.6	2,147.0
September	143.1	564.8	273.3	104.1	182.6	408.5	537.9	2,214.3
October	78.3	562.0	239.0	92.2	215.2	460.5	502.0	2,149.2
November	140.4	561.8	267.6	104.1	254.3	454.4	465.3	2,247.9
December	141.5	578.3	400.3	98.5	324.2	408.4	470.5	2,421.3
Total	116.5	599.3	274.6	88.1	272.6	422.3	460.6	2,234.0
1977								
January	166.9	614.2	288.3	82.5	303.4	424.4	563.6	2,443.3

Source: Bureau of Mines.

Motor Gasoline

		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	6,376	6,281	68	**212,770
1973	AVERAGE	6,674	6,527	134	**209,395
1974	AVERAGE	6,537	6,358	204	**218,346
1975	January	6,206	6,509	262	***242,285
	February	6,096	6,276	171	251,915
	March	6,326	6,070	150	248,685
	April	6,718	6,046	133	232,556
	May	6,871	6,126	142	213,947
	June	7,076	6,669	177	207,114
	July	7,041	7,003	209	212,454
	August	7,008	6,872	232	215,480
	September	6,729	6,823	269	226,447
	October	6,778	6,410	207	221,493
	November	6,390	6,602	139	232,091
	December	6,808	6,786	119	234,925
	AVERAGE	6,675	6,518	184	
1976	January	6,398	6,483	92	240,464
	February	6,263	6,472	84	248,854
	March	6,890	6,455	123	239,049
	April	7,159	6,562	99	223,965
	May	6,853	6,774	112	225,037
	June	7,482	7,303	188	225,365
	July	7,315	7,174	190	226,922
	August	7,168	7,149	141	230,578
	September	7,079	6,878	171	229,751
	October	6,929	6,678	138	226,300
	November	7,038	6,938	146	227,742
	December	7,138	7,176	84	231,387
	AVERAGE	6,978	6,837	131	
1977	January	6,466	6,934	222	252,608
	February	R6,823	R6,875	R169	R255,991
	March	R7,094	R6,920	R246	R262,536
	April	7,242	6,983	146	255,577
	AVERAGE (4 months)	6,905	6,929	197	

*See Definitions.

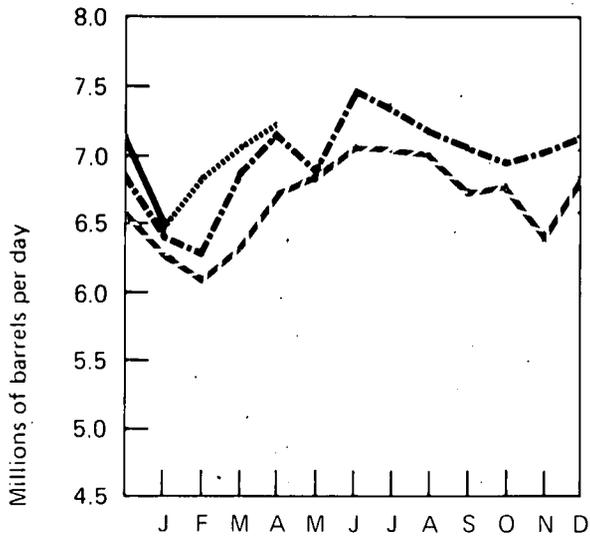
**Total as of December 31.

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

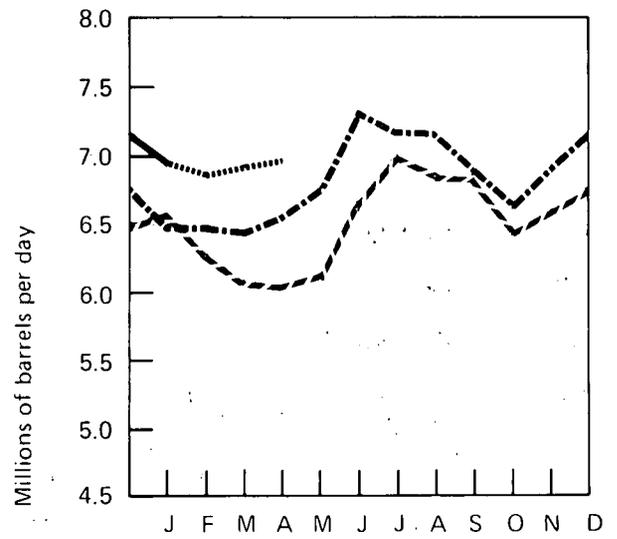
R=Revised data.

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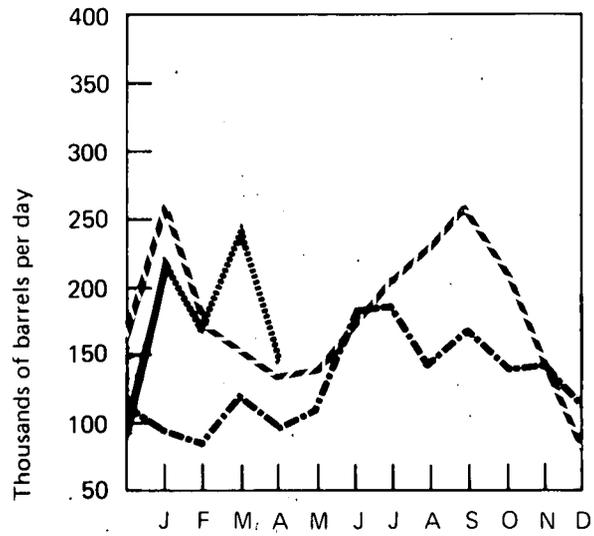
Domestic Demand



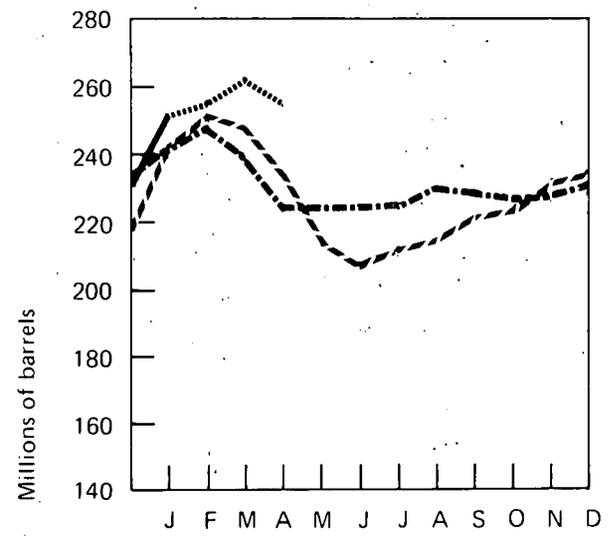
Production



Imports



Stocks



- 1975 BOM
- .- 1976 BOM
- 1977 BOM
- 1977 FEA, API

Jet Fuel

		Domestic Demand	Production	Imports	Stocks
Thousands of barrels per day					
					Thousands of barrels
1972	AVERAGE	1,045	847	194	*25,493
1973	AVERAGE	1,059	859	212	*28,544
1974	AVERAGE	993	836	163	*29,435
1975	January	1,041	831	229	**30,321
	February	1,075	835	200	29,133
	March	982	896	130	30,456
	April	1,006	864	137	30,263
	May	977	861	133	30,719
	June	989	839	106	29,337
	July	954	883	88	29,798
	August	1,046	958	132	31,103
	September	1,040	907	140	31,291
	October	997	864	106	30,410
	November	999	864	89	28,977
	December	911	849	109	30,380
		AVERAGE	1,001	871	133
1976	January	948	889	69	30,618
	February	965	918	71	31,180
	March	965	927	86	32,619
	April	1,010	927	108	33,332
	May	960	899	106	34,664
	June	972	879	68	33,879
	July	1,099	933	130	32,732
	August	965	942	38	33,121
	September	1,048	990	63	33,204
	October	911	890	50	34,032
	November	978	920	56	33,859
	December	1,027	900	72	32,085
		AVERAGE	987	918	76
1977	January	1,051	917	74	30,170
	February	R1,026	974	R71	30,449
	March	R1,046	R954	R103	R30,733
	April	1,029	994	63	32,774
		AVERAGE (4 months)	1,038	959	78

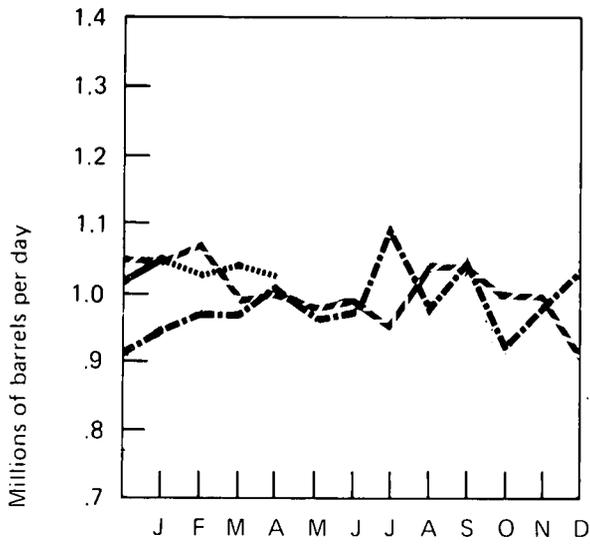
*Total as of December 31.

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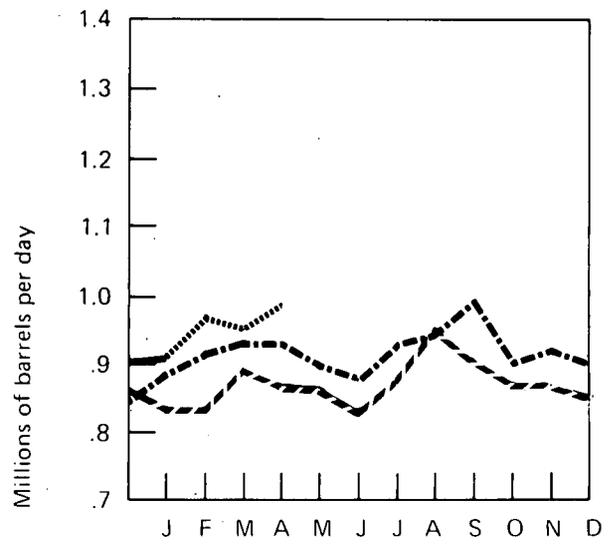
R=Revised data.

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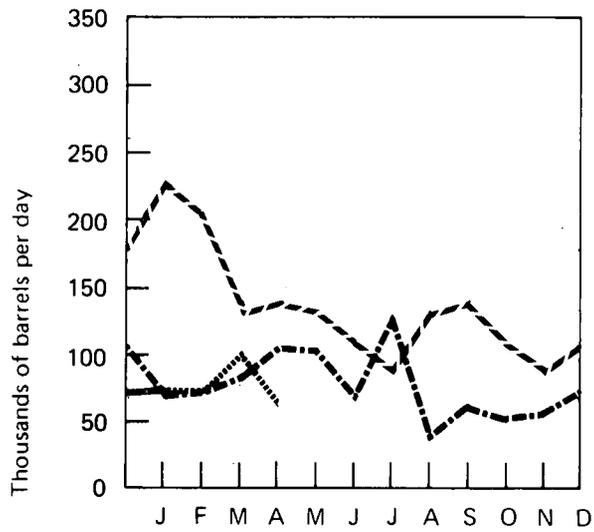
Domestic Demand



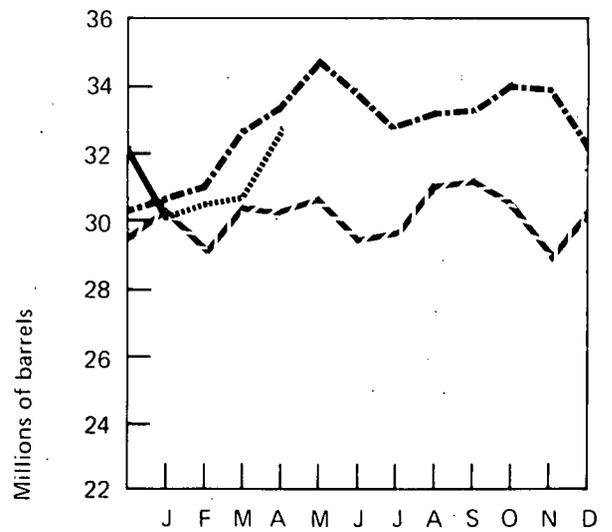
Production



Imports



Stocks



- 1975 BOM
- - - 1976 BOM
- 1977 BOM
- 1977 FEA, API

Distillate Fuel Oil

		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	2,913	2,630	182	**154,284
1973	AVERAGE	3,092	2,820	392	**196,421
1974	AVERAGE	2,948	2,668	289	**200,029
1975	January	3,963	2,852	334	*** 199,715
	February	3,803	2,679	302	176,696
	March	3,292	2,532	255	161,111
	April	3,094	2,487	110	146,214
	May	2,382	2,431	136	152,027
	June	2,267	2,574	69	163,306
	July	2,109	2,590	104	181,472
	August	2,173	2,592	92	197,323
	September	2,163	2,812	130	220,732
	October	2,677	2,745	104	226,113
	November	2,544	2,767	96	235,749
	December	3,792	2,783	138	208,787
	AVERAGE	2,851	2,653	155	
1976	January	4,298	2,734	164	165,428
	February	3,687	2,961	207	150,439
	March	3,336	2,793	151	138,306
	April	2,788	2,655	96	137,249
	May	2,519	2,738	97	147,057
	June	2,436	2,885	151	165,064
	July	2,255	2,959	126	190,861
	August	2,237	2,982	131	217,930
	September	2,618	2,947	147	232,230
	October	3,029	2,995	141	235,599
	November	3,714	3,181	135	223,648
	December	4,650	3,255	179	185,948
	AVERAGE	3,130	2,924	144	
1977	January	5,076	3,375	315	142,989
	February	R4,659	R3,716	R648	R133,504
	March	R3,446	R3,212	R513	R142,111
	April	2,947	3,016	134	145,910
	AVERAGE (4 months)	4,025	3,323	399	

*See Definitions.

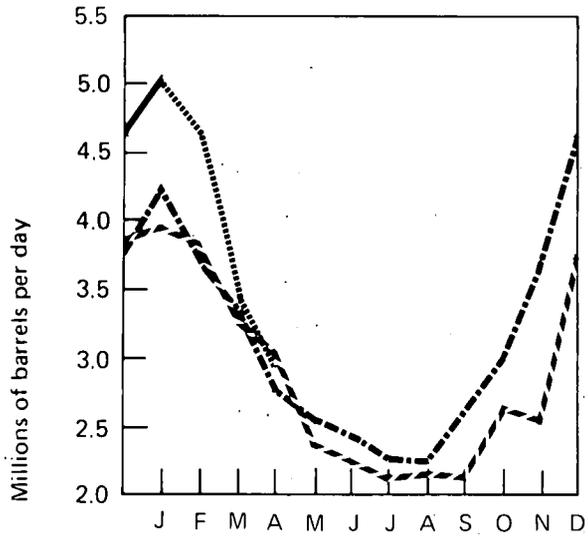
**Total as of December 31.

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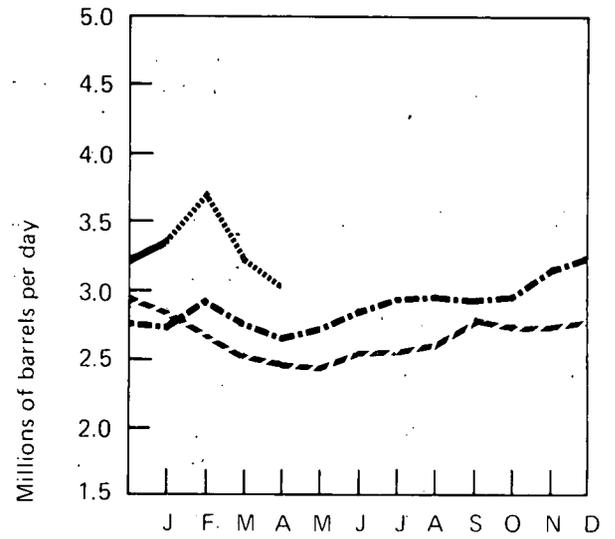
R=Revised data.

Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February and March 1977; April 1977 data are FEA estimates based on American Petroleum Institute data.

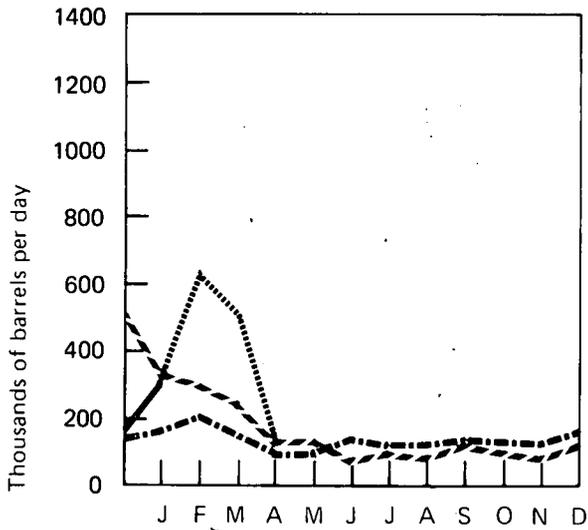
Domestic Demand



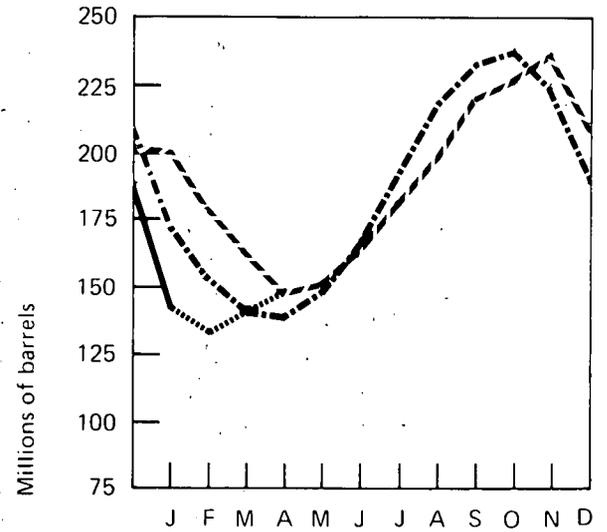
Production



Imports



Stocks



--- 1975 BOM
-.- 1976 BOM
— 1977 BOM
..... 1977 FEA, API

Residual Fuel Oil

		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	2,529	799	1,742	*55,216
1973	AVERAGE	2,822	971	1,853	*53,480
1974	AVERAGE	2,639	1,070	1,587	*59,694
1975	January	3,253	1,415	1,657	** 69,233
	February	2,849	1,354	1,402	66,495
	March	2,669	1,299	1,293	64,148
	April	2,232	1,245	1,054	66,340
	May	2,087	1,151	1,160	73,498
	June	2,177	1,152	902	69,660
	July	2,220	1,155	1,125	71,526
	August	2,157	1,146	1,021	71,857
	September	2,328	1,183	1,311	76,938
	October	2,268	1,165	1,251	81,858
	November	2,405	1,214	1,225	83,131
	December	2,912	1,354	1,283	74,126
	AVERAGE	2,462	1,235	1,223	
1976	January	3,069	1,415	1,406	66,592
	February	3,007	1,394	1,703	68,859
	March	2,779	1,311	1,342	65,132
	April	2,496	1,283	1,258	66,458
	May	2,439	1,257	1,134	65,147
	June	2,520	1,241	1,240	64,272
	July	2,555	1,266	1,462	69,812
	August	2,678	1,321	1,307	68,490
	September	2,517	1,330	1,442	76,436
	October	2,511	1,351	1,234	79,117
	November	3,253	1,581	1,474	73,284
	December	3,608	1,772	1,791	72,344
	AVERAGE	2,786	1,377	1,402	
1977	January	3,676	1,889	1,531	64,749
	February	R3,675	1,945	R1,966	R71,314
	March	R3,104	R1,720	R1,383	R71,224
	April	2,946	1,670	1,199	67,144
	AVERAGE (4 months)	3,346	1,804	1,511	

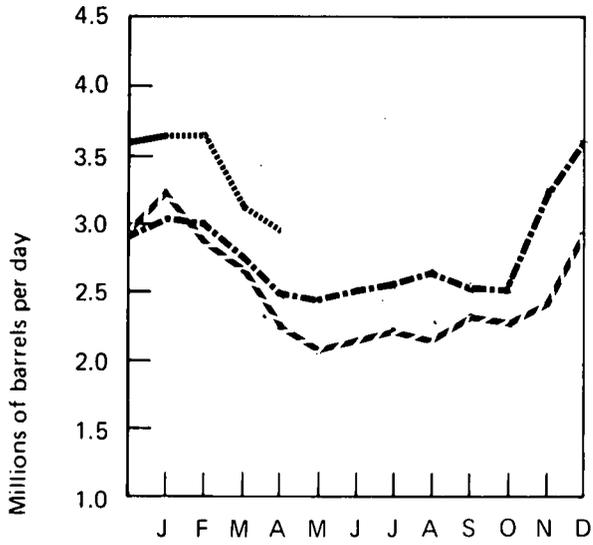
*Total as of December 31.

