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**October 1977**

# **Monthly Energy Review**



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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  
Motor Gasoline Supply and Demand – July 1977

# Contents

<b>Part 1 – Overview</b>	<b>1</b>
<b>Part 2 – Crude Oil and Refined Petroleum Products</b>	<b>3</b>
Crude Oil	4
Total Refined Petroleum Products	6
Total Petroleum Imports	6
Motor Gasoline	10
Jet Fuel	12
Distillate Fuel Oil	14
Residual Fuel Oil	16
Natural Gas Liquids	18
U.S. Petroleum Supply and Demand	20
Strategic Petroleum Reserve	21
<b>Part 3 – Natural Gas</b>	<b>23</b>
<b>Part 4 – Coal</b>	<b>27</b>
Bituminous and Lignite	28
Anthracite	30
<b>Part 5 – Electric Utilities</b>	<b>31</b>
Cooling Degree-Days	39
<b>Part 6 – Nuclear Power</b>	<b>41</b>
<b>Part 7 – Consumption</b>	<b>45</b>
Energy Consumption	46
Petroleum Consumption and Forecast	53
Energy Indicators	54
<b>Part 8 – Resource Development</b>	<b>55</b>
Oil and Gas Exploration and Development	56
<b>Part 9 – Price</b>	<b>59</b>
Motor Gasoline	60
Diesel Fuel	66
Heating Oil	68
Residual Fuel Oil	71
Aviation Fuels	71
Crude Oil	72
Natural Gas	78
Utility Fossil Fuels	81
<b>Part 10 – International</b>	<b>85</b>
Petroleum Consumption	86
Crude Oil Production	88
Definitions	89
Explanatory Notes	93
Units of Measure	96

Domestic energy production in August 1977 averaged 162 trillion Btu per day (the equivalent of 28 million barrels per day of crude oil), up 1.7 percent from the production rate for the same month 1 year ago. Crude oil output attained its highest level since March 1975, averaging nearly 8.5 million barrels per day (including an estimated 400,000 barrels per day of production from the Alaskan North Slope). August coal production was up 4.6 percent from the level for the same month a year ago despite the continuing wildcat strikes. Nuclear electric power production set a record high in August of 22.7 billion kilowatt hours (11.6 percent of total electricity generation for the month). Estimated natural gas production, on the other hand, was down about 1 percent from the August 1976 level, and estimated hydroelectric power generation was down 30 percent, reflecting the prolonged drought in some of the Nation's major watersheds. Average daily energy production for the first 8 months of 1977 was 0.6 percent higher than for the January-August period of 1976, compared with a decrease of 1.1 percent between the same two periods in 1975 and 1976.

Imports of fossil fuels in August were about the same as in July, averaging 53 trillion Btu per day (or 9.1 million barrels per day of crude oil equivalent). Fossil fuel imports for the January-August period of 1977 were 25.6 percent greater than in the same period of 1976, reflecting the Nation's increasing reliance on imports, in particular petroleum, to meet its energy requirements. During the first 8 months of the year, 48 percent of petroleum demand in the United States was filled by imports. This compares to 41 percent for the same period last year. Our dependence on natural gas imports is not nearly so great, with imports accounting for only 5 percent of the natural gas used during the first 8 months of 1977.

Two shipments of crude oil, totaling 675,000 barrels, were received and pumped into the Strategic Petroleum Reserve (SPR) in September, bringing the total SPR volume as of September 30 to 1.1 million barrels.\*

(No crude oil shipments for the SPR were received in August.) The average landed cost of the September SPR shipments was \$13.59 per barrel.

The United States consumed 4.4 percent more energy in the first 7 months of 1977 than in the same period of 1976. Energy consumption averaged 209 trillion Btu per day (equal to 36 million barrels per day of crude oil). The largest consumption increase was for refined petroleum products (up 8.3 percent). Coal use rose 6.6 percent, while natural gas consumption declined 2.1 percent due to supply constraints.

Utility electricity generation in August declined 2 percent from its summer peak in July but was 4.2 percent higher than the level for August 1976. Power generation for the first 8 months of the year was up 5.2 percent from the level for a year ago. Part of this year's electricity production growth was the result of increased air-conditioning requirements caused by unusually warm summer weather. Cooling degree-days through the end of September were 12 percent above normal and 18 percent above 1976.

The average full service retail price of regular motor gasoline was unchanged for the third month in a row in August at 63.4 cents per gallon. Selling prices for other gasoline grades were also stable during the month and are as follows: self service regular, 58.8 cents per gallon (down 0.4 cent from the July price); full service premium, 68.9 cents per gallon (no change); full service unleaded, 67.0 cents per gallon (down 0.3 cent).

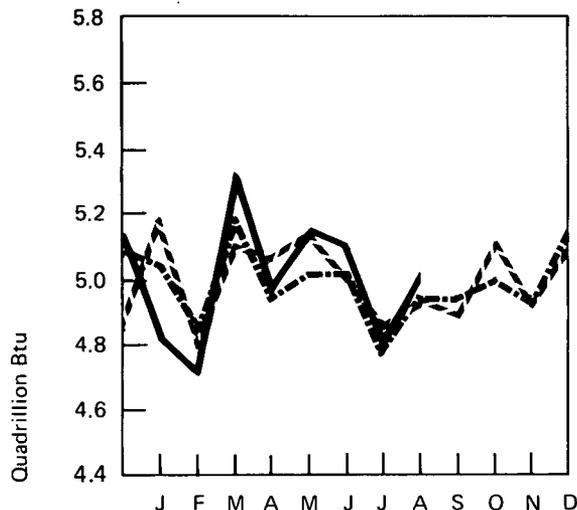
Crude oil production in the Organization of Petroleum Exporting Countries (OPEC) averaged 31.1 million barrels per day during the first 7 months of 1977, up 7.6 percent from the average for the comparable months last year. July OPEC production, however, was just under 30 million barrels. Demand for crude oil imports has been softened by high stock levels in consuming nations and by increased production capacity in the North Sea, Mexico, and the United States.

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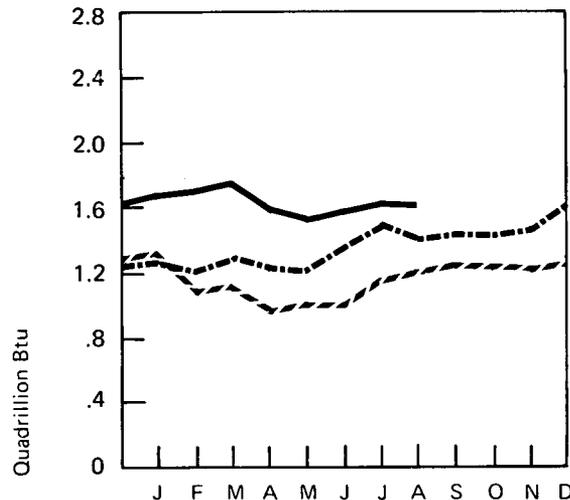
\*Crude oil volumes "imported" for the SPR will not be counted in petroleum statistics until withdrawn from storage for actual consumption.

		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy***
<b>1972</b>	<b>TOTAL</b>	<b>62.937</b>	<b>11.563</b>	<b>71.895</b>
<b>1973</b>	<b>TOTAL</b>	<b>62.373</b>	<b>14.519</b>	<b>74.551</b>
<b>1974</b>	<b>TOTAL</b>	<b>61.138</b>	<b>14.114</b>	<b>72.601</b>
<b>1975</b>	January	5.199	1.334	6.927
	February	4.793	1.093	6.054
	March	5.118	1.128	6.267
	April	5.060	0.971	5.685
	May	5.148	1.030	5.368
	June	4.999	1.027	5.315
	July	4.849	1.164	5.550
	August	4.942	1.220	5.634
	September	4.896	1.272	5.388
	October	5.118	1.232	5.801
	November	4.918	1.210	5.747
	December	5.095	1.255	6.821
	<b>TOTAL</b>	<b>60.134</b>	<b>13.935</b>	<b>70.557</b>
<b>1976</b>	January	5.056	1.296	R7.176
	February	4.834	1.210	R6.250
	March	5.194	1.301	R6.254
	April	4.937	1.245	R5.733
	May	5.034	1.232	R5.657
	June	5.035	1.391	R5.694
	July	4.777	1.507	R5.885
	August	4.952	1.416	R5.826
	September	4.949	1.465	R5.604
	October	5.005	1.448	R6.105
	November	4.916	1.498	R6.587
	December	5.141	1.610	R7.495
	<b>TOTAL</b>	<b>59.830</b>	<b>16.619</b>	<b>R74.267</b>
<b>1977</b>	January	4.819	1.700	R7.706
	February	4.704	1.718	R6.522
	March	5.323	1.786	R6.400
	April	4.963	R1.604	R15.839
	May	R†5.152	R†1.563	R15.908
	June	R†5.106	R†1.602	R15.942
	July	R†4.791	R†1.645	††6.008
	August	††5.036	†1.641	NA
	<b>TOTAL</b>	<b>39.895</b>	<b>13.259</b>	<b>44.326</b>
		(8 months)	(8 months)	(7 months)

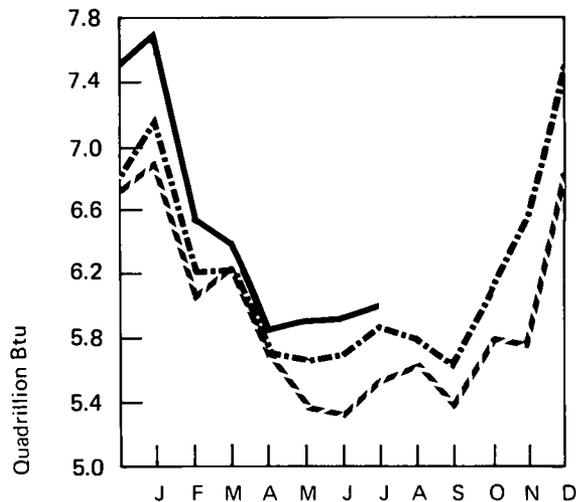
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



— 1975  
 - - - 1976  
 - · - 1977

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

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

## Crude Oil and Refined Petroleum Products

Total domestic demand for petroleum products in August 1977 averaged 18.2 million barrels per day, 3.5 percent above the July rate. Distillate fuel oil demand was 6.2 percent higher, motor gasoline was 4.4 percent higher, and residual fuel oil, 2.9 percent higher. August total demand was 9.1 percent above that of a year earlier, with distillate fuel oil demand increasing 21.5 percent, motor gasoline demand, 7.9 percent, and residual fuel oil demand, 6.7 percent. The August motor gasoline figure of 7.6 million barrels per day was a record high and exceeded last summer's peak demand (in June) by 1.7 percent.

Total petroleum imports in August averaged 8.6 million barrels per day, about the same as in July, but 16.3 percent above the import rate for August 1976. Imports have been higher than expected all year, and as a consequence, stocks of crude oil and major products (gasoline, distillate fuel oil, and residual fuel oil) have been built up by more than 110 million barrels since January to a level at the end of August that was 104 million barrels higher than for August 1976.

Domestic crude oil production was estimated at close to 8.5 million barrels per day in August. Production from the Alaskan North Slope accounted for an estimated 400,000 barrels per day.

### Strategic Petroleum Reserve

Two shipments of crude oil totaling 674,961 barrels were imported\* for the Strategic Petroleum Reserve (SPR) in September, bringing the total SPR inventory volume at the end of the month to 1,089,133 barrels. The average cost of the oil delivered in September was \$13.59 per barrel (including transportation costs).

The Strategic Petroleum Reserve was established by the Energy Policy and Conservation Act (P.L. 94-163) enacted December 22,

1975.\*\* The current plan provides for storage of a 90-day supply of crude imports, or approximately 500 million barrels, by December 1980.

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\*\*This law authorizes the storage of up to 1 billion barrels of crude oil and petroleum products.

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\*Crude oil volumes imported for the SPR will not appear in petroleum statistics until withdrawn from storage for actual consumption.

# Crude Oil

		Crude Input to Refineries	Domestic Production*	Imports*	Stocks*
		Thousands of barrels per day			Thousands of barrels
<b>1972</b>	<b>AVERAGE</b>	<b>11,696</b>	<b>9,441</b>	<b>2,216</b>	<b>**246,395</b>
<b>1973</b>	<b>AVERAGE</b>	<b>12,431</b>	<b>9,208</b>	<b>3,244</b>	<b>**242,478</b>
<b>1974</b>	<b>AVERAGE</b>	<b>12,133</b>	<b>8,774</b>	<b>3,477</b>	<b>**265,020</b>
<b>1975</b>	January	12,297	8,455	4,029	270,462
	February	12,135	8,591	3,828	276,755
	March	11,905	8,493	3,656	279,989
	April	11,803	8,457	3,378	281,908
	May	11,983	8,379	3,486	280,961
	June	12,417	8,421	3,905	276,132
	July	12,915	8,336	4,192	264,157
	August	13,046	8,249	4,581	256,616
	September	12,945	8,280	4,689	259,446
	October	12,365	8,324	4,380	269,584
	November	12,689	8,278	4,623	270,950
	December	12,779	8,254	4,476	271,354
	<b>AVERAGE</b>	<b>12,442</b>	<b>8,375</b>	<b>4,105</b>	
<b>1976</b>	January	12,560	8,211	4,595	289,296
	February	12,834	8,196	4,208	277,414
	March	12,877	8,175	4,738	283,112
	April	12,727	8,080	4,790	286,628
	May	12,920	8,168	4,669	283,982
	June	13,799	8,144	5,621	281,715
	July	13,901	8,104	5,792	282,599
	August	13,888	8,074	5,556	277,272
	September	13,716	8,185	5,875	284,357
	October	13,319	8,049	5,699	297,683
	November	14,101	8,043	5,946	298,836
	December	14,333	8,006	5,925	285,471
	<b>AVERAGE</b>	<b>13,416</b>	<b>8,119</b>	<b>5,287</b>	
<b>1977</b>	January	14,140	7,790	6,288	294,037
	February	14,740	8,067	6,652	291,387
	March	14,270	8,022	6,633	299,464
	April	R14,185	8,079	R6,785	R318,588
	May	14,657	7,899	6,609	319,331
	June	R14,903	7,896	R6,943	325,499
	July	R14,917	7,888	R6,781	R334,136
	August	14,660	8,458	6,572	343,575
	<b>AVERAGE</b> (8 months)	<b>14,557</b>	<b>8,012</b>	<b>6,656</b>	

\*See Definitions.

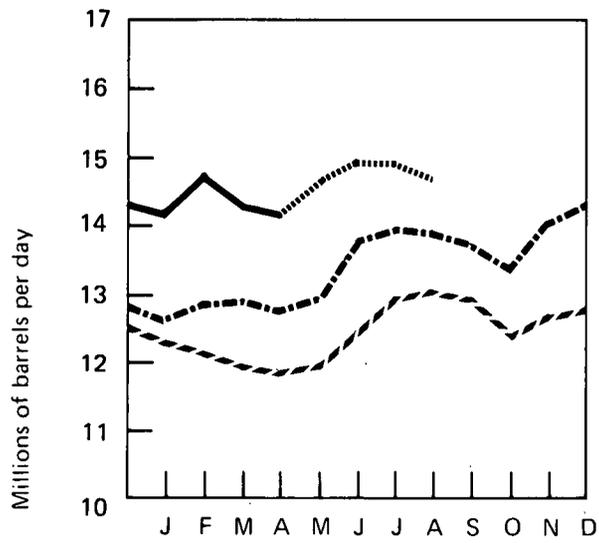
\*\*Total as of December 31.

R=Revised data.

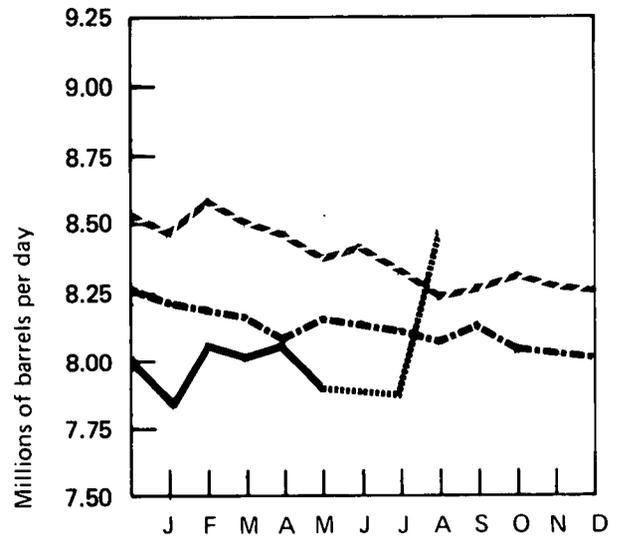
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Federal Energy Administration (FEA) "Monthly Petroleum Statistics Report" for May, June, and July 1977; August 1977 data are EIA estimates based on data from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

# Crude Oil

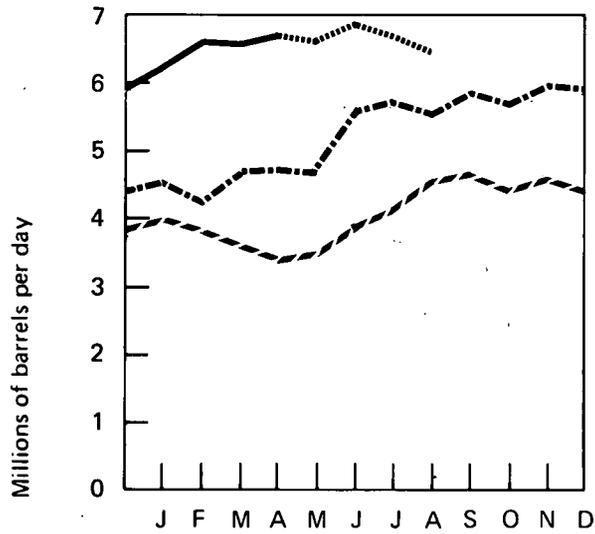
## Crude Input to Refineries



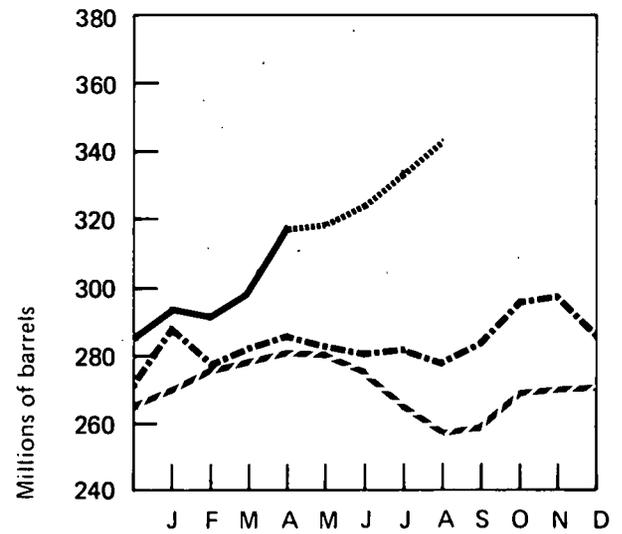
## Domestic Production



## Imports



## Stocks



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

## Total Refined Petroleum Products

		Domestic Demand	Imports*
		Thousands of barrels per day	
<b>1972</b>	<b>AVERAGE</b>	<b>16,367</b>	<b>2,525</b>
<b>1973</b>	<b>AVERAGE</b>	<b>17,308</b>	<b>3,012</b>
<b>1974</b>	<b>AVERAGE</b>	<b>16,653</b>	<b>2,635</b>
<b>1975</b>	January	18,004	2,832
	February	17,084	2,348
	March	16,315	2,074
	April	16,048	1,662
	May	15,155	1,728
	June	15,610	1,502
	July	15,740	1,767
	August	15,806	1,717
	September	15,768	2,115
	October	16,377	1,940
	November	15,777	1,796
	December	18,185	1,949
	<b>AVERAGE</b>	<b>16,322</b>	<b>1,951</b>
<b>1976</b>	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
	<b>AVERAGE</b>	<b>17,443</b>	<b>2,007</b>
<b>1977</b>	January	20,481	2,595
	February	20,427	3,278
	March	18,056	2,611
	April	R17,570	R1,886
	May	17,298	1,551
	June	R18,113	R1,746
	July	R17,553	R1,872
	August	18,163	2,016
	<b>AVERAGE</b> (8 months)	<b>18,438</b>	<b>2,184</b>

## Total Petroleum Imports

(Crude Oil and Refined Products)

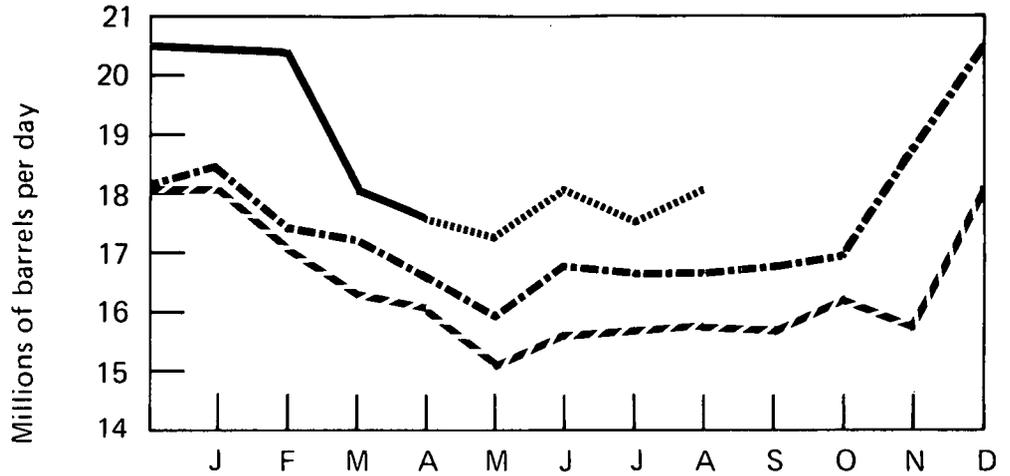
		Thousands of barrels per day
<b>1972</b>	<b>AVERAGE</b>	<b>4,741</b>
<b>1973</b>	<b>AVERAGE</b>	<b>6,256</b>
<b>1974</b>	<b>AVERAGE</b>	<b>6,112</b>
<b>1975</b>	January	6,861
	February	6,176
	March	5,730
	April	5,040
	May	5,214
	June	5,407
	July	5,959
	August	6,298
	September	6,804
	October	6,329
	November	6,419
	December	6,425
	<b>AVERAGE</b>	<b>6,056</b>
<b>1976</b>	January	6,665
	February	6,631
	March	6,684
	April	6,596
	May	6,323
	June	7,479
	July	7,890
	August	7,382
	September	7,913
	October	7,507
	November	8,060
	December	8,393
	<b>AVERAGE</b>	<b>7,295</b>
<b>1977</b>	January	8,883
	February	9,930
	March	9,244
	April	R8,671
	May	8,160
	June	R8,689
	July	R8,653
	August	8,588
	<b>AVERAGE</b>	<b>8,840</b>

\*See Definitions.

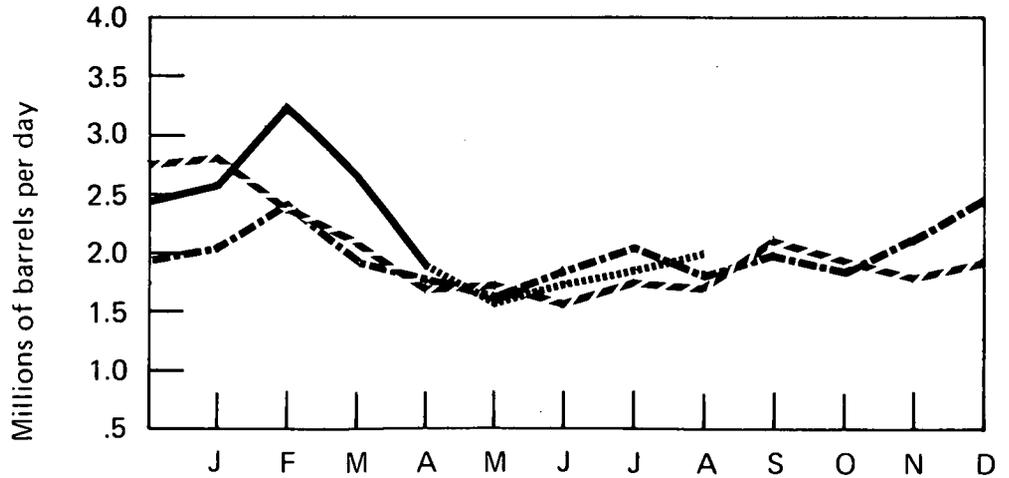
R=Revised data.