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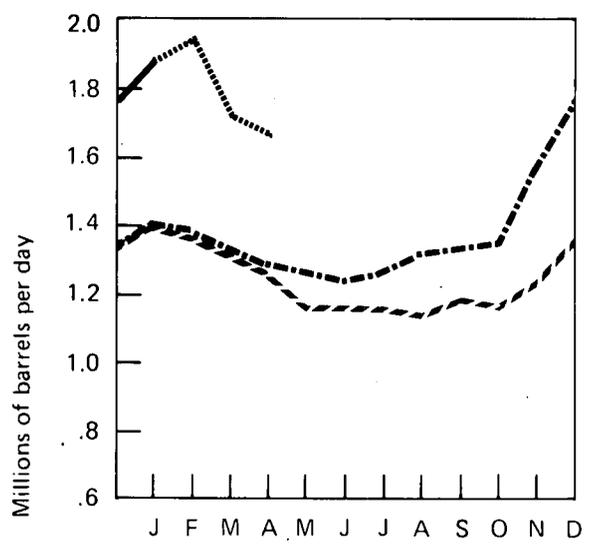
R=Revised data.

Sources: Bureau of Mines through January 1977; Federal Energy Administration (FEA) for February and March 1977; April 1977 data are FEA estimates based on American Petroleum Institute data.

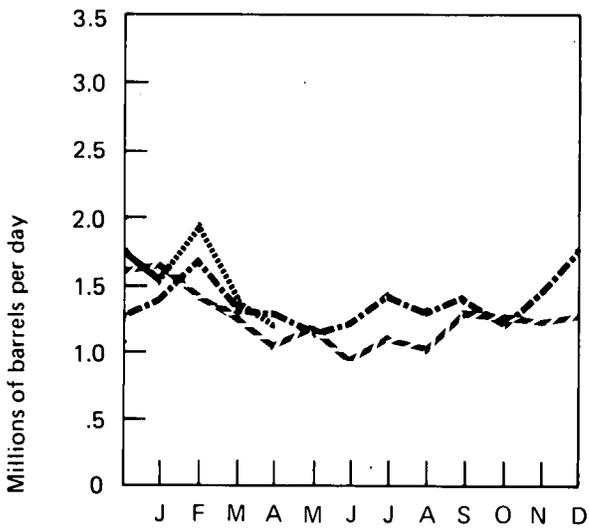
Domestic Demand



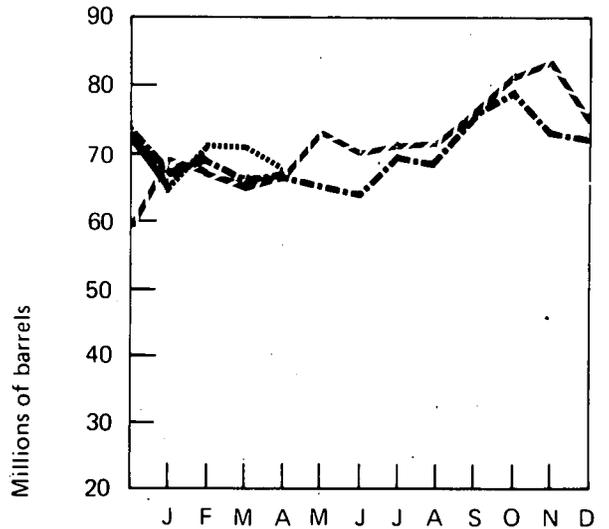
Production



Imports



Stocks



--- 1975 BOM
-.- 1976 BOM
— 1977 BOM
..... 1977 FEA, API

Natural Gas Liquids

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

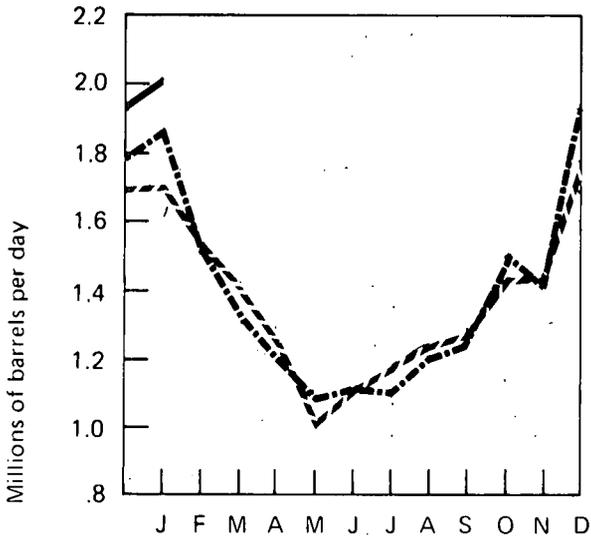
*See Explanatory Note 4.

**Total as of December 31.

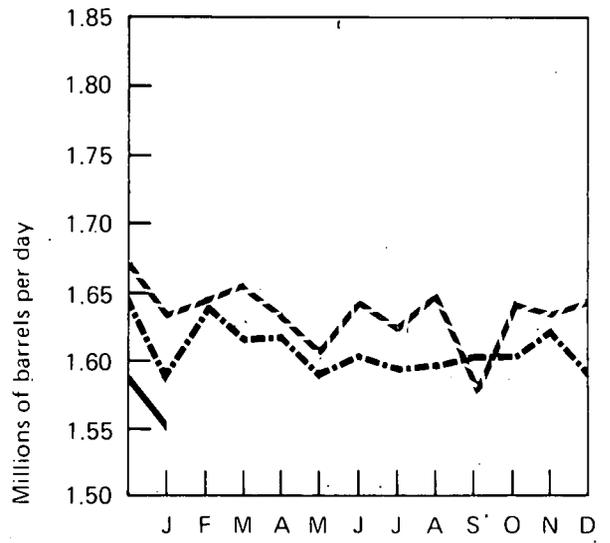
Note: The stocks series has been revised to include stocks of liquefied refinery gas (LRG).

Source: Bureau of Mines.

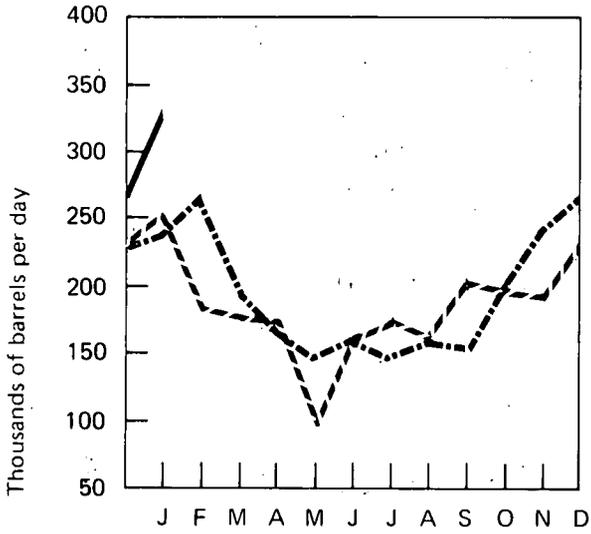
Domestic Demand



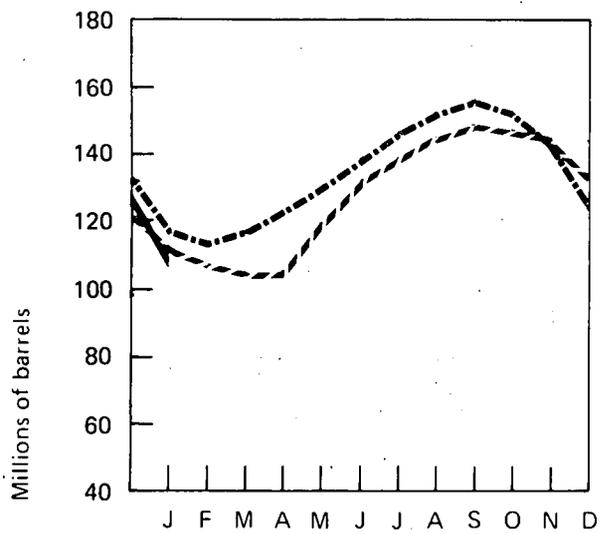
Production at Processing Plants



Imports



Stocks



- - - 1975
 - · - 1976
 - - - 1977

U.S. Petroleum Supply and Demand

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

	Actual†	1977 Forecast††			Year	
		1st Qtr.	2nd. Qtr.	3rd Qtr.		4th Qtr.
		Thousands of barrels per day				
Supply						
Crude oil and lease condensate production	7,821	8,047	8,347	9,002	8,308	
Natural gas plant liquids production	1,564	1,541	1,524	1,541	1,542	
Other hydrocarbon supply	39	36	36	36	37	
Crude oil imports	6,301	6,280	6,307	5,507	6,097	
Refined products imports*	2,776	1,194	1,244	2,102	1,826	
Total new supply	18,501	17,098	17,458	18,188	17,810	
Processing gain	528	516	527	522	523	
Stock change—all oils	-212	+565	+524	-395	+121	
Total net supply	19,241	17,049	17,461	19,105	18,212	
Unaccounted for crude oil**	+486	0	0	0	+119	
Demand						
Crude oil and refined products exports	192	206	198	195	198	
Crude oil losses	15	13	13	13	13	
Domestic demand for refined products***	19,520	16,830	17,250	18,897	18,120	
Total demand	19,727	17,049	17,461	19,105	18,331	

*Includes plant condensate and unfinished oils.

**Balancing item resulting from statistical inconsistencies.

***Includes international bunkers.

†Partially estimated.

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

†††Calculated using actual 1st Quarter data and FEA forecast for remainder of year.

Sources: 1976—Bureau of Mines; 1st Quarter 1977—BOM and FEA; 2nd, 3rd, and 4th Quarters 1977—FEA forecast.

Natural Gas

Net injections of natural gas into underground storage reservoirs in April totaled 211 billion cubic feet, almost twice the net volume injected in April 1976. As a result, the working gas level at the end of the month was within 0.1 percent of the working gas in storage at the end of last April.

Marketed production of natural gas in April and in the first 4 months of 1977 was estimated to be very close to production during the same periods in 1976.

Imports of natural gas in April were estimated to be at the same level as in April 1976. However, as a consequence of heavy importing activity at the beginning of the year, imports for the first 4 months of 1977 were an estimated 8.7 percent higher than for the same 4 months of 1976.

Domestic consumption of natural gas in April was estimated to be 2.5 percent below consumption in April 1976, and for the first 4 months of 1977, was estimated to be 2.8 percent below the level for the same period in 1976.

Natural Gas

		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
Billion cubic feet					
1972	TOTAL	22,102	22,532	12,429	1,019
1973	TOTAL	22,049	22,648	12,067	1,033
1974	TOTAL	21,223	21,601	11,462	959
1975	January	2,248	1,778	950	81
	February	1,939	1,640	867	75
	March	1,903	1,740	948	83
	April	1,575	1,677	906	82
	May	1,331	1,689	898	80
	June	1,257	1,634	859	76
	July	1,313	1,677	873	80
	August	1,369	1,677	882	75
	September	1,370	1,603	836	74
	October	1,544	1,646	877	80
	November	1,640	1,618	853	81
	December	2,049	1,730	903	86
	TOTAL	19,538	20,109	10,652	953
1976	January	R2,282	1,745	894	83
	February	R1,927	1,641	850	79
	March	R1,711	1,709	894	85
	April	R1,497	1,633	849	85
	May	R1,427	1,668	860	83
	June	R1,328	1,637	815	77
	July	R1,365	1,671	822	74
	August	R1,304	1,631	810	76
	September	R1,293	1,562	793	74
	October	1,611	1,632	840	85
	November	R1,864	1,629	841	81
	December	R2,225	1,745	872	84
	TOTAL	R19,836	19,903	10,140	966
1977	January	R2,397	1,742	NA	***88
	February	R1,710	R**1,663	NA	***89
	March	R1,640	R***1,700	NA	***99
	April	1,460	***1,630	NA	***85
	TOTAL (4 months)	7,207	6,735	NA	361

*See Explanatory Note 6.

**Preliminary data.

***Projected data.

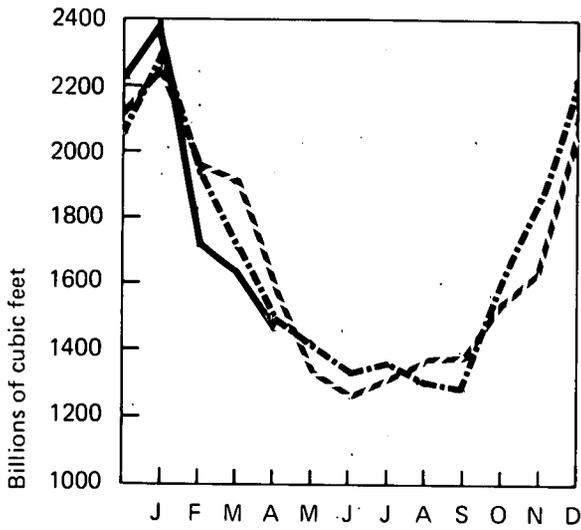
R=Revised data.

NA=Not available.

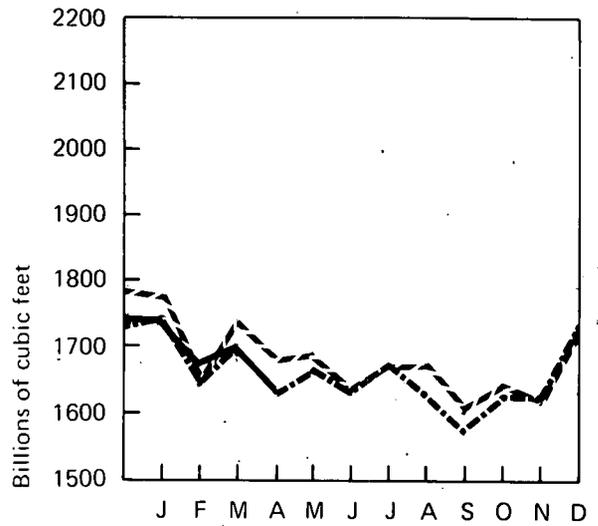
Note: All monthly Domestic Consumption data are estimated.

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

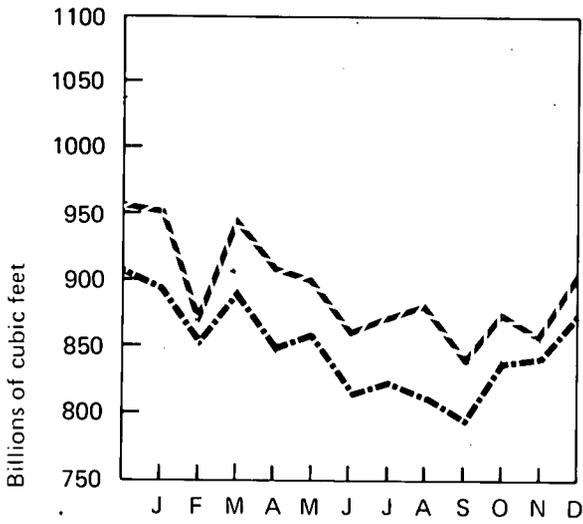
Domestic Consumption



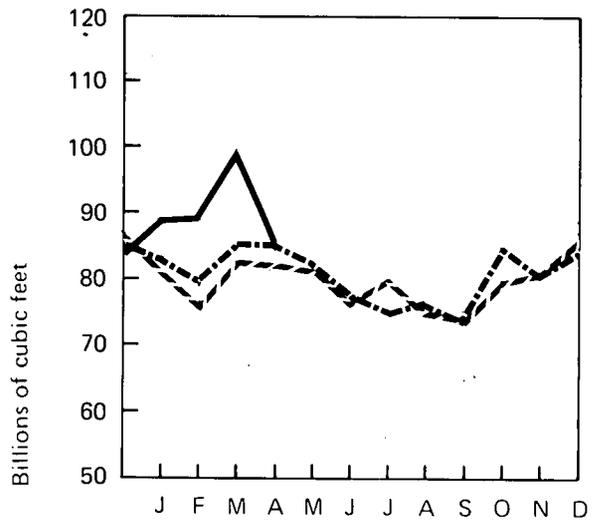
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



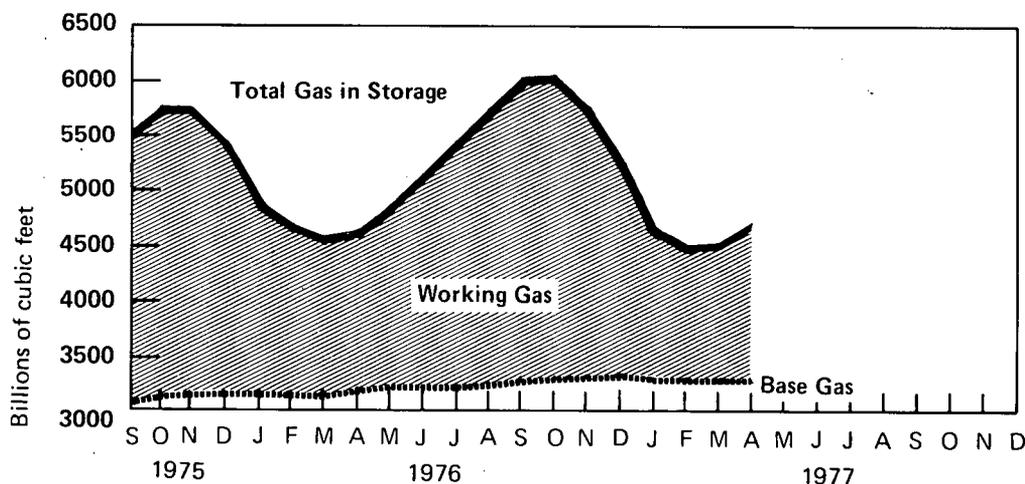
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Natural Gas (Continued)

Natural Gas in Underground Storage*

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections
Billion cubic feet							
1974	October**	5,445	3,042	2,403	***	***	***
1975	September	5,558	3,084	2,474	225	31	193
	October	5,770	3,128	2,642	248	94	154
	November	5,760	3,172	2,588	99	150	-51
	December	5,423	3,173	2,250	35	375	-340
1976	January	4,868	3,194	1,674	22	574	-552
	February	4,660	3,197	1,463	67	275	-208
	March	4,543	3,195	1,348	81	199	-118
	April	4,650	3,208	1,443	176	70	106
	May	4,878	3,214	1,664	262	34	228
	June	5,163	3,220	1,943	312	27	285
	July	5,476	3,244	2,232	311	11	300
	August	5,759	3,272	2,487	295	13	282
	September	6,021	3,317	2,704	267	21	246
	October	6,030	3,327	2,703	132	123	9
	November	5,779	3,330	2,449	41	298	-257
	December	5,284	3,334	1,950	23	518	-495
1977	January	4,621	3,317	1,304	17	681	-664
	February	4,490	3,307	1,183	104	234	-130
	March	4,544	3,310	1,234	190	137	53
	April	4,755	3,311	1,444	256	45	211

Gas in Storage



*See Explanatory Note 7.

**Data reported as of November 1, 1974.

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

Sources: Federal Energy Administration and Federal Power Commission.

Coal

Production of bituminous coal and lignite dropped to 57.2 million tons in April 1977, after achieving a record monthly level for the 1970's in March of 65.0 million tons. This 9.2-percent decrease in average daily production is the result of flooding in Appalachia and the United Mine Workers' 8-hour holiday on April 1, 1977.

Total domestic consumption of bituminous coal and lignite for January 1977 was 57.1 million tons, up 7.8 percent from the amount consumed in January 1976. Most of the increase occurred in the electric utility sector, where increased demand for coal-fired electricity generation during the extreme cold weather resulted in an 8.1-percent increase in utility coal consumption.

Stocks of bituminous coal and lignite held by consumers on January 31, 1977, were 118.1 million tons, with electric utilities accounting for 88 percent of the total. Utility stocks were equivalent to a 75-days' supply compared to an 81-days' supply in January 1976.

Electric utilities consumed 37.5 million tons of bituminous coal and lignite in February 1977, up 7.7 percent from utility consumption in February 1976. Utilities maintained a 75-days' supply of stocks in February compared to an 86-days' supply in February 1976.

In March 1977, the United States exported 3.4 million tons of coal, 14.8 percent below coal exports in March 1976. Exports to Japan, the largest U.S. coal importer, were 47 percent lower. Two factors could be contributing to a possible future downtrend in U.S. coal trade: (1) Japanese steel producers have been importing increasing amounts of cheaper Australian coal, and (2) Japan is showing considerable interest in "formcoke" technology, which is designed to upgrade noncoking coals to coking-quality coal. A consortium of Japanese steel mills plans to build a pilot "formcoke" production plant in Australia.