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

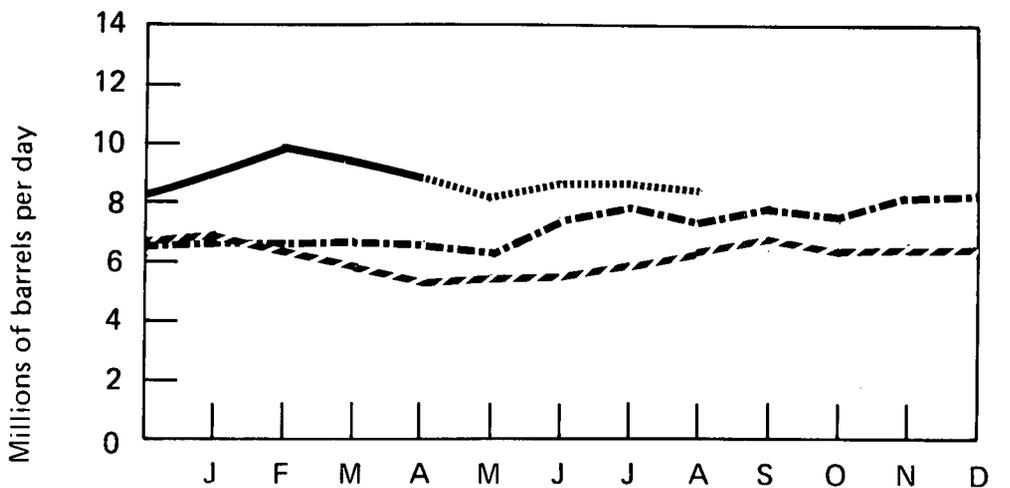
### Total Refined Product Domestic Demand



### Refined Product Imports



### Total Petroleum Imports



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

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

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC**	Total OPEC	Arab Members of OPEC
Thousands of barrels per day											
<b>1973</b>											
Direct	134.2	212.7	222.7	164.3	458.9	487.3	70.6	1,124.7	106.5	2,981.9	914.4
Indirect	17.0	25.0	211.0	144.0	149.0	253.0	13.0	509.0	88.0	1,409.0	463.0
<b>Total</b>	<b>151.2</b>	<b>237.7</b>	<b>433.7</b>	<b>308.3</b>	<b>607.9</b>	<b>740.3</b>	<b>83.6</b>	<b>1,633.7</b>	<b>194.5</b>	<b>4,390.9</b>	<b>1,377.4</b>
<b>1974</b>											
Direct	190.2	300.1	468.8	4.4	697.6	460.6	70.5	979.3	88.3	3,259.8	748.5
Indirect	16.9	40.8	262.2	35.9	214.6	214.6	17.3	478.5	128.7	1,409.5	357.9
<b>Total</b>	<b>207.1</b>	<b>340.9</b>	<b>731.0</b>	<b>40.3</b>	<b>912.2</b>	<b>675.2</b>	<b>87.8</b>	<b>1,457.8</b>	<b>217.0</b>	<b>4,669.3</b>	<b>1,106.4</b>
<b>1975</b>											
Direct											
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
<b>Total Direct</b>	<b>281.5</b>	<b>388.4</b>	<b>280.4</b>	<b>232.0</b>	<b>761.5</b>	<b>715.0</b>	<b>116.7</b>	<b>697.6</b>	<b>116.1</b>	<b>3,589.2</b>	<b>1,381.3</b>
Indirect	6.7	49.3	244.4	97.3	76.3	176.6	37.5	332.5	143.2	1,163.8	408.8
<b>Total</b>	<b>288.2</b>	<b>437.7</b>	<b>524.8</b>	<b>329.3</b>	<b>837.8</b>	<b>891.6</b>	<b>154.2</b>	<b>1,030.1</b>	<b>259.3</b>	<b>4,753.0</b>	<b>1,790.1</b>
<b>1976</b>											
Direct											
January	345.5	478.0	387.5	451.3	781.7	1,111.9	118.8	533.7	86.3	4,294.7	2,045.7
February	357.4	465.3	241.2	328.4	830.9	1,080.9	118.5	838.6	102.8	4,364.0	1,925.3
March	347.2	552.0	292.5	372.2	896.8	1,145.0	159.4	468.1	111.8	4,345.0	2,058.5
April	446.5	467.6	323.3	356.2	997.0	1,027.5	195.5	496.8	81.6	4,392.0	2,036.2
May	410.6	485.5	183.7	362.0	855.1	1,141.5	214.5	487.7	135.9	4,276.5	2,138.8
June	501.2	603.6	323.2	487.8	1,127.6	1,205.0	290.1	668.0	70.5	5,277.0	2,486.5
July	451.0	581.0	374.3	487.1	1,136.7	1,327.7	305.2	808.0	208.8	5,679.8	2,711.4
August	510.0	554.5	294.2	463.5	1,029.4	1,317.6	228.1	704.0	133.6	5,234.9	2,597.4
September	435.3	570.2	274.6	491.0	1,173.0	1,288.1	335.1	932.4	198.7	5,698.4	2,748.2
October	357.2	487.4	284.2	456.2	1,097.5	1,366.2	304.4	772.8	232.7	5,358.5	2,578.8
November	502.0	647.1	316.8	533.9	1,173.8	1,316.1	341.1	810.8	170.7	5,812.3	2,768.4
December	379.9	556.4	289.5	637.2	1,193.6	1,404.0	448.0	868.4	194.8	5,971.8	2,956.6
<b>Total Direct</b>	<b>428.3</b>	<b>537.4</b>	<b>298.5</b>	<b>453.3</b>	<b>1,025.2</b>	<b>1,229.8</b>	<b>255.2</b>	<b>699.2</b>	<b>134.0</b>	<b>5,060.9</b>	<b>2,421.0</b>
Indirect	10.0	32.0	248.0	76.0	94.0	136.0	68.0	273.0	82.0	1,019.0	352.0
<b>TOTAL</b>	<b>438.3</b>	<b>569.4</b>	<b>546.5</b>	<b>529.3</b>	<b>1,119.2</b>	<b>1,365.8</b>	<b>323.2</b>	<b>972.2</b>	<b>216.0</b>	<b>6,079.9</b>	<b>2,773.0</b>
<b>1977</b>											
Direct											
January	493.0	619.2	396.8	627.0	1,285.8	1,328.0	319.5	841.8	324.2	6,236.0	3,000.0
February	666.1	570.3	412.4	638.0	1,265.1	1,441.8	316.7	920.6	241.0	6,472.0	3,141.1
March	459.8	567.0	735.0	701.2	1,300.0	1,371.6	369.5	664.3	184.3	6,352.7	3,022.1
April	660.7	523.9	517.2	782.9	1,242.4	1,437.4	323.5	663.3	250.5	6,401.8	3,363.2
<b>Total Direct</b>	<b>566.8</b>	<b>570.4</b>	<b>517.8</b>	<b>687.7</b>	<b>1,273.7</b>	<b>1,393.2</b>	<b>333.2</b>	<b>769.7</b>	<b>250.2</b>	<b>6,362.8</b>	<b>3,129.3</b>
Indirect	18.8	99.2	332.3	159.8	146.2	204.9	102.3	278.5	129.6	1,471.6	583.0
<b>TOTAL</b>	<b>585.6</b>	<b>669.6</b>	<b>850.1</b>	<b>847.5</b>	<b>1,419.9</b>	<b>1,598.1</b>	<b>435.5</b>	<b>1,048.2</b>	<b>379.8</b>	<b>7,834.4</b>	<b>3,712.3</b>
<b>(4 months)</b>											

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

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

Sources: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly," "PAD Districts Supply/Demand, Monthly," and EIA estimates.

**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								
<b>1973</b>	<b>170.8</b>	<b>1,312.9</b>	<b>573.6</b>	<b>99.3</b>	<b>250.6</b>	<b>329.2</b>	<b>537.8</b>	<b>3,274.2</b>
<b>1974</b>	<b>159.3</b>	<b>1,067.6</b>	<b>509.6</b>	<b>90.4</b>	<b>241.2</b>	<b>391.7</b>	<b>392.6</b>	<b>2,852.4</b>
<b>1975</b>								
January	216.1	949.1	549.4	99.0	232.9	563.5	319.5	2,929.5
February	213.9	854.5	315.2	148.8	255.1	490.3	315.7	2,593.5
March	162.6	746.9	279.5	139.0	185.7	506.4	295.7	2,315.8
April	168.9	704.3	237.7	73.1	171.8	353.3	273.9	1,983.0
May	122.3	574.2	242.9	77.9	237.1	413.4	304.2	1,971.7
June	130.0	872.7	261.6	75.1	204.5	352.6	229.6	2,126.1
July	178.3	889.1	368.3	104.9	281.1	320.8	358.7	2,501.2
August	135.8	887.9	333.1	72.9	289.4	399.1	364.9	2,483.1
September	143.6	918.0	428.6	66.9	283.2	389.7	614.3	2,844.3
October	135.8	946.3	357.8	105.8	222.2	336.3	557.6	2,661.8
November	88.8	893.1	280.0	60.6	265.5	353.0	518.8	2,459.8
December	119.5	907.3	238.0	50.9	262.5	405.9	375.0	2,359.1
<b>Total</b>	<b>152.0</b>	<b>845.2</b>	<b>323.6</b>	<b>89.7</b>	<b>240.9</b>	<b>406.5</b>	<b>377.5</b>	<b>2,435.4</b>
<b>1976</b>								
January	134.1	681.7	291.7	71.0	343.2	468.4	380.2	2,370.3
February	127.6	644.9	262.4	122.2	326.3	462.3	321.7	2,267.4
March	90.4	590.2	328.7	114.0	315.6	424.5	475.5	2,338.9
April	131.9	578.4	274.9	68.5	291.9	341.2	516.5	2,203.3
May	95.2	614.9	214.1	70.6	257.5	388.5	405.7	2,046.5
June	104.2	653.3	190.4	54.3	319.3	427.5	453.0	2,202.0
July	112.8	581.7	259.1	77.9	279.2	386.5	513.4	2,210.6
August	98.5	580.9	268.7	81.5	163.6	437.2	516.6	2,147.0
September	143.1	564.8	273.3	104.1	182.6	408.5	537.9	2,214.3
October	78.3	562.0	239.0	92.2	215.2	460.5	502.0	2,149.2
November	140.4	561.8	267.6	104.1	254.3	454.4	465.3	2,247.9
December	141.5	578.3	400.3	98.5	324.2	408.4	470.5	2,421.3
<b>Total</b>	<b>116.5</b>	<b>599.3</b>	<b>274.6</b>	<b>88.1</b>	<b>272.6</b>	<b>422.3</b>	<b>460.6</b>	<b>2,234.0</b>
<b>1977</b>								
January	170.0	505.9	304.1	82.5	316.2	619.6	647.7	2,646.0
February	289.5	605.1	406.6	86.3	406.3	548.8	1,115.9	3,458.5
March	200.4	561.7	257.3	97.4	286.5	505.5	981.9	2,890.7
April	130.7	506.1	110.1	85.3	210.5	409.0	817.6	2,269.3
<b>TOTAL</b> (4 months)	<b>196.0</b>	<b>543.6</b>	<b>267.4</b>	<b>87.8</b>	<b>303.3</b>	<b>521.2</b>	<b>885.4</b>	<b>2,804.7</b>

Source: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly."

# Motor Gasoline

		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
<b>1972</b>	<b>AVERAGE</b>	<b>6,376</b>	<b>6,281</b>	<b>68</b>	<b>**212,770</b>
<b>1973</b>	<b>AVERAGE</b>	<b>6,674</b>	<b>6,527</b>	<b>134</b>	<b>**209,395</b>
<b>1974</b>	<b>AVERAGE</b>	<b>6,537</b>	<b>6,358</b>	<b>204</b>	<b>**218,346</b>
<b>1975</b>	January	6,206	6,509	262	*** 242,285
	February	6,096	6,276	171	251,915
	March	6,326	6,070	150	248,685
	April	6,718	6,046	133	232,556
	May	6,871	6,126	142	213,947
	June	7,076	6,669	177	207,114
	July	7,041	7,003	209	212,454
	August	7,008	6,872	232	215,480
	September	6,729	6,823	269	226,447
	October	6,778	6,410	207	221,493
	November	6,390	6,602	139	232,091
	December	6,808	6,786	119	234,925
	<b>AVERAGE</b>	<b>6,675</b>	<b>6,518</b>	<b>184</b>	
<b>1976</b>	January	6,398	6,483	92	240,464
	February	6,263	6,472	84	248,854
	March	6,890	6,455	123	239,049
	April	7,159	6,562	99	223,965
	May	6,853	6,774	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
	<b>AVERAGE</b>	<b>6,978</b>	<b>6,837</b>	<b>131</b>	
<b>1977</b>	January	6,466	6,934	222	252,608
	February	6,897	6,817	184	255,519
	March	6,899	6,864	245	262,118
	April	R7,348	R6,968	R269	R258,831
	May	7,032	6,950	202	262,066
	June	R7,590	R7,134	R246	R255,773
	July	R7,411	R7,248	R238	R258,105
	August	7,612	7,248	218	247,000
	<b>AVERAGE</b> (8 months)	<b>7,158</b>	<b>7,023</b>	<b>228</b>	

\*See Definitions.

\*\*Total as of December 31.

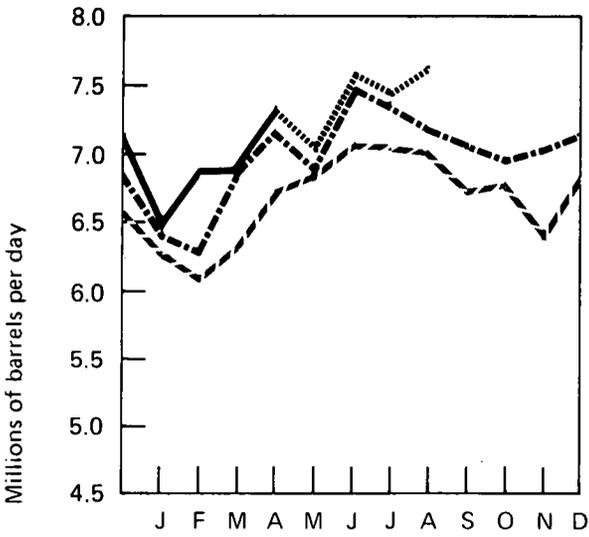
\*\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

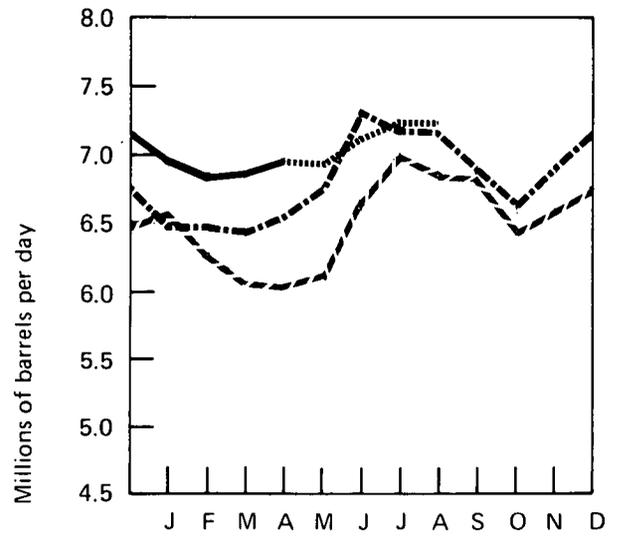
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Federal Energy Administration (FEA) "Monthly Petroleum Statistics Report" for May, June, and July 1977; August 1977 data are EIA estimates based on data from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

# Motor Gasoline

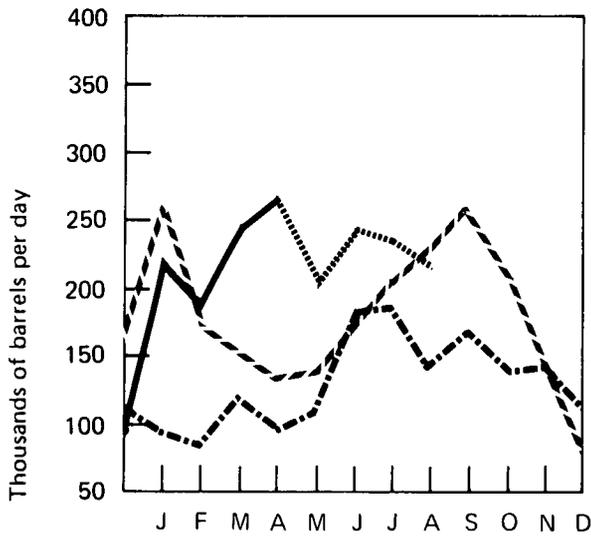
Domestic Demand



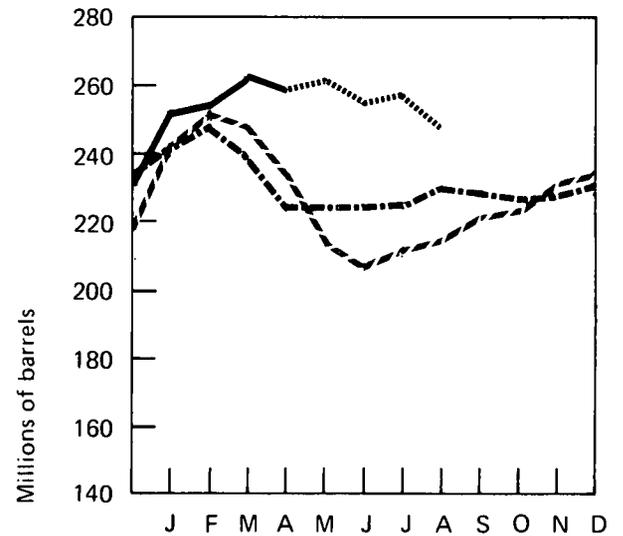
Production



Imports



Stocks



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

# Jet Fuel

		Domestic Demand	Production	Imports	Stocks
					Thousands of barrels
Thousands of barrels per day					
1972	<b>AVERAGE</b>	1,045	847	194	<b>*25,493</b>
1973	<b>AVERAGE</b>	1,059	859	212	<b>*28,544</b>
1974	<b>AVERAGE</b>	993	836	163	<b>*29,435</b>
1975	January	1,041	831	229	**30,321
	February	1,075	835	200	29,133
	March	982	896	130	30,456
	April	1,006	864	137	30,263
	May	977	861	133	30,719
	June	989	839	106	29,337
	July	954	883	88	29,798
	August	1,046	958	132	31,103
	September	1,040	907	140	31,291
	October	997	864	106	30,410
	November	999	864	89	28,977
	December	911	849	109	30,380
		<b>AVERAGE</b>	<b>1,001</b>	<b>871</b>	<b>133</b>
1976	January	948	889	69	30,618
	February	965	918	71	31,180
	March	965	927	86	32,619
	April	1,010	927	108	33,332
	May	960	899	106	34,664
	June	972	879	68	33,879
	July	1,099	933	130	32,732
	August	965	942	38	33,121
	September	1,048	990	63	33,204
	October	911	890	50	34,032
	November	978	920	56	33,859
	December	1,027	900	72	32,085
		<b>AVERAGE</b>	<b>987</b>	<b>918</b>	<b>76</b>
1977	January	1,054	917	77	30,170
	February	1,036	974	74	30,455
	March	1,041	954	98	30,739
	April	R1,019	R991	R86	R32,355
	May	981	979	48	33,644
	June	R993	R997	33	R34,707
	July	R1,027	R967	R73	R35,038
	August	1,064	997	47	34,470
		<b>AVERAGE</b> (8 months)	<b>1,027</b>	<b>972</b>	<b>67</b>

\*Total as of December 31.

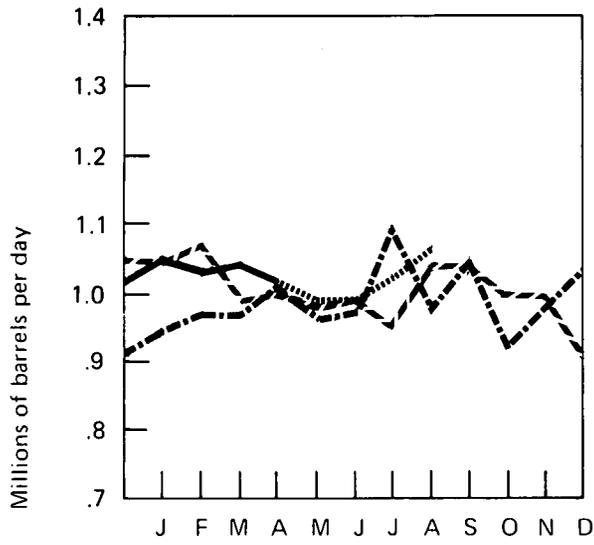
\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

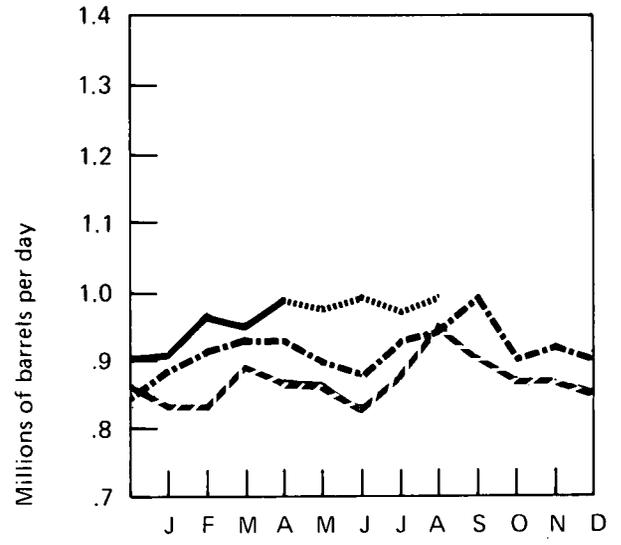
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Federal Energy Administration (FEA) "Monthly Petroleum Statistics Report" for May, June, and July 1977; August 1977 data are EIA estimates based on data from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

# Jet Fuel

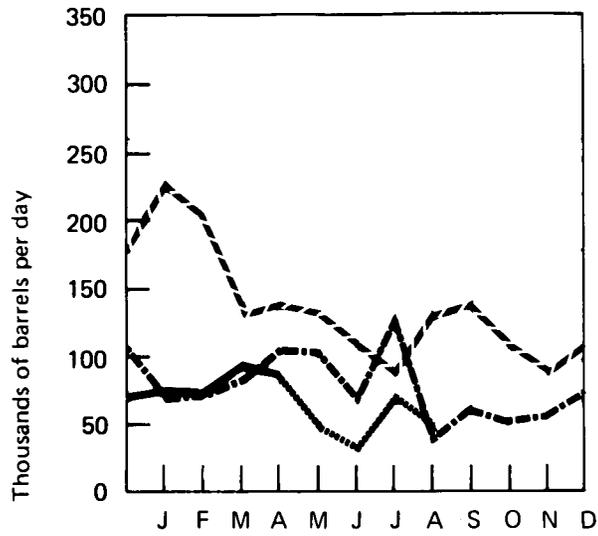
Domestic Demand



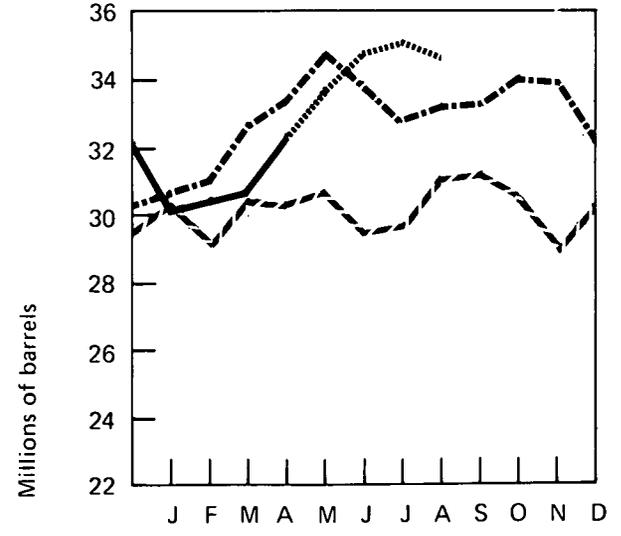
Production



Imports



Stocks



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

# Distillate Fuel Oil

		Domestic Demand	Production*	Imports	Stocks*
					Thousands of barrels
Thousands of barrels per day					
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
		<b>AVERAGE</b>	<b>2,851</b>	<b>2,653</b>	<b>155</b>
1976	January	4,298	2,734	164	165,428
	February	3,687	2,961	207	150,439
	March	3,336	2,793	151	138,306
	April	2,788	2,655	96	137,249
	May	2,519	2,738	97	147,057
	June	2,436	2,885	151	165,064
	July	2,255	2,959	126	190,861
	August	2,237	2,982	131	217,930
	September	2,618	2,947	147	232,230
	October	3,029	2,995	141	235,599
	November	3,714	3,181	135	223,648
	December	4,650	3,255	179	185,948
		<b>AVERAGE</b>	<b>3,130</b>	<b>2,924</b>	<b>144</b>
1977	January	5,111	3,375	350	142,989
	February	4,714	3,702	664	133,261
	March	3,421	3,179	519	141,882
	April	R2,942	R3,001	R153	R148,246
	May	2,747	3,118	83	162,123
	June	R2,776	R3,207	132	R178,988
	July	R2,560	R3,190	R166	R203,640
	August	2,718	3,186	143	224,594
		<b>AVERAGE</b> (8 months)	<b>3,361</b>	<b>3,240</b>	<b>273</b>

\*See Definitions.

\*\*Total as of December 31.

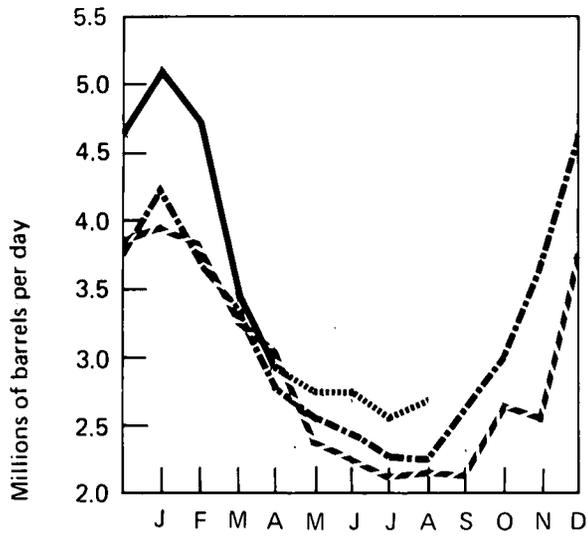
\*\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

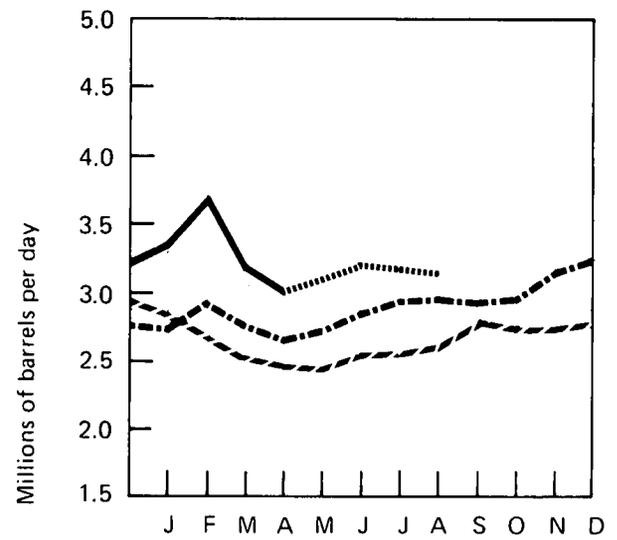
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Federal Energy Administration (FEA) "Monthly Petroleum Statistics Report" for May, June, and July 1977; August 1977 data are EIA estimates based on data from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

# Distillate Fuel Oil

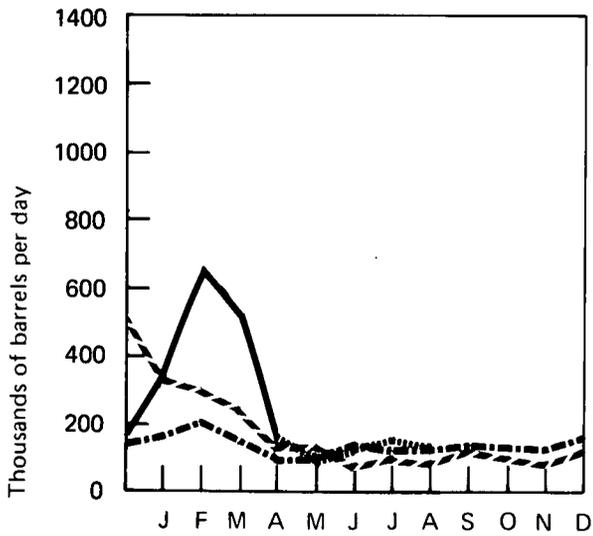
Domestic Demand



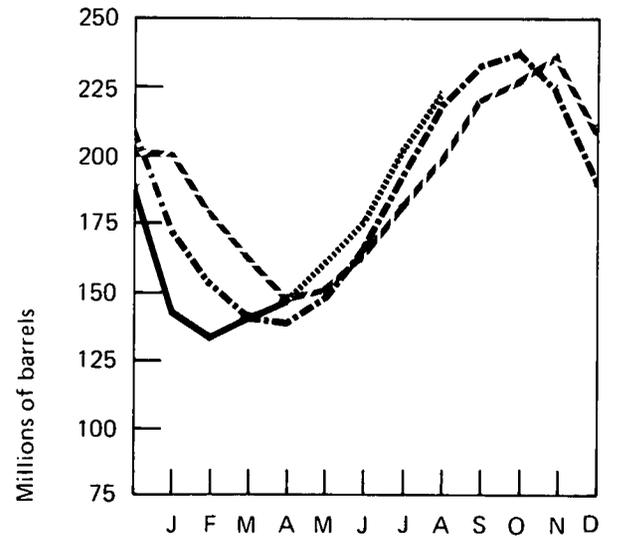
Production



Imports



Stocks



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

## Residual Fuel Oil

		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
<b>1972</b>	<b>AVERAGE</b>	<b>2,529</b>	<b>799</b>	<b>1,742</b>	<b>*55,216</b>
<b>1973</b>	<b>AVERAGE</b>	<b>2,822</b>	<b>971</b>	<b>1,853</b>	<b>*53,480</b>
<b>1974</b>	<b>AVERAGE</b>	<b>2,639</b>	<b>1,070</b>	<b>1,587</b>	<b>*59,694</b>
<b>1975</b>	January	3,253	1,415	1,657	** 69,233
	February	2,849	1,354	1,402	66,495
	March	2,669	1,299	1,293	64,148
	April	2,232	1,245	1,054	66,340
	May	2,087	1,151	1,160	73,498
	June	2,177	1,152	902	69,660
	July	2,220	1,155	1,125	71,526
	August	2,157	1,146	1,021	71,857
	September	2,328	1,183	1,311	76,938
	October	2,268	1,165	1,251	81,858
	November	2,405	1,214	1,225	83,131
	December	2,912	1,354	1,283	74,126
	<b>AVERAGE</b>	<b>2,462</b>	<b>1,235</b>	<b>1,223</b>	
<b>1976</b>	January	3,069	1,415	1,406	66,592
	February	3,007	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
	<b>AVERAGE</b>	<b>2,786</b>	<b>1,377</b>	<b>1,402</b>	
<b>1977</b>	January	3,741	1,889	1,596	64,749
	February	3,662	1,951	1,943	71,414
	March	3,150	1,715	1,417	71,186
	April	R2,855	R1,687	R1,125	70,165
	May	2,650	1,668	1,089	73,376
	June	R2,942	R1,712	R1,184	R71,914
	July	R2,778	R1,711	R1,254	R77,621
	August	2,858	1,533	1,356	70,404
	<b>AVERAGE</b> (8 months)	<b>3,074</b>	<b>1,733</b>	<b>1,365</b>	

\*Total as of December 31.

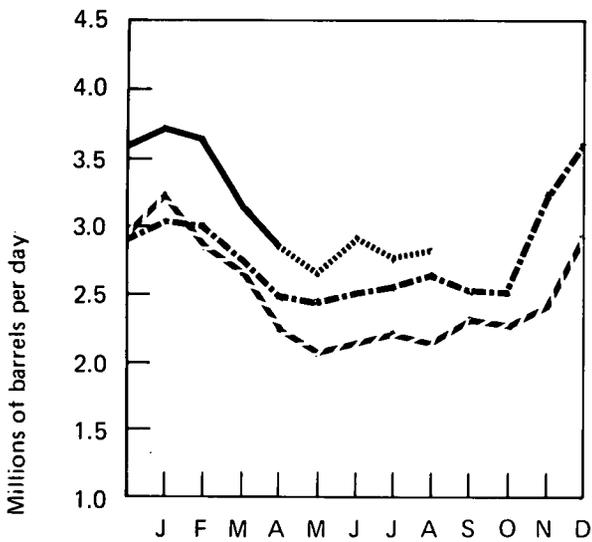
\*\*Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

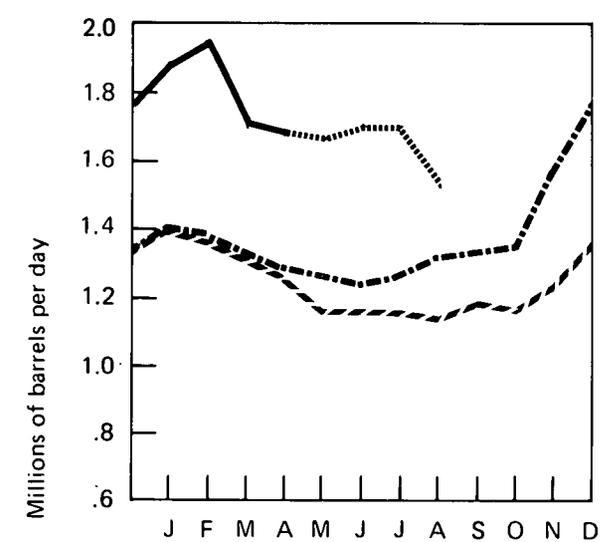
Sources: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual" and "Petroleum Statement, Monthly" through April 1977; Federal Energy Administration (FEA) "Monthly Petroleum Statistics Report" for May, June, and July 1977; August 1977 data are EIA estimates based on data from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

# Residual Fuel Oil

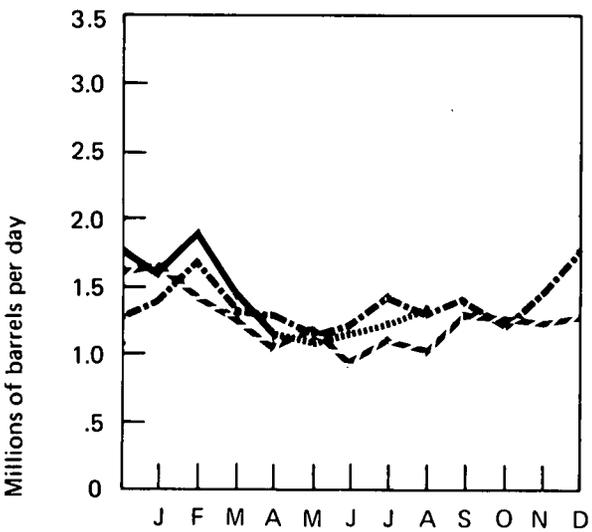
Domestic Demand



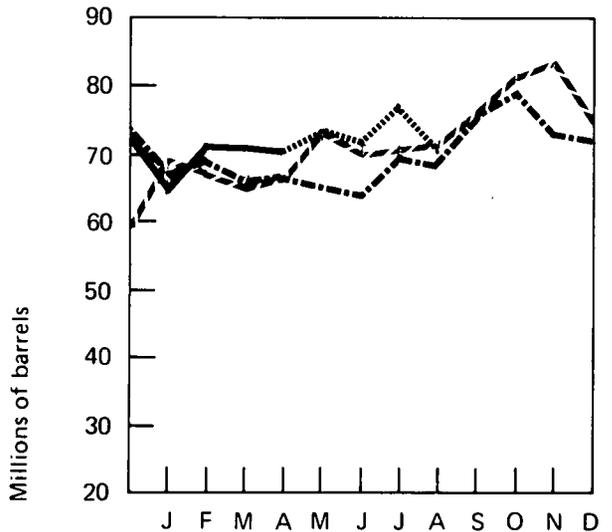
Production



Imports



Stocks



- 1975 BOM
- .- 1976 BOM
- 1977 BOM
- ..... 1977 EIA, 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							
<b>1972</b>	<b>AVERAGE</b>	<b>1,420</b>	<b>1,744</b>	<b>365</b>	<b>826</b>	<b>174</b>	<b>**92,024</b>
<b>1973</b>	<b>AVERAGE</b>	<b>1,454</b>	<b>1,738</b>	<b>375</b>	<b>815</b>	<b>239</b>	<b>**106,659</b>
<b>1974</b>	<b>AVERAGE</b>	<b>1,422</b>	<b>1,688</b>	<b>338</b>	<b>746</b>	<b>212</b>	<b>**120,175</b>
<b>1975</b>	January	1,708	1,630	307	756	257	110,697
	February	1,512	1,646	296	734	181	106,205
	March	1,404	1,658	280	731	178	104,365
	April	1,242	1,635	273	667	176	105,521
	May	1,002	1,607	299	628	97	119,052
	June	998	1,646	323	659	166	132,553
	July	1,191	1,621	336	701	173	139,095
	August	1,227	1,650	357	690	163	145,920
	September	1,278	1,577	326	703	209	148,948
	October	1,429	1,643	310	729	198	147,793
	November	1,444	1,635	309	759	196	145,052
	December	1,787	1,646	310	768	232	132,653
	<b>AVERAGE</b>	<b>1,352</b>	<b>1,633</b>	<b>311</b>	<b>710</b>	<b>185</b>	
<b>1976</b>	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
	<b>AVERAGE</b>	<b>1,407</b>	<b>1,604</b>	<b>340</b>	<b>725</b>	<b>196</b>	
<b>1977</b>	January	2,018	1,549	323	730	331	106,524
	February	1,887	1,589	336	693	238	94,128
	March	1,354	1,687	331	688	239	100,025
	April	1,228	1,664	337	672	198	108,235
	<b>AVERAGE</b> (4 months)	<b>1,619</b>	<b>1,623</b>	<b>331</b>	<b>696</b>	<b>252</b>	

\*See Explanatory Note 4.

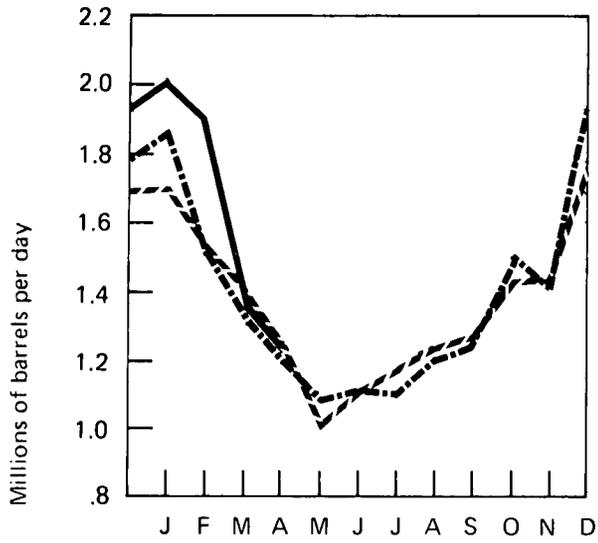
\*\*Total as of December 31.

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

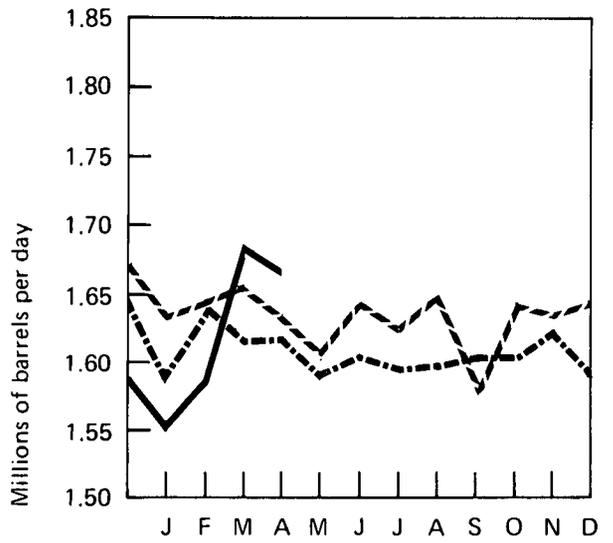
Source: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly."

# Natural Gas Liquids

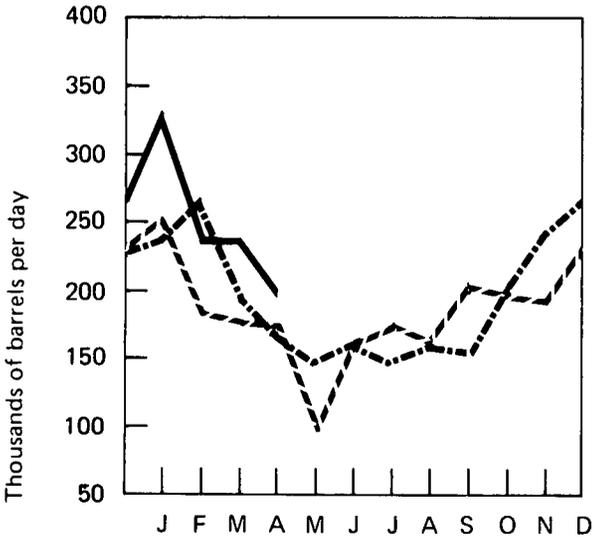
Domestic Demand



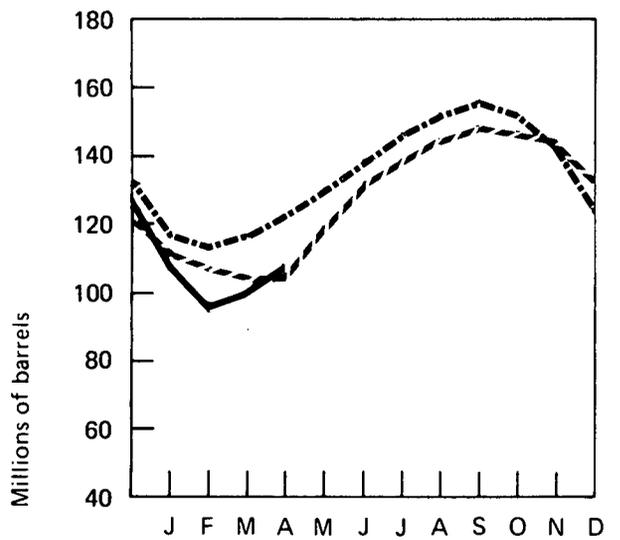
Production at Processing Plants



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					
<b>Supply</b>					
Crude oil and lease condensate production	8,194	8,131	8,120	8,033	8,119
Natural gas plant liquids production	1,612	1,604	1,597	1,604	1,604
Other hydrocarbon supply	37	38	37	40	38
Crude oil imports	4,520	5,023	5,740	5,856	5,287
Refined products imports*	2,140	1,771	1,987	2,130	2,008
Total new supply	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
<b>Demand</b>					
Crude oil and refined products exports	192	204	220	274	223
Crude oil losses	14	14	15	15	14
Domestic demand for refined products***	17,783	16,489	16,692	18,801	17,444
Total demand	17,989	16,707	16,927	19,090	17,681

	1977				
	Actual	Forecast †			
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year ††
Thousands of barrels per day					
<b>Supply</b>					
Crude oil and lease condensate production	7,956	8,107	8,600	8,988	8,416
Natural gas plant liquids production	1,609	1,541	1,524	1,541	1,553
Other hydrocarbon supply	44	36	36	36	38
Crude oil imports	6,520	6,106	6,007	5,635	6,064
Refined products imports*	2,813	1,673	1,659	2,504	2,160
Total new supply	18,942	17,463	17,826	18,704	18,231
Processing gain	520	512	523	518	518
Stock change—all oils	-278	+565	+594	-165	+180
Total net supply	19,740	17,410	17,755	19,387	18,569
Unaccounted for crude oil**	+114	0	0	0	+28
<b>Demand</b>					
Crude oil and refined products exports	210	206	198	195	202
Crude oil losses	15	13	13	13	13
Domestic demand for refined products***	19,629	17,191	17,544	19,179	18,382
Total demand	19,854	17,410	17,755	19,387	18,597

\*Includes plant condensate and unfinished oils.

\*\*Balancing item resulting from statistical inconsistencies.

\*\*\*Includes international bunkers.

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

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

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

## Strategic Petroleum Reserve

		<b>Crude Oil Shipments Received</b>	<b>Average Cost per Barrel</b>	<b>Total Crude Oil in Storage at End of Month</b>
		Barrels	Dollars	Barrels
<b>1977</b>	July	414,172	13.565	414,172
	August	None	—	414,172
	September	674,961	13.59	1,089,133
	<b>TOTAL</b>	<b>1,089,133</b>	<b>13.58</b>	

## Natural Gas

Marketed production of natural gas in August was estimated at 3.4 percent below the August 1976 level, while production for the first 8 months of the year was estimated to be 0.7 percent above the level for the same period of 1976.

Imports of natural gas in August were estimated to be 10.7 percent greater than imports in August 1976, and for the first 8 months of 1977, were estimated to be 5.8 percent greater than the import level during the corresponding months of 1976.

Domestic consumption of natural gas for August and for the January-August 1977 period was estimated to be down 2.1 percent from the comparable 1976 consumption levels.

Net injections of natural gas into underground storage reservoirs in August were 1.4 percent below the amount injected in August 1976, the first decline during the current injection season (April through October). Working gas\* in storage at the end of the month, however, totaled 2.64 trillion cubic feet, 6.3 percent above the level for the same time last year.

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\*Gas available for withdrawal.

# Natural Gas

		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
Billion cubic feet					
<b>1972</b>	<b>TOTAL</b>	<b>22,102</b>	<b>22,532</b>	<b>12,429</b>	<b>1,019</b>
<b>1973</b>	<b>TOTAL</b>	<b>22,049</b>	<b>22,648</b>	<b>12,067</b>	<b>1,033</b>
<b>1974</b>	<b>TOTAL</b>	<b>21,223</b>	<b>21,601</b>	<b>11,462</b>	<b>959</b>
<b>1975</b>	January	2,248	1,778	950	81
	February	1,939	1,640	867	75
	March	1,903	1,740	948	83
	April	1,575	1,677	906	82
	May	1,331	1,689	898	80
	June	1,257	1,634	859	76
	July	1,313	1,677	873	80
	August	1,369	1,677	882	75
	September	1,370	1,603	836	74
	October	1,544	1,646	877	80
	November	1,640	1,618	853	81
	December	2,049	1,730	903	86
	<b>TOTAL</b>	<b>19,538</b>	<b>20,109</b>	<b>10,652</b>	<b>953</b>
<b>1976</b>	January	2,288	1,745	894	83
	February	1,935	1,641	850	79
	March	1,717	1,709	894	85
	April	1,505	1,633	849	85
	May	1,431	1,668	860	83
	June	1,331	1,637	815	77
	July	1,369	1,671	822	74
	August	1,313	1,631	810	76
	September	1,298	1,562	793	74
	October	1,618	1,632	840	85
	November	1,871	1,629	841	81
	December	2,229	1,745	872	84
	<b>TOTAL</b>	<b>19,905</b>	<b>19,903</b>	<b>10,140</b>	<b>966</b>
<b>1977</b>	January	2,394	1,742	848	85
	February	1,796	1,671	807	85
	March	1,695	1,744	910	106
	April	1,417	1,637	830	R82
	May	R1,358	R1,694	830	R84
	June	1,310	R**1,653	NA	***78
	July	1,310	***1,670	NA	***76
	August	1,340	***1,620	NA	***83
	<b>TOTAL</b>	<b>12,620</b>	<b>13,431</b>	<b>4,225</b>	<b>679</b>
	(8 months)			(5 months)	

\*See Explanatory Note 6.

\*\*Preliminary data.

\*\*\*Projected data.

R=Revised data.

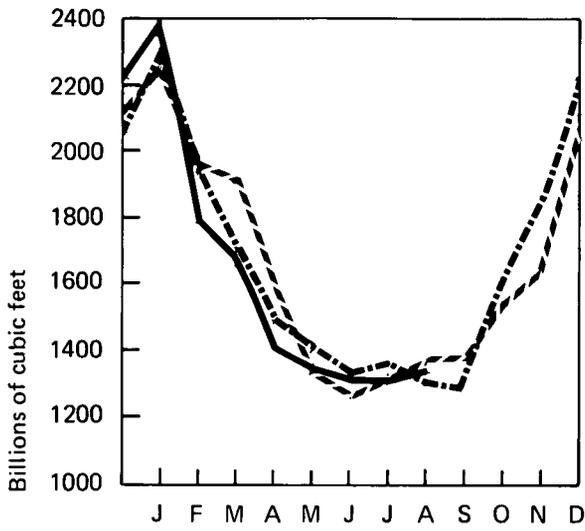
NA=Not available.