Bituminous and Lignite

		Domestic Consumption*	Production*	Exports	Stocks
Thousands of short tons					
1972	TOTAL	516,776	595,386	55,997	**117,442
1973	TOTAL	556,022	591,738	52,903	**103,022
1974	TOTAL	552,709	603,406	59,926	**95,528
1975	January	49,841	55,610	4,254	95,512
	February	45,699	51,135	4,470	97,028
	March	47,202	51,910	5,653	97,832
	April	43,537	56,330	6,159	102,663
	May	42,658	57,045	7,011	109,666
	June	44,777	55,730	6,269	114,857
	July	47,454	45,560	4,691	109,133
	August	49,190	51,160	5,859	108,522
	September	44,032	56,060	4,529	111,922
	October	44,929	60,030	4,647	120,344
	November	45,946	54,655	7,593	125,808
	December	51,036	53,213	4,534	127,115
	TOTAL ***	556,301	648,438	65,669	
1976	January	52,919	51,495	3,697	119,149
	February	46,800	52,630	3,050	118,970
	March	48,607	60,050	3,979	123,441
	April	46,450	57,850	5,780	128,343
	May	46,506	56,605	5,667	134,621
	June	48,472	58,430	6,569	140,237
	July	51,696	43,250	4,879	129,606
	August	52,069	53,440	4,223	123,662
	September	47,750	59,675	5,613	129,867
	October	49,248	57,445	5,871	133,581
	November	51,320	58,350	5,451	135,402
	December	55,642	55,780	4,625	133,673
	TOTAL ***	597,479	665,000	59,406	
1977	January	57,052	42,145	2,143	118,080
	February	NA	45,950	3,079	NA
	March	NA	65,020	3,390	NA
	April	NA	57,160	NA	NA
	TOTAL		210,275 (4 months)	8,613 (3 months)	

*See Explanatory Note 8.

**Total as of December 31.

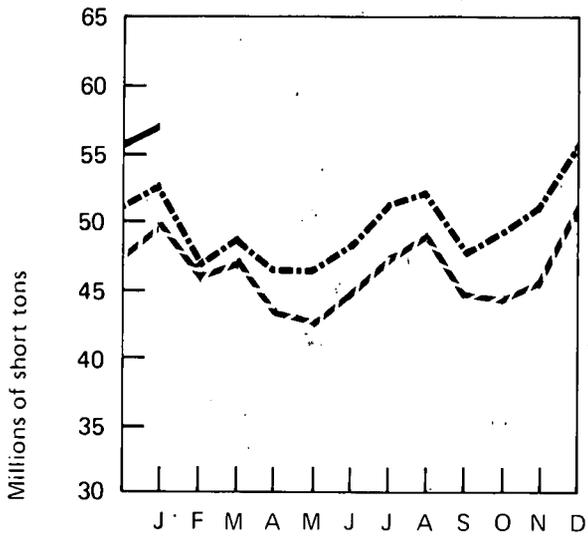
***Totals may not add due to rounding.

R=Revised data.

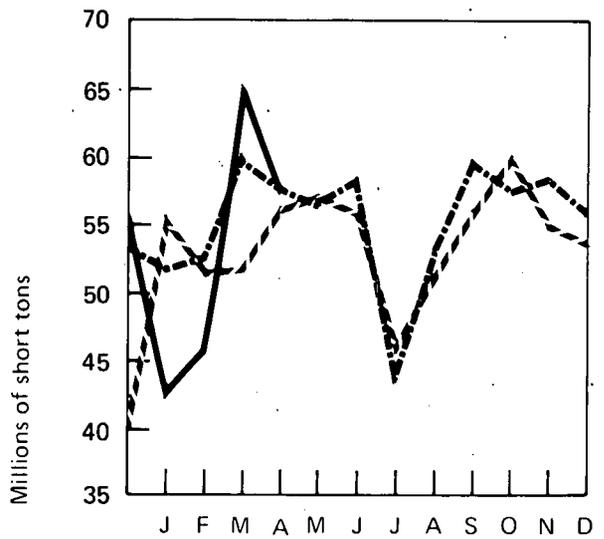
NA=Not available.

Source: Bureau of Mines.

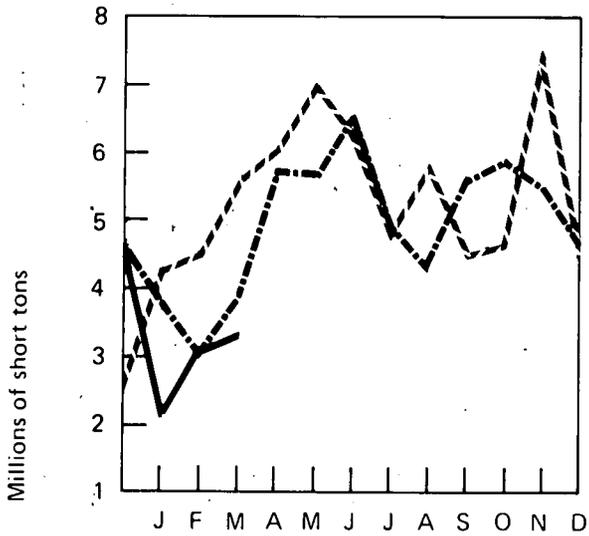
Domestic Consumption



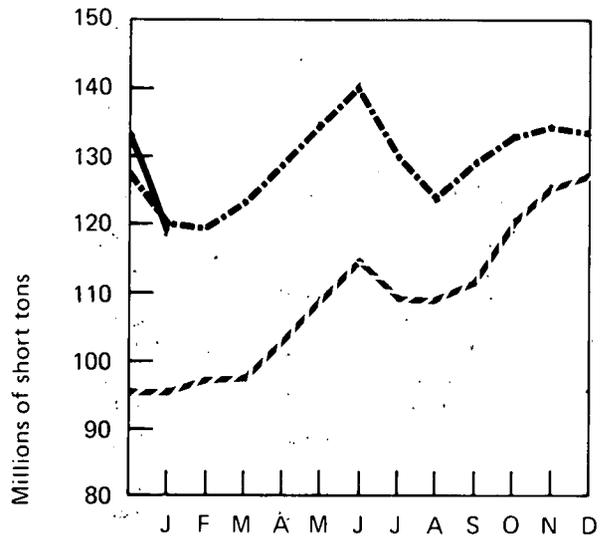
Production



Exports



Stocks

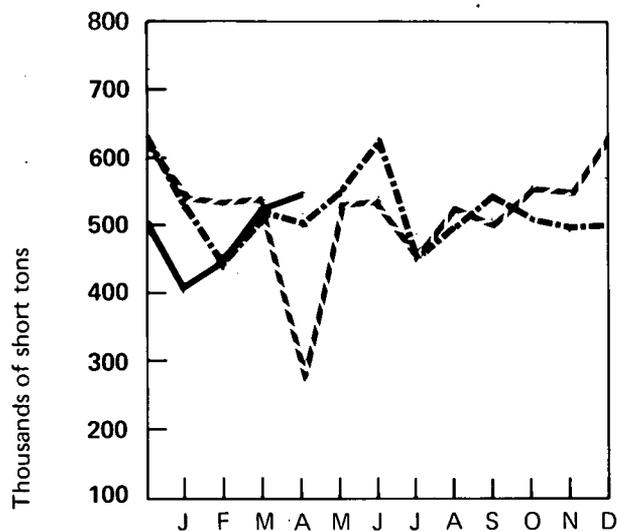


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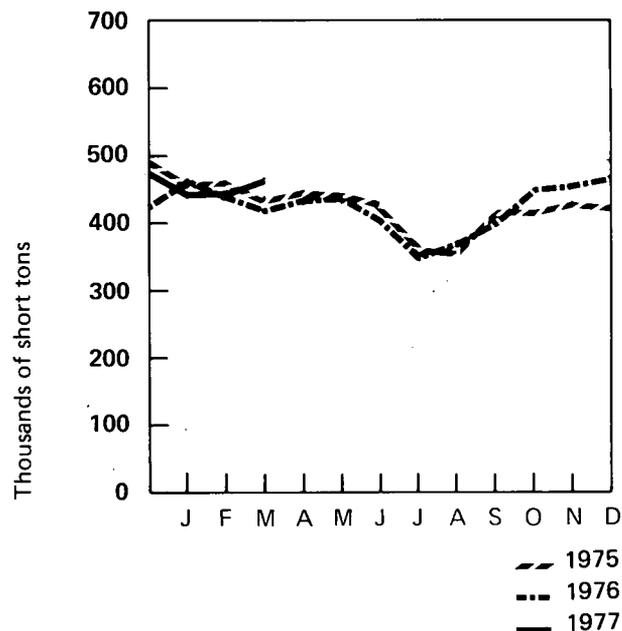
Anthracite

		Production	Apparent Domestic Consumption
		Thousands of short tons	
1972	TOTAL	7,106	5,915
1973	TOTAL	6,830	5,671
1974	TOTAL	6,617	5,448
1975	January	540	459
	February	535	465
	March	544	435
	April	270	450
	May	535	445
	June	544	430
	July	455	360
	August	535	356
	September	500	425
	October	560	420
	November	555	435
	December	630	428
	TOTAL	6,203	5,108
1976	January	530	460
	February	440	430
	March	530	420
	April	500	435
	May	555	440
	June	630	400
	July	450	350
	August	500	375
	September	550	400
	October	510	455
	November	500	460
	December	505	475
	TOTAL	6,200	5,100
1977	January	400	440
	February	450	450
	March	530	470
	April	550	NA
	TOTAL	1,930	1,360
		(4 months)	(3 months)

Production



Apparent Domestic Consumption



NA=Not available.
Source: Bureau of Mines.

Electric Utilities

April 1977 production of electricity by utilities is estimated at 157.9 billion kilowatt hours, 3.1 percent above the level for April 1976. Total production during the first 4 months of 1977 is estimated at 684.6 billion kilowatt hours, up 4.9 percent from the level for the same period in 1976.

Electric utility oil consumption during February 1977 was 17.9 percent higher than during February 1976, corresponding to the 18.8-percent increase in kilowatt-hour generation from oil. Electric utility coal consumption increased 5.4 percent, and natural gas consumption was 0.5 percent higher.

Sales of electricity to industrial customers during February 1977 totaled 59.5 billion kilowatt hours, an increase of 2.2 percent over the level for February 1976. Sales to commercial customers during the month totaled 37.9 billion kilowatt hours, up 13.0 percent. Sales to residential customers, at 61.7 billion kilowatt hours, were 13.7 percent higher.

Sales to industrial customers increased despite a 4.5-percent increase in the real price of electricity to these customers. The primary causes of the increase appear to be a 4.7-percent growth in industrial output over the period and a 3.2-percent increase in the number of industrial electricity customers.

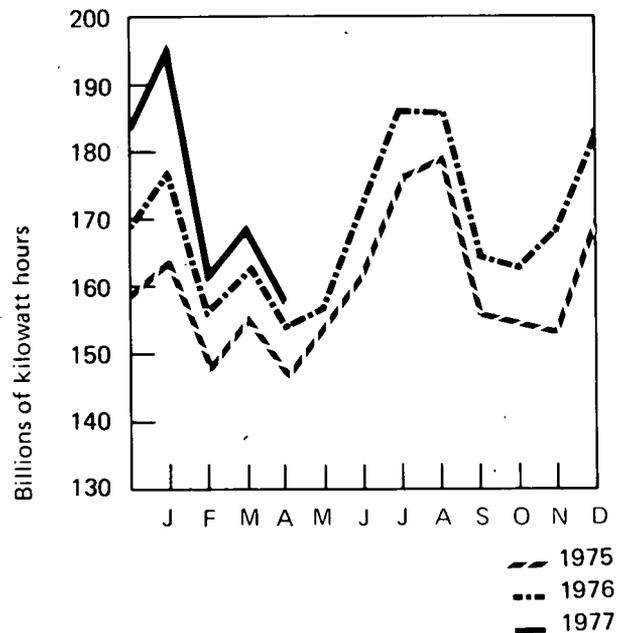
Sales of electricity to commercial customers were substantially higher because of a 1.9-percent increase in commercial electricity customers, increased activity in the services sector of the economy, and colder February weather.

The increase in residential electricity sales appears to be due primarily to the 2.4-percent growth in the number of residential electricity customers and the unusually cold weather in early 1977.

Electric Utilities

		Total Net Production	Percentage Produced from Each Source					
		Millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro-electric	Other*
1972	TOTAL	1,749,629	AVG. 44.2	15.6	21.4	3.1	15.6	0.1
1973	TOTAL	1,860,440	AVG. 45.7	16.8	18.3	4.5	14.6	0.1
1974	TOTAL	1,867,103	AVG. 44.5	16.0	17.2	6.1	16.1	0.1
1975	January	164,325	45.6	18.6	12.0	8.5	15.2	0.1
	February	147,080	45.8	16.9	12.3	8.7	16.2	0.1
	March	155,481	44.5	14.9	12.9	9.6	18.0	0.1
	April	146,217	44.1	14.5	13.9	9.1	18.2	0.2
	May	153,231	42.2	13.7	16.8	9.0	18.1	0.2
	June	162,442	43.3	14.2	17.8	7.8	16.7	0.2
	July	176,815	43.2	14.2	19.3	8.7	14.4	0.2
	August	179,714	43.9	15.6	18.9	8.8	12.6	0.2
	September	155,223	44.2	13.8	19.3	9.3	13.2	0.2
	October	154,944	44.6	14.2	17.0	9.4	14.6	0.2
	November	152,794	46.1	14.1	14.3	9.3	16.0	0.2
	December	169,372	46.5	15.9	12.2	9.9	15.3	0.2
	TOTAL	1,917,638	AVG. 44.5	15.1	15.6	9.0	15.6	0.2
1976	January	178,313	46.9	18.1	11.2	9.0	14.6	0.2
	February	156,671	46.9	15.8	12.2	9.2	15.7	0.2
	March	R164,160	46.6	15.5	13.0	8.5	16.2	0.2
	April	153,154	47.4	15.2	14.3	7.2	15.7	0.2
	May	R157,355	46.1	13.8	16.1	7.6	16.2	0.2
	June	173,370	44.4	14.5	17.1	9.1	14.7	0.2
	July	186,409	44.7	14.5	17.1	9.5	14.0	0.2
	August	186,380	45.2	R15.2	16.8	R9.8	12.8	0.2
	September	R165,009	45.7	14.3	17.0	10.5	12.3	0.2
	October	163,709	47.0	14.8	14.6	10.6	12.8	0.2
	November	169,053	48.3	17.8	12.5	9.5	11.7	0.2
	December	R183,832	47.4	18.6	11.3	11.5	11.0	0.2
	TOTAL	R2,037,415	46.4	15.7	14.4	9.4	13.9	0.2
1977	January	R196,349	45.7	22.1	R10.2	11.3	R10.5	0.2
	February	R161,073	47.9	18.3	12.1	R12.1	9.4	0.2
	March	169,230	NA	NA	NA	11.2	NA	NA
	April	157,919	NA	NA	NA	12.5	NA	NA
	TOTAL	684,571						
	(4 months)							

Total Net Production



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

NA=Not available.

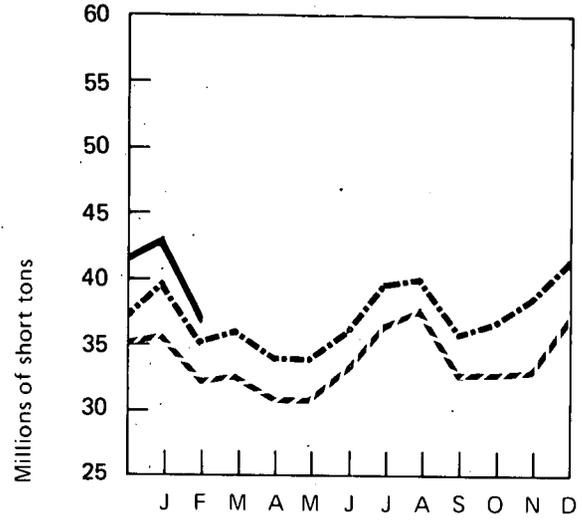
R=Revised.

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

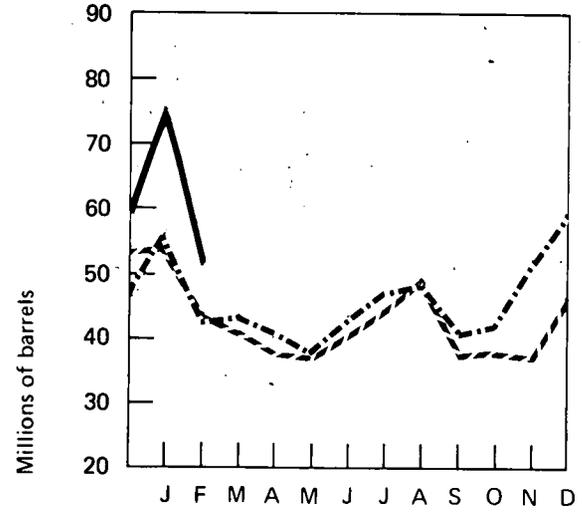
Fuel Consumption

	Coal	Oil	Gas
	Thousands of short tons	Thousands of barrels	Millions of cubic feet
1972 TOTAL	352,392	493,692	3,976,770
1973 TOTAL	389,707	560,146	3,659,388
1974 TOTAL	392,423	536,245	3,443,293
1975			
January	35,843	54,048	205,096
February	32,097	43,544	188,922
March	32,793	40,414	211,184
April	30,547	37,037	214,250
May	30,574	36,986	275,097
June	33,456	40,943	307,901
July	36,567	44,413	362,088
August	37,967	49,320	360,199
September	32,609	37,041	315,877
October	32,853	38,030	275,266
November	33,333	37,538	227,748
December	37,390	46,814	213,957
TOTAL	406,029	506,128	3,157,585
1976			
January	39,986	56,081	206,359
February	34,965	43,123	199,300
March	36,099	R43,950	222,605
April	33,805	40,145	227,699
May	33,944	37,866	266,470
June	36,381	43,632	313,143
July	39,841	47,220	R337,372
August	40,329	R49,063	329,493
September	35,894	R40,763	294,818
October	36,775	R42,192	249,738
November	38,837	R52,300	216,914
December	41,570	R59,484	R214,406
TOTAL	448,426	R555,819	R3,078,317
1977			
January	43,250	R75,783	R205,507
February	36,854	50,852	200,298
TOTAL (2 months)	80,104	126,635	405,805

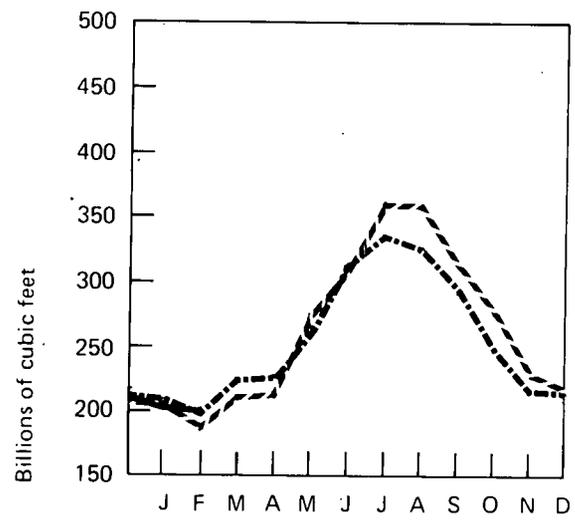
Coal Consumption



Oil Consumption



Gas Consumption



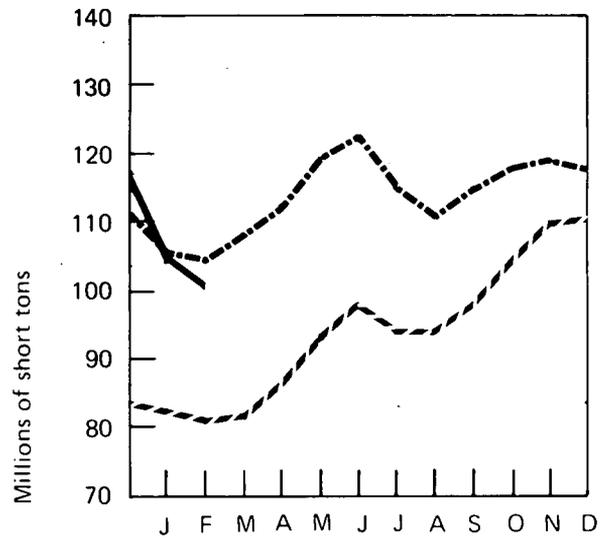
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R=Revised.
Source: Federal Power Commission.