Note: All monthly Domestic Consumption data are estimated.

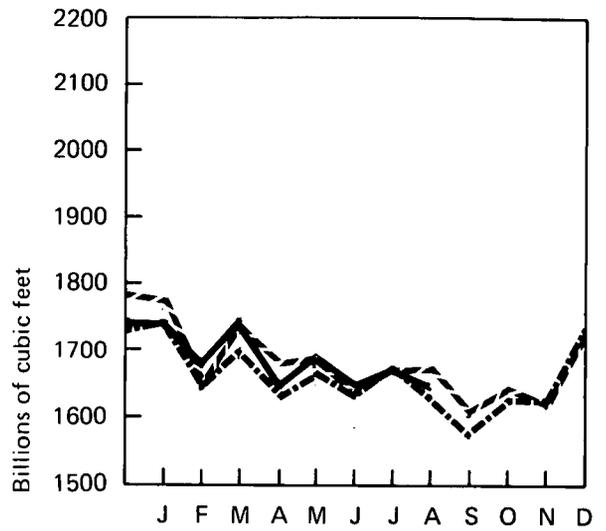
Sources: Domestic Consumption—Bureau of Mines, "Minerals and Materials/A Monthly Survey" (advance estimates are subject to revision prior to publication by BOM); Marketed Production and Imports—Bureau of Mines *Mineral Industry Surveys*, "Natural Gas, Monthly;" Domestic Producer Sales—Federal Power Commission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

# Natural Gas

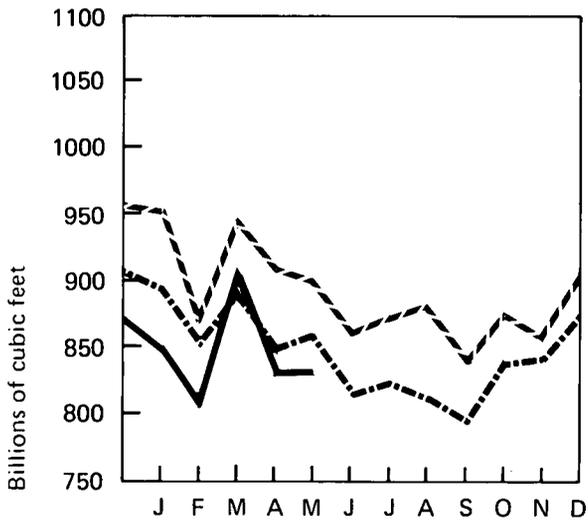
## Domestic Consumption



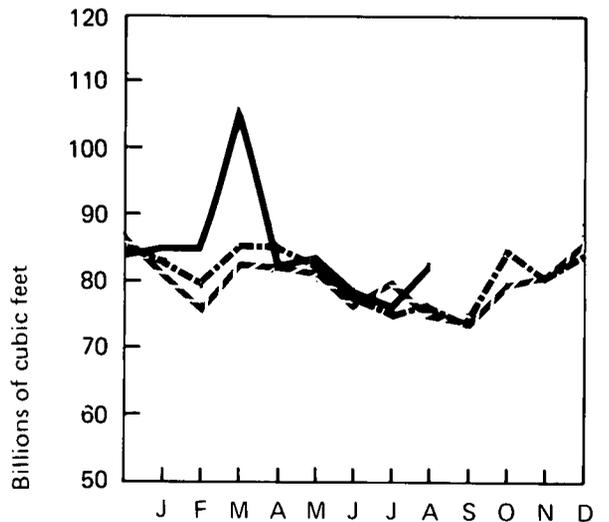
## Marketed Production



## Domestic Producer Sales to Major Interstate Pipelines



## Imports



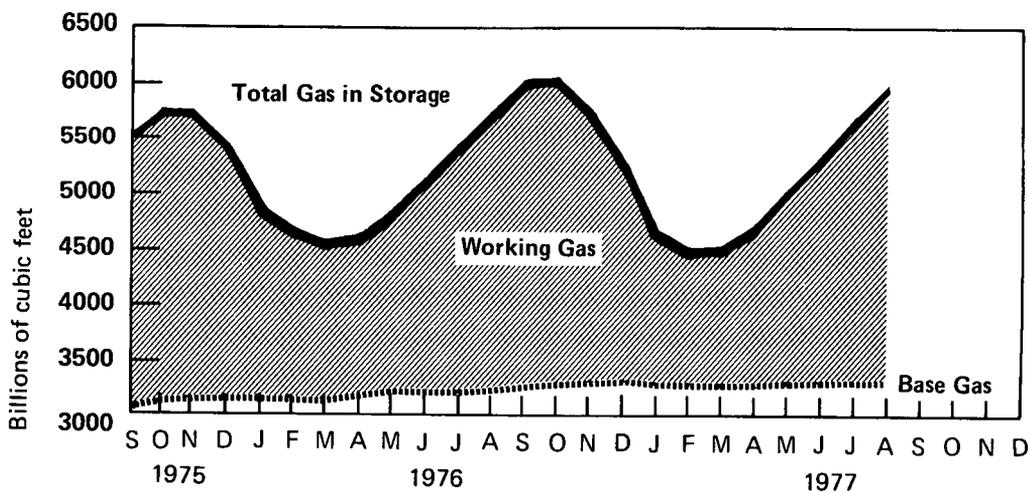
- - - 1975  
 . . . 1976  
 — 1977

# 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							
<b>1974</b>	October**	5,445	3,042	2,403	***	***	***
<b>1975</b>	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
<b>1976</b>	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
<b>1977</b>	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
	May	5,074	3,317	1,757	338	18	320
	June	5,386	3,324	2,062	322	10	312
	July	5,728	3,342	2,386	355	15	340
	August	6,015	3,371	2,644	298	20	278

## 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 Form G318-M-O and Federal Power Commission Form 8.

## Coal

Production of bituminous coal and lignite increased to 55.9 million tons in August 1977 after dropping to 47.8 million tons in July. The decrease in July was due to the miners' annual vacation and to wildcat work stoppages in the Appalachian coal fields. The stoppages, which involved approximately half of the 162,000 United Mine Workers of America (UMWA), continued into August preventing production in that month from reaching the high pre-strike levels achieved prior to July. By the end of August most miners had returned to work. Despite the strikes, production for the first 8 months of 1977 was up 2.9 percent and 5.1 percent from production during the same periods in 1976 and 1975, respectively.

Domestic consumption of bituminous coal and lignite totaled 52.3 million tons in June 1977, 7.9 percent more than the June 1976 level. Consumption for the first half of 1977 was 307.2 million tons, up 6.0 percent and 12.2 percent from the first halves of 1976 and 1975, respectively. The increases are primarily due to steadily climbing consumption in the electric utility sector. Utility coal consumption was 228.6 million tons in the first 6 months of the year, compared with 214.3 million tons in the same period of 1976 and 193.8 million tons in 1975. Coal's share of gross energy input to electricity production, however, rose only 2 percentage points between the first half of 1975 and the first half of 1976, from 44 percent to 46 percent, and has remained at 46 percent in 1977.

The second largest coal consuming sector, metallurgical coke plants, used 40.3 million tons of the total amount of coal consumed during the first half of 1977 compared with 42.2 million tons during the same period in 1976. The remaining 38.4 million tons were consumed by general industry and retail, compared to 33.2 million tons in 1976.

Stocks of bituminous coal and lignite on June 30, 1977, were 144.3 million tons, or 83 days' supply at current burn rates. Electric utility stockpiles (accounting for 87 percent of the total) represented 94 days' supply on June 30, 1977, down from 101 days' supply for both the previous month and for June 1976. Stocks of coking coal,

plus the effective coking coal supply represented by coke stocks,\* were 21.6 million tons at the end of June, or a 96 days' supply. Coal stocks for general industry and retail (nonutility, noncoke) were 6.8 million tons, or a 37 days' supply.

In July the United States exported 5.2 million tons of coal, with Canada receiving 43.3 percent of the shipments and Japan receiving 23.3 percent. Exports for the first 7 months of 1977 were 31.1 million tons, 7.5 percent below the amount exported a year earlier, and 19.2 percent below the amount for the January-July period in 1975.

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\*Coking coal stocks were 12.0 million tons and coke stocks were 6.5 million tons, the latter representing 9.5 million tons of original coking coal at a 1.47 coal to coke ratio.

## Bituminous and Lignite

		Domestic Consumption*	Production*	Exports	Stocks
Thousands of short tons					
<b>1972</b>	<b>TOTAL</b>	<b>516,776</b>	<b>595,386</b>	<b>55,997</b>	<b>**117,442</b>
<b>1973</b>	<b>TOTAL</b>	<b>556,022</b>	<b>591,738</b>	<b>52,903</b>	<b>**103,022</b>
<b>1974</b>	<b>TOTAL</b>	<b>552,709</b>	<b>603,406</b>	<b>59,926</b>	<b>**95,528</b>
<b>1975</b>	January	49,841	55,610	4,254	95,512
	February	45,699	51,135	4,470	97,028
	March	47,202	51,910	5,653	97,832
	April	43,537	56,330	6,159	102,663
	May	42,658	57,045	7,011	109,666
	June	44,777	55,730	6,269	114,857
	July	47,454	45,560	4,691	109,133
	August	49,190	51,160	5,859	108,522
	September	44,032	56,060	4,529	111,922
	October	44,929	60,030	4,647	120,344
	November	45,946	54,655	7,593	125,808
	December	51,036	53,213	4,534	127,115
	<b>TOTAL***</b>	<b>556,301</b>	<b>648,438</b>	<b>65,669</b>	
<b>1976</b>	January	52,919	51,501	3,697	119,149
	February	46,800	52,636	3,050	118,970
	March	48,607	60,056	3,979	123,441
	April	46,450	57,856	5,780	128,343
	May	46,506	56,611	5,667	134,621
	June	48,472	58,436	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	57,498	5,871	133,581
	November	51,320	56,995	5,451	135,402
	December	55,642	57,046	4,625	133,673
	<b>TOTAL***</b>	<b>597,479</b>	<b>665,000</b>	<b>59,406</b>	
<b>1977</b>	January	57,032	44,555	2,143	118,080
	February	50,756	50,365	3,079	114,387
	March	50,238	65,020	3,390	122,584
	April	R46,888	57,160	5,637	129,830
	May	50,015	61,560	5,673	137,518
	June	52,275	63,810	6,019	144,269
	July	NA	47,785	5,158	NA
	August	NA	55,920	NA	NA
	<b>TOTAL</b>	<b>307,204</b>	<b>446,175</b>	<b>31,101</b>	
		(6 months)	(8 months)	(7 months)	

\*See Explanatory Note 8.

\*\*Total as of December 31.

\*\*\*Totals may not add due to rounding.

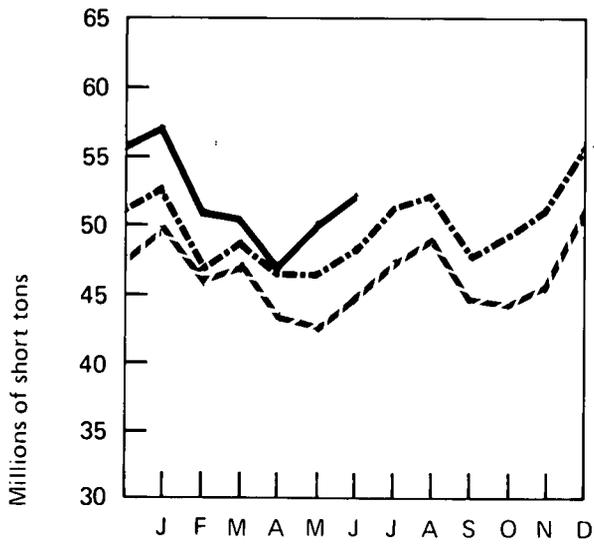
R=Revised data.

NA=Not available.

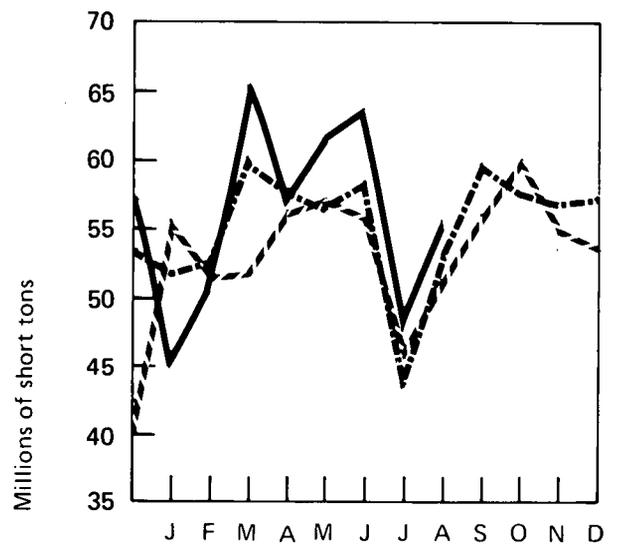
Source: EIA *Energy Information Reports*, "Weekly Coal Report."

# Bituminous and Lignite

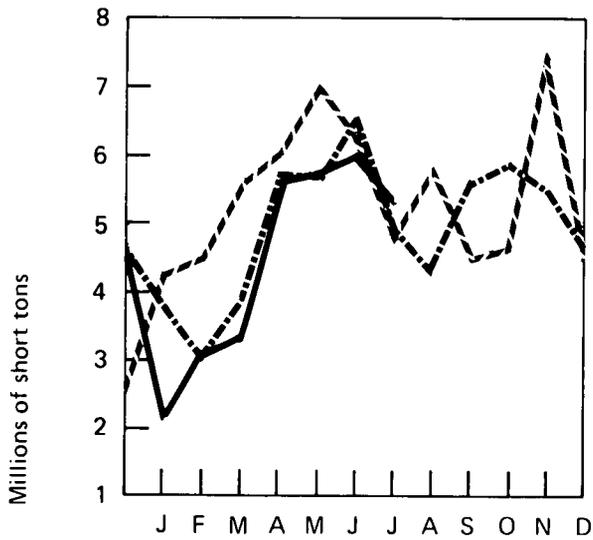
## Domestic Consumption



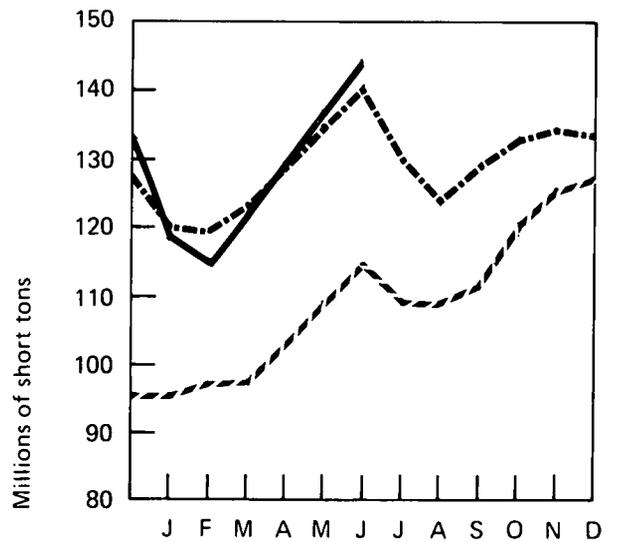
## Production



## Exports



## Stocks

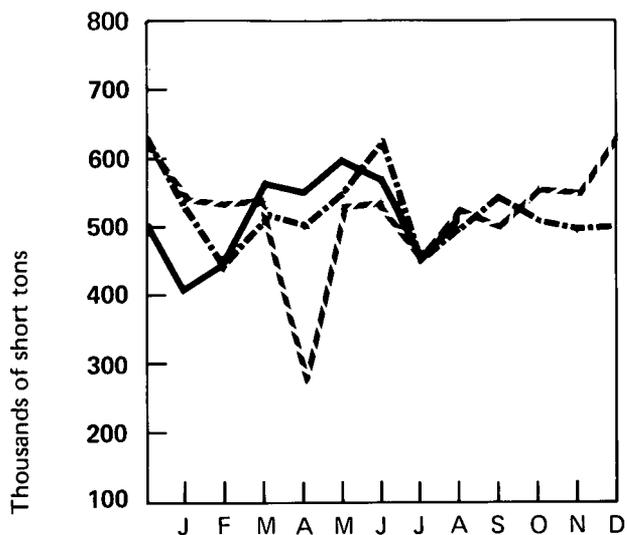


- - - 1975  
 - · - 1976  
 - - - 1977

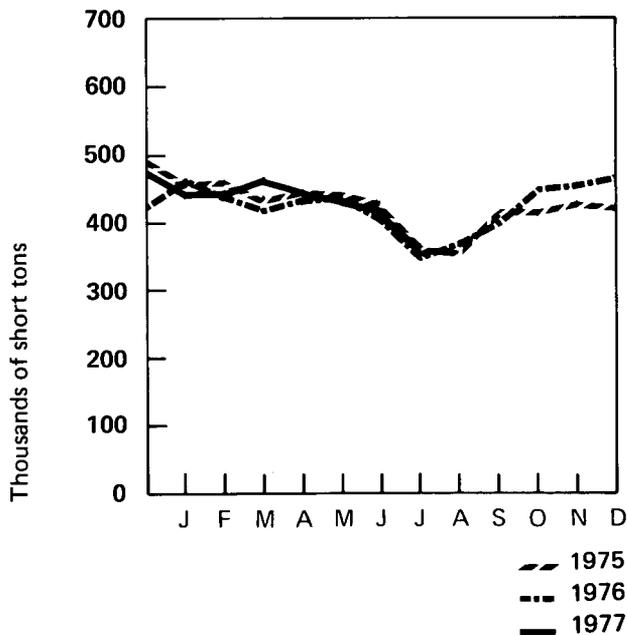
# Anthracite

		Production	Apparent Domestic Consumption
Thousands of short tons			
<b>1972</b>	<b>TOTAL</b>	<b>7,106</b>	<b>5,915</b>
<b>1973</b>	<b>TOTAL</b>	<b>6,830</b>	<b>5,671</b>
<b>1974</b>	<b>TOTAL</b>	<b>6,617</b>	<b>5,448</b>
<b>1975</b>	January	540	459
	February	535	465
	March	544	435
	April	270	450
	May	535	445
	June	544	430
	July	455	360
	August	535	356
	September	500	425
	October	560	420
	November	555	435
	December	630	428
	<b>TOTAL</b>	<b>6,203</b>	<b>5,108</b>
<b>1976</b>	January	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
	<b>TOTAL</b>	<b>6,200</b>	<b>5,100</b>
<b>1977</b>	January	400	440
	February	450	450
	March	570	470
	April	550	450
	May	600	440
	June	570	420
	July	450	360
	August	525	NA
	<b>TOTAL</b>	<b>4,115</b>	<b>3,030</b>
		(8 months)	(7 months)

## Production



## Apparent Domestic Consumption



NA=Not available.

Source: Bureau of Mines "Minerals and Materials/A Monthly Survey."

## Electric Utilities

August 1977 production of electricity by utilities is preliminarily estimated at 195.9 billion kilowatt hours, 5.1 percent above the level for August 1976. Total production during the first 8 months of 1977 is estimated at 1.4 trillion kilowatt hours, 5.4 percent above the level for the same period in 1976.

Electric utility oil consumption during the first 7 months of the year was 22.0 percent higher than during the same period in 1976, corresponding to a 21.6-percent increase in kilowatt-hour generation from oil. Electric utility coal consumption during the first 7 months was up 7.5 percent, and natural gas consumption was 0.2 percent higher.

Edison Electric Institute data indicate that sales of electricity to industrial customers during June 1977 totaled 65.5 billion kilowatt hours, 6.6 percent above the level for June 1976. Sales to commercial customers totaled 39.5 billion kilowatt hours, up 7.9 percent. Sales to residential customers rose 9.3 percent to 49.5 billion kilowatt hours.

The primary causes of the increase in industrial electricity sales appear to be a 6.3-percent increase in industrial production during the period and a 2.7-percent increase in the number of industrial electricity customers.

Factors affecting the growth in commercial sales were increased activity in the services sector of the economy and a 2.3-percent increase in the number of commercial electricity customers.

The sharp increase in residential electricity sales appears to be due to a 2.4-percent rise in the number of residential electricity customers and to increased air-conditioning requirements which were the result of warmer than normal weather in the latter part of the month.

## Cooling Degree-Days

Temperatures in September were considerably warmer than normal, as was characteristic of the summer as a whole. National average cooling degree-days accumulated from August 29 through September 25 were 20 percent above normal and 36 percent above the count for last year. All

regions of the country reported above normal degree-days during the month, ranging from 7 percent above normal in the South Central States to 31 percent above normal in New England.

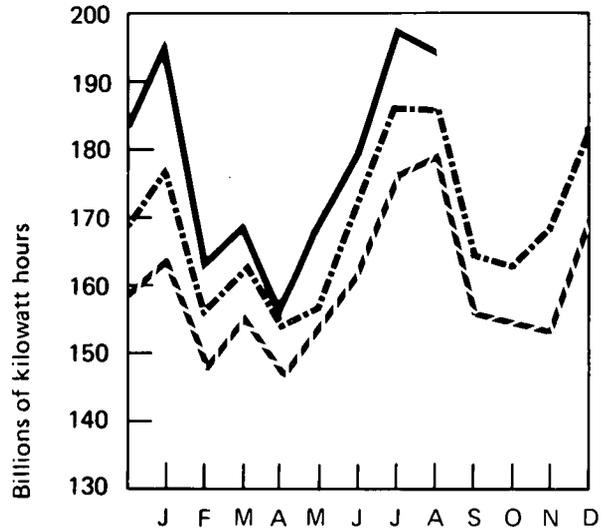
Cooling degree-days for the period January 1 through September 25, 1977, were 12 percent above normal and 18 percent above the number accumulated during the same period in 1976.

# Electric Utilities

		Total Net Production	Percentage Produced from Each Source					
			Millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro- electric
<b>1972</b>	<b>TOTAL</b>	<b>1,749,629</b>	<b>AVG. 44.2</b>	<b>15.6</b>	<b>21.4</b>	<b>3.1</b>	<b>15.6</b>	<b>0.1</b>
<b>1973</b>	<b>TOTAL</b>	<b>1,860,440</b>	<b>AVG. 45.7</b>	<b>16.8</b>	<b>18.3</b>	<b>4.5</b>	<b>14.6</b>	<b>0.1</b>
<b>1974</b>	<b>TOTAL</b>	<b>1,867,103</b>	<b>AVG. 44.5</b>	<b>16.0</b>	<b>17.2</b>	<b>6.1</b>	<b>16.1</b>	<b>0.1</b>
<b>1975</b>	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
	<b>TOTAL</b>	<b>1,917,638</b>	<b>AVG. 44.5</b>	<b>15.1</b>	<b>15.6</b>	<b>9.0</b>	<b>15.6</b>	<b>0.2</b>
<b>1976</b>	January	R178,317	46.9	18.1	11.2	9.0	14.6	0.2
	February	R156,674	46.9	15.8	12.2	9.2	15.7	0.2
	March	R164,164	46.6	15.5	13.0	8.5	16.2	0.2
	April	R153,158	47.4	15.2	14.3	7.2	15.7	0.2
	May	R157,359	46.1	13.8	16.1	7.6	16.2	0.2
	June	R173,375	44.4	14.5	17.1	9.1	14.7	0.2
	July	R186,414	44.7	14.5	17.1	9.5	14.0	0.2
	August	R186,385	45.2	15.2	16.8	9.8	12.8	0.2
	September	R165,015	45.7	14.3	17.0	10.5	12.3	0.2
	October	R163,715	47.0	14.8	14.6	10.6	12.8	0.2
	November	R169,060	48.3	17.8	12.5	9.5	11.7	0.2
	December	R183,856	47.4	18.6	11.3	11.5	11.0	0.2
	<b>TOTAL</b>	<b>R2,037,491</b>	<b>AVG. 46.4</b>	<b>15.7</b>	<b>14.4</b>	<b>9.4</b>	<b>13.9</b>	<b>0.2</b>
<b>1977</b>	January	R196,283	45.8	22.1	10.2	R11.3	R10.5	0.2
	February	R162,698	48.4	18.1	12.0	12.0	9.3	0.2
	March	R169,119	R45.9	R16.7	13.3	12.2	11.7	0.2
	April	R156,841	45.2	16.5	13.6	12.6	11.9	0.2
	May	R169,012	45.5	16.5	14.6	12.1	11.1	0.2
	June	R180,314	46.0	16.0	16.4	11.8	9.6	0.2
	July	R198,494	46.5	17.4	16.4	11.0	8.5	0.2
	August	195,861	46.3	16.5	17.0	11.6	8.4	0.2
	<b>TOTAL</b>	<b>1,428,622</b>						

(8 months)

Total Net Production



\*Includes electricity produced from geothermal power, wood, and waste.  
 NA=Not available.  
 R=Revised.

Source: Federal Power Commission Form 4.

— 1975  
 - - - 1976  
 - · - 1977

## Electric Utilities (Continued)

### Fuel Consumption

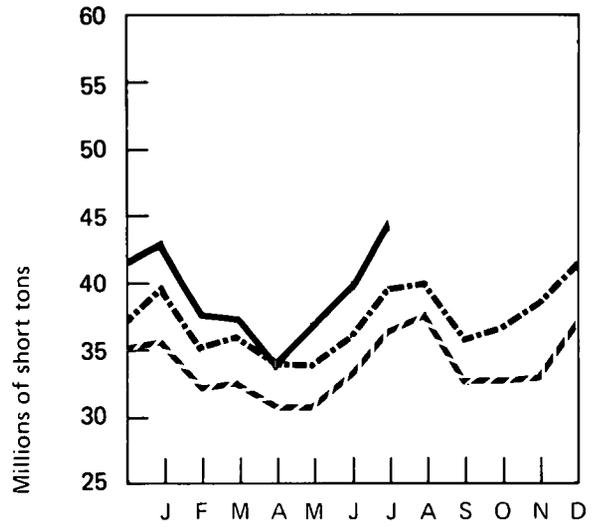
		Coal Thousands of short tons	Oil			Gas Millions of cubic feet
			Steam *	Gas Turbine/ Internal Combustion **	Total	
		Thousands of barrels				
<b>1972</b>	<b>TOTAL</b>	<b>352,392</b>	<b>440,229</b>	<b>53,463</b>	<b>493,692</b>	<b>3,976,770</b>
<b>1973</b>	<b>TOTAL</b>	<b>389,707</b>	<b>513,127</b>	<b>47,020</b>	<b>560,147</b>	<b>3,659,388</b>
<b>1974</b>	<b>TOTAL</b>	<b>392,423</b>	<b>482,524</b>	<b>53,721</b>	<b>536,245</b>	<b>3,443,293</b>
<b>1975</b>	January	35,843	48,678	5,370	54,048	205,096
	February	32,097	39,794	3,750	43,544	188,922
	March	32,793	37,408	3,007	40,415	211,184
	April	30,547	34,702	2,335	37,037	214,250
	May	30,574	33,720	3,266	36,986	275,097
	June	33,456	36,825	4,118	40,943	307,901
	July	36,567	40,520	3,893	44,413	362,088
	August	37,967	44,565	4,755	49,320	360,199
	September	32,609	35,124	1,917	37,041	315,877
	October	32,853	36,137	1,893	38,030	275,266
	November	33,333	35,743	1,794	37,537	227,748
	December	37,390	43,724	3,090	46,814	213,957
	<b>TOTAL</b>	<b>406,029</b>	<b>466,940</b>	<b>39,188</b>	<b>506,128</b>	<b>3,157,585</b>
<b>1976</b>	January	39,986	51,114	4,968	56,082	206,365
	February	34,965	40,452	2,671	43,123	199,300
	March	36,099	41,154	2,796	43,950	222,617
	April	33,805	37,663	2,483	40,146	227,709
	May	33,944	35,651	2,215	37,866	266,481
	June	36,381	40,065	3,568	43,633	313,156
	July	39,841	43,143	4,078	47,221	337,390
	August	40,329	45,626	3,437	49,063	329,511
	September	35,894	38,245	2,519	40,764	294,841
	October	36,775	39,095	3,098	42,193	249,761
	November	38,837	47,340	4,963	52,303	216,931
	December	41,575	53,940	5,550	59,490	214,414
	<b>TOTAL</b>	<b>448,431</b>	<b>513,488</b>	<b>42,346</b>	<b>555,834</b>	<b>3,078,475</b>
<b>1977</b>	January	43,254	66,251	9,645	75,896	205,067
	February	37,644	47,605	3,218	50,823	200,371
	March	37,283	46,069	R2,595	R48,664	231,520
	April	33,981	42,137	2,292	44,429	223,308
	May	R37,044	R44,709	R3,904	R48,613	R259,550
	June	40,040	46,108	4,402	50,509	310,331
	July	44,903	53,971	7,853	61,824	346,044
	<b>TOTAL</b> (6 months)	<b>274,149</b>	<b>346,850</b>	<b>33,909</b>	<b>380,758</b>	<b>1,776,191</b>

\*Primarily residual fuel oil.

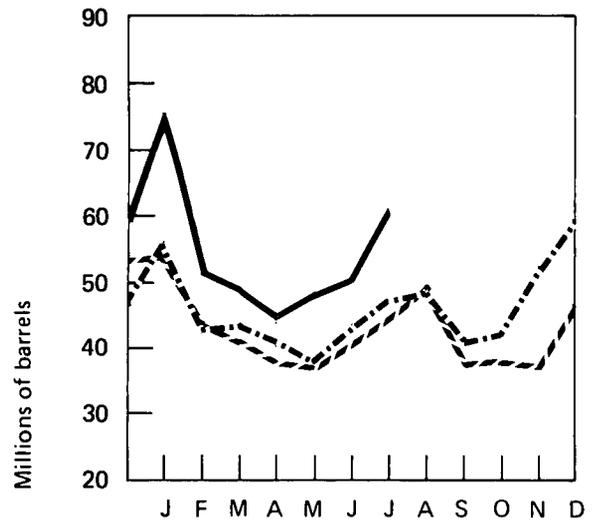
\*\*Primarily middle distillates.

Source: Federal Power Commission Form 4.

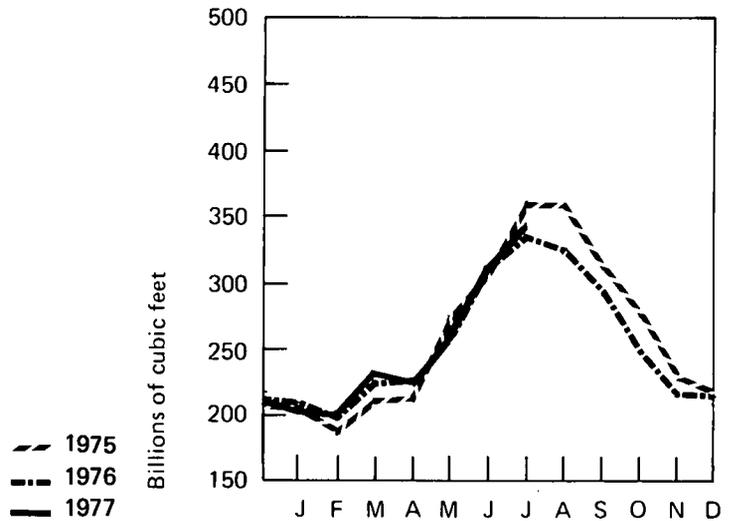
### Coal Consumption



### Oil Consumption



### Gas Consumption



- - - 1975  
 - · - 1976  
 — 1977

## Electric Utilities (Continued)

### Stocks at End of Month

		Coal	Oil		
			Thousands of short tons	Steam*	Gas Turbine/ Internal Combustion**
		Thousands of barrels			
1972		***100,009	***52,575	***5,079	***57,654
1973		***87,279	***79,121	***10,095	***89,216
1974		***83,542	***97,201	***15,715	***112,916
1975	January	82,088	95,579	15,716	111,295
	February	80,972	95,762	15,738	111,500
	March	81,885	97,333	16,310	113,643
	April	86,829	98,004	16,294	114,298
	May	93,869	101,464	15,767	117,231
	June	98,031	103,222	15,714	118,936
	July	94,278	105,334	15,905	121,239
	August	94,213	104,926	15,739	120,665
	September	98,096	109,678	16,635	126,313
	October	105,415	112,107	16,774	128,881
	November	110,313	113,231	17,110	130,341
	December	110,750	108,358	16,886	125,244
1976	January	105,518	102,023	15,922	117,945
	February	104,874	102,147	16,705	118,852
	March	108,450	104,072	16,466	120,538
	April	112,862	103,747	16,640	120,387
	May	119,611	109,132	16,961	126,092
	June	123,048	109,649	16,619	126,268
	July	115,204	110,818	15,860	126,678
	August	110,752	109,812	15,993	125,805
	September	115,399	112,955	17,042	129,997
	October	118,566	114,426	16,936	131,362
	November	119,298	111,127	15,499	126,626
	December	117,468	106,730	14,956	121,686
1977	January	104,839	R89,871	12,963	R102,834
	February	101,919	95,632	R14,386	R110,017
	March	108,283	R96,694	15,770	R112,464
	April	114,585	101,286	16,090	117,376
	May	R121,487	R103,562	R16,089	R119,650
	June	127,452	107,360	15,742	123,103
	July	122,067	112,202	16,241	128,443

\*Primarily residual fuel oil.

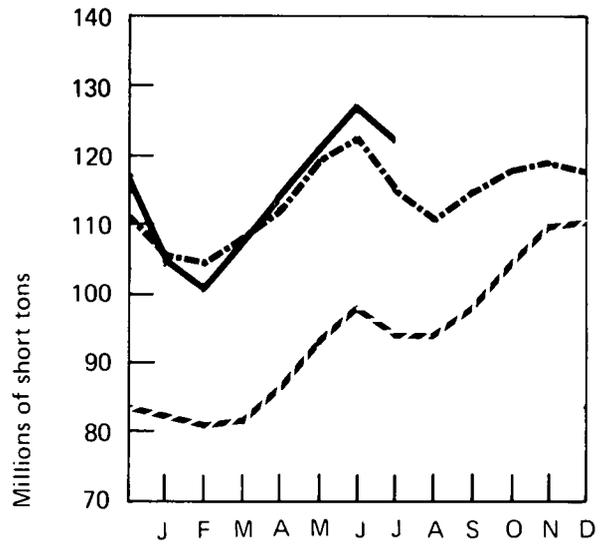
\*\*Primarily middle distillates.

\*\*\*As of December 31.

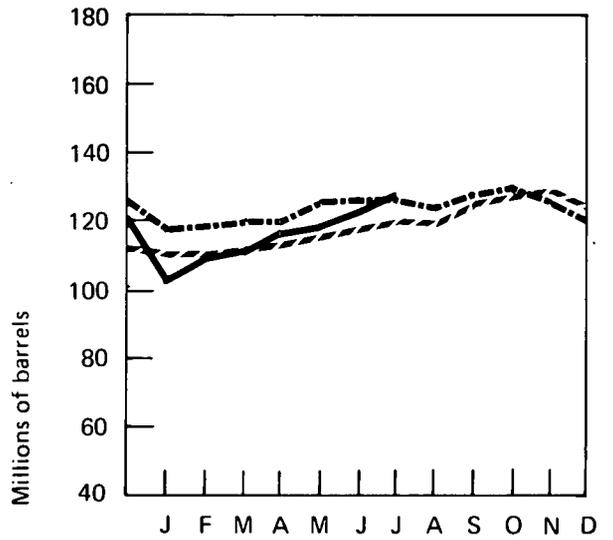
R=Revised.

Source: Federal Power Commission Form 4.

### Coal Stocks



### Oil Stocks



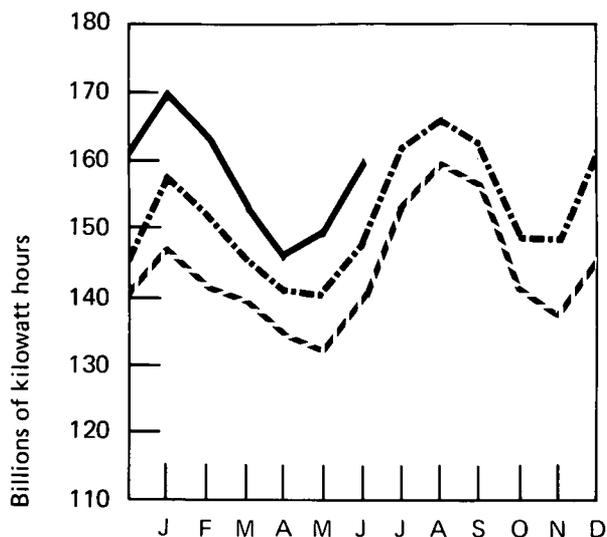
--- 1975  
- - - 1976  
— 1977

# Electric Utilities (Continued)

## Electricity Sales

		Residential	Commercial	Industrial	Other*	Total
Millions of kilowatt hours						
<b>1972</b>	<b>TOTAL</b>	<b>538,609</b>	<b>359,265</b>	<b>640,978</b>	<b>56,309</b>	<b>1,595,161</b>
<b>1973</b>	<b>TOTAL</b>	<b>579,231</b>	<b>388,266</b>	<b>686,085</b>	<b>59,326</b>	<b>1,712,909</b>
<b>1974</b>	<b>TOTAL</b>	<b>578,183</b>	<b>384,824</b>	<b>684,874</b>	<b>58,042</b>	<b>1,705,923</b>
<b>1975</b>	January	54,003	32,405	55,505	5,954	147,867
	February	50,219	31,459	54,328	5,544	141,550
	March	47,968	31,194	54,437	5,639	139,238
	April	44,762	30,473	53,910	5,269	134,414
	May	41,077	30,926	54,767	5,404	132,174
	June	45,766	35,210	55,369	5,384	141,729
	July	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	43,024	32,817	58,815	5,745	140,401
	November	42,054	31,608	58,223	5,976	137,861
	December	50,213	32,596	57,433	5,907	146,149
	<b>TOTAL</b>	<b>585,325</b>	<b>402,620</b>	<b>674,705</b>	<b>68,177</b>	<b>1,730,827</b>
<b>1976</b>	January	60,126	34,955	57,463	6,359	158,903
	February	54,264	33,809	58,064	5,855	151,992
	March	R47,041	R32,520	R60,322	R5,967	R145,850
	April	R43,563	R31,812	R59,967	R5,386	R140,728
	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	44,762	34,388	64,208	5,420	148,778
	November	46,674	33,372	63,106	5,606	148,758
	December	56,750	35,579	62,842	5,626	160,797
	<b>TOTAL</b>	<b>R603,403</b>	<b>R421,964</b>	<b>R741,056</b>	<b>R68,905</b>	<b>R1,835,328</b>
<b>1977</b>	January	65,280	37,362	61,638	6,006	170,286
	February	61,492	35,969	60,687	5,549	163,697
	March	R50,374	R33,660	R63,275	R5,748	R153,057
	April	R44,564	R33,051	R63,583	R5,078	R146,276
	May	44,005	36,227	63,549	5,764	149,545
	June	49,481	39,511	65,493	5,685	160,170
	<b>TOTAL</b> (6 months)	<b>315,196</b>	<b>215,780</b>	<b>378,225</b>	<b>33,830</b>	<b>943,031</b>

Total Sales



\*Includes street lighting and trolley cars.

R=Revised.

Sources: 1972 through April 1977—Federal Power Commission Form 5; May 1977 forward—Edison Electric Institute.

— 1975  
- - - 1976  
- · - 1977

## Cooling Degree-Days\*

Petroleum Administration For Defense (PAD) Districts	August 29, 1977 through September 25, 1977			1977	Cumulative Since January 1					
	1977	1976**	Normal (1941-70)**		1976**	Normal (1941-70)**				
PAD District I	210.6	135.0	(56.0)	163.5	(28.8)	1,299.7	1,166.3	(11.4)	1,173.4	(10.8)
New England	100.4	54.1	(85.5)	57.8	(73.8)	748.7	738.7	(1.3)	572.0	(30.9)
Conn., Maine, Mass., N.H., R.I., Vt.										
Middle Atlantic	152.8	93.8	(62.9)	112.2	(36.3)	960.6	925.5	(3.8)	890.8	(7.8)
Del., Md., N.J., N.Y., Pa.										
Lower Atlantic	345.8	232.5	(48.7)	287.2	(20.4)	2,051.6	1,716.1	(19.6)	1,862.2	(10.2)
Fla., Ga., N.C., S.C., Va., W.Va.										
PAD District II	139.9	92.4	(51.5)	110.7	(26.4)	1,137.1	876.6	(29.7)	941.9	(20.7)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.										
PAD District III	402.7	309.1	(30.3)	352.7	(14.2)	2,397.7	1,913.8	(25.3)	2,249.6	(6.6)
Ala., Ark., La., Miss., N. Mex., Tex.										
PAD District IV	80.1	75.3	(6.4)	73.3	(9.3)	787.7	657.8	(19.8)	669.0	(17.7)
Colo., Idaho, Mont., Utah, Wyo.										
PAD District V	142.9	171.2	(-16.6)	146.6	(-2.6)	807.8	802.7	(0.6)	744.5	(8.5)
Ariz., Calif., Nev., Oreg., Wash.										
<b>U.S. AVERAGE</b>	<b>197.6</b>	<b>145.5</b>	<b>(35.9)</b>	<b>164.2</b>	<b>(20.4)</b>	<b>1,295.3</b>	<b>1,097.2</b>	<b>(18.1)</b>	<b>1,153.1</b>	<b>(12.3)</b>

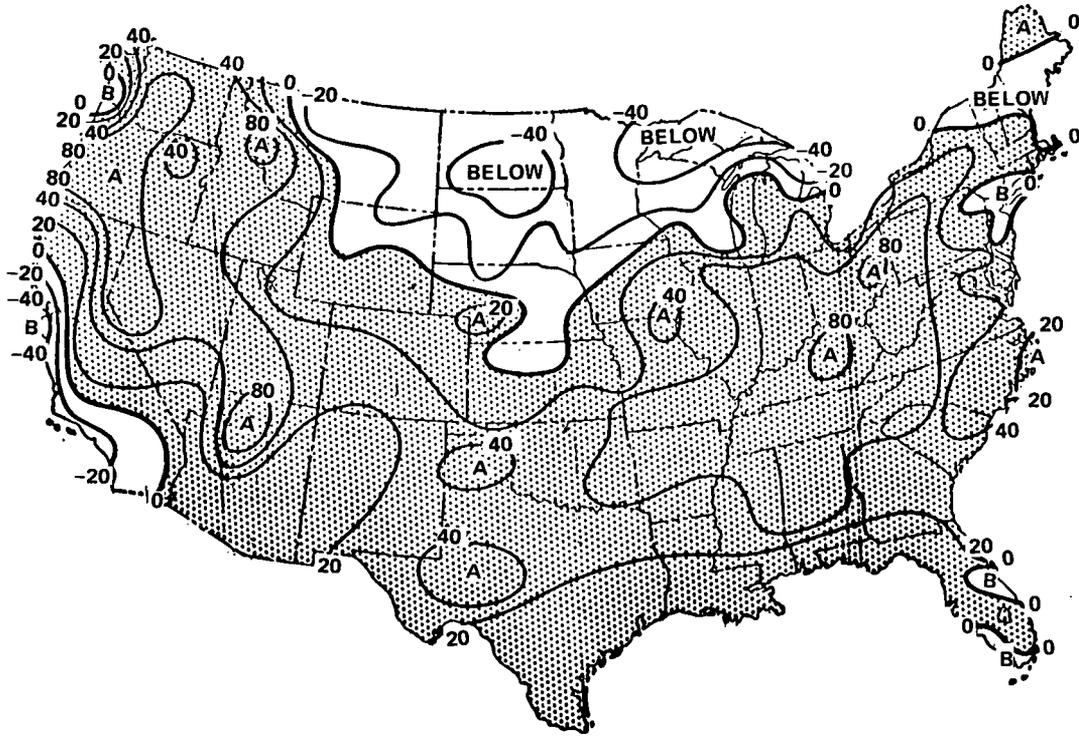
\*See Explanatory Note 9 for explanation of cooling degree-days.

\*\*Percentage change in parentheses.

# Cooling Degree-Days (Continued)

Cooling Degree-Days Accumulated from January 1, 1977 through September 25, 1977

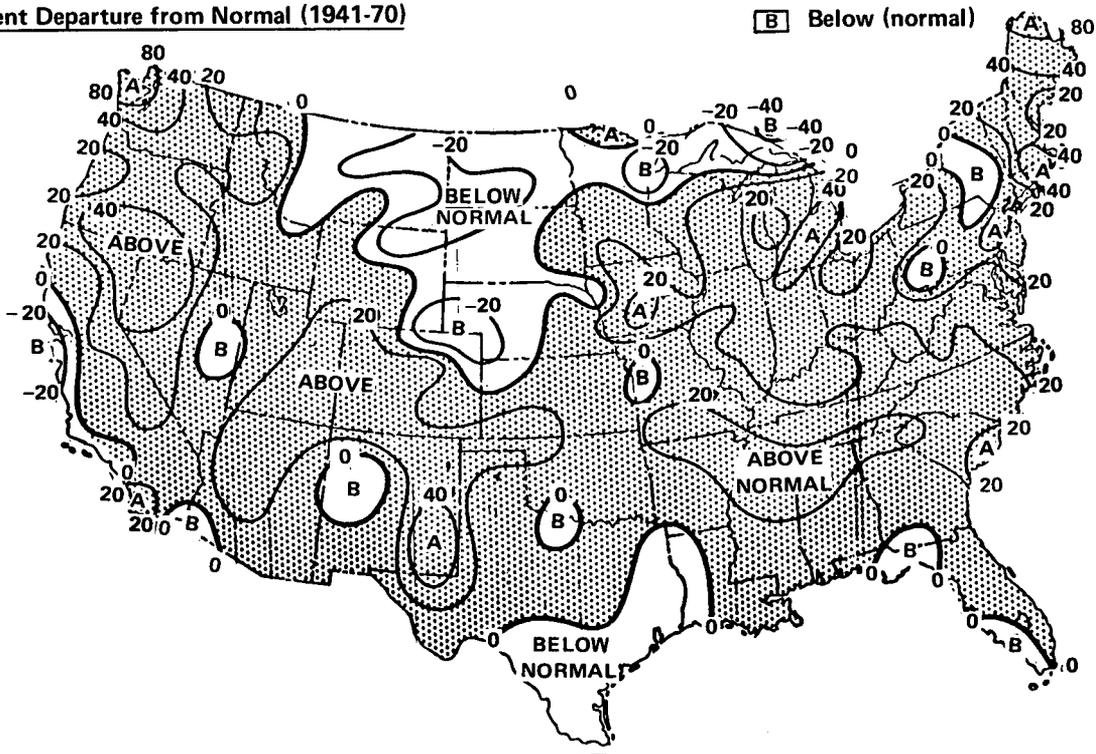
## Percent Departure from 1976



**A** Above (normal)

**B** Below (normal)

## Percent Departure from Normal (1941-70)



Note: Above normal cooling-days correspond to above normal temperatures.  
Source: Department of Commerce-NOAA.

## Nuclear Power

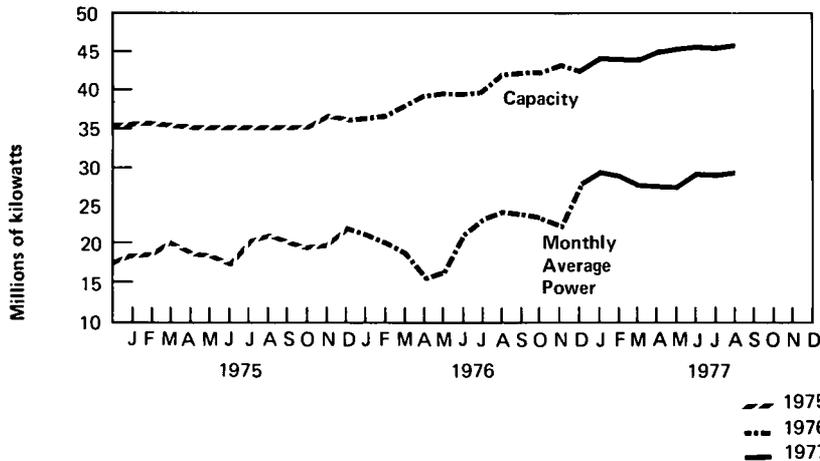
The 61 domestic reactors in commercial operation, with a maximum dependable capacity of 43,098 megawatts, performed at 69 percent of capacity during August and provided 11.6 percent of the Nation's total electricity generation for the month. Although 15 reactors were refueling or conducting maintenance for major portions of the month, the commercial nuclear power-plant network established a new record for net electricity generation (22.7 billion kilowatt hours).