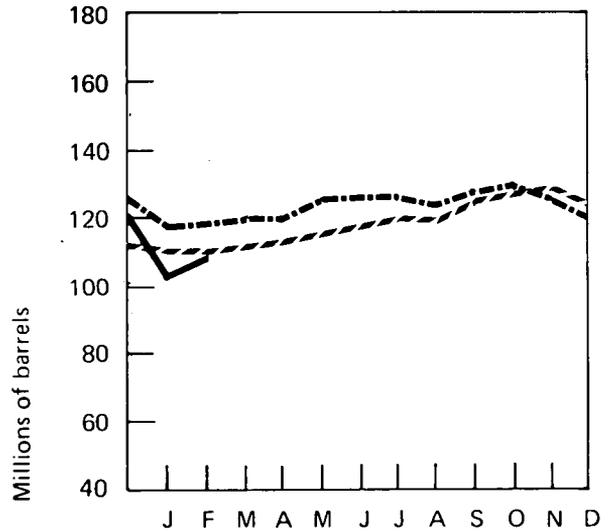
Electric Utilities (Continued)

		Stocks at End of Month	
		Coal	Oil
		Thousands of short tons	Thousands of barrels
1972		*100,009	*57,653
1973		*87,279	*89,216
1974		*83,542	*112,916
1975	January	82,088	111,295
	February	80,972	111,500
	March	81,885	113,643
	April	86,829	114,298
	May	93,869	117,231
	June	98,031	118,936
	July	94,278	121,239
	August	94,213	120,665
	September	98,096	126,314
	October	105,415	128,882
	November	110,313	130,341
	December	110,750	125,245
1976	January	105,518	R117,944
	February	104,874	R118,852
	March	108,450	R120,537
	April	112,862	R120,387
	May	119,611	R126,092
	June	123,048	R126,268
	July	115,204	R126,677
	August	110,752	R125,805
	September	115,399	R129,995
	October	118,566	R131,360
	November	119,298	R126,624
	December	117,459	R121,680
1977	January	R104,828	R102,836
	February	100,673	109,952

Coal Stocks



Oil Stocks



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 — 1977

*As of December 31.

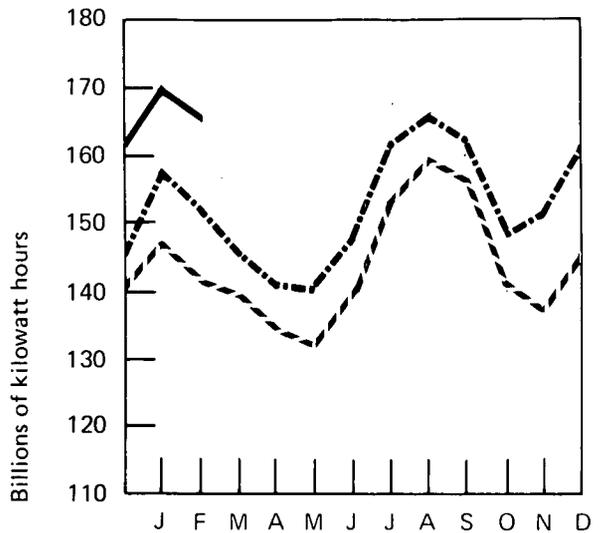
R=Revised.

Source: Federal Power Commission.

Sales

		Residential	Commercial	Industrial	Other*	Total
Millions of kilowatt hours						
1972	TOTAL	538,609	359,265	640,978	56,309	1,595,161
1973	TOTAL	579,231	388,266	686,085	59,326	1,712,909
1974	TOTAL	578,183	384,824	684,874	58,042	1,705,923
1975	January	54,003	32,405	55,505	5,954	147,867
	February	50,219	31,459	54,328	5,544	141,550
	March	47,968	31,194	54,437	5,639	139,238
	April	44,762	30,473	53,910	5,269	134,414
	May	41,077	30,926	54,767	5,404	132,174
	June	45,766	35,210	55,369	5,384	141,729
	July	54,586	38,031	55,645	5,668	153,930
	August	57,291	38,576	57,868	5,709	159,444
	September	54,362	37,325	58,405	5,978	156,070
	October	R43,024	R32,817	R58,815	R5,745	R140,401
	November	44,019	32,288	56,174	5,235	137,716
	December	51,900	33,183	55,532	5,357	145,972
	TOTAL	R588,977	R403,887	R670,755	R66,886	R1,730,505
1976	January	60,091	34,833	57,448	6,380	158,752
	February	54,264	33,583	58,228	5,874	151,949
	March	47,060	32,273	60,516	5,990	145,839
	April	43,551	31,598	60,106	5,407	140,662
	May	41,036	32,347	61,271	5,478	140,132
	June	44,157	35,707	62,419	5,344	147,627
	July	54,314	39,455	62,877	5,895	162,541
	August	57,256	39,517	64,184	5,835	166,792
	September	53,460	38,503	64,333	6,134	162,430
	October	R44,762	R34,388	R64,208	R5,420	R148,778
	November	48,582	35,760	61,511	5,977	151,830
	December	56,893	36,916	61,956	6,084	161,849
	TOTAL	R605,426	R424,880	R739,057	R69,818	R1,839,181
1977	January	64,516	39,133	60,314	6,314	170,277
	February	61,705	37,945	59,493	6,083	165,226
	TOTAL (2 months)	126,221	77,078	119,807	12,397	335,503

Total Sales



*Includes street lighting and trolley cars.

R=Revised.

Source: Federal Power Commission; data for latest 4 months from Edison Electric Institute.

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Nuclear Power

The 60 domestic reactors in commercial operation, with a maximum dependable capacity of 42,028 megawatts, performed at 62 percent of capacity during April and provided a record 12.5 percent of the Nation's total electricity generation for the month. Thirteen of the reactors were not in service for major portions of the month because of refueling shutdowns. Reactors are generally refueled during the spring so that they are available to help satisfy high demands for power in July and August, the months when operating capacities usually exceed 70 percent.

Calvert Cliffs 2, an 845-megawatt pressurized-water reactor (PWR), attained commercial operation in April, and not in March as previously reported. The reactor is owned by the Baltimore Gas and Electric Company and is located at the company's dual-unit plant site on the Chesapeake Bay. Crystal River 3, an 855-megawatt PWR, became commercial in March and was not reported. This reactor is owned by the Florida Power Corporation and is located on the Gulf of Mexico about 90 miles north of Tampa.

The Toledo Edison Company was awarded an operating license for Davis-Bessie 1, a 906-megawatt PWR. It is the first unit of a planned three-unit facility located in Ottawa, Ohio. Construction has not yet been initiated on units 2 and 3, which are slated for operation in 1986 and 1988, respectively.

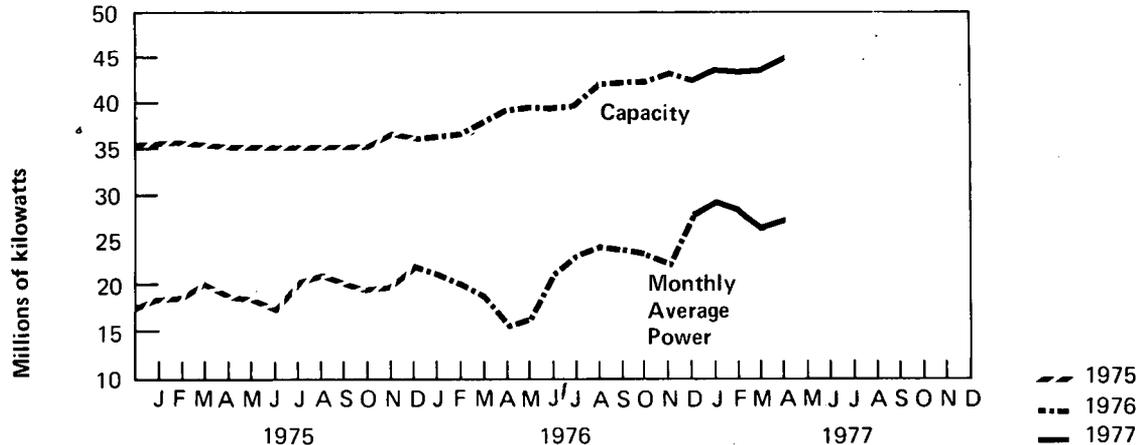
FEA has revised its forecasts for domestic nuclear power growth in light of significant construction schedule slippages during the first half of fiscal year 1977. Nuclear capacity is now envisioned to approach 64,000 megawatts by 1980, 112,000 megawatts by 1985, and 192,000 megawatts by 1990. In August 1976, FEA had forecast that nuclear power capacity could approach 70,000 megawatts by 1980, 141,000 megawatts by 1985, and 206,000 megawatts by 1990. Since that date, however, construction schedules for 31 units have slipped an average of 12 months, and 2 units have been canceled. Another 13 units, whose construction permits are pending, have slipped their schedules an average of 18 months; 2 units have suffered indefinite suspension; and 1 unit has been

canceled. An additional 3 units planned for operation by 1990 have been canceled. This slippage is unprecedented over such a short time frame and is primarily the result of continuous revision of utility demand growth estimates and financing problems that have plagued new nuclear construction projects since the Arab oil embargo of 1973-74.

U.S. Nuclear Powerplant Operations*

		Maximum Dependable Capacity	Average Power	Percent of Total Domestic Electricity Generation
Thousands of net kilowatts				
1972	AVERAGE	7,726	6,174	3.1
1973	AVERAGE	13,850	8,760	4.5
1974	AVERAGE	29,921	13,011	6.1
1975	January	35,691	18,734	8.5
	February	35,899	18,948	8.7
	March	35,686	20,003	9.6
	April	35,017	18,510	9.1
	May	35,017	18,500	9.0
	June	35,322	17,701	7.8
	July	35,596	20,661	8.7
	August	35,589	21,344	8.8
	September	35,540	19,994	9.3
	October	35,540	19,659	9.4
	November	36,752	19,672	9.3
	December	36,424	22,418	9.9
	AVERAGE	35,671	19,692	9.0
1976	January	36,750	21,638	9.0
	February	36,879	20,657	9.2
	March	38,072	18,808	8.5
	April	39,763	15,142	7.2
	May	39,902	16,034	7.6
	June	39,781	21,885	9.1
	July	40,168	23,802	9.5
	August	42,067	24,681	R9.8
	September	42,896	24,014	10.5
	October	42,877	23,327	10.6
	November	43,673	22,408	9.5
	December	42,877	28,380	11.5
	AVERAGE	40,642	21,756	9.4
1977	January	44,316	29,715	11.3
	February	44,282	R29,168	R12.1
	March	44,289	**26,208	**11.5
	April	**45,131	**27,371	**12.5
	AVERAGE (4 months)	44,505	28,095	11.8

U.S. Nuclear Powerplants



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

**Preliminary data.

R=Revised data.

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

Status of Nuclear Powerplants – April 30, 1977

Status	Number of Plants					Design Capacity
	Boiling Water Reactors	High Temperature Gas Reactors	Pressurized Water Reactors	Other*	Total	Net Electrical Megawatts
Licensed to operate	25	1	38	0	64	46,000
Construction permit granted	22	0	48	0	70	74,000
Construction permit pending	19	0	43	4	66	75,000
Orders placed for plant	3	0	8	0	11	13,000
Publicly announced	—	—	—	19	19	23,000
TOTAL	69	1	137	23	230	231,000

*Includes 1 Liquid Metal Fast Breeder Reactor and 22 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment – April 1977

	Domestic Customers	Foreign Customers	Total
Separative work performed (in metric tons of separative work units)	465.065	238.537	703.602
Cost (in millions of dollars)	30.627	14.623	45.250
Product quantity (in metric tons of uranium)	119.132	62.972	182.104
Feed requirement (in metric tons of uranium)	608.193	314.455	922.648

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

Nuclear Power Generation by Major Non-Communist Countries – April 1977

Country	Number of Reactors*	Capacity	Generation of Electricity				
			Generation	Percent of Design Capacity			
				April	April		Year**
					1974	1975	
		Thousands of gross electrical kilowatts	Millions of gross kilowatt hours				
Canada	7	3,930	2,076	73	74	64	85
Federal Republic of Germany	10	6,410	3,456	75	57	72	68
France	11	3,970	1,530	54	57	68	58
Great Britain	***31	7,950	3,223	56	61	57	64
India	3	620	142	32	55	46	58
Italy	3	630	391	86	61	69	69
Japan	13	7,430	1,621	30	61	36	57
Spain	3	1,120	441	55	75	77	77
Sweden	6	3,880	1,726	62	20	44	55
Switzerland	3	1,060	762	100	76	84	86
United States	63	46,090	20,396	61	57	60	56
TOTAL	153	83,090	35,764	60	58	58	60

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

**Averages are computed for those units in operation on January 1 of each year.

***Figures are for 4-week period.

Source: *Nucleonics Week*.

Summary of Monthly Fuel Cycle – March 1977

Fuel Cycle Activity	Product	Processed Material*	Percent Utilization of Industry Capacity	Energy Content of Processed Material**	Energy Consumed in Fuel Cycle Activity***	Cost Contribution to Electric Power
		MTU except where noted			Billion Btu	Mills per kilowatt hour
Milling	Yellowcake (U ₃ O ₈) Deliveries	695	61	239,000	395	1.27
Conversion	Uranium Hexafluoride (UF ₆) Deliveries	936	64	325,000	202	0.16
Enrichment	Enriched UF ₆ Deliveries	230 (832 MT-SWU)	††	690,000	8,130	1.53
Fabrication	Finished Fuel Assemblies Shipped	111	48	22,000	15	0.47
Powerplant Operation	Electricity Generated	21,217 (million kWhe)	64	200,000	973 (million kWhe)	10.93
	Spent Fuel Discharged	32	—	—	—	} †††1.57
Reprocessing	Spent Fuel Received	0	—	—	—	
	Spent Fuel Reprocessed	0	—	—	—	

*Units of measure are discussed in Explanatory Notes 9 and 10.

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

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

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

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

†††Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste disposition, exclusive of cost credits for recovered uranium and plutonium.

NA=Not available.

Source: ERDA.

Energy Consumption

Estimated domestic energy consumption in March 1977 was 6.39 quadrillion Btu, 2.3 percent more than for March 1976 and 2.0 percent more than for March 1975. The sectoral breakout for the month is not yet available.

In February 1977, the combined residential/commercial sector consumed 2.97 quadrillion Btu, 14.2 percent more than in February 1976. (All comparisons between February 1977 and February 1976 are adjusted to compensate for the extra day in February 1976.) This sizable increase in residential/commercial consumption occurred largely because of increased heating fuel requirements. (February 1976 was unusually warm, with national population-weighted heating degree-days averaging about 21 percent below normal. Degree-days for February 1977, on the other hand, were close to normal.)

Industrial energy consumption in February 1977 was 1.81 quadrillion Btu, 9.9 percent less than in February 1976. A large part of this difference can be attributed to greater natural gas curtailments to low priority industrial users, so that the gas could be diverted to higher priority residential and commercial users and to underground storage reservoirs that were drawn down during the extremely cold weather from October 1976 through January 1977. Industrial consumption of natural gas in February 1977 was 0.27 quadrillion Btu, about 54 percent less than in February 1976.

Petroleum Consumption and Forecast

Total domestic demand for petroleum products during April 1977 was 17.6 million barrels per day. This was 3.3 percent above the forecast level, 5.3 percent above the April 1976 level, and 9.4 percent above demand in April 1975.

Demand for residual fuel oil in April was far above previous levels, as it has been for the past 6 months. Residual demand was 2.9 million barrels per day, 18.7 percent above the forecast level, and 18.0 percent and 32.0 percent above April 1976 and April 1975 levels, respectively.

Domestic demand for distillate fuel oil in April was 2.9 million barrels per day, 7.8 percent below the forecast level, 5.7 percent above April 1976 demand, and 4.8 percent below April 1975 demand. Motor gasoline demand in April, at 7.2 million barrels per day, was 3.1 percent above the forecast level, and 1.2 percent and 7.8 percent above the April 1976 and April 1975 levels, respectively.

Energy Consumption

Domestic Energy Consumption by Primary Energy Type

		Coal*	Natural Gas (dry)	Petroleum	Hydroelectric Power**	Nuclear Electric Power	Total	Cumulative Total
Quadrillion (10 ¹⁵) Btu								
1972	TOTAL	12.424	22.984	32.965	2.946	0.567	71.895	
1973	TOTAL	13.294	22.512	34.852	3.006	0.888	74.553	
1974	TOTAL	12.889	21.732	33.468	3.295	1.215	72.600	
1975	January	1.148	2.295	3.067	0.268	0.149	6.927	6.927
	February	1.054	1.980	2.629	0.256	0.136	6.054	12.982
	March	1.087	1.943	2.780	0.299	0.159	6.267	19.249
	April	1.004	1.608	2.646	0.285	0.142	5.685	24.934
	May	0.984	1.359	2.582	0.296	0.147	5.368	30.301
	June	1.032	1.283	2.574	0.290	0.136	5.315	35.616
	July	1.091	1.341	2.682	0.273	0.164	5.550	41.167
	August	1.131	1.398	2.693	0.243	0.169	5.634	46.800
	September	1.015	1.399	2.600	0.221	0.153	5.388	52.188
	October	1.035	1.576	2.790	0.243	0.156	5.801	57.989
	November	1.059	1.674	2.601	0.262	0.151	5.747	63.736
	December	1.174	2.092	3.098	0.278	0.178	6.821	70.557
	TOTAL	12.813	19.948	32.742	3.215	1.839	70.557	
1976	January	1.218	R2.330	3.169	0.279	0.172	R7.167	R7.167
	February	1.078	R1.967	2.778	0.263	0.153	R6.239	R13.407
	March	1.119	R1.747	2.947	0.284	0.149	R6.246	R19.653
	April	1.070	R1.528	2.749	0.259	0.117	R5.723	R25.376
	May	1.072	R1.457	2.722	0.273	0.127	R5.651	R31.027
	June	1.115	R1.356	2.776	0.273	0.168	R5.689	R36.715
	July	1.188	R1.394	2.830	0.279	0.189	R5.879	R42.594
	August	1.197	R1.331	2.835	0.256	0.196	R5.815	R48.409
	September	1.099	R1.320	2.774	0.220	0.184	R5.597	R54.006
	October	1.134	1.645	2.905	0.227	0.185	6.096	R60.102
	November	1.182	R1.903	3.107	0.214	0.172	R6.578	R66.680
	December	1.281	R2.272	3.494	0.218	0.225	R7.489	R74.169
	TOTAL	13.752	R20.250	35.087	3.043	2.037	R74.169	
1977	January	R1.312	R2.447	3.484	0.223	0.236	R7.703	R7.703
	February***	R1.154	R1.746	R3.067	R0.165	0.209	R6.342	R14.045
	March***	1.198	1.674	3.104	0.208	0.208	6.392	20.436
	TOTAL (3 months)	3.664	5.868	9.655	0.597	0.652	20.436	

*Includes bituminous coal, lignite, and anthracite coal.

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

***Partially estimated.

Source: FEA.

Energy Consumption by Economic Sector and Primary Source – February 1977 (Quadrillion (10¹⁵) Btu)

Sector ¹	Primary Energy Source					Primary Energy Consumption	Electricity Distributed ⁷	Net Energy Consumption	Electrical Energy Loss Distributed ⁸	Ultimate Energy Disposition
	Coal ²	Natural Gas (dry) ³	Petroleum ⁴	Hydroelectric ⁵	Nuclear ⁶					
Residential and Commercial	0.033	1.220	0.644	–	–	1.897	0.355	2.252	0.718	2.969
Industrial	0.306	0.265	0.626	0.003	–	1.200	0.203	1.403	0.410	1.813
Transportation	0.001	0.055	1.486	–	(⁹)	1.542	0.006	1.548	0.012	1.559
Electric Utilities	0.815	0.206	0.311	0.163	0.209	1.703	–	–	–	–
TOTAL	1.154	1.746	3.067	0.165	0.209	6.342	0.564	5.202	1.140	6.342

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

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

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

⁴ Aggregate petroleum data are from the Bureau of Mines. FPC provided data on oil consumed by electric utilities.

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

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

⁶ FPC nuclear power production.

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

⁸ In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

⁹ Negligible.

Energy Consumption (Continued)

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

	February 1977 Consumption	Percent Change from February 1976*	Cumulative Percent Change from 1976 (January through February)*
	Quadrillion Btu		
Refined Petroleum Products	3.067	+14.4	+12.0
Motor Gasoline	1.003	+8.9	+4.8
Jet Fuel	0.161	+6.3	+8.7
Distillate	0.760	+26.4	+21.9
Residual	0.647	+22.2	+20.9
Other Petroleum Products	0.497	+6.9	+7.4
Natural Gas (Dry)	1.746	-8.1	-0.8
Coal (Anthracite, bituminous, and lignite)	1.154	+10.9	+9.2
Hydroelectric and Nuclear Electric Power	0.374	-6.9	-2.3
TOTAL ENERGY USE	6.342	+5.3	+6.5
Economic Sector Consumption			
Residential and Commercial	2.969	+14.2	+12.3
Industrial	1.813	-9.9	-1.7
Transportation	1.559	+10.5	+7.9

*Computed on a daily average basis.