Startup testing began at two new power-plants in August. Farley 1, an 829-megawatt pressurized-water reactor (PWR) owned by the Alabama Power Company, began startup testing (see Definitions) on August 9 and produced a small amount of net electricity by month's end. Davis Bessie 1, a 906-megawatt PWR owned by the Toledo Edison Company of Ohio, began startup testing on August 12 but produced no net power during the month.

**U.S. Nuclear Powerplant Operations\***

		Maximum Dependable Capacity	Average Power	Percent of Total Domestic Electricity Generation
Thousands of net kilowatts				
<b>1972</b>	<b>AVERAGE</b>	<b>7,726</b>	<b>6,174</b>	<b>3.1</b>
<b>1973</b>	<b>AVERAGE</b>	<b>13,850</b>	<b>8,760</b>	<b>4.5</b>
<b>1974</b>	<b>AVERAGE</b>	<b>29,921</b>	<b>13,011</b>	<b>6.1</b>
<b>1975</b>	January	35,691	18,734	8.5
	February	35,899	18,948	8.7
	March	35,686	20,003	9.6
	April	35,017	18,510	9.1
	May	35,017	18,500	9.0
	June	35,322	17,701	7.8
	July	35,596	20,661	8.7
	August	35,589	21,344	8.8
	September	35,540	19,994	9.3
	October	35,540	19,659	9.4
	November	36,752	19,672	9.3
	December	36,424	22,418	9.9
	<b>AVERAGE</b>	<b>35,671</b>	<b>19,692</b>	<b>9.0</b>
<b>1976</b>	January	36,750	21,638	9.0
	February	36,879	20,657	9.2
	March	38,072	18,808	8.5
	April	39,763	15,142	7.2
	May	39,902	16,034	7.6
	June	39,781	21,885	9.1
	July	40,168	23,802	9.5
	August	42,067	24,681	9.8
	September	42,896	24,014	10.5
	October	42,877	23,327	10.6
	November	43,673	22,408	9.5
	December	42,877	28,380	11.5
	<b>AVERAGE</b>	<b>40,642</b>	<b>21,756</b>	<b>9.4</b>
<b>1977</b>	January	44,316	R29,714	R11.3
	February	44,282	29,168	12.0
	March	44,289	27,785	12.2
	April	45,131	R27,588	12.6
	May	45,222	R27,526	12.1
	June	45,991	R29,539	11.8
	July	**45,984	R29,335	R11.0
	August	**45,982	**30,538	**11.6
	<b>AVERAGE</b> (8 months)	<b>45,257</b>	<b>28,898</b>	<b>11.8</b>

**U.S. Nuclear Powerplants**



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

\*\*Preliminary data.

R=Revised data.

Sources: Capacity data are from U.S. Nuclear Regulatory Commission; remaining data are from Federal Power Commission Form 4.

## Status of Nuclear Powerplants – August 31, 1977

Status	Number of Plants				Total	Design Capacity
	Boiling Water Reactors	High Temperature Gas Reactors	Pressurized Water Reactors	Other*		Net Electrical Megawatts
Licensed to operate	25	1	39	0	65	47,000
Construction permit granted	27	0	50	0	77	82,000
Construction permit pending	13	0	43	4	60	67,000
Orders placed for plant	3	0	8	0	11	13,000
Publicly announced	—	—	—	17	17	21,000
<b>TOTAL</b>	<b>68</b>	<b>1</b>	<b>140</b>	<b>21</b>	<b>230</b>	<b>230,000</b>

\*Includes 1 Liquid Metal Fast Breeder Reactor and 20 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

## U.S. Uranium Enrichment – August 1977

	Domestic Customers	Foreign Customers	Total
Separative work performed (in metric tons of separative work units)	462.128	453.042	915.170
Cost (in millions of dollars)	29.193	30.560	59.753
Product quantity (in metric tons of uranium)	103.150	116.787	219.937
Feed requirement (in metric tons of uranium)	578.173	595.272	1,173.445

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

## Nuclear Power Generation by Major Non-Communist Countries – August 1977

Country	Number of Reactors*	Capacity	Generation of Electricity				
			Generation	Percent of Design Capacity			
				August	August	Year**	
		Thousands of gross electrical kilowatts	Millions of gross kilowatt hours	1974	1975	1976	
Canada	7	3,960	1,977	67	74	64	85
Federal Republic of Germany	10	6,410	2,382	50	57	72	68
France	11	3,970	954	32	57	68	58
Great Britain	***31	8,040	3,107	52	61	57	64
India	3	620	220	48	55	46	58
Italy	3	630	247	53	61	69	69
Japan	13	7,430	2,726	49	61	36	57
Spain	3	1,120	426	51	75	77	77
Sweden	6	3,880	1,274	44	20	44	55
Switzerland	3	1,060	322	41	76	84	86
United States	64	46,930	22,926	66	57	60	56
<b>TOTAL</b>	<b>154</b>	<b>84,050</b>	<b>36,561</b>	<b>58</b>	<b>58</b>	<b>58</b>	<b>60</b>

\*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 for 17 units are based on 4-week period; figures for remaining units are for 31 days.

Source: *Nucleonics Week*.

## Summary of Monthly Fuel Cycle – July 1977

Fuel Cycle Activity	Product	Processed Material <sup>1</sup> MTU except where noted	Percent Utilization of Industry Capacity	Energy Content of Processed Material <sup>2</sup> Billion Btu	Energy Consumed in Fuel Cycle Activity <sup>3</sup>	Cost Contribution to Electric Power <sup>4</sup>
						Mills per kilowatt hour
Milling	Yellowcake (U <sub>3</sub> O <sub>8</sub> ) Deliveries	470	45	160,000	257	1.27
Conversion	Uranium Hexafluoride (UF <sub>6</sub> ) Deliveries	1,251	<sup>5</sup> 87	427,000	188	0.16
Enrichment	Enriched UF <sub>6</sub> Deliveries	231 (913 MT-SWU)	( <sup>6</sup> )	474,000	2,106	1.53
Fabrication	Finished Fuel Assemblies Shipped	43	NA	87,000	12	0.47
Powerplant Operation	Electricity Generated	21,650 (million kWhe)	66	204,000	1,200 (million kWhe)	10.93
	Spent Fuel Discharged	28	–	–	–	} 1.57
Reprocessing	Spent Fuel Received	10	–	–	–	
	Spent Fuel Reprocessed	0	–	–	–	

<sup>1</sup> Units of measure are discussed in Explanatory Notes 10 and 11.

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

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

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

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

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

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

NA=Not available.

Source: ERDA.

## Energy Consumption

Domestic energy consumption in July 1977 was 6.01 quadrillion Btu, 2.1 percent more than during July 1976, and 8.3 percent more than in July 1975. The sectoral breakout for July consumption is not yet available.

In June 1977, the combined residential/commercial sector consumed 2.03 quadrillion Btu, up 6.7 percent and 12.0 percent from the consumption level for the same month in 1976 and 1975, respectively.

Industrial energy consumption for June totaled 2.27 quadrillion Btu, which was 3.1 percent more than for the same month a year earlier and 14.0 percent more than in June 1975. Industrial natural gas consumption amounted to 0.63 quadrillion Btu in June, which was 1.4 percent less than in June 1976 but 6.1 percent more than in June 1975.

Transportation consumption for June was 1.649 quadrillion Btu, up 3.1 percent and 8.7 percent from the levels for the corresponding month in 1976 and 1975, respectively.

## Energy Indicators\*

### U.S. Dependence on Petroleum Imports

The fraction of petroleum demand supplied by imports continued to increase in the second quarter of 1977 to a seasonally adjusted figure of 47.3 percent, as compared to 42.7 percent 1 year earlier. The portion of imports from Arab OPEC countries decreased slightly between first and second quarter 1977 from 18.9 percent to 18.5 percent of total petroleum demand. The comparable figure for second quarter 1976 was 14.8 percent.

### Energy Consumption per GNP Dollar

Energy consumption per GNP dollar continued a downward trend that began in the first quarter of 1975. The seasonally adjusted figure for the second quarter of 1977 was 57.2 thousand Btu per constant 1972

dollar, 5.7 percent below what it was during the fourth quarter of 1973 at the time of the Arab oil embargo. This continuing decrease probably indicates a combination of greater efficiency in the use of energy and a shift toward the production of goods and services which are less energy intensive.

### Consumer Energy Price Indicator

The Consumer Energy Price Indicator (CEPI) rose 4.4 percent between March and June 1977, while the Consumer Price Index rose only 1.4 percent. The change in the CEPI reflects a 6-percent increase in the average residential price of electricity and a 3-percent increase in the price of gasoline coupled with a 7-percent increase in personal gasoline consumption. During the first half of 1977 the price of energy to the consumer increased at a rate almost 2-1/2 times the average price increase for all consumer goods.

\*See Explanatory Notes 13, 14, and 15.

# Energy Consumption

## Domestic Energy Consumption by Primary Energy Type

		Coal*	Natural Gas (dry)	Petroleum	Hydroelectric Power**	Nuclear Electric Power	Total	Cumulative Total
Quadrillion (10 <sup>15</sup> ) Btu								
<b>1972</b>	<b>TOTAL</b>	<b>12.424</b>	<b>22.984</b>	<b>32.965</b>	<b>2.946</b>	<b>0.567</b>	<b>71.895</b>	
<b>1973</b>	<b>TOTAL</b>	<b>13.294</b>	<b>22.512</b>	<b>34.852</b>	<b>3.006</b>	<b>0.888</b>	<b>74.553</b>	
<b>1974</b>	<b>TOTAL</b>	<b>12.889</b>	<b>21.732</b>	<b>33.468</b>	<b>3.295</b>	<b>1.215</b>	<b>72.600</b>	
<b>1975</b>	January	1.148	2.295	3.067	0.268	0.149	6.927	6.927
	February	1.054	1.980	2.629	0.256	0.136	6.054	12.982
	March	1.087	1.943	2.780	0.299	0.159	6.267	19.249
	April	1.004	1.608	2.646	0.285	0.142	5.685	24.934
	May	0.984	1.359	2.582	0.296	0.147	5.368	30.301
	June	1.032	1.283	2.574	0.290	0.136	5.315	35.616
	July	1.091	1.341	2.682	0.273	0.164	5.550	41.167
	August	1.131	1.398	2.693	0.243	0.169	5.634	46.800
	September	1.015	1.399	2.600	0.221	0.153	5.388	52.188
	October	1.035	1.576	2.790	0.243	0.156	5.801	57.989
	November	1.059	1.674	2.601	0.262	0.151	5.747	63.736
	December	1.174	2.092	3.098	0.278	0.178	6.821	70.557
	<b>TOTAL</b>	<b>12.813</b>	<b>19.948</b>	<b>32.742</b>	<b>3.215</b>	<b>1.839</b>	<b>70.557</b>	
<b>1976</b>	January	1.218	2.336	3.169	R0.281	0.172	R7.176	R7.176
	February	1.078	1.976	2.778	R0.265	0.153	R6.250	R13.425
	March	1.119	1.753	2.947	R0.286	0.149	R6.254	R19.679
	April	1.070	1.537	2.749	R0.261	0.117	R5.733	R25.413
	May	1.072	1.461	2.722	R0.275	0.127	R5.657	R31.070
	June	1.115	1.359	2.776	R0.276	0.168	R5.694	R36.763
	July	1.188	1.398	2.830	R0.281	0.189	R5.885	R42.649
	August	1.197	1.341	2.835	R0.258	0.196	R5.826	R48.475
	September	1.099	1.325	2.774	R0.222	0.184	R5.604	R54.079
	October	1.134	1.652	2.905	R0.229	0.185	R6.105	R60.184
	November	1.182	1.910	3.107	R0.216	0.172	R6.587	R66.771
	December	1.281	2.276	3.494	R0.220	0.225	R7.495	R74.267
	<b>TOTAL</b>	<b>13.752</b>	<b>20.323</b>	<b>35.087</b>	<b>R3.068</b>	<b>2.037</b>	<b>R74.267</b>	
<b>1977</b>	January	1.312	2.444	3.489	R0.225	0.236	R7.706	R7.706
	February	1.169	1.834	3.143	R0.167	0.209	R6.522	R14.228
	March	1.157	1.731	3.076	R0.216	0.220	R6.400	R20.628
	April	1.080	1.447	R2.897	R0.204	R0.212	R5.839	R26.467
	May	1.152	R1.387	2.947	R0.204	0.218	R5.908	R32.375
	June	1.203	1.338	2.986	0.189	0.227	5.942	38.317
	July***	1.263	1.338	2.991	0.184	0.233	6.008	44.326
	<b>TOTAL</b> (7 months)	<b>8.335</b>	<b>11.517</b>	<b>21.530</b>	<b>1.389</b>	<b>1.554</b>	<b>44.326</b>	

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

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

\*\*\*Partially estimated.

R=Revised.

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

## Domestic Energy Consumption by Economic Sector<sup>1</sup>

		Residential/ Commercial	Industrial	Transportation	Total
Quadrillion (10 <sup>15</sup> ) Btu					
<b>1973<sup>2</sup></b>	<b>TOTAL</b>	<b>26.515</b>	<b>29.161</b>	<b>18.877</b>	<b>74.553</b>
<b>1974<sup>2</sup></b>	<b>TOTAL</b>	<b>25.853</b>	<b>28.486</b>	<b>18.261</b>	<b>72.600</b>
<b>1975</b>	January	2.845	2.489	1.594	6.927
	February	2.583	2.064	1.408	6.054
	March	2.554	2.176	1.537	6.267
	April	2.302	1.861	1.523	5.685
	May	1.897	1.934	1.537	5.368
	June	1.811	1.987	1.517	5.315
	July	1.947	2.053	1.550	5.550
	August	1.925	2.144	1.564	5.634
	September	1.789	2.125	1.474	5.388
	October	1.860	2.380	1.561	5.801
	November	1.953	2.343	1.452	5.747
	December	2.649	2.523	1.649	6.821
	<b>TOTAL</b>	<b>26.115</b>	<b>26.077</b>	<b>18.365</b>	<b>70.557</b>
<b>1976</b>	January	R3.093	R2.454	1.629	R7.176
	February	R2.676	R2.112	1.462	R6.249
	March	R2.427	R2.202	1.626	R6.254
	April	R2.074	R2.079	1.581	R5.733
	May	R1.915	R2.189	1.553	R5.657
	June	R1.896	R2.198	1.600	R5.694
	July	R1.984	R2.264	1.637	R5.885
	August	R1.987	2.246	1.592	R5.826
	September	R1.836	R2.210	1.558	R5.604
	October	R1.943	2.562	1.599	R6.105
	November	R2.339	R2.607	1.642	R6.587
	December	R2.986	R2.717	1.792	R7.495
	<b>TOTAL</b>	<b>R27.156</b>	<b>R27.839</b>	<b>19.271</b>	<b>R74.267</b>
<b>1977</b>	January	R3.400	2.583	1.723	R7.706
	February	R2.973	1.969	1.580	R6.522
	March	R2.506	R2.242	1.652	R6.400
	April	R2.096	R2.119	R1.625	R5.839
	May	R2.002	2.300	1.606	R5.908
	June	2.028	2.266	1.649	5.942
	<b>TOTAL</b> (6 months)	<b>15.003</b>	<b>13.479</b>	<b>9.835</b>	<b>38.317</b>

<sup>1</sup> See Explanatory Note 12 for definitions of the Residential/Commercial, Industrial, and Transportation sectors. The methodology used for sector calculations is provided in the footnotes of the next table.

<sup>2</sup> Monthly data for 1973 and 1974 are published in the September 1977 issue of the *Monthly Energy Review*.

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

Sector <sup>1</sup>	Primary Energy Source					Primary Energy Consumption	Electricity Distributed <sup>7</sup>	Net Energy Consumption	Electrical Energy Loss Distributed <sup>8</sup>	Ultimate Energy Disposition
	Coal <sup>2</sup>	Natural Gas (dry) <sup>3</sup>	Petroleum <sup>4</sup>	Hydroelectric <sup>5</sup>	Nuclear <sup>6</sup>					
Residential and Commercial	0.015	0.351	0.549	—	—	0.915	0.318	1.233	0.794	2.028
Industrial	0.317	0.631	0.534	0.003	—	1.485	0.223	1.708	0.558	2.266
Transportation	0.001	0.037	1.595	—	( <sup>9</sup> )	1.632	0.005	1.637	0.012	1.649
Electric Utilities	0.870	0.318	0.309	0.186	0.227	1.910	—	—	—	—
<b>TOTAL</b>	<b>1.203</b>	<b>1.338</b>	<b>2.986</b>	<b>0.189</b>	<b>0.227</b>	<b>5.942</b>	<b>0.546</b>	<b>4.578</b>	<b>1.364</b>	<b>5.942</b>

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

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

<sup>3</sup> Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. Data from the American Gas Association are used for the Residential and Commercial Sector, 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.

<sup>4</sup> Aggregate petroleum data are from the Energy Information Administration. FPC provided data on oil consumed

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

<sup>5</sup> FPC hydroelectric power production plus net imports of electricity. These imports are assumed to be from hydroelectric power sources and are estimated at 0.011 quadrillion Btu per month in 1974 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.

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

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

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

<sup>9</sup> Negligible.

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

	<b>June 1977 Consumption</b>	<b>Percent Change from June 1976*</b>	<b>Cumulative Percent Change from 1976 (January through June)*</b>
	Quadrillion Btu		
<b>Refined Petroleum Products</b>	2.986	+7.6	+8.8
Motor Gasoline	1.195	+1.4	+2.8
Jet Fuel	0.167	+2.2	+5.2
Distillate	0.485	+14.0	+13.6
Residual	0.555	+16.7	+16.3
Other Petroleum Products	0.585	+11.3	+11.1
<b>Natural Gas (Dry)</b>	1.338	-1.6	-1.8
<b>Coal (Anthracite, bituminous, and lignite)</b>	1.203	+7.8	+6.6
<b>Hydroelectric and Nuclear Electric Power</b>	0.546	+8.5	+7.0
<b>TOTAL ENERGY USE</b>	<b>5.942</b>	<b>+4.4</b>	<b>+4.8</b>
<b>Economic Sector Consumption</b>			
Residential and Commercial	2.028	+6.9	+7.1
Industrial	2.266	+3.1	+2.4
Transportation	1.649	+3.1	+4.6

\*Computed on a daily average basis.

# Energy Consumption (Continued)

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

		Coal	Natural Gas (dry)	Petroleum <sup>2</sup>	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 <sup>15</sup> ) Btu								
<b>1973</b>	<b>TOTAL</b>	<b>0.295</b>	<b>7.577</b>	<b>7.077</b>	<b>3.445</b>	<b>8.120</b>	<b>26.515</b>	
<b>1974</b>	<b>TOTAL</b>	<b>0.297</b>	<b>7.427</b>	<b>R6.484</b>	<b>3.424</b>	<b>8.222</b>	<b>R25.853</b>	
<b>1975</b>	January	0.035	1.124	0.627	0.310	0.748	2.845	2.845
	February	0.023	1.105	0.526	0.292	0.637	2.583	5.427
	March	0.022	1.018	0.546	0.284	0.684	2.554	7.981
	April	0.015	0.905	0.489	0.270	0.623	2.302	10.283
	May	0.012	0.522	0.444	0.259	0.660	1.897	12.180
	June	0.013	0.338	0.435	0.290	0.735	1.811	13.991
	July	0.016	0.294	0.463	0.331	0.844	1.947	15.938
	August	0.015	0.267	0.447	0.342	0.855	1.925	17.863
	September	0.021	0.284	0.484	0.328	0.673	1.789	19.652
	October	0.023	0.375	0.539	0.273	0.650	1.860	21.513
	November	0.024	0.526	0.503	0.266	0.634	1.953	23.466
	December	0.033	0.930	0.635	0.297	0.754	2.649	26.115
	<b>TOTAL</b>	<b>0.255</b>	<b>7.688</b>	<b>6.135</b>	<b>3.541</b>	<b>8.495</b>	<b>26.115</b>	
<b>1976</b>	January	0.031	1.232	0.656	0.340	R0.834	R3.093	R3.093
	February	0.020	1.086	0.575	0.315	R0.681	R2.676	R5.769
	March	0.018	0.854	0.571	0.286	R0.697	R2.427	R8.195
	April	0.021	0.661	0.500	R0.271	R0.622	R2.074	R10.269
	May	0.016	0.491	0.506	0.264	R0.637	R1.915	R12.184
	June	0.015	0.361	0.489	0.286	R0.746	R1.896	R14.080
	July	0.011	0.297	0.487	0.335	R0.854	R1.984	R16.064
	August	0.015	0.275	0.506	0.345	R0.846	R1.987	R18.052
	September	0.017	0.271	0.517	0.329	R0.701	R1.836	R19.888
	October	0.020	0.397	0.567	0.283	R0.676	R1.943	R21.831
	November	0.025	0.700	0.622	0.287	R0.705	R2.339	R24.170
	December	0.037	1.078	0.726	0.328	R0.817	R2.986	R27.156
	<b>TOTAL</b>	<b>0.246</b>	<b>7.703</b>	<b>6.722</b>	<b>R3.670</b>	<b>R8.815</b>	<b>R27.156</b>	
<b>1977</b>	January	0.036	1.353	0.712	0.365	R0.934	R3.400	R3.400
	February	0.025	1.220	0.674	0.346	R0.709	R2.973	R6.372
	March	0.019	0.849	0.608	R0.301	R0.729	R2.506	R8.878
	April	0.021	0.623	R0.538	R0.277	R0.636	R2.096	R10.973
	May	0.017	0.416	0.559	0.289	R0.722	R2.002	R12.975
	June	0.015	0.351	0.549	0.318	0.794	2.028	15.003
	<b>TOTAL</b> (6 months)	<b>0.133</b>	<b>4.811</b>	<b>3.639</b>	<b>1.895</b>	<b>4.524</b>	<b>15.003</b>	

(See footnotes on page 52)

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

		Coal	Natural Gas (dry)	Petroleum <sup>3</sup>	Hydro-electric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 <sup>15</sup> ) Btu									
<b>1973</b>	<b>TOTAL</b>	<b>4.370</b>	<b>10.493</b>	<b>6.403</b>	<b>0.036</b>	<b>2.341</b>	<b>5.518</b>	<b>29.161</b>	
<b>1974</b>	<b>TOTAL</b>	<b>4.062</b>	<b>R10.137</b>	<b>R6.305</b>	<b>0.036</b>	<b>2.337</b>	<b>5.609</b>	<b>R28.486</b>	
<b>1975</b>	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	0.187	0.475	1.934	10.523
	June	0.299	0.595	0.423	0.003	0.189	0.478	1.987	12.510
	July	0.286	0.640	0.450	0.003	0.190	0.485	2.053	14.563
	August	0.291	0.724	0.435	0.003	0.197	0.494	2.144	16.707
	September	0.292	0.752	0.470	0.003	0.199	0.408	2.125	18.832
	October	0.303	0.872	0.524	0.003	0.201	0.478	2.380	21.212
	November	0.316	0.863	0.489	0.003	0.199	0.473	2.343	23.555
	December	0.334	0.875	0.617	0.003	0.196	0.498	2.523	26.077
	<b>TOTAL</b>	<b>3.826</b>	<b>8.425</b>	<b>5.966</b>	<b>0.035</b>	<b>2.302</b>	<b>5.523</b>	<b>26.077</b>	
<b>1976</b>	January	0.320	0.816	0.638	0.003	0.196	0.480	R2.454	R2.454
	February	0.302	0.622	0.559	0.003	0.198	R0.428	R2.112	R4.566
	March	0.321	0.616	0.555	0.003	0.206	R0.501	R2.202	R6.768
	April	0.320	0.595	0.487	0.003	0.205	R0.470	R2.079	R8.846
	May	0.327	0.654	0.492	0.003	0.209	R0.505	R2.189	11.035
	June	0.312	0.640	0.475	0.003	0.213	R0.555	R2.198	R13.233
	July	0.310	0.717	0.473	0.003	0.215	0.546	R2.264	R15.497
	August	0.304	0.691	0.492	0.003	0.219	0.537	2.246	R17.743
	September	0.303	0.715	0.503	0.003	0.220	R0.467	R2.210	R19.953
	October	0.318	0.948	0.551	0.003	0.219	R0.523	2.562	R22.516
	November	0.327	0.927	0.605	0.003	0.215	R0.530	R2.607	R25.122
	December	0.357	0.904	0.706	0.003	0.214	R0.533	R2.717	R27.839
	<b>TOTAL</b>	<b>3.821</b>	<b>8.843</b>	<b>6.537</b>	<b>0.033</b>	<b>R2.528</b>	<b>R6.077</b>	<b>R27.839</b>	
<b>1977</b>	January	0.338	0.801	0.693	0.003	0.210	R0.539	2.583	2.583
	February	0.330	0.350	0.655	0.003	0.207	0.424	1.969	R4.553
	March	0.331	0.590	0.591	0.003	0.212	R0.514	R2.242	R6.794
	April	0.327	0.551	R0.523	0.003	R0.217	R0.498	R2.119	R8.913
	May	0.331	R0.664	R0.543	0.003	0.217	R0.542	R2.300	R11.213
	June	0.317	0.631	0.534	0.003	0.223	0.558	2.266	13.479
	<b>TOTAL</b> (6 months)	<b>1.974</b>	<b>3.587</b>	<b>3.539</b>	<b>0.016</b>	<b>1.287</b>	<b>3.076</b>	<b>13.479</b>	

(See footnotes on page 52)

# Energy Consumption (Continued)

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

		Coal	Natural Gas <sup>4</sup> (dry)	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
		Quadrillion (10 <sup>15</sup> ) Btu						
<b>1973</b>	<b>TOTAL</b>	<b>0.009</b>	<b>0.733</b>	<b>17.940</b>	<b>0.058</b>	<b>0.137</b>	<b>18.877</b>	
<b>1974</b>	<b>TOTAL</b>	<b>0.009</b>	<b>R0.656</b>	<b>17.392</b>	<b>0.060</b>	<b>0.144</b>	<b>R18.261</b>	
<b>1975</b>	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	0.012	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	18.365
	<b>TOTAL</b>	<b>0.008</b>	<b>0.602</b>	<b>17.544</b>	<b>0.062</b>	<b>0.149</b>	<b>18.365</b>	
<b>1976</b>	January	0.001	0.076	1.532	0.006	R0.015	1.629	1.629
	February	0.001	0.064	1.380	0.006	0.012	1.462	3.091
	March	0.001	0.055	1.552	0.005	0.013	1.626	4.717
	April	0.001	0.047	1.516	0.005	0.012	1.581	6.297
	May	0.001	0.043	1.493	0.005	0.012	1.553	7.851
	June	0.001	0.037	1.545	0.005	0.012	1.600	9.450
	July	0.001	0.038	1.581	0.005	0.012	1.637	11.087
	August	0.001	0.036	1.538	0.005	0.013	1.592	12.680
	September	0.001	0.037	1.504	0.005	0.011	1.558	R14.238
	October	0.001	0.050	1.530	0.006	0.013	1.599	15.837
	November	0.001	0.061	1.561	0.006	0.014	1.642	17.479
	December	0.001	0.074	1.697	0.006	R0.015	1.792	19.271
	<b>TOTAL</b>	<b>0.008</b>	<b>0.618</b>	<b>18.428</b>	<b>0.064</b>	<b>R0.154</b>	<b>19.271</b>	
<b>1977</b>	January	0.001	0.080	1.620	0.006	0.016	1.723	1.723
	February	0.001	0.059	1.503	0.006	0.012	1.580	3.303
	March	0.001	0.054	1.580	0.005	R0.013	1.652	R4.956
	April	0.001	0.044	R1.564	0.005	0.011	R1.625	6.581
	May	0.001	0.040	1.548	0.005	0.012	1.606	8.187
	June	0.001	0.037	1.595	0.005	0.012	1.649	9.835
	<b>TOTAL</b> (6 months)	<b>0.004</b>	<b>0.314</b>	<b>9.411</b>	<b>0.032</b>	<b>0.076</b>	<b>9.835</b>	

<sup>1</sup> See Explanatory Note 12 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the footnotes of the previous table. Printed totals may differ slightly from the sum of their row/column components due to independent rounding.