Energy Consumption by the Residential and Commercial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ²	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu								
1973	TOTAL	0.295	7.577	7.077	3.445	8.120	26.515	
1974	TOTAL	0.297	7.427	R6.688	3.424	8.222	R26.058	
1975	January	0.035	1.124	0.627	0.310	0.748	2.845	2.845
	February	0.023	1.105	0.526	0.292	0.637	R2.583	5.427
	March	0.022	1.018	0.546	0.284	0.684	2.554	7.981
	April	0.015	0.905	0.489	0.270	0.623	2.302	10.283
	May	0.012	0.522	0.444	R0.259	R0.660	R1.897	R12.180
	June	0.013	0.338	0.435	R0.290	R0.735	R1.811	R13.991
	July	0.016	0.294	0.463	0.331	0.844	1.947	R15.938
	August	0.015	0.267	0.447	0.342	0.855	R1.925	R17.863
	September	0.021	0.281	0.484	0.328	0.673	1.786	R19.649
	October	0.023	0.353	0.539	R0.273	R0.650	R1.838	R21.487
	November	0.024	0.523	0.503	0.273	0.651	1.974	R23.461
	December	0.033	0.910	0.635	0.303	0.770	2.651	R26.112
	TOTAL	0.255	7.640	6.135	R3.554	R8.528	R26.112	
1976	January	0.031	1.229	0.656	0.340	0.832	3.088	3.088
	February	0.020	1.106	0.575	0.314	0.678	2.693	5.781
	March	0.018	0.858	0.571	0.286	0.695	2.428	8.208
	April	0.021	0.704	0.500	0.270	0.619	2.114	10.323
	May	0.016	0.510	0.506	R0.264	R0.636	R1.932	R12.255
	June	0.015	0.369	0.489	0.286	0.745	1.904	R14.158
	July	0.011	0.297	0.487	0.335	0.852	1.983	R16.141
	August	0.015	0.275	0.506	0.345	0.845	1.986	R18.127
	September	0.017	0.271	0.517	0.329	0.700	1.835	R19.962
	October	0.020	0.397	0.567	R0.283	R0.675	R1.942	R21.905
	November	0.025	0.700	0.622	0.302	0.722	2.371	R24.276
	December	0.037	1.078	0.726	0.335	0.824	3.000	R27.276
	TOTAL	0.246	7.796	6.722	R3.690	R8.823	R27.276	
1977	January	0.036	1.353	0.712	0.369	R0.945	R3.414	R3.414
	February	0.033	1.220	0.644	0.355	0.718	2.969	6.383
	TOTAL	0.069	2.572	1.356	0.724	1.662	6.383	

(See footnotes on page 47)

Energy Consumption (Continued)

Energy Consumption by the Industrial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ³	Hydro-electric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu									
1973	TOTAL	4.370	10.493	6.403	0.036	2.341	5.518	29.161	
1974	TOTAL	4.062	R10.156	R6.100	0.036	2.337	5.609	R28.299	
1975	January	0.341	0.887	0.610	0.003	0.189	0.458	2.489	2.489
	February	0.342	0.619	0.511	0.003	0.185	0.404	2.064	4.553
	March	0.362	0.648	0.531	0.003	0.186	0.447	2.176	6.729
	April	0.340	0.433	0.475	0.003	0.184	0.425	1.861	8.590
	May	0.321	0.516	0.431	0.003	R0.187	R0.475	R1.934	R10.523
	June	0.299	0.595	0.423	0.003	R0.189	R0.478	R1.987	R12.510
	July	0.286	0.640	0.450	0.003	0.190	0.485	2.053	R14.563
	August	0.291	0.724	0.435	0.003	0.197	R0.494	R2.144	R16.707
	September	0.292	0.755	0.470	0.003	0.199	0.408	2.128	R18.835
	October	0.303	0.895	0.524	0.003	R0.201	R0.478	R2.403	R21.238
	November	0.316	0.865	0.489	0.003	0.192	0.457	2.322	R23.560
	December	0.334	0.895	0.617	0.003	0.189	0.482	2.521	R26.080
	TOTAL	3.826	8.473	5.966	0.035	R2.289	R5.492	R26.080	
1976	January	0.320	R0.813	0.638	0.003	0.196	0.480	R2.451	R2.451
	February	0.302	R0.593	0.559	0.003	0.199	0.429	R2.085	R4.535
	March	0.321	R0.606	0.555	0.003	0.206	0.502	R2.193	R6.728
	April	0.320	R0.544	0.487	0.003	0.205	0.471	R2.028	R8.757
	May	0.327	R0.631	0.492	0.003	0.209	R0.504	R2.166	R10.922
	June	0.312	R0.628	0.475	0.003	0.213	0.554	R2.185	R13.108
	July	0.310	R0.713	0.473	0.003	0.215	0.546	R2.259	R15.367
	August	0.304	R0.682	0.492	0.003	0.219	0.537	R2.237	R17.604
	September	0.303	R0.710	0.503	0.003	0.220	0.466	R2.204	R19.808
	October	0.318	0.941	0.551	0.003	R0.219	R0.522	R2.555	R22.363
	November	0.327	R0.920	0.605	0.003	0.210	0.501	R2.565	R24.928
	December	0.357	R0.900	0.706	0.003	0.211	0.520	R2.697	R27.625
	TOTAL	3.821	R8.681	6.537	0.033	R2.522	R6.031	R27.625	
1977	January	R0.338	R0.803	0.692	0.003	0.206	R0.527	R2.569	R2.569
	February	0.306	0.265	0.626	0.003	0.203	0.410	1.813	4.382
	TOTAL	0.644	1.069	1.318	0.005	0.409	0.937	4.382	

(See footnotes on page 47)

Energy Consumption by the Transportation Economic Sector¹

		Coal	Natural Gas ⁴ (dry)	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu								
1973	TOTAL	0.009	0.733	17.940	0.058	0.137	18.877	
1974	TOTAL	0.009	R0.638	17.392	0.060	0.144	R18.242	
1975	January	0.001	0.075	1.499	0.006	0.013	1.594	1.594
	February	0.001	0.064	1.325	0.005	0.012	1.408	3.002
	March	0.001	0.062	1.456	0.005	0.013	1.537	4.538
	April	0.001	0.050	1.455	0.005	0.012	1.523	6.061
	May	0.001	0.039	1.481	0.005	0.012	1.537	7.598
	June	0.001	0.035	1.465	0.005	R0.012	1.517	9.115
	July	0.001	0.035	1.497	0.005	0.012	1.550	10.665
	August	0.001	0.037	1.510	0.005	0.012	1.564	12.230
	September	0.001	0.039	1.419	0.005	0.010	1.474	13.704
	October	0.001	0.047	1.495	0.005	0.013	1.561	15.264
	November	0.001	0.052	1.380	0.006	0.013	1.452	16.716
	December	0.001	0.067	1.560	0.006	0.015	1.649	R18.365
	TOTAL	0.008	0.602	17.544	0.062	0.149	R18.365	
1976	January	0.001	R0.076	1.532	0.006	0.015	R1.629	R1.629
	February	0.001	R0.063	1.380	0.006	0.012	R1.461	R3.090
	March	0.001	R0.055	1.552	0.005	0.013	R1.626	R4.716
	April	0.001	R0.047	1.516	0.005	0.012	1.580	R6.296
	May	0.001	0.043	1.493	0.005	0.012	1.553	R7.849
	June	0.001	0.037	1.545	0.005	0.012	1.599	R9.449
	July	0.001	R0.038	1.581	0.005	0.012	R1.637	11.086
	August	0.001	R0.036	1.538	0.005	0.013	R1.592	R12.678
	September	0.001	0.037	1.504	0.005	0.011	1.558	14.236
	October	0.001	0.050	1.530	0.006	0.013	1.599	15.835
	November	0.001	0.061	1.561	0.006	0.014	R1.641	17.476
	December	0.001	0.074	1.697	0.006	0.014	1.792	R19.268
	TOTAL	0.008	R0.615	18.428	0.064	R0.153	R19.268	
1977	January	0.001	0.081	1.617	0.006	0.016	1.720	1.720
	February	0.001	0.055	1.486	0.006	0.012	1.559	3.279
	TOTAL	0.001	0.136	3.103	0.012	0.027	3.279	

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

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

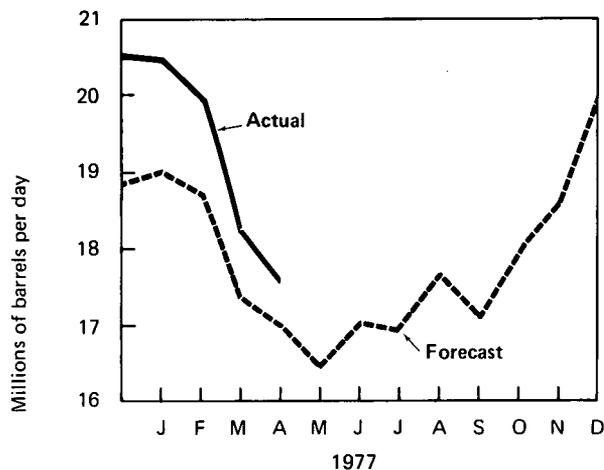
³ The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 49.3 percent for 1974, 1975, 1976, and 1977.

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

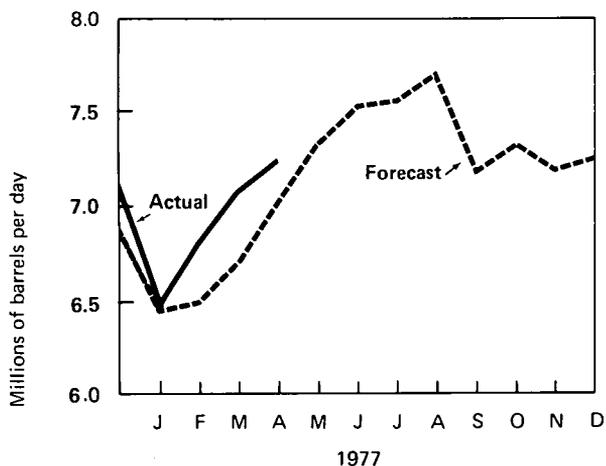
R=Revised data.

Petroleum Consumption and Forecast

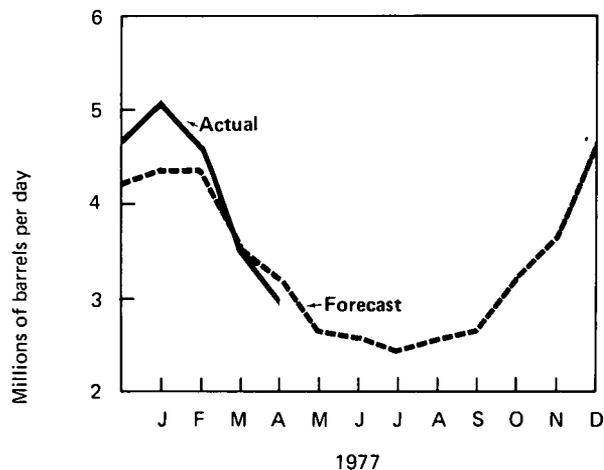
Total Domestic Demand for Petroleum Products



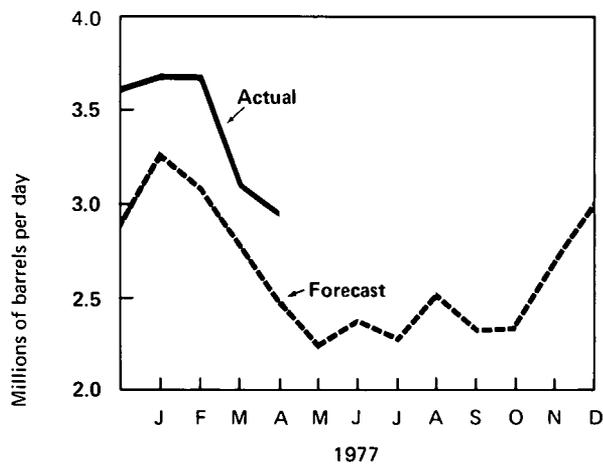
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Notes:

Domestic Demand – Demand for products, in terms of real consumption, is not available; production plus imports plus withdrawals from primary stocks is used as a proxy for consumption. Secondary stocks, not measured by BOM and API, are substantial for some products.

Actuals – Based on Bureau of Mines data for December 1976 and January 1977, FEA data for February and March 1977, and API data for April 1977.

Forecast – See Explanatory Note 5 for discussion of basic assumptions for forecast.

Oil and Gas Exploration and Development

An average of 1,982 rotary drilling rigs were in use in May, an increase of 75 rigs from the previous month's count, and 486 rigs (32 percent) more than in May 1976. This was the highest May rig count since 1959 and was almost double the preembargo May 1973 count. Because the normal seasonal decline in rig activity did not develop during the early months of 1977, Hughes Tool Company revised upwards its yearly projection for total rigs in use to between 1,875 and 1,890. This amounts to a 4- to 5-percent increase over earlier estimates.

A total of 3,282 exploratory and development wells were drilled in April, 13 percent more than in April of last year, and 19 percent more than in April 1975. This was the second consecutive year-to-year increase in monthly well completions, after a 5-month period of decline.

There was a 10-crew increase in seismic oil and gas exploration activity during April which more than compensated for March's 4-crew drop. A total of 292 crews (266 land, 26 marine) were operating in the United States and in its territorial waters during the month, up 23 percent from the count reported for April 1976, and up 3 percent from the total reported for the same month 2 years ago. In particular, marine seismic exploration activity has increased more than 50 percent over the past 12 months.

The uptrend in marine seismic exploration is probably in response to the scheduling of several oil and gas lease sales in frontier areas of the Outer Continental Shelf (OCS). According to a revised OCS leasing plan published in May, two frontier area sales are scheduled within the coming year, the North Atlantic Georges Bank Trough (November 1977) and the South Atlantic Southeast Georgia Embayment (January 1978). A third frontier sale in the Gulf of Alaska Kodiak Basin, however, originally planned for November 1977, was postponed until after 1978. Also listed in the new schedule were four sales in the Gulf of Mexico (June 1977, February 1978, August 1978, and October 1978) and a sale in the mid-Atlantic Baltimore Canyon (December 1978). There have been no OCS oil and gas lease sales so far this year.

Oil and Gas Exploration and Development

		Rotary Rigs	Exploratory and Development				Total Footage	
		in Operation	Wells Drilled*				of Wells Drilled	
		Monthly average	Oil	Gas	Dry	Total	Thousands of feet	
1972	AVERAGE	1,107	TOTAL	11,306	4,928	11,057	27,291	134,602
1973	AVERAGE	1,194	TOTAL	9,902	6,385	10,305	26,592	136,391
1974	AVERAGE	1,475	TOTAL	12,784	7,240	11,674	31,698	150,551
1975	January	1,615		1,299	655	1,040	2,994	13,189
	February	1,611		1,097	458	933	2,488	12,071
	March	1,651		1,341	658	1,091	3,090	15,472
	April	1,604		1,181	506	1,071	2,758	13,545
	May	1,592		1,100	451	891	2,442	12,054
	June	1,613		1,246	509	1,022	2,777	13,540
	July	1,616		1,229	557	920	2,706	12,545
	August	1,645		1,272	587	1,122	2,981	14,221
	September	1,699		1,504	831	1,165	3,500	15,636
	October	1,716		1,633	682	1,310	3,625	16,689
	November	1,757		1,619	776	1,270	3,665	15,788
	December	1,793		1,817	832	1,424	4,073	17,556
	AVERAGE	1,660	TOTAL**	16,408	7,580	13,247	37,235	174,434
1976	January	1,710		1,465	772	1,055	3,292	14,517
	February	1,594		1,341	652	1,159	3,152	14,888
	March	1,540		1,726	821	1,301	3,848	18,126
	April	1,480		1,237	672	994	2,903	13,765
	May	1,496		1,501	658	1,104	3,263	14,196
	June	1,546		1,500	709	1,123	3,332	14,780
	July	1,597		1,312	730	916	2,958	13,716
	August	1,691		1,265	711	1,140	3,116	14,697
	September	1,744		1,474	909	1,199	3,582	16,777
	October	1,794		1,396	750	1,123	3,269	14,542
	November	1,840		1,291	698	1,222	3,211	14,642
	December	1,860		1,512	926	1,414	3,852	17,093
	AVERAGE	1,656	TOTAL**	17,059	9,085	13,621	39,765	181,780
1977	January	1,850		1,391	732	1,096	3,219	14,517
	February	1,856		1,321	705	999	3,025	14,443
	March	1,887		1,817	958	1,297	4,072	19,400
	April	1,907		1,405	818	1,059	3,282	15,523
	May	1,982		NA	NA	NA	NA	NA
	AVERAGE (5 months)	1,898	TOTAL** (4 months)	5,934	3,213	4,451	13,598	63,883

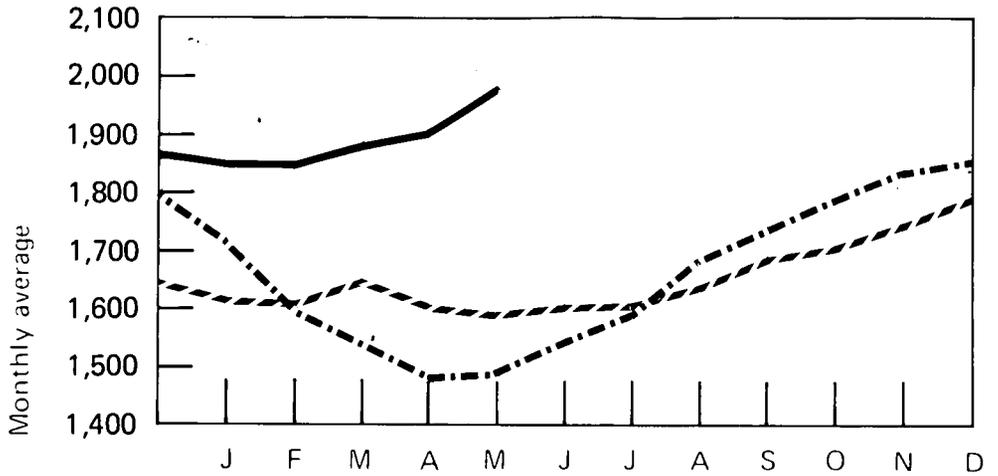
*Excludes service wells and stratigraphic and core tests.

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

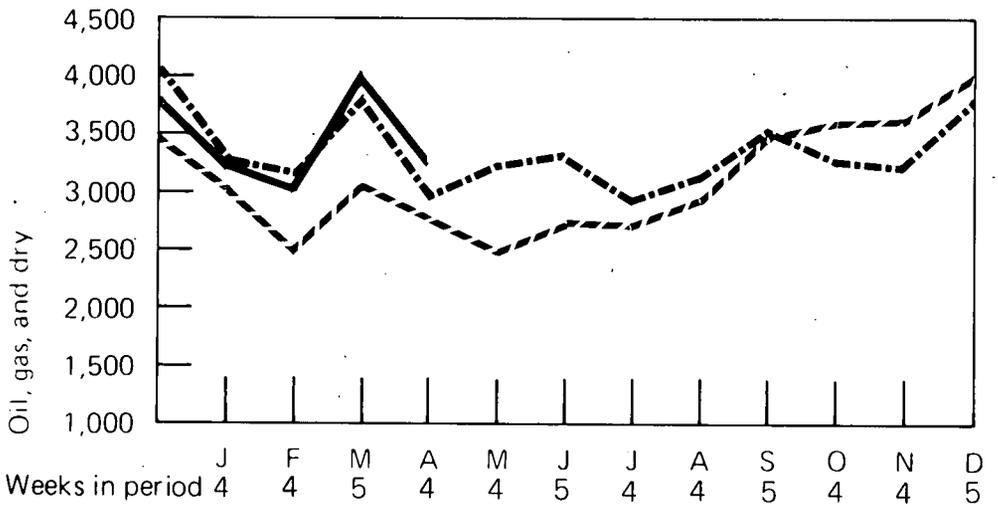
NA=Not available.