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

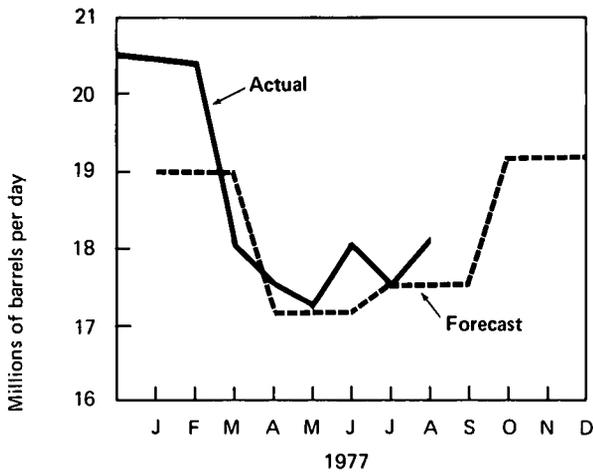
<sup>3</sup> The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 49.3 percent for 1974, 1975, 1976, and 1977.

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

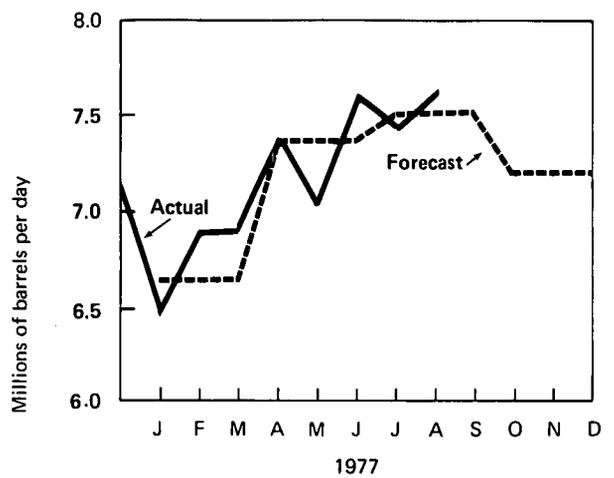
R=Revised data.

# Petroleum Consumption and Forecast

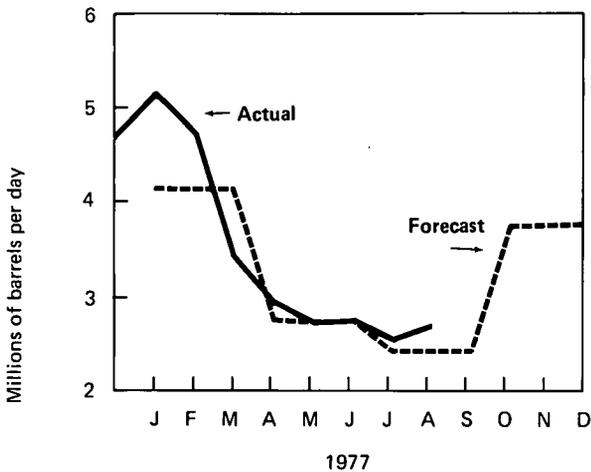
Total Domestic Demand for Petroleum Products



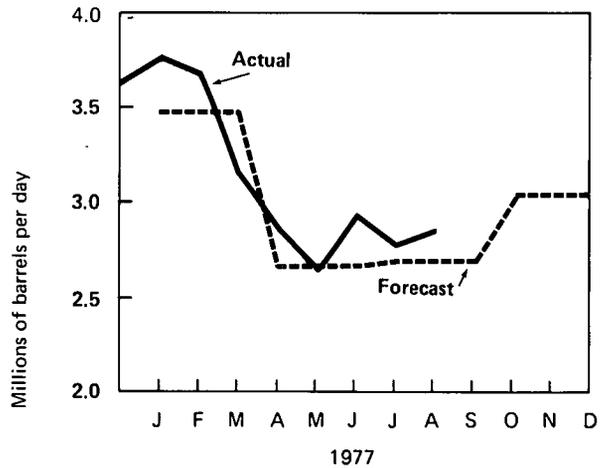
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



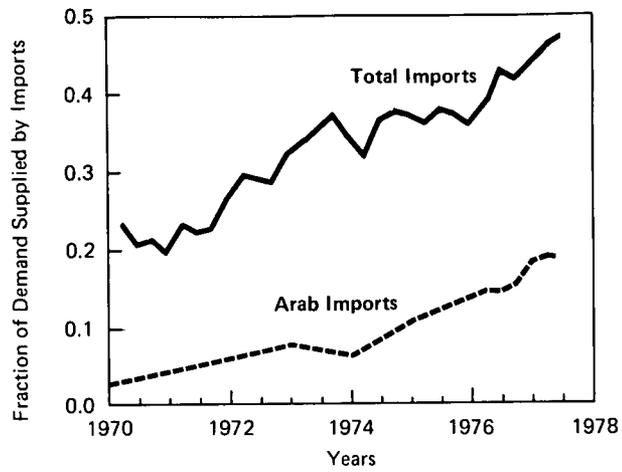
Sources:

Actual — Monthly figures are based on Bureau of Mines data for December 1976 and January through April 1977, EIA data for May, June, and July 1977, and API data for August 1977.

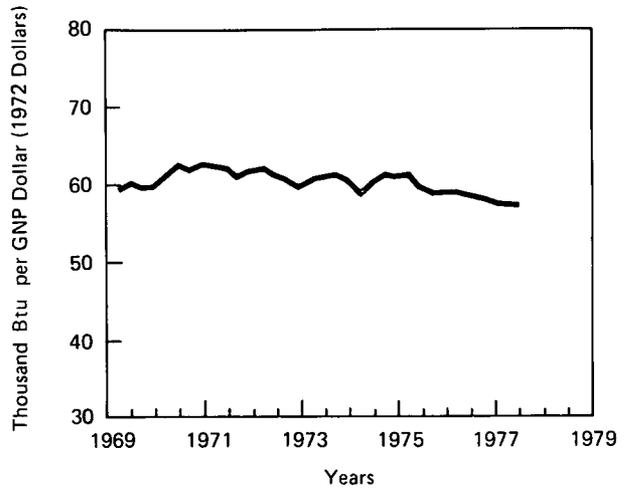
Forecast — The EIA forecast is shown for quarterly intervals. See Explanatory Note 5 for discussion of basic assumptions of forecast.

# Energy Indicators \*

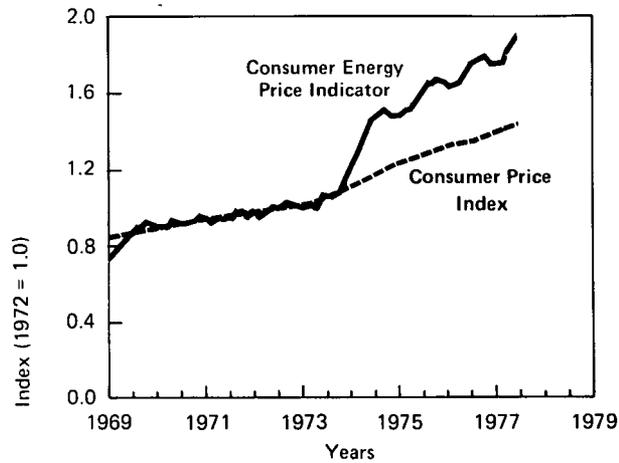
## U.S. Dependence on Petroleum Imports



## Energy Consumption per GNP Dollar



## Consumer Energy Price Indicator



\*See Explanatory Notes 13, 14, and 15.

## Oil and Gas Exploration and Development

The number of rotary drilling rigs in operation increased to 2,084 in September, raising the year-to-date average for 1977 to 1,963, which is 23 percent above the level for the January-September period of 1976. It was the highest September rig count since 1959.

A total of 3,540 exploratory and development wells were drilled in August, 14 percent more than in August 1976. The well completion total for the first 8 months of 1977 (27,583) has already surpassed the number completed in all of 1973 (26,592) just prior to the upsurge in petroleum exploration activity.

The seismic crew count increased for the seventh consecutive month in August. An average of 326 crews (295 land, 31 marine) were active during the month compared with 275 (242 land, 33 marine) during the same month in 1976.

# Oil and Gas Exploration and Development

		Rotary Rigs in Operation	Exploratory and Development Wells Drilled*				Total Footage of Wells Drilled	
		Monthly average	Oil	Gas	Dry	Total	Thousands of feet	
<b>1972</b>	<b>AVERAGE</b>	<b>1,107</b>	<b>TOTAL</b>	<b>11,306</b>	<b>4,928</b>	<b>11,057</b>	<b>27,291</b>	<b>134,602</b>
<b>1973</b>	<b>AVERAGE</b>	<b>1,194</b>	<b>TOTAL</b>	<b>9,902</b>	<b>6,385</b>	<b>10,305</b>	<b>26,592</b>	<b>136,391</b>
<b>1974</b>	<b>AVERAGE</b>	<b>1,475</b>	<b>TOTAL</b>	<b>12,784</b>	<b>7,240</b>	<b>11,674</b>	<b>31,698</b>	<b>150,551</b>
<b>1975</b>	January	1,615		1,299	655	1,040	2,994	13,189
	February	1,611		1,097	458	933	2,488	12,071
	March	1,651		1,341	658	1,091	3,090	15,472
	April	1,604		1,181	506	1,071	2,758	13,545
	May	1,592		1,100	451	891	2,442	12,054
	June	1,613		1,246	509	1,022	2,777	13,540
	July	1,616		1,229	557	920	2,706	12,545
	August	1,645		1,272	587	1,122	2,981	14,221
	September	1,699		1,504	831	1,165	3,500	15,636
	October	1,716		1,633	682	1,310	3,625	16,689
	November	1,757		1,619	776	1,270	3,665	15,788
	December	1,793		1,817	832	1,424	4,073	17,556
	<b>AVERAGE</b>	<b>1,660</b>	<b>TOTAL**</b>	<b>16,408</b>	<b>7,580</b>	<b>13,247</b>	<b>37,235</b>	<b>174,434</b>
<b>1976</b>	January	1,710		1,465	772	1,055	3,292	14,517
	February	1,594		1,341	652	1,159	3,152	14,888
	March	1,540		1,726	821	1,301	3,848	18,126
	April	1,480		1,237	672	994	2,903	13,765
	May	1,496		1,501	658	1,104	3,263	14,196
	June	1,546		1,500	709	1,123	3,332	14,780
	July	1,597		1,312	730	916	2,958	13,716
	August	1,691		1,265	711	1,140	3,116	14,697
	September	1,744		1,474	909	1,199	3,582	16,777
	October	1,794		1,396	750	1,123	3,269	14,542
	November	1,840		1,291	698	1,222	3,211	14,642
	December	1,860		1,512	926	1,414	3,852	17,093
	<b>AVERAGE</b>	<b>1,656</b>	<b>TOTAL**</b>	<b>17,059</b>	<b>9,085</b>	<b>13,621</b>	<b>39,765</b>	<b>181,780</b>
<b>1977</b>	January	1,850		1,391	732	1,096	3,219	14,517
	February	1,856		1,321	705	999	3,025	14,443
	March	1,887		1,817	958	1,297	4,072	19,400
	April	1,907		1,405	818	1,059	3,282	15,523
	May	1,982		1,382	877	1,150	3,409	16,702
	June	2,008		1,720	952	1,270	3,942	18,767
	July	2,023		1,304	724	1,022	3,050	14,529
	August	2,066		1,400	961	1,179	3,540	16,838
	September	2,084		NA	NA	NA	NA	NA
	<b>AVERAGE</b> (9 months)	<b>1,963</b>	<b>TOTAL**</b> (8 months)	<b>11,740</b>	<b>6,753</b>	<b>9,090</b>	<b>27,583</b>	<b>131,803</b>

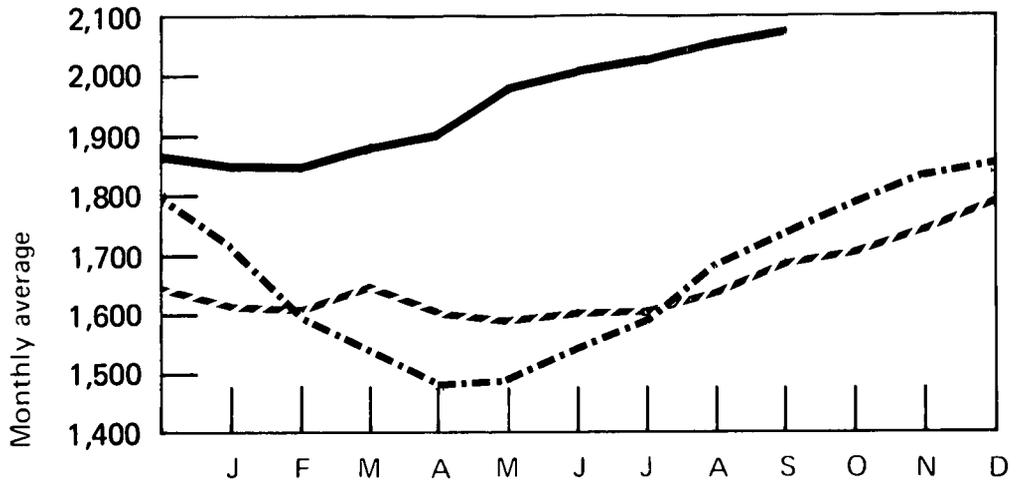
\*Excludes service wells and stratigraphic and core tests.

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

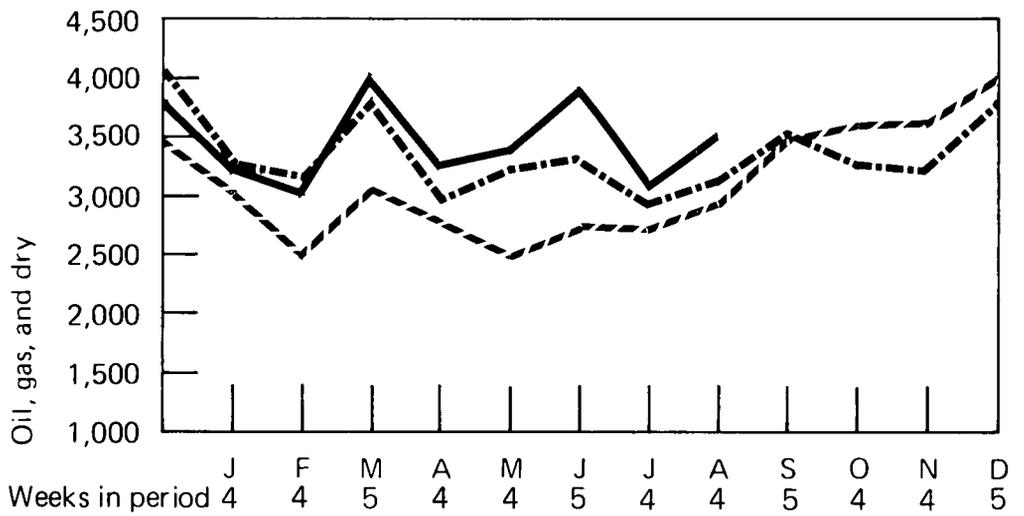
NA=Not available.

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

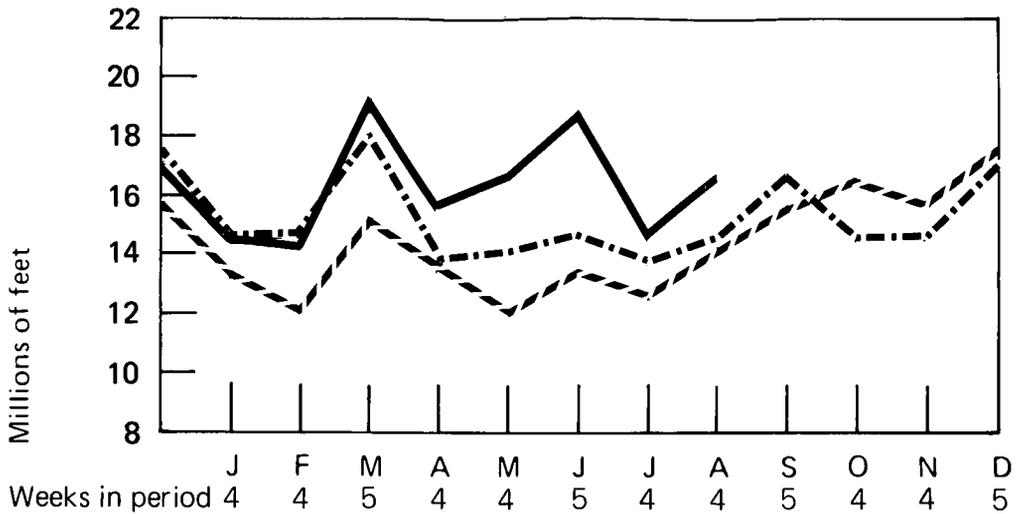
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled



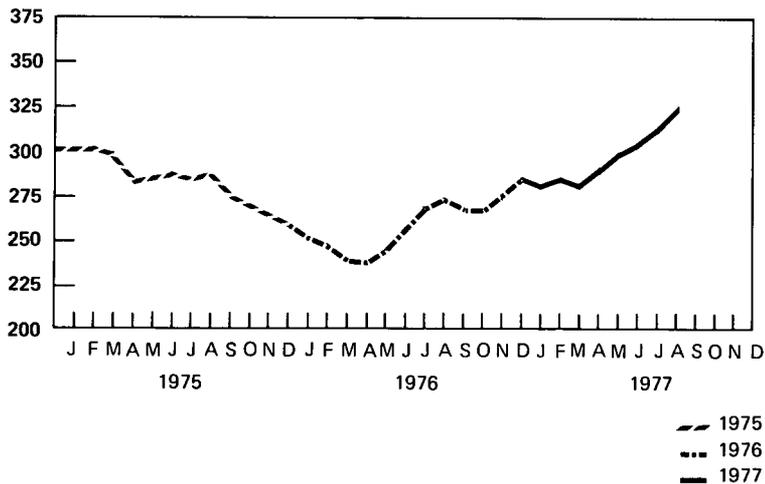
/ / 1975  
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# Oil and Gas Exploration and Development (Continued)

		Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore	Onshore	Total
		Monthly average			Monthly average		
<b>1972</b>	<b>Year</b>	<b>12</b>	<b>239</b>	<b>251</b>	<b>10,306</b>	<b>9,333</b>	<b>19,639</b>
<b>1973</b>	<b>Year</b>	<b>23</b>	<b>227</b>	<b>250</b>	<b>21,579</b>	<b>10,597</b>	<b>32,175</b>
<b>1974</b>	<b>Year</b>	<b>31</b>	<b>274</b>	<b>305</b>	<b>28,482</b>	<b>13,219</b>	<b>41,701</b>
<b>1975</b>	<b>Year</b>	<b>30</b>	<b>254</b>	<b>284</b>	<b>25,773</b>	<b>12,558</b>	<b>38,331</b>
<b>1976</b>	<b>Year</b>	<b>25</b>	<b>237</b>	<b>262</b>	<b>18,859</b>	<b>11,910</b>	<b>30,769</b>
<b>1975</b>	January	27	274	301			
	February	24	278	302			
	March	23	276	299			
	April	23	260	283			
	May	32	254	286			
	June	38	251	289			
	July	37	249	286			
	August	40	249	289			
	September	40	234	274			
	October	29	241	270			
	November	27	238	265			
	December	26	233	259			
<b>1976</b>	January	20	232	252			
	February	17	232	249			
	March	18	222	240			
	April	17	221	238			
	May	21	226	247			
	June	29	229	258			
	July	30	240	270			
	August	33	242	275			
	September	28	240	268			
	October	21	246	267			
	November	25	250	275			
	December	27	259	286			
<b>1977</b>	January	26	254	280			
	February	27	259	286			
	March	22	260	282			
	April	26	266	292			
	May	29	272	301			
	June	31	274	305			
	July	30	285	315			
	August	31	295	326			
	<b>AVERAGE</b> (8 months)	<b>28</b>	<b>270</b>	<b>298</b>			

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

Total Seismic Crews



## Motor Gasoline

The national average selling price for regular gasoline at full service retail outlets was 63.4 cents per gallon in August, unchanged for the third consecutive month. The average price that retailers paid for regular gasoline decreased slightly (0.1 cent) to 55.0 cents per gallon, increasing the dealer margin by the same amount to 8.4 cents per gallon.

The average price for unleaded gasoline sold at full service retail outlets decreased in August by 0.3 cent to 67.0 cents per gallon. The average price for premium gasoline remained at 68.9 cents per gallon for the third month in a row.

## Heating Oil

The average price for heating oil sold to residential customers was 45.7 cents per gallon in July, unchanged from the price in May and June, but 6.4 cents more than in July 1976.

## Crude Oil

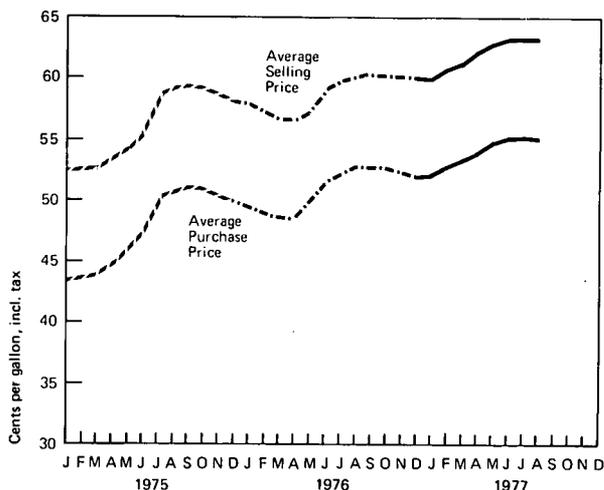
The average price that first purchasers paid for upper tier crude oil was \$10.86 per barrel in July, 6 cents below the price in June. The average price for all domestic crude oil purchased was \$8.45 per barrel, 1 cent above the price in June.