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

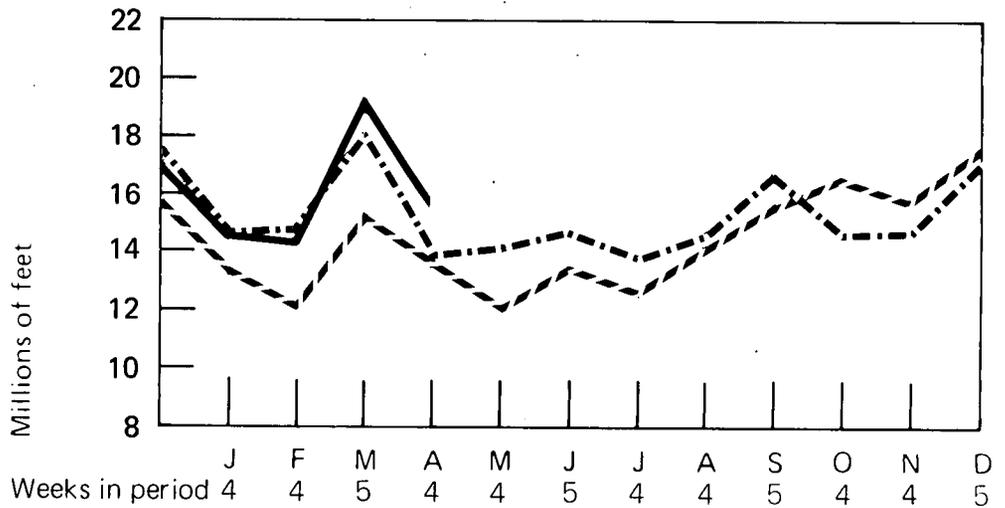
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled



- - - 1975
 - · - 1976
 ——— 1977

Oil and Gas Exploration and Development (Continued)

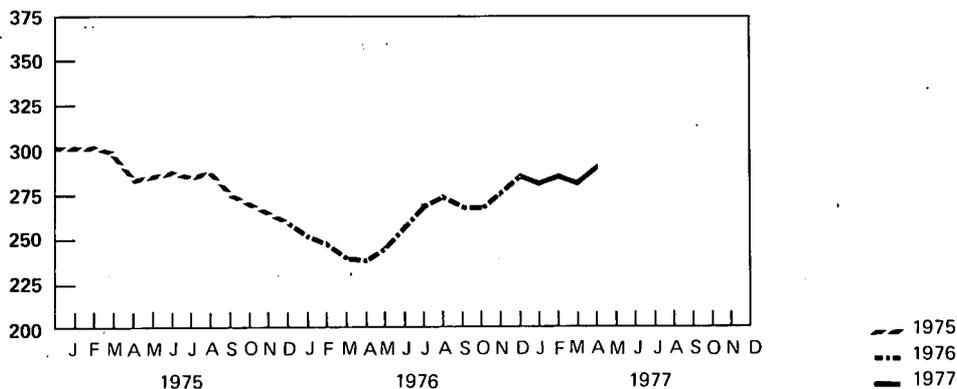
		Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore	Onshore	Total
		Monthly average			Monthly average		
1972	Year	12	239	251	10,306	9,333	19,639
1973	Year	23	227	250	21,579	10,597	32,175
1974	Year	31	274	305	28,482	13,219	41,701
1975	Year	30	254	284	25,773	12,558	38,331
1976	Year	*24	*237	*261	NA	NA	NA
1975	January	27	274	301			
	February	24	278	302			
	March	23	276	299			
	April	23	260	283			
	May	32	254	286			
	June	38	251	289			
	July	37	249	286			
	August	40	249	289			
	September	40	234	274			
	October	29	241	270			
	November	27	238	265			
	December	26	233	259			
1976	January	20	232	252			
	February	17	232	249			
	March	18	222	240			
	April	17	221	238			
	May	21	226	247			
	June	29	229	258			
	July	30	240	270			
	August	33	242	275			
	September	28	240	268			
	October	21	246	267			
	November	25	250	275			
	December	27	259	286			
1977	January	26	254	280			
	February	27	259	286			
	March	22	260	282			
	April	26	266	292			
	AVERAGE (4 months)	25	260	285			

*Preliminary.

NA=Not available.

Source: Society of Exploration Geophysicists.

Total Seismic Crews



Motor Gasoline

The national average selling price for regular gasoline at full service retail outlets increased 0.9 cent in April to 62.2 cents per gallon. This was the largest monthly increase since July 1975. The average price that full service retailers paid for regular gasoline advanced by a smaller amount (0.6) to 54.1 cents per gallon, increasing the dealer margin by 0.3 cent to 8.1 cents per gallon, the highest level in more than a year. The average self service retail price for regular advanced 1.2 cents in April to 58.9 cents per gallon.

The average selling price for premium gasoline at full service retail outlets increased in April by 0.8 cent to 67.6 cents per gallon. The retail price for unleaded gasoline at full service outlets was 66.1 cents per gallon, 0.7 cent above the price in March.

Diesel Fuel

The average selling price for diesel fuel sold at truckstops advanced 0.6 cent in April to 56.6 cents per gallon. The average price for diesel fuel sold at service stations increased by a smaller amount (0.3 cent) to 56.7 cents per gallon.

Heating Oil

The national average selling price for heating oil sold to residential customers was 45.8 cents per gallon in March, 0.5 cent above the February price.

Residual Fuel

The average No. 6 residual fuel retail price increased 18 cents in March to \$13.87 per barrel.

Crude Oil

Upper tier ceiling prices, which were rolled back 20 cents per barrel effective January 1, 1977, were rolled back an additional 45 cents per barrel effective March 1, 1977. The average price paid by first purchasers for upper tier crude oil during March (\$11.03 per barrel) reflects, in part, these mandatory rollbacks. The domestic average first purchase price of crude oil was \$8.45 per barrel in March, a drop of 12 cents from the February price.

The preliminary average refiner acquisition cost of domestic crude oil in March was \$9.27 per barrel, 3 cents above the revised price in February.

The preliminary average price that refiners paid for imported crude oil was \$14.55 per barrel, 5 cents above the price in February.

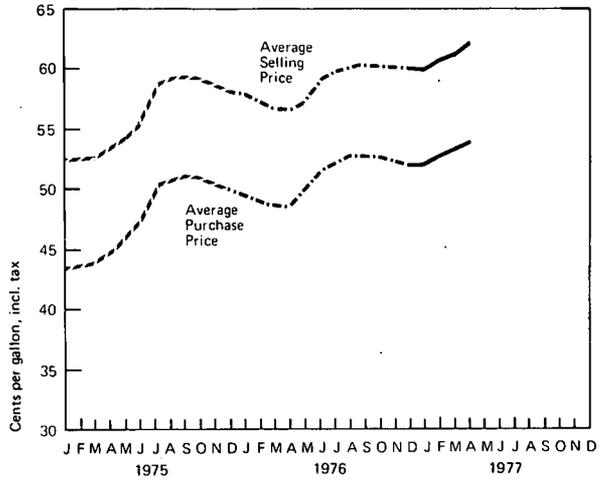
The preliminary average composite cost of crude oil purchased by refiners advanced by 10 cents to \$11.90 per barrel.

Motor Gasoline

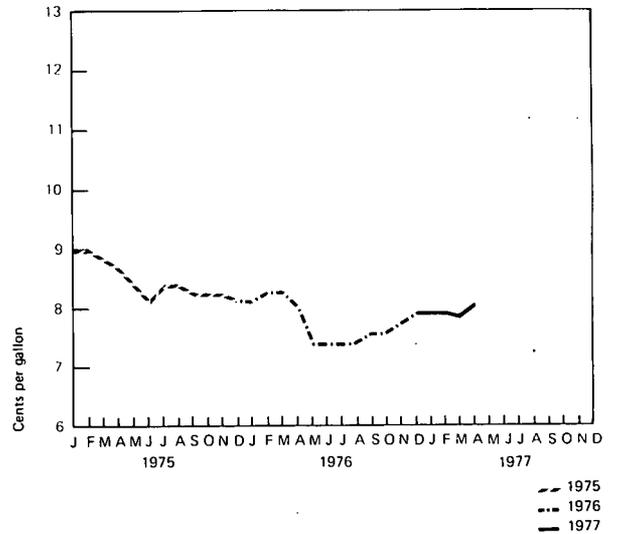
Regular Gasoline at Full Service Retail Outlets

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

Average Retail Prices For Regular



Average Margins For Regular



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

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

Regular Gasoline at Self Service Retail Outlets

		Average Selling Price	Average Dealer Margin
		Cents per gallon, including tax	
1975	November	55.4	5.5
	December	54.9	5.3
1976	January	54.7	5.4
	February	53.8	5.4
	March	53.2	5.3
	April	53.2	4.9
	May	54.4	4.5
	June	56.3	4.8
	July	56.6	4.6
	August	56.7	4.4
	September	56.5	4.3
	October	56.5	4.4
	November	56.4	4.5
	December	56.1	4.5
1977	January	56.2	4.5
	February	57.1	4.4
	March	57.7	4.4
	April	58.9	4.2

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

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

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

NA=Not available.

Source: Lundberg Survey, Inc.

Average Selling Prices and Margins for Major and Independent Retail Dealers – April 1977

Regular Gasoline—Full Service

	Cents per gallon, including tax	
	Selling Price	Margin
Major	63.1	8.3
Independent	57.8	6.6
National Average	62.2	8.1

Regular Gasoline—Self Service

	Selling Price	Margin
Major	59.1	4.1
Independent	56.6	5.2
National Average	58.4	4.4

Premium Gasoline—Selling Prices

	Full Service	Self Service
Major	68.3	65.2
Independent	62.5	61.4
National Average	67.6	64.1

Unleaded Gasoline—Full Service Selling Prices

	Regular	Premium
Major	66.7	71.7
Independent	60.7	NA
National Average	66.1	71.7

Source: Lundberg Survey, Inc.

Average Regional Selling Prices and Dealer Margins for Regular Gasoline at Full Service Outlets – April 1977

Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	60.3	5.9
1B Mid-Atlantic	63.3	7.1
1C Lower Atlantic	62.1	8.0
2 Mid-Continent	62.2	7.8
3 Gulf Coast	60.5	9.9
4 Rocky Mountain	62.8	9.7
5 West Coast	63.7	8.4
National Average	62.2	8.1

Source: Lundberg Survey, Inc.

**Retail Gasoline Price Changes for 21 Leading Refiners During April 1977
and Entitlement Position* During March**

Company	Effective Date of Change	Amount of Change Cents per gallon	Entitlement Position (March)
Amerada Hess		None	Seller
American Petrofina		None	Buyer
Ashland	April 20	1.00 Baltimore 0.50 All other areas	Seller
Atlantic Richfield	April 20	1.00 All PADS, all grades	Seller
B.P.	April 7	0.60 All PADS, all grades	Seller
Cities Service	April 24	0.80 All PADS, all grades	Buyer
Champlin	April 13	1.70 PAD I regular, premium 1.00 PAD I, unleaded 1.00 PADS II, IV, all grades 0.50 PAD III, all grades	Buyer
Continental	April 12	1.00 All PADS, all grades	Buyer
Exxon	April 17	0.80 PADS I, II, III, all grades	Buyer
Getty Refining and Marketing Company	April 14 April 23	1.00 PAD I, all grades 0.50 PADS II, III, IV, all grades	Buyer
Gulf	April 7	1.00 PAD V, premium, leaded regular, unleaded regular	Buyer
	April 13	0.50 PADS I, II, III, IV, premium, leaded regular, unleaded regular	
	April 22	1.00 PADS I, II, III, IV, premium, leaded regular, unleaded regular	
Kerr McGee	April 1	0.50 PAD III, regular, premium, unleaded 1.00 PAD II, regular, premium, unleaded	Buyer
Mobil	April 15	1.50 PADS I, II, premium 1.00 PADS I, II, regular, unleaded 0.50 PAD III, premium 1.00 PAD IV, premium 0.50 PAD IV, regular, unleaded -0.50 PAD V, all grades	Buyer
Phillips	April 6 April 14 April 26	1.00 All PADS, unbranded premium 1.00 PADS I, II, III, unleaded 1.00 PAD IV, all grades	Buyer
Shell	April 15	0.80 PAD II, all grades	Buyer
Standard Oil of California	April 15	1.57 PAD II, unleaded	Seller
Standard Oil of Indiana	April 1 April 12	1.00 PAD IV, leaded premium 1.00 All PADS, all grades	Buyer
Standard Oil of Ohio	April 7	0.60 All PADS, all grades	Seller
Sun	April 20	1.00 PADS II, III, all grades	Buyer
Texaco	April 1 April 14 April 28	1.00 PADS III, IV, all grades 0.70 All PADS, all grades 1.00 PADS I, II, III, all grades	Buyer
Union Oil of California	April 7 April 22 April 29	1.00 PADS I, II, III, unleaded regular, premium 1.00 PAD IV, all grades 1.00 PAD V, all grades	Buyer

*See Definitions.
Source: FEA.

Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners

		Northeast	Mid-Atlantic	Southeast	Central	Western	Southwest	Pacific	National Average
Cents per gallon, excluding tax									
1974	AVERAGE								26.7
1975	January	27.8	27.8	27.4	28.2	28.5	27.2	27.8	27.8
	February	28.4	28.2	27.8	28.7	28.3	27.6	27.5	28.1
	March	28.9	28.8	28.4	29.1	29.0	27.8	28.0	28.6
	April	29.6	29.9	29.4	30.4	29.8	29.2	29.8	29.7
	May	30.9	31.0	30.5	31.6	31.2	30.4	31.0	30.9
	June	32.4	32.5	32.0	33.1	32.6	31.6	32.6	32.4
	July	34.4	34.6	33.9	34.9	34.5	33.4	33.7	34.2
	August	35.3	35.1	34.6	35.6	35.2	34.1	34.5	34.9
	September	35.2	35.1	34.5	35.4	35.0	34.1	34.5	34.8
	October	34.3	34.6	34.0	34.9	34.3	33.8	34.2	34.3
	November	34.1	34.3	33.9	34.6	34.3	33.6	34.0	34.1
	December	33.7	34.1	33.6	34.3	33.8	33.3	33.7	33.8
	AVERAGE								32.0
1976	January	33.3	33.9	33.2	34.0	33.2	33.1	33.5	33.5
	February	33.0	33.4	32.6	33.8	32.6	32.9	33.5	33.1
	March	32.4	33.0	31.8	33.4	32.5	32.6	33.2	32.7
	April	33.0	33.5	32.3	33.9	33.2	33.2	33.2	33.2
	May	34.4	34.9	33.6	35.3	34.8	34.8	34.7	34.6
	June	35.7	35.9	34.8	36.5	36.1	35.9	35.5	35.8
	July	36.1	36.3	35.4	36.8	36.3	36.3	36.3	36.2
	August	36.5	36.6	35.7	37.3	36.4	36.5	36.7	36.5
	September	35.8	36.1	35.3	36.9	35.9	36.6	36.5	36.2
	October	35.7	35.8	35.2	36.7	35.9	36.4	36.5	36.0
	November	34.9	35.1	34.4	36.3	35.3	36.3	36.5	35.6
	December	34.9	35.1	34.4	36.3	35.3	36.3	36.5	35.6
	AVERAGE								35.0
1977	January	35.6	35.8	35.2	36.9	35.9	36.7	37.0	36.2
	February	36.2	36.5	35.8	37.5	36.7	37.5	38.1	36.9
	March	37.0	37.3	36.7	38.2	37.0	38.0	38.1	37.5
	April	37.6	37.8	37.2	39.0	37.8	38.9	38.8	38.2

Source: FEA.

Diesel Fuel

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

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

*See Explanatory Note 12.

NA=Not available.

Source: Lundberg Survey, Inc.

Average Selling Prices and Margins for Major and Independent No. 2 Diesel Fuel Retail Dealers – April 1977

Cents per gallon, including tax

Truckstops

	Selling Price	Margin
Major	57.5	5.8
Independent	55.2	7.2
National Average	56.6	6.5

Service Stations

	Selling Price	Margin
Major	58.0	5.8
Independent	55.6	7.1
National Average	56.7	6.7

Source: Lundberg Survey, Inc.

No. 1 Diesel Fuel

Wholesale Retail
Cents per gallon, excluding tax

1975	July	30.1	37.7
	August	30.8	38.2
	September	31.5	36.9
	October	33.1	35.4
	November	33.3	35.0
	December	34.2	35.5
1976	January	33.8	37.1
	February	33.6	35.3
	March	33.9	34.8
	April	34.2	35.4
	May	34.5	37.5
	June	34.7	37.9
	July	35.0	38.1
	August	35.9	38.2
	September	35.3	37.7
	October	36.3	36.4
	November	35.7	36.9
	December	35.5	36.7
1977	January	37.1	36.6
	February*	38.4	39.2

*Preliminary.

Note: Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and -operated retail dealers sell to consumers.

Source: FEA.

Heating Oil

Residential Heating Oil Prices

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

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

NA=Not available.

Sources: 1974 through February 1976—FEA No. 2 heating oil monthly price adjustment report; June 1976 forward—FEA No. 2 heating oil supply/price monitoring report.

Residential Heating Oil Prices by Region

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

NA=Not available.

Note: Data for West South Central Region are based on a sample of less than four reporting firms.

Sources: January through December 1975—FEA No. 2 heating oil monthly price adjustment report; January 1976 forward—FEA No. 2 heating oil supply/price monitoring report.

Average Distributor Purchase Prices for Heating Oil by Region

		New England	Mid-Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast
Cents per gallon										
1975	January	30.3	29.7	28.5	27.2	28.8	27.5	NA	28.5	29.7
	February	29.6	29.3	28.6	27.2	28.8	27.3	NA	29.4	28.5
	March	29.5	29.3	29.1	28.1	26.8	28.1	NA	NA	27.6
	April	29.4	29.5	29.7	28.3	27.8	29.5	NA	29.0	28.5
	May	30.5	30.0	30.0	30.0	28.8	29.4	NA	30.9	28.7
	June	30.4	30.2	30.6	30.5	NA	30.7	NA	31.8	29.0
	July	30.7	30.1	29.9	31.6	28.8	31.4	NA	NA	30.4
	August	31.6	30.8	30.9	31.2	29.8	30.2	NA	31.6	32.8
	September	31.4	30.9	30.7	30.6	29.8	30.6	NA	31.9	31.4
	October	32.0	31.9	31.3	31.5	31.1	31.4	NA	34.4	32.5
	November	32.5	31.7	32.0	32.1	NA	32.0	NA	34.1	32.3
	December	32.9	32.7	31.8	32.0	29.4	31.4	NA	33.9	32.8
1976	January	32.5	32.5	31.9	32.3	NA	32.3	NA	33.6	32.9
	February	32.8	32.9	31.6	31.9	31.3	32.1	NA	NA	31.1

NA=Not available.

Source: FEA No. 2 heating oil monthly price adjustment report.

Residual Fuel Oil

RESIDUAL FUEL OIL (Dollars per barrel)

		NO. 5		NO. 6						BUNKER "C"		TOTAL		
				0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Total				
		Whole-sale	Retail	Whole-sale	Retail	Whole-sale	Retail	Whole-sale	Retail	Whole-sale	Retail	Whole-sale	Retail	
1975	July	10.19	11.28	11.57	12.86	10.90	12.05	10.25	10.59	10.66	11.70	7.88	10.54	11.27
	August	10.19	11.04	11.53	13.22	10.85	12.34	9.72	10.53	10.49	11.89	8.76	10.43	11.32
	September	10.58	11.07	11.75	12.94	10.63	11.65	9.87	10.52	10.48	11.52	8.93	10.29	11.09
	October	10.15	11.12	11.50	12.98	10.37	12.09	9.75	10.38	10.30	11.69	8.88	10.31	11.13
	November	10.90	11.27	12.21	12.96	10.33	12.03	9.90	10.34	10.47	11.68	9.01	10.43	11.24
	December	10.83	11.64	11.89	12.87	10.37	11.83	9.65	10.06	10.24	11.42	9.07	10.15	10.97
1976	January	11.08	11.63	12.13	12.39	10.62	11.61	9.58	10.23	10.53	11.35	8.75	10.35	11.02
	February	10.55	11.57	12.42	12.78	10.87	11.84	9.70	10.35	10.73	11.52	8.53	10.27	11.15
	March	10.41	11.89	12.36	12.81	11.05	11.80	9.56	10.21	10.74	11.43	8.59	10.35	11.12
	April	10.21	11.58	11.44	12.34	10.86	11.77	9.53	10.28	10.38	11.43	8.66	10.12	11.02
	May	9.87	11.49	11.71	11.87	10.80	11.40	9.47	9.89	10.11	10.95	8.75	10.65	10.63
	June	9.91	11.23	11.71	12.24	10.33	11.36	9.73	10.03	10.12	11.04	8.57	10.10	10.70
	July	10.06	11.70	11.71	12.12	10.22	11.36	9.83	10.04	10.25	11.04	9.23	10.34	10.74
	August	9.78	11.48	11.67	12.79	10.45	11.46	9.61	10.22	10.20	11.20	8.93	9.98	10.82
	September	10.36	11.37	11.75	12.50	10.33	11.55	10.04	10.28	10.35	11.30	9.22	10.05	10.91
	October	10.25	11.64	11.86	12.94	11.04	12.12	10.00	10.73	10.75	11.82	9.57	10.81	11.43
	November	10.84	12.04	12.33	13.15	11.62	12.21	10.40	10.98	11.16	11.95	10.31	10.83	11.61
	December	11.49	12.64	13.16	13.32	11.74	12.76	11.04	11.48	11.87	12.44	9.95	11.24	11.94
1977	January	12.34	13.39	14.06	14.34	12.74	13.68	11.51	12.32	12.43	13.32	10.34	11.89	12.94
	February	R12.67	13.66	R14.10	R14.60	12.85	14.07	12.05	12.74	R12.66	R13.69	R10.18	12.00	R13.23
	March	12.15	13.81	14.07	14.69	13.54	14.53	11.71	12.70	12.74	13.87	10.75	11.74	13.37

*Preliminary.

R=Revised data.

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

Source: FEA mandatory survey of refiners and large resellers.

Aviation Fuels

AVIATION FUELS (Cents per gallon)

		Aviation Gasoline		Naphtha-Type*	Kerosene-Type	
		Wholesale	Retail	Retail	Wholesale	Retail
1975	July	40.6	40.6	31.4	29.8	29.2
	August	41.3	42.1	30.8	32.1	29.5
	September	41.2	39.9	30.3	31.5	29.6
	October	41.1	41.2	30.2	31.7	30.0
	November	39.7	42.1	30.6	31.6	30.2
	December	40.9	40.9	30.7	31.9	30.5
1976	January	41.4	41.2	31.0	30.6	31.3
	February	41.2	42.0	31.1	31.1	31.2
	March	41.1	41.9	30.9	31.2	30.7
	April	41.2	42.5	30.5	31.9	30.5
	May	42.1	43.1	30.6	33.0	30.2
	June	42.6	42.3	31.5	32.1	30.3
	July	43.6	44.2	31.3	32.9	30.8
	August	43.7	44.1	31.7	32.1	31.1
	September	43.6	44.7	32.1	32.5	31.4
	October	43.6	43.8	32.4	33.5	31.9
	November	43.4	43.9	32.7	33.4	32.4
	December	43.5	43.7	32.7	34.7	32.2
1977	January	43.4	44.1	33.4	34.6	33.2
	February	44.7	45.0	34.0	37.1	34.1
	March**	45.0	45.7	34.4	35.9	34.6

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

**Preliminary.

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

Source: FEA mandatory survey of refiners and large resellers.

Percentages of Domestic Production Sold at the Wellhead

		Old Oil	New Oil	Released	Stripper
1975	January*	58	19	10	12
	February*	61	17	9	12
	March	60	18	10	12
	April	61	17	9	12
	May	62	17	8	13
	June	63	16	8	13
	July	62	16	8	14
	August	63	16	7	14
	September*	63	15	7	14
	October	63	16	7	14
	November	64	15	7	14
	December	63	16	7	14
	AVERAGE		62	16	8
1976	January	54	21	10	15
		Lower Tier	Upper Tier		
	February	56	30	—	14
	March	57	29	—	14
	April	57	29	—	14
	May	57	29	—	14
	June	56	29	—	15
	July	56	30	—	14
	August	56	30	—	14
		Lower Tier	Upper Tier		Stripper
	September**	53	34		13
	October**	53	35		13
	November**	50	37		13
December**	50	36		14	
1977	January**	51	37		13

*Totals do not add to 100 due to rounding.

**Preliminary.

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

Crude Oil (Continued)

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

*See Definitions.
Source: FEA.

Refiner Acquisition Cost of Crude Petroleum*

		Domestic	Imported	Composite
Dollars per barrel				
1974	AVERAGE	7.18	12.52	9.07
1975	January	7.78	12.77	9.48
	February	8.29	13.05	10.09
	March	8.38	13.28	9.91
	April	8.23	13.26	9.83
	May	8.33	13.27	9.79
	June	8.33	14.15	10.33
	July	8.37	14.03	10.57
	August	8.48	14.25	10.81
	September	8.49	14.04	10.79
	October	8.68	14.66	10.85
	November	8.67	15.04	11.05
	December	8.66	14.81	10.98
	AVERAGE	8.39	13.93	10.38
1976	January	9.14	13.27	10.76
	February	8.67	13.26	10.54
	March	8.48	13.51	10.44
	April	8.66	13.39	10.63
	May	8.62	13.41	10.66
	June	8.60	13.48	10.88
	July	8.72	13.51	10.97
	August	8.65	13.58	10.78
	September	8.95	13.47	11.08
	October	9.13	13.49	11.20
	November	9.23	13.58	11.26
	December	9.25	13.71	11.32
	AVERAGE	8.84	13.48	10.89
1977	January	9.23	14.11	11.64
	February	R9.24	14.50	11.80
	March**	9.27	14.55	11.90

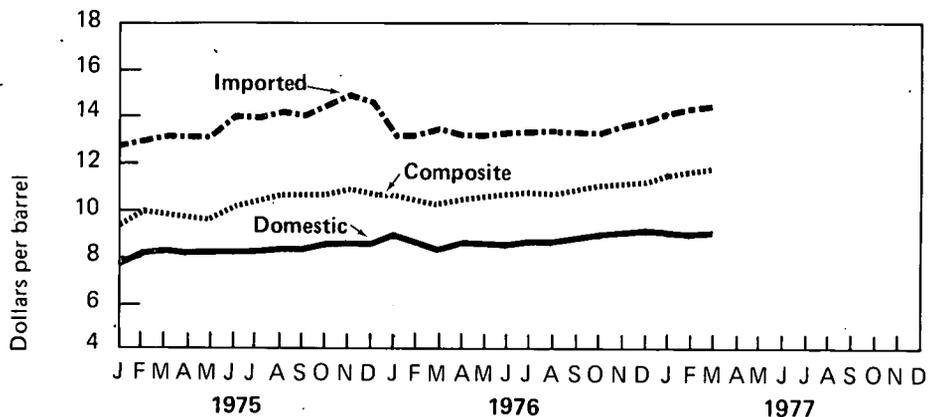
*See Explanatory Note 14.

**Preliminary data.

R=Revised data.

Sources: 1974 through January 1976—FEA Monthly Cost Allocation Report; February forward—FEA Refiners' Monthly Cost Allocation Report.

Crude Oil Refiner Acquisition Cost



Crude Oil (Continued)

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

		Algeria	Canada	Indonesia	Iran	Nigeria	Saudi Arabia	U.A. Emirates	Venezuela
		Dollars per barrel							
1975	January	12.72	12.43	13.30	12.11	12.07	12.07	13.14	11.37
	February	12.11	12.15	13.52	11.86	12.18	11.94	12.67	11.56
	March	12.46	12.79	13.94	12.08	12.56	11.78	13.40	11.66
	April	12.36	12.95	13.71	12.34	12.46	12.16	12.55	11.61
	May	12.41	12.08	13.71	11.93	12.34	12.27	13.29	11.54
	June	12.37	11.90	13.73	12.51	12.49	11.93	12.48	11.51
	July	12.69	12.15	13.98	11.83	12.37	12.08	12.78	11.46
	August	12.68	12.27	13.85	12.17	12.32	12.10	12.60	11.44
	September	12.52	12.63	13.75	11.97	12.42	12.17	12.49	11.42
	October	13.45	13.02	14.00	12.27	13.18	12.64	12.85	12.08
	November	13.28	14.00	13.81	12.47	13.37	12.58	13.23	12.38
	December	13.46	13.96	13.92	13.01	13.57	12.93	13.21	12.31
1976	January	13.56	12.95	13.89	13.01	13.61	13.18	13.50	11.60
	February	13.57	13.24	13.94	12.87	13.52	13.21	13.36	12.09
	March	13.83	13.30	13.94	12.77	13.62	13.18	13.37	11.71
	April	13.73	13.61	13.78	12.91	13.60	13.11	13.18	11.95
	May	13.47	13.62	13.84	12.82	13.62	13.05	13.39	11.61
	June	13.75	14.19	13.84	13.00	13.78	13.14	13.09	11.55
	July	13.77	13.79	13.80	12.76	13.81	13.02	13.45	11.44
	August	13.91	13.78	13.78	13.09	13.87	13.03	13.23	11.77
	September	14.03	13.70	13.80	12.78	13.82	12.87	13.44	11.98
	October	13.81	13.71	13.84	12.73	13.99	12.87	13.22	11.84
	November	13.84	13.59	13.77	12.58	13.95	13.01	13.18	12.01
	December	14.14	13.52	13.75	12.69	14.11	13.02	13.29	12.19
1977	January	14.80	13.92	14.42	13.16	14.97	13.22	13.56	13.29
	February	15.18	13.74	14.57	13.56	15.12	13.32	13.46	13.76
	March	15.08	14.34	14.64	13.94	15.13	13.50	13.80	13.41

*See Explanatory Note 15.
Source: FEA.

Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate*	Motor Gasoline	Aviation Jet Fuel**	Other Products	Total
Millions of dollars						
1975	January	254	431	—	672	1,357
	February	300	418	—	790	1,508
	March	282	452	—	966	1,700
	April	302	485	—	807	1,594
	May	292	370	—	771	1,433
	June	284	266	—	785	1,334
	July	233	219	—	624	1,075
	August	280	344	—	583	1,208
	September	347	335	—	661	1,342
	October	338	245	—	673	1,255
	November	426	275	—	796	1,497
	December	446	211	—	826	1,483
1976	January	336	242	131	515	1,224
	February	279	336	145	456	1,216
	March	263	316	163	456	1,198
	April	237	398	180	524	1,339
	May	264	632	161	446	1,503
	June	—	628	135	349	1,112
	July	—	587	129	384	1,100
	August	—	679	125	352	1,156
	September	—	619	134	340	1,093
	October	—	733	151	372	1,256
	November	—	796	168	368	1,332
	December	—	723	139	317	1,179
1977	January	—	901	166	325	1,392
	February	—	1,038	187	303	1,528
	March***	—	860	171	307	1,338

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

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

***Preliminary.

Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES		
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
Cents per thousand cubic feet							
1975	January	30.4	104.0	35.8	67.8	70.9	71.2
	February	29.5	105.9	35.2	70.1	74.0	74.3
	March	33.5	102.5	38.8	70.4	77.7	77.8
	April	32.8	102.8	38.3	71.1	82.3	81.9
	May	34.7	100.6	39.8	71.1	83.7	82.8
	June	35.3	98.9	40.2	72.2	85.1	83.9
	July	36.7	101.1	41.7	73.9	84.6	83.6
	August	35.5	141.0	43.3	73.4	86.5	85.1
	September	36.5	141.1	44.4	72.8	85.9	84.7
	October	36.0	140.1	44.3	77.2	85.9	85.4
	November	36.5	162.5	46.7	77.8	86.9	86.6
	December	35.9	161.8	46.0	81.1	79.6	80.1
1976	January	38.6	164.0	48.6	87.5	88.7	89.2
	February	39.5	165.3	49.5	87.7	92.3	92.7
	March	39.5	164.5	49.7	86.4	89.8	90.2
	April	40.6	164.3	51.2	88.6	100.2	99.7
	May	42.4	165.1	52.5	86.9	98.3	97.6
	June	43.7	166.6	53.7	89.5	98.2	98.5
	July	43.6	168.4	53.2	94.3	101.8	101.1
	August	56.4	167.7	65.3	97.8	104.8	104.1
	September	68.5	183.7	77.7	103.5	92.5	94.1
	October	57.4	190.1	68.8	106.4	105.4	105.7
	November	52.6	182.4	63.3	112.9	106.1	106.9
	December	54.0	189.4	65.2	131.3	117.3	118.1

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

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

Source: Federal Power Commission.

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

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

*Prices are for FPC jurisdictional natural gas companies selling more than 1 billion cubic feet per year in interstate commerce.
Source: Federal Power Commission - Summary of Intrastate Natural Gas Prices.

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

		Cents per thousand cubic feet
1975	January	141.2
	February	144.7
	March	146.1
	April	150.6
	May	153.7
	June	155.7
	July	154.7
	August	155.4
	September	159.4
	October	160.6
	November	166.2
	December	170.2
1976	January	171.4
	February	175.2
	March	177.0
	April	178.4
	May	180.8
	June	183.2
	July	184.5
	August	185.8
	September	191.2
	October	195.0
	November	198.3
	December	208.3
	AVERAGE	185.8
1977	January	213.8
	February	217.0
	March	219.9
	April	223.7

Source: Bureau of Labor Statistics.

Utility Fossil Fuels

U.S. Average Delivered Prices of Coal at Utilities

		Contract	Spot
		Dollars per short ton	
1975	January	14.57	28.12
	February	15.71	25.93
	March	15.68	25.02
	April	15.88	24.52
	May	16.45	23.78
	June	16.40	23.36
	July	16.06	22.35
	August	16.65	22.39
	September	16.76	22.46
	October	16.72	22.52
	November	16.79	22.50
	December	16.90	22.40
1976	January	16.53	21.75
	February	17.04	21.23
	March	17.65	21.36
	April	17.76	21.43
	May	18.12	21.17
	June	18.05	20.88
	July	17.93	21.00
	August	18.19	21.35
	September	18.55	21.46
	October	18.49	21.28
	November	18.26	21.56
	December	18.15	21.49

Source: Federal Power Commission.

Utility Fossil Fuels (Continued)

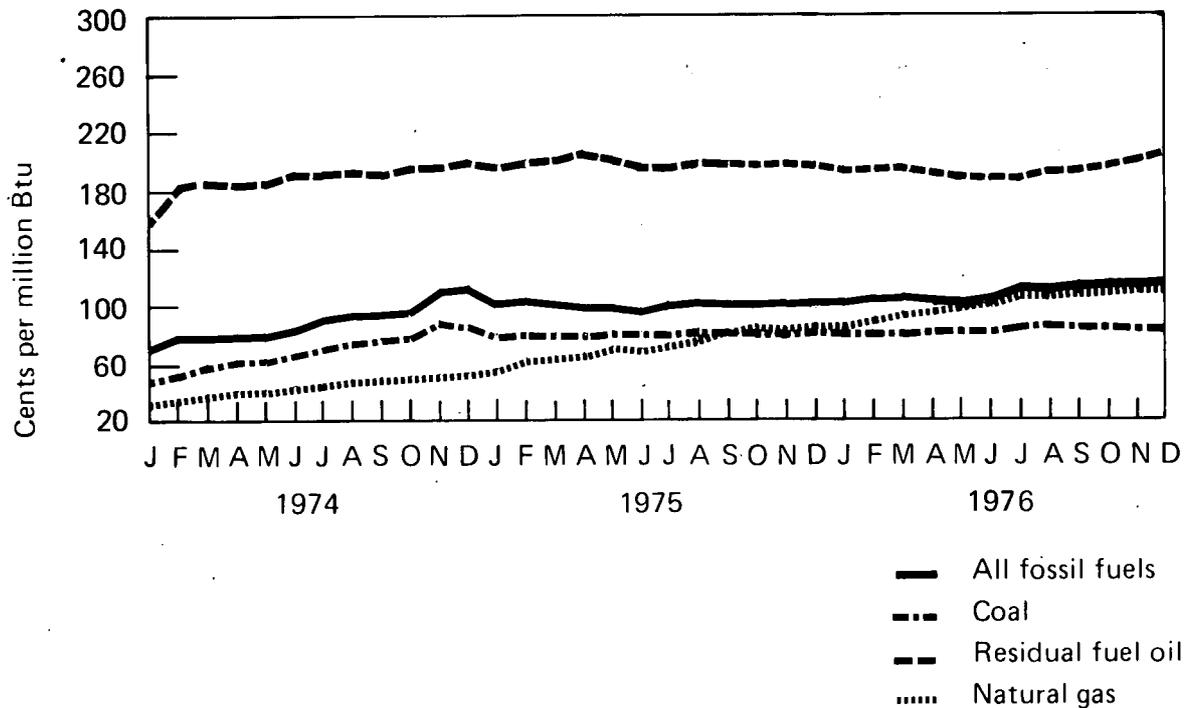
COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

All Fossil Fuels*

Region	1975			1976									
	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
	Cents per million Btu												
New England	177.6	181.3	184.6	182.3	184.3	174.6	174.2	172.4	173.7	176.6	184.0	186.9	197.0
Middle Atlantic	140.8	143.6	142.2	136.8	136.9	136.6	137.9	144.5	140.2	135.2	136.8	139.8	146.5
East North Central	92.6	89.9	90.0	88.3	91.3	92.1	93.8	100.9	97.6	95.2	95.8	96.8	94.4
West North Central	65.7	72.7	67.4	67.5	67.2	68.9	69.1	70.8	75.1	76.1	73.5	76.1	78.5
South Atlantic	121.3	122.0	122.7	118.3	119.2	120.0	118.9	130.7	126.2	125.6	127.2	129.1	134.7
East South Central	85.5	88.5	88.0	87.4	90.4	90.9	90.0	93.2	94.6	94.4	93.8	92.3	96.7
West South Central	82.8	88.0	88.2	91.7	93.5	94.6	98.6	101.2	102.9	102.4	101.6	106.2	106.9
Mountain	55.6	50.4	48.3	58.4	56.1	50.1	53.0	55.4	57.9	55.3	55.4	54.2	53.9
Pacific	222.7	214.0	206.5	211.3	196.2	180.3	177.2	180.2	195.7	195.9	199.1	214.5	218.9
NATIONAL AVG.	106.9	107.3	107.6	107.8	106.4	105.8	107.0	113.2	112.9	110.7	111.1	115.2	118.6

*See Explanatory Note 16.

National Average



Coal

Region	1975												1976													
	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
	Cents per million Btu																									
New England	120.8	124.2	122.7	119.4	124.8	127.0	122.3	127.9	127.8	125.4	125.6	125.6	124.4	120.8	124.2	122.7	119.4	124.8	127.0	122.3	127.9	127.8	125.4	125.6	125.6	124.4
Middle Atlantic	104.0	102.8	103.4	101.7	100.2	101.7	102.5	107.5	103.3	102.6	102.6	100.2	101.2	104.0	102.8	103.4	101.7	100.2	101.7	102.5	107.5	103.3	102.6	102.6	100.2	101.2
East North Central	85.7	83.1	83.1	82.7	85.0	86.8	86.6	92.4	90.9	89.8	89.2	90.2	90.7	85.7	83.1	83.1	82.7	85.0	86.8	86.6	92.4	90.9	89.8	89.2	90.2	90.7
West North Central	58.2	59.2	60.2	62.3	64.1	65.8	64.7	65.3	70.1	71.0	69.3	69.6	67.6	58.2	59.2	60.2	62.3	64.1	65.8	64.7	65.3	70.1	71.0	69.3	69.6	67.6
South Atlantic	100.1	98.3	99.2	99.7	100.8	100.8	100.7	104.4	103.5	103.4	105.4	103.8	104.1	100.1	98.3	99.2	99.7	100.8	100.8	100.7	104.4	103.5	103.4	105.4	103.8	104.1
East South Central	81.9	83.9	83.5	82.6	83.4	85.1	84.5	85.5	85.7	87.2	88.3	87.4	90.6	81.9	83.9	83.5	82.6	83.4	85.1	84.5	85.5	85.7	87.2	88.3	87.4	90.6
West South Central	24.0	26.4	26.4	26.4	26.4	26.4	27.3	32.4	36.4	42.4	43.7	51.5	56.6	24.0	26.4	26.4	26.4	26.4	26.4	27.3	32.4	36.4	42.4	43.7	51.5	56.6
Mountain	36.1	34.1	33.0	42.4	34.6	32.2	35.9	35.3	36.8	36.2	38.2	39.1	38.1	36.1	34.1	33.0	42.4	34.6	32.2	35.9	35.3	36.8	36.2	38.2	39.1	38.1
Pacific	58.9	72.7	76.0	74.5	75.5	75.7	75.2	75.8	75.7	75.7	76.0	75.6	74.5	58.9	72.7	76.0	74.5	75.5	75.7	75.2	75.8	75.7	75.7	76.0	75.6	74.5
NATIONAL AVG.	82.2	80.2	81.4	83.3	83.7	84.6	84.6	85.7	86.4	86.9	86.9	86.6	86.6	82.2	80.2	81.4	83.3	83.7	84.6	84.6	85.7	86.4	86.9	86.9	86.6	86.6

Residual Fuel Oil*

Region	1975												1976													
	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
	Cents per million Btu																									
New England	181.0	182.5	185.4	183.5	185.7	170.0	177.8	175.4	182.8	179.5	188.1	192.0	198.9	181.0	182.5	185.4	183.5	185.7	170.0	177.8	175.4	182.8	179.5	188.1	192.0	198.9
Middle Atlantic	191.6	191.3	179.9	191.8	197.1	190.3	187.3	184.3	189.3	190.0	199.5	200.5	208.3	191.6	191.3	179.9	191.8	197.1	190.3	187.3	184.3	189.3	190.0	199.5	200.5	208.3
East North Central	192.4	197.0	193.4	200.9	198.4	202.8	211.8	214.8	222.8	221.4	225.8	223.9	227.9	192.4	197.0	193.4	200.9	198.4	202.8	211.8	214.8	222.8	221.4	225.8	223.9	227.9
West North Central	157.1	173.1	162.2	153.4	153.0	145.6	148.8	151.3	148.4	149.6	156.8	167.9	191.5	157.1	173.1	162.2	153.4	153.0	145.6	148.8	151.3	148.4	149.6	156.8	167.9	191.5
South Atlantic	173.0	174.6	177.5	178.6	179.6	171.3	171.9	174.1	176.6	180.4	184.1	189.2	197.0	173.0	174.6	177.5	178.6	179.6	171.3	171.9	174.1	176.6	180.4	184.1	189.2	197.0
East South Central	171.4	172.8	173.7	174.3	176.0	170.9	166.9	171.0	171.3	163.8	166.6	167.8	166.4	171.4	172.8	173.7	174.3	176.0	170.9	166.9	171.0	171.3	163.8	166.6	167.8	166.4
West South Central	187.9	195.3	190.7	183.0	187.4	182.0	176.4	173.3	178.6	166.4	176.6	180.3	179.9	187.9	195.3	190.7	183.0	187.4	182.0	176.4	173.3	178.6	166.4	176.6	180.3	179.9
Mountain	202.3	206.8	203.5	205.0	220.8	206.4	212.4	217.2	224.8	213.0	221.9	209.3	181.2	202.3	206.8	203.5	205.0	220.8	206.4	212.4	217.2	224.8	213.0	221.9	209.3	181.2
Pacific	259.7	246.6	240.7	240.3	232.7	229.2	229.1	228.7	228.8	230.2	231.2	234.1	233.4	259.7	246.6	240.7	240.3	232.7	229.2	229.1	228.7	228.8	230.2	231.2	234.1	233.4
NATIONAL AVG.	198.1	194.1	195.4	197.7	196.7	188.1	187.4	187.0	191.8	109.8	198.8	203.5	207.5	198.1	194.1	195.4	197.7	196.7	188.1	187.4	187.0	191.8	109.8	198.8	203.5	207.5

Natural Gas**

Region	1975												1976													
	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
	Cents per million Btu																									
New England	157.7	166.1	166.1	151.6	134.5	144.0	153.7	154.1	153.9	154.4	155.4	185.2	186.1	157.7	166.1	166.1	151.6	134.5	144.0	153.7	154.1	153.9	154.4	155.4	185.2	186.1
Middle Atlantic	105.0	107.8	195.8	106.3	150.3	111.5	108.0	114.8	114.5	122.7	125.2	111.9	127.8	105.0	107.8	195.8	106.3	150.3	111.5	108.0	114.8	114.5	122.7	125.2	111.9	127.8
East North Central	136.8	126.8	124.4	125.0	127.7	135.3	139.8	138.2	147.8	148.4	153.0	168.8	188.9	136.8	126.8	124.4	125.0	127.7	135.3	139.8	138.2	147.8	148.4	153.0	168.8	188.9
West North Central	55.9	56.1	61.6	61.5	68.0	73.4	78.1	78.4	81.4	81.9	80.8	84.1	84.0	55.9	56.1	61.6	61.5	68.0	73.4	78.1	78.4	81.4	81.9	80.8	84.1	84.0
South Atlantic	80.8	75.1	82.0	75.5	78.2	84.0	83.1	88.7	82.9	88.3	89.3	89.1	90.4	80.8	75.1	82.0	75.5	78.2	84.0	83.1	88.7	82.9	88.3	89.3	89.1	90.4
East South Central	146.6	156.6	157.4	147.5	148.0	128.6	123.0	136.9	132.5	137.7	158.5	162.2	160.8	146.6	156.6	157.4	147.5	148.0	128.6	123.0	136.9	132.5	137.7	158.5	162.2	160.8
West South Central	80.3	83.5	87.3	90.8	92.3	94.0	98.1	100.4	101.6	101.8	101.0	106.6	106.8	80.3	83.5	87.3	90.8	92.3	94.0	98.1	100.4	101.6	101.8	101.0	106.6	106.8
Mountain	90.4	86.2	85.5	87.4	90.4	87.4	89.5	90.8	101.7	104.3	112.2	118.2	136.0	90.4	86.2	85.5	87.4	90.4	87.4	89.5	90.8	101.7	104.3	112.2	118.2	136.0
Pacific	151.1	141.2	151.6	149.5	152.6	147.3	147.6	146.6	155.3	166.5	169.0	177.5	188.7	151.1	141.2	151.6	149.5	152.6	147.3	147.6	146.6	155.3	166.5	169.0	177.5	188.7
NATIONAL AVG.	86.1	86.5	92.1	94.9	97.4	100.8	104.4	106.2	106.5	191.9	109.9	113.1	111.3	86.1	86.5	92.1	94.9	97.4	100.8	104.4	106.2	106.5	191.9	109.9	113.1	111.3

*See Explanatory Note 17.

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

Source: Federal Power Commission.

Petroleum Consumption

Preliminary 1976 data indicate that the 19 member countries of the International Energy Agency (IEA) consumed an average of 33.2 million barrels of oil a day in 1976 compared to 31.2 million barrels a day in 1975, an increase of 6 percent. The greatest percentage increases were in the 13 smaller IEA countries (see "Other IEA" in table) whose aggregate consumption grew from 3.4 million barrels a day in 1975 to an average of 3.8 million barrels a day in 1976, a gain of 11 percent. Consumption increases in the major industrialized countries ranged from 8 percent in West Germany to 4 percent in Canada. Italy showed no change, while consumption in the United Kingdom declined 2 percent.

First quarter 1977 figures for France (not a member of IEA) were 5 percent below the comparable period of 1976 and for Italy, were 3 percent lower. Petroleum use in Canada was up 1.2 percent.

Crude Oil Production

OPEC production rose by about 800,000 barrels a day from February to March, with the Arab and non-Arab sectors each accounting for approximately half of the increase. Iran had the largest single production increase (280,000 barrels per day). Ecuador's production dropped sharply (60,000 barrels per day) because of marketing problems. The figure given for Mexico's production (920,000 barrels per day) is lower than the widely publicized million-barrel production rate because it excludes production of natural gas liquids. Mexico's NGL production has been averaging around 95,000 barrels a day.

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
Thousands of barrels per day									
1973	AVG.	33,600	5,000	2,693	2,219	1,974	1,597	1,525	3,467
1974	AVG.	32,390	4,872	2,408	2,094	1,857	1,630	1,521	3,449
1975	Jan	34,100	4,729	2,183	2,190	1,981	1,691	1,792	3,741
	Feb	34,100	5,191	2,455	2,243	1,907	1,872	1,767	3,825
	Mar	31,600	4,918	2,234	1,952	1,731	1,558	1,558	3,285
	Apr	31,200	4,202	2,431	2,202	1,826	1,592	1,530	3,578
	May	28,600	4,041	2,253	1,640	1,482	1,474	1,174	3,058
	June	29,300	4,135	2,106	1,642	1,416	1,550	1,289	3,195
	July	29,400	4,265	2,319	1,491	1,322	1,537	1,234	2,961
	Aug	29,200	4,234	2,360	1,300	1,208	1,444	1,105	3,082
	Sept	30,400	4,543	2,309	1,785	1,501	1,474	1,465	3,338
	Oct	31,000	4,409	2,328	1,917	1,707	1,555	1,679	2,981
	Nov	31,000	4,747	2,361	2,077	1,723	1,577	1,448	3,423
	Dec	35,100	5,447	2,502	2,658	1,821	1,880	1,600	3,863
	AVG.	31,235	4,568	2,319	1,925	1,633	1,594	1,468	3,382
1976	Jan	35,100	4,941	2,459	2,432	1,679	1,784	1,748	3,943
	Feb	34,400	5,246	2,490	2,492	1,865	1,754	1,713	3,991
	Mar	34,300	5,165	2,742	2,372	1,879	1,747	1,621	3,907
	Apr	31,500	4,526	2,332	2,117	1,716	1,518	1,409	3,457
	May	29,900	4,218	2,314	1,796	1,418	1,509	1,238	3,226
	June	31,300	4,429	2,388	1,604	1,417	1,560	1,208	3,459
	July	31,100	4,416	2,624	1,624	1,346	1,531	1,247	3,323
	Aug	31,100	4,461	2,514	1,668	1,272	1,577	1,273	3,395
	Sept	32,200	4,517	2,521	1,966	1,478	1,515	1,562	3,806
	Oct	32,300	4,523	2,391	1,908	1,544	1,560	1,450	3,780
	Nov	35,900	5,160	2,700	2,206	R1,750	1,822	1,390	4,233
	Dec	39,100	5,846	2,571	2,672	R1,869	1,996	1,749	4,593
	AVG.	33,180	4,786	2,504	2,073	R1,605	1,656	1,467	3,758
1977	Jan	NA	5,252	R2,388	2,487	R1,826	R1,794	1,630	NA
	Feb	NA	5,576	R2,441	2,324	1,830	R1,911	1,783	NA
	Mar	NA	NA	NA	2,092	NA	1,660	1,516	NA
	AVG.	NA	5,406	R2,413	2,300	R1,828	1,784	1,638	NA
	(Year to date)								

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

**Excludes liquefied petroleum gases and condensates.

***Not a member of IEA.

†Principal products only.

††Excludes the United States.

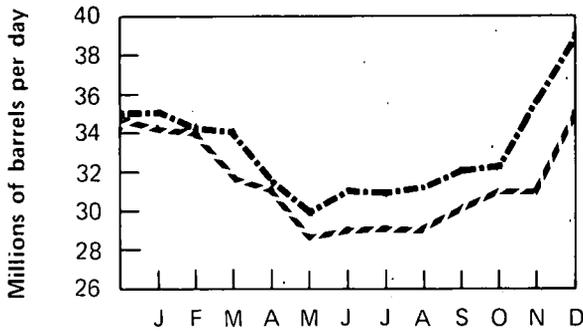
NA=Not available.

R=Revised data.

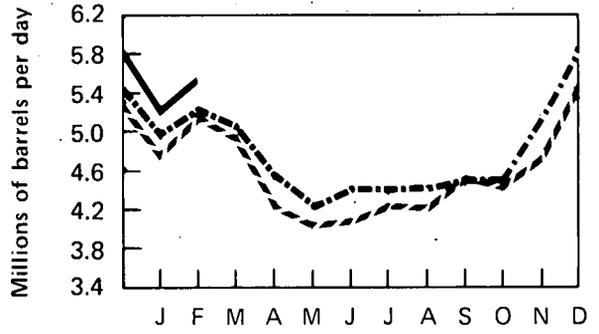
Note: All Total IEA, Other IEA, and recent figures are estimates.

Source: Central Intelligence Agency.

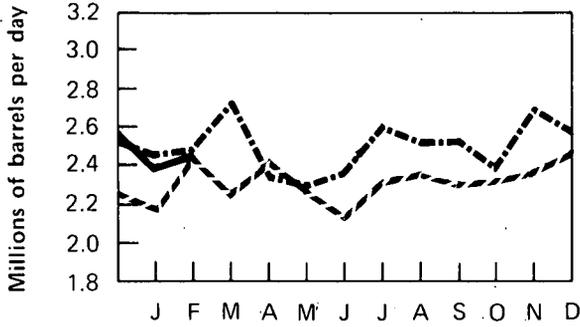
Totals IEA



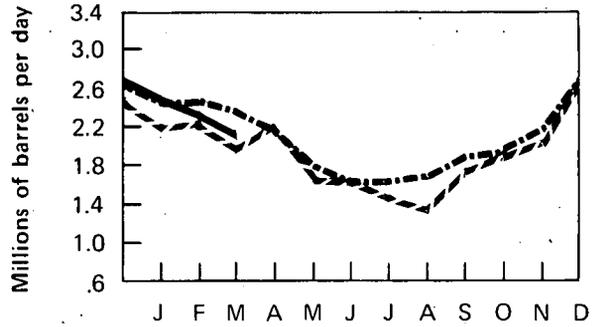
Japan*



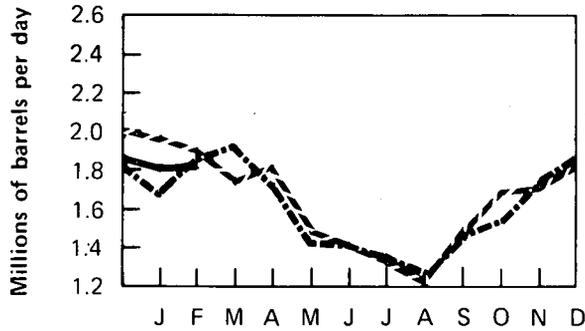
West Germany



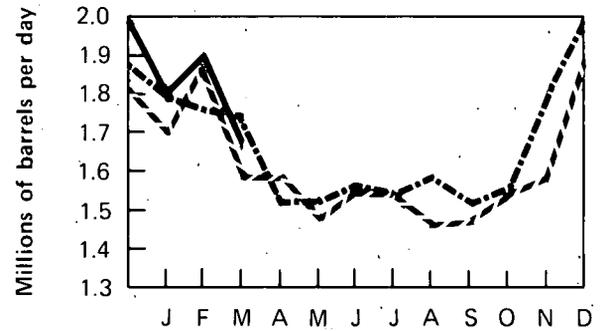
France**



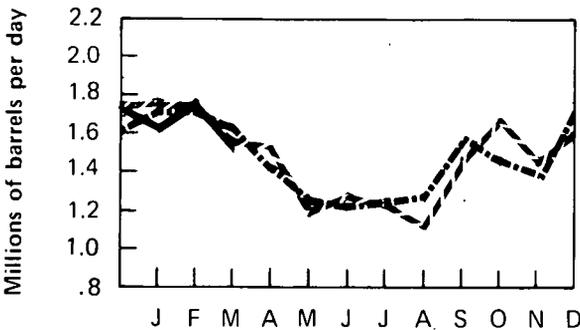
United Kingdom



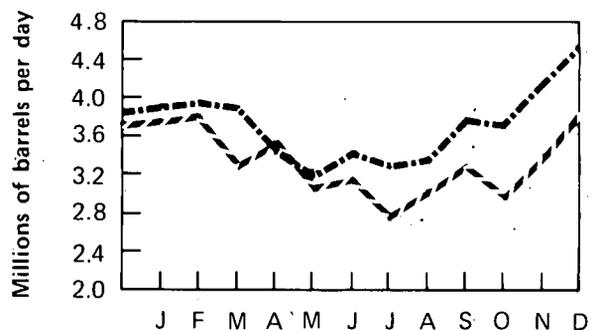
Canada



Italy***



Other IEA†



* Excludes liquefied petroleum gases and condensates.

** Not a member of IEA.

*** Principal products only.

† Excludes the United States.

--- 1975
 - - - 1976
 ——— 1977

Crude Oil Production

Crude Oil Production for Major Petroleum Exporting Countries – March 1977

Country	Production						Production Capacity	Production Shut in
	1972 Year	1973 Year	1974 Year	1975 Year	1976 Year	1977 March**	March	March
Thousands of barrels per day								Percent
Algeria	1,040	1,070	960	960	990	1,000	1,000	0
Iraq	1,465	2,020	1,970	2,260	R2,280	2,350	3,000	21.7
Kuwait*	3,283	3,020	2,545	2,085	2,150	R1,900	3,500	45.7
Libya	2,239	2,175	1,520	1,480	R1,930	2,210	2,500	11.6
Qatar	482	570	520	440	490	490	700	30.0
Saudi Arabia*	6,016	7,595	8,480	7,075	8,580	9,860	11,500	14.3
United Arab Emirates	1,202	1,535	1,680	1,665	1,940	2,020	2,380	15.1
Subtotal: Arab OPEC	15,727	17,985	17,675	15,965	R18,360	19,830	24,580	19.3
Ecuador	78	210	175	160	190	160	225	28.9
Gabon	125	150	200	225	220	220	250	12.0
Indonesia	1,080	1,340	1,375	1,305	R1,500	1,720	1,800	4.4
Iran	5,023	5,860	6,020	5,350	5,880	6,280	6,700	6.3
Nigeria	1,815	2,055	2,255	1,785	2,070	2,260	2,300	1.7
Venezuela	3,219	3,365	2,975	2,345	2,290	2,360	2,600	9.2
Subtotal: Non-Arab OPEC	11,340	12,980	13,000	11,170	R12,150	13,000	13,875	6.3
TOTAL OPEC	27,067	30,965	30,675	27,135	R30,510	32,830	38,455	14.6
Canada	1,540	1,800	1,695	1,460	1,300	1,338	1,800	25.7
Mexico	440	465	580	720	R850	920	1,000	8.0
TOTAL OPEC, Canada, Mexico	29,047	33,230	32,950	29,315	R32,660	35,088	41,255	14.9
Total World	50,550	55,745	55,865	52,990	R57,170	60,700		

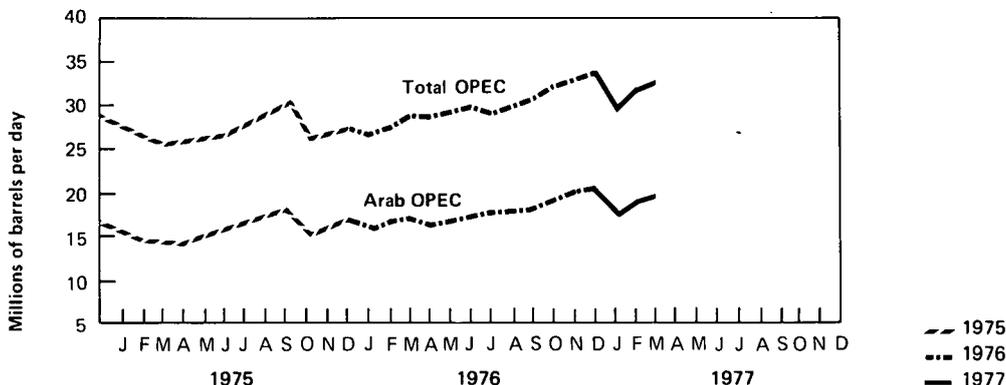
*Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in March 1977 amounted to approximately 370,000 barrels per day.

** Estimated.

R=Revised.

Source: Central Intelligence Agency and National Energy Board of Canada.

OPEC Countries Crude Oil Production



Definitions

Base Production Control Level

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

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

Branded Independent Marketer

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

Ceiling Price

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

Controlled Crude Oil

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

Crude Oil Domestic Production

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

Crude Oil Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil. It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976 and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

Crude Oil Imports

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

Crude Oil Input to Refineries

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

Crude Oil Stocks

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

Cumulative Deficiency

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

Dealer Tankwagon (DTW) Price

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

Distillate Fuel Oil

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

Domestic Demand for Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net in-

quality in the nearest field for which prices were posted; and (2) \$1.35 per barrel.

Major Brand

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

Motor Gasoline Production

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

Motor Gasoline Stocks

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

National Domestic Crude Oil Supply Ratio

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

National Old Oil Supply Ratio

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

Natural Gas Liquids (NGL)

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

New Crude Oil

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

Nonbranded Independent Marketer

A firm which is engaged in the marketing or distribution

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

Old Crude Oil

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

Power Ascension Nuclear Powerplant

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

Primary Stocks of Refined Petroleum Products

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

Property

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

crease in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies.

Electricity Production

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

Entitlement Position

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

Entitlement Price

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

Firm Natural Gas Service

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

Interruptible Natural Gas Service

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

Jet Fuel

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

Jobber

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of

reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

Jobber Margin

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

Jobber Price

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

Landed Cost

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

Limited Work Authorization

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

Line Miles of Seismic Exploration

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

Lower Tier Crude Oil

Old crude oil.

Lower Tier Ceiling Price Determination

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and

Refined Petroleum Products Imports

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

Refiner Acquisition Cost

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

Released Crude Oil

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

Residual Fuel Oil

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy Special Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

Rotary Rig

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

Separative Work Unit (SWU)

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

Stripper Well Property

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

Synthetic Natural Gas (SNG)

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

Uncontrolled Crude Oil

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

Unrecouped Costs

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

Upper Tier Crude Oil

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

Upper Tier Ceiling Price Determination

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) \$1.32 per barrel.

Well

A hole drilled for the purpose of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic tests, or service wells. This is a standard definition of the American Petroleum Institute.

Explanatory Notes

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

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

3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and net imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1976 and 1977 electricity imports were estimated on the basis of the import level for 1975.

4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries. (LRG). NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

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

The assumptions underlying the current short-term forecast are:

1. Normal weather.
2. Real GNP growth rate of 4.9 and 6.3 percent for 1977 and 1978, respectively.
3. Implementation of the Energy Policy and Conservation Act and the Energy Conservation and Production Act; specifically, the composite price of domestic crude oil is set at \$7.66 per barrel beginning February 1976. This price ceiling is permitted to rise at 10 percent per year. Furthermore, stripper oil and tertiary oil are not controlled.
4. The price of imported oil is assumed to be \$13.40, \$13.98, and \$14.73 for the years 1976, 1977; and 1978, respectively.

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

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

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

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

8. Bituminous coal and lignite consumption as reported by the Bureau of Mines are derived for information provided by the Federal Power Commission, De-

partment of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

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

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

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

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

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

The energy extracted from uranium fuel is expressed as

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

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

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

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

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

15. The estimated landed cost of imported crude petroleum from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries

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

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

Units of Measure

Weight

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

Conversion Factors for Crude Oil

Average gravity

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

Conversion Factors for Uranium

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

Approximate Heat Content of Various Fuels

Petroleum

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

Natural gas liquids 4.023 million Btu/barrel

Natural gas

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

Coal

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

Electricity Conversion Heat Rates

Fossil fuel steam-electric

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

Nuclear steam-electric 10,660 Btu/kilowatt hour

Hydroelectric 10,383 Btu/kilowatt hour

Electricity Consumption 3,412 Btu/kilowatt hour

Note: The heat content conversion factors listed above were revised in the April 1977 issue to conform with the most recently published Bureau of Mines figures given in Department of the Interior news release "Annual U.S. Energy Use Up in 1976," March 14, 1977.

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