# Motor Gasoline

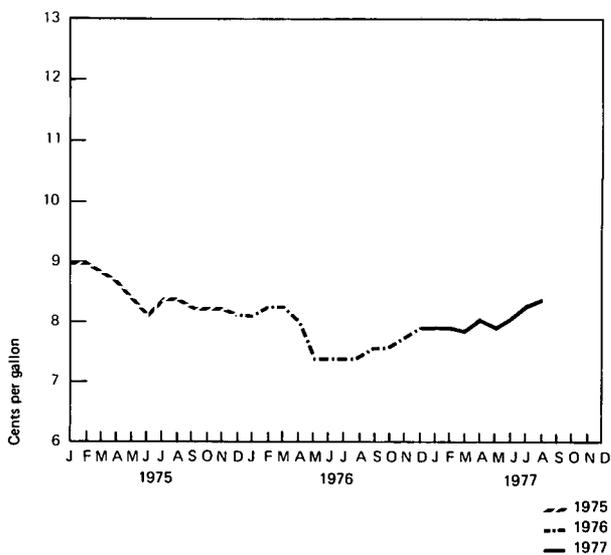
## Regular Gasoline at Full Service Retail Outlets

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

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**

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

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
	May	68.4	66.7
	June	68.9	67.2
	July	68.9	67.3
	August	68.9	67.0

NA=Not available.

Source: Lundberg Survey, Inc.

**Average Selling Prices and Margins for Major and Independent Retail Dealers — August 1977**

**Regular Gasoline — Full Service**

Cents per gallon, including tax

	<b>Selling Price</b>	<b>Margin</b>
Major	64.4	8.7
Independent	58.8	6.6
<b>National Average</b>	<b>63.4</b>	<b>8.4</b>

**Unleaded Gasoline — Full Service Selling Prices**

	<b>Regular</b>	<b>Premium</b>
Major	67.9	71.6
Independent	62.8	66.3
<b>National Average</b>	<b>67.0</b>	<b>71.4</b>

**Regular Gasoline — Self Service**

	<b>Selling Price</b>	<b>Margin</b>
Major	59.7	4.1
Independent	56.6	4.4
<b>National Average</b>	<b>58.8</b>	<b>4.2</b>

**Premium Gasoline — Full Service**

	<b>Selling Price</b>	<b>Margin</b>
Major	69.7	10.1
Independent	63.8	8.7
<b>National Average</b>	<b>68.9</b>	<b>9.9</b>

**Premium Gasoline — Self Service**

	<b>Selling Price</b>	<b>Margin</b>
Major	66.8	7.3
Independent	62.0	7.0
<b>National Average</b>	<b>65.8</b>	<b>7.2</b>

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

<b>Region</b>	<b>Selling Price</b>	<b>Margin</b>
	Cents per gallon, including tax	
1A New England	61.8	6.3
1B Mid-Atlantic	64.3	7.4
1C Lower Atlantic	63.4	8.6
2 Mid-Continent	63.3	7.9
3 Gulf Coast	61.6	10.1
4 Rocky Mountain	64.3	10.0
5 West Coast	64.7	9.0
<b>National Average</b>	<b>63.4</b>	<b>8.4</b>

NA=Not available.

Source: Lundberg Survey, Inc.

## Motor Gasoline (Continued)

Retail Gasoline Price Changes for 21 Leading Refiners During August 1977  
and Entitlement Position\* During July

Company	Effective Date of Change	Amount of Change  Cents per gallon	Entitlement Position (July)
Amerada Hess	August 17	-1.00 (regular)	Seller
American Petrofina		None	Buyer
Ashland	August 11	-0.50 (all PADs, all grades)	Seller
	August 26	-0.30 (Eastern Michigan)	
Atlantic Richfield		None	Seller
B.P.		None	Seller
Champlin	August 13	-0.50 (PAD II, all grades)	Buyer
	August 18	-0.50 (PAD I, all grades)	
	August 25	0.50 (PAD III, all grades)	
Chevron	August 16	0.60 (PAD I, leaded regular, leaded premium)	Seller
		1.10 (PAD I, unleaded)	
		1.00 (PAD II, leaded regular, leaded premium)	
		1.50 (PAD II, unleaded)	
		0.70 (PAD III, leaded regular, leaded premium)	
		1.20 (PAD III, unleaded)	
		1.50 (PAD IV, leaded regular, leaded premium)	
		1.00 (PAD IV, unleaded)	
		0.50 (PAD V, leaded regular, unleaded)	
		1.00 (PAD V, leaded premium)	
Cities Service	August 22	-0.70 (all PADs, regular)	Buyer
		-0.40 (all PADs, unleaded)	
Continental		None	Buyer
Exxon	August 31	-0.70 (PADs I, II, III, regular)	Buyer
		-0.20 (PADs I, II, III, unleaded premium)	
		0.80 (PAD IV, regular)	
		1.30 (PAD IV, unleaded premium)	
		0.30 (PAD V, regular)	
		0.50 (PAD V, unleaded premium)	
Getty Refining and Marketing Company		None	Seller
Gulf		None	Buyer
Kerr McGee	August 1	-0.50 (all PADs, all grades)	Buyer
Mobil	August 25	0.50 (PAD V, all grades)	Buyer
Phillips		None	Buyer
Shell	August 23	0.60 and 0.85 (PADs IV, V, unleaded, premium)	Buyer
Standard of Indiana	August 12	-1.00 (PADs I, III, IV, V, leaded regular)	Seller
Standard of Ohio		None	Seller
Sun	August 20	-0.80 (PADs II, III, leaded regular, leaded premium)	Buyer
		1.00 (PAD I, unleaded)	
Texaco	August 5	1.00 (PAD IV, premium, regular, unleaded)	Buyer
	August 19	-0.70 (PADs I, III, V, premium, regular, unleaded)	
Union Oil of California		None	Buyer

\*See Definitions.  
Source: EIA.

**Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners**

		PAD IA	PAD IB	PAD IC	PAD II	PAD III	PAD IV	PAD V	National Average
Cents per gallon, excluding tax									
<b>1974</b>	<b>AVERAGE</b>								<b>26.7</b>
<b>1975</b>	January	27.8	27.8	27.4	28.2	27.2	28.5	27.8	27.8
	February	28.4	28.2	27.8	28.7	27.6	28.3	27.5	28.1
	March	28.9	28.8	28.4	29.1	27.8	29.0	28.0	28.6
	April	29.6	29.9	29.4	30.4	29.2	29.8	29.8	29.7
	May	30.9	31.0	30.5	31.6	30.4	31.2	31.0	30.9
	June	32.4	32.5	32.0	33.1	31.6	32.6	32.6	32.4
	July	34.4	34.6	33.9	34.9	33.4	34.5	33.7	34.2
	August	35.3	35.1	34.6	35.6	34.1	35.2	34.5	34.9
	September	35.2	35.1	34.5	35.4	34.1	35.0	34.5	34.8
	October	34.3	34.6	34.0	34.9	33.8	34.3	34.2	34.3
	November	34.1	34.3	33.9	34.6	33.6	34.3	34.0	34.1
	December	33.7	34.1	33.6	34.3	33.3	33.8	33.7	33.8
	<b>AVERAGE</b>								<b>32.0</b>
<b>1976</b>	January	33.3	33.9	33.2	34.0	33.1	33.2	33.5	33.5
	February	33.0	33.4	32.6	33.8	32.9	32.6	33.5	33.1
	March	32.4	33.0	31.8	33.4	32.6	32.5	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	35.9	36.1	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	36.5	36.4	36.7	36.5
	September	35.8	36.1	35.3	36.9	36.6	35.9	36.5	36.2
	October	35.7	35.8	35.2	36.7	36.4	35.9	36.5	36.0
	November	34.9	35.1	34.4	36.3	36.3	35.3	36.5	35.6
	December	34.9	35.1	34.4	36.3	36.3	35.3	36.5	35.6
	<b>AVERAGE</b>								<b>35.0</b>
<b>1977</b>	January	35.6	35.8	35.2	36.9	36.7	35.9	37.0	36.2
	February	36.2	36.5	35.8	37.5	37.5	36.7	38.1	36.9
	March	37.0	37.3	36.7	38.2	38.0	37.0	38.1	37.5
	April	37.6	37.8	37.2	39.0	38.9	37.8	38.8	38.2
	May	38.3	38.4	37.9	39.7	39.3	38.5	39.0	38.7
	June	38.5	38.4	38.1	39.7	39.5	38.7	39.0	38.8
	July	38.4	38.3	38.0	39.6	39.4	38.6	38.8	38.7
	August	38.1	37.9	37.7	39.4	39.1	38.9	38.7	38.5

Source: EIA.

# Diesel Fuel

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

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

\*See Explanatory Note 16.

NA=Not available.

Source: Lundberg Survey, Inc.

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

Cents per gallon, including tax

**Truckstops**

	Selling Price	Margin
Major	58.1	6.1
Independent	55.9	7.6
<b>National Average</b>	<b>57.0</b>	<b>6.7</b>

**Service Stations**

	Selling Price	Margin
Major	59.2	6.8
Independent	55.9	7.3
<b>National Average</b>	<b>57.2</b>	<b>7.2</b>

Source: Lundberg Survey, Inc.

**No. 1 Diesel Fuel**

**Wholesale      Retail**

Cents per gallon, excluding tax

<b>1975</b>	July	30.1	37.7
	August	30.8	38.2
	September	31.5	36.9
	October	33.1	35.4
	November	33.3	35.0
	December	34.2	35.5
<b>1976</b>	January	33.8	37.1
	February	33.6	35.3
	March	33.9	34.8
	April	34.2	35.4
	May	34.5	37.5
	June	34.7	37.9
	July	35.0	38.1
	August	35.9	38.2
	September	35.3	37.7
	October	36.3	36.4
	November	35.7	36.9
	December	35.5	36.7
<b>1977</b>	January	37.1	37.8
	February	38.4	39.2
	March	39.0	39.6
	April	39.7	40.6
	May	39.5	41.7
	June*	40.3	41.2

\*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 Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

# Heating Oil

## Residential Heating Oil Prices

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

\*Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.  
NA=Not available.

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

**Residential Heating Oil Prices by Region**

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

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—Form CLC-92 "No. 2 Heating Oil Monthly Price Adjustment Report;"  
January 1976 forward—FEA Form P112-M-1 "No. 2 Heating Oil Supply/Price Monitoring Report."

## 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									
<b>1975</b>	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	
<b>1976</b>	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: Form CLC-92 "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	10.90
	October	10.25	11.64	11.86	12.94	11.08	11.99	10.00	10.73	10.75	11.82	9.57	10.81	11.38
	November	10.84	12.04	12.33	13.15	11.57	12.21	10.40	10.99	11.16	11.95	10.31	10.88	11.61
		December	11.49	12.64	13.16	13.32	11.80	12.76	11.04	11.48	11.87	12.44	9.95	11.24
1977	January	12.00	13.20	14.06	14.34	12.79	13.68	11.51	12.32	12.45	13.32	10.34	11.89	12.94
	February	12.28	13.63	14.00	14.60	12.91	14.06	12.04	12.74	12.69	13.71	10.24	12.00	13.21
	March	12.15	13.76	14.00	14.58	13.47	14.51	11.62	12.70	12.68	13.84	9.97	11.74	13.27
	April	11.62	13.26	12.88	14.63	13.05	14.10	11.27	12.50	12.04	13.61	10.14	11.75	12.92
	May	11.54	12.69	R13.17	14.48	11.90	13.73	11.05	12.15	11.64	13.42	9.97	11.41	12.67
	June	R11.30	R13.51	R13.10	R14.25	11.83	R13.27	R11.20	R11.90	11.72	R13.02	R10.33	11.37	R12.47
	July*	10.71	12.67	13.27	14.38	11.67	13.14	11.12	12.00	11.66	13.03	10.88	11.51	12.48

\*Preliminary.

R=Revised data.

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

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

# Aviation Fuels

## AVIATION FUELS (Cents per gallon)

		Aviation Gasoline		Naphtha-Type*	Kerosene-Type	
		Wholesale	Retail	Retail	Wholesale	Retail
1975	July	40.6	40.6	31.4	29.8	29.2
	August	41.3	42.1	30.8	32.1	29.5
	September	41.2	39.9	30.3	31.5	29.6
	October	41.1	41.2	30.2	31.7	30.0
	November	39.7	42.1	30.6	31.6	30.2
	December	40.9	40.9	30.7	31.9	30.5
1976	January	41.4	41.2	31.0	30.6	31.3
	February	41.2	42.0	31.1	31.1	31.2
	March	41.1	41.9	30.9	31.2	30.7
	April	41.2	42.5	30.5	31.9	30.5
	May	42.1	43.1	30.6	33.0	30.2
	June	42.6	42.3	31.5	32.1	30.3
	July	43.6	44.2	31.3	32.9	30.8
	August	43.7	44.1	31.7	32.1	31.1
	September	43.6	44.7	32.1	32.5	31.4
	October	43.6	43.8	32.4	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	34.5	35.9	34.6
	April	46.0	47.2	34.3	35.9	34.9
	May	46.6	47.8	34.3	36.6	35.1
	June	46.9	R47.6	35.1	36.8	35.7
	July**	46.8	48.7	35.6	36.9	35.8

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

\*\*Preliminary.

R = Revised data.

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

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

# Crude Oil

## Domestic Crude Petroleum Prices at the Wellhead\*

		Old	New	Domestic Average			Lower Tier**	Upper Tier**	Domestic Average		
		Dollars per barrel			Dollars per barrel						
<b>1974</b>	<b>AVG.</b>	<b>5.03</b>	<b>10.13</b>	<b>6.87</b>	<b>1976</b>	February	5.05	11.47	7.87		
						March	5.07	11.39	7.79		
<b>1975</b>	January	5.05	11.28	7.61		April	5.07	11.52	7.86		
	February	5.03	11.39	7.47		May	5.13	11.55	7.89		
	March	5.03	11.47	7.57		June	5.15	11.60	7.99		
	April	5.03	11.64	7.55		July	5.19	11.59	8.04		
	May	5.03	11.69	7.52		August	5.18	11.62	8.03		
	June	5.03	11.73	7.49							
	July	5.03	12.30	7.75							
	August	5.03	12.38	7.73							
	September	5.04	12.46	7.75							
	October	5.03	12.73	7.83							
	November	5.03	12.89	7.80							
	December	5.03	12.95	7.93							
	<b>AVG.</b>	<b>5.03</b>	<b>12.03</b>	<b>7.67</b>							
<b>1976</b>	January	5.02	12.99	8.63							
						September	5.17	11.65	13.21	8.39	8.19
						October	5.15	11.62	13.35	8.46	8.23
						November	5.17	11.62	13.31	8.62	8.40
						December	5.17	11.64	13.30	8.62	8.40
					<b>1977</b>	January	5.17	11.44	13.27	8.50	8.28
						February	5.18	11.39	13.32	8.57	8.33
						March	5.15	11.03	13.31	8.45	8.19
						April	5.15	10.97	13.28	8.40	8.14
						May	5.18	10.98	13.26	8.49	8.23
						June	5.16	10.92	13.28	8.44	8.17
						July***	5.16	10.86	13.31	8.45	8.18

(Table continued in next column)

\*See Explanatory Note 17.

\*\*See Definitions.

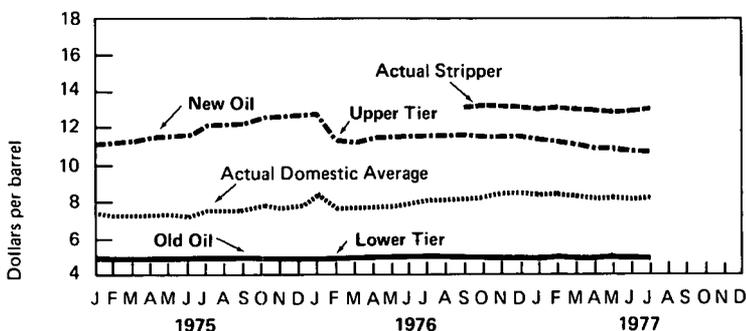
\*\*\*Preliminary figure based on early reports.

†Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976, stripper oil was subject to upper tier price ceilings.

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

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

Crude Oil Wellhead Price



**Percentages of Domestic Production Sold at the Wellhead**

		Old Oil	New Oil	Released	Stripper
<b>1975</b>	January*	58	19	10	12
	February*	61	17	9	12
	March	60	18	10	12
	April	61	17	9	12
	May	62	17	8	13
	June	63	16	8	13
	July	62	16	8	14
	August	63	16	7	14
	September*	63	15	7	14
	October	63	16	7	14
	November	64	15	7	14
	December	63	16	7	14
	<b>AVERAGE</b>		<b>62</b>	<b>16</b>	<b>8</b>
<b>1976</b>	January	54	21	10	15
		<b>Lower Tier</b>	<b>Upper Tier</b>		
	February	56	30	—	14
	March	57	29	—	14
	April	57	29	—	14
	May	57	29	—	14
	June	56	29	—	15
	July	56	30	—	14
	August	56	30	—	14
		<b>Lower Tier</b>	<b>Upper Tier</b>		<b>Stripper</b>
	September	53.4	33.7		12.9
	October	52.4	34.7		12.9
	November	49.9	36.6		13.4
	December	50.1	36.4		13.6
	<b>1977</b>	January	50.6	36.7	
February		49.5	37.2		13.3
March		49.2	37.2		13.6
April		49.5	36.9		13.6
May		48.4	37.6		14.0
June		48.8	37.0		14.2
July**		48.1	38.4		13.5

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

\*\*Preliminary.

Sources: January 1975 through January 1976—Form FEA-90 "Crude Petroleum Production Monthly Report;" February 1976 through August 1976—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report" for Lower Tier percentages and EIA estimates for Upper Tier percentages; September 1976 forward—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report" for Lower Tier, 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
			<b>National Domestic Crude Oil Supply Ratio</b>	
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
April		8.69	.285	2.48
May		8.77	.280	2.46
June		8.65	.273	2.36
July		8.77	.258	2.26

\*See Definitions.  
Source: DOE.

**Refiner Acquisition Cost of Crude Petroleum\***

		Domestic	Imported	Composite
Dollars per barrel				
<b>1974</b>	<b>AVERAGE</b>	<b>7.18</b>	<b>12.52</b>	<b>9.07</b>
<b>1975</b>	January	7.78	12.77	9.48
	February	8.29	13.05	10.09
	March	8.38	13.28	9.91
	April	8.23	13.25	9.83
	May	8.33	13.27	9.79
	June	8.33	14.15	10.33
	July	8.37	14.03	10.57
	August	8.48	14.25	10.81
	September	8.49	14.04	10.79
	October	8.68	14.66	10.85
	November	8.67	15.04	11.05
	December	8.66	14.81	10.98
	<b>AVERAGE</b>	<b>8.39</b>	<b>13.93</b>	<b>10.38</b>
<b>1976</b>	January	9.14	13.27	10.76
	February	8.67	13.26	10.54
	March	8.48	13.51	10.44
	April	8.66	13.39	10.63
	May	8.62	13.41	10.66
	June	8.60	13.48	10.88
	July	8.72	13.51	10.97
	August	8.65	13.58	10.78
	September	8.95	13.47	11.08
	October	9.13	13.49	11.20
	November	9.23	13.58	11.26
	December	9.25	13.71	11.32
	<b>AVERAGE</b>	<b>8.84</b>	<b>13.48</b>	<b>10.89</b>
<b>1977</b>	January	9.23	14.11	11.64
	February	9.24	14.50	11.80
	March	9.32	14.54	11.88
	April	9.21	14.36	11.75
	May	9.21	14.62	11.87
	June	R9.34	R14.63	R11.98
	July**	9.29	14.53	11.91

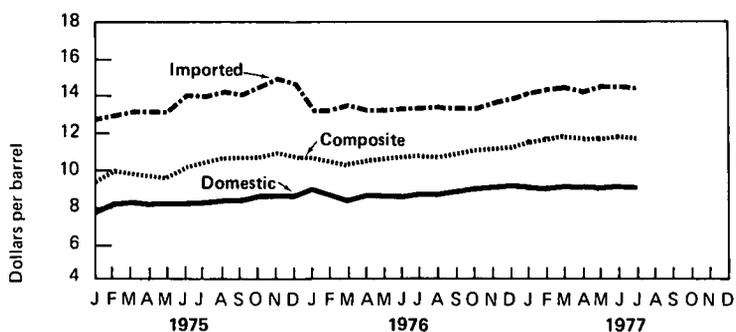
\*See Explanatory Note 18.

\*\*Preliminary data.

R=Revised data.

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

**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							
<b>1975</b>	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
<b>1976</b>	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
<b>1977</b>	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
	April	15.21	14.02	14.70	13.95	15.37	13.41	13.78	13.19
	May	15.20	14.94	14.59	13.94	15.40	13.49	13.85	13.10
	June	15.34	14.49	14.63	13.81	15.37	13.39	13.72	13.06
	July	15.29	13.91	14.75	13.84	15.39	13.64	14.20	13.02

\*See Explanatory Note 19.

Source: FEA Form F 701-M-O "Transfer Pricing Report."

## Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate*	Motor Gasoline	Aviation Jet Fuel**	Other Products	Total
Millions of dollars						
<b>1975</b>	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
<b>1976</b>	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
<b>1977</b>	January	—	901	166	325	1,392
	February	—	1,038	187	303	1,528
	March	—	956	180	287	1,423
	April	—	1,029	194	343	1,566
	May	—	968	199	328	1,495
	June	—	R956	232	R347	R1,535
	July**	—	866	211	382	1,459

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

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

\*\*\*Preliminary.

R = Revised data.

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

# Natural Gas

## Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES		
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
Cents per thousand cubic feet							
<b>1975</b>	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
<b>1976</b>	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
<b>1977</b>	January	58.8	201.8	71.5	143.1	124.4	125.4
	February	63.5	199.0	76.5	131.0	130.0	130.7

\*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 Form 2.

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										
<b>1975</b>										
January	75.00	76.89	55.30	—	98.04	102.96	95.99	76.03	139.90	164.04
February	—	—	—	—	128.68	113.06	97.30	64.49	154.72	163.11
March	—	—	—	—	115.78	125.89	107.70	55.05	96.66	97.50
April	—	—	64.65	45.24	149.78	134.81	132.58	87.79	160.09	176.32
May	—	—	—	—	126.80	123.53	129.31	106.56	156.72	158.59
June	—	53.68	65.00	—	130.91	129.57	94.22	120.29	165.00	187.54
July	—	65.51	—	—	117.22	125.63	133.87	114.62	183.22	178.22
August	—	75.00	198.24	—	132.87	114.20	136.77	121.21	151.87	132.50
September	—	86.00	152.69	70.38	121.89	141.23	143.73	106.69	169.87	180.77
October	135.53	—	—	—	75.16	117.60	143.09	144.14	168.10	187.30
November	—	—	157.95	139.02	138.42	71.65	140.61	133.15	149.43	182.17
December	—	—	—	80.00	139.64	131.92	132.50	153.86	187.20	140.90
<b>1976</b>										
January	—	83.97	103.81	84.54	138.75	131.23	149.87	109.39	181.05	193.31
February	—	40.00	—	109.68	125.00	145.30	133.72	146.71	176.63	191.54
March	—	—	150.36	—	145.66	155.39	162.83	168.57	178.70	176.44
April	195.00	—	150.00	—	142.99	154.05	162.12	148.30	202.60	152.95
May	122.00	60.39	180.39	149.84	125.54	106.05	156.35	164.02	154.00	197.22
June	—	—	114.45	150.82	147.11	137.67	169.56	168.14	178.01	192.98
July	—	117.15	137.57	150.83	127.55	141.71	148.20	95.00	151.19	176.23
August	—	97.38	—	—	138.70	164.23	151.81	171.49	157.98	198.81
September	—	—	—	125.68	164.10	156.39	164.85	172.00	184.07	197.66
October	—	—	—	111.72	144.64	149.91	163.48	161.16	196.58	188.80
November	—	—	150.82	144.21	—	131.91	162.57	90.73	186.80	182.82
December	—	97.47	160.73	—	194.51	152.45	167.55	175.98	198.71	202.54
<b>1977</b>										
January	—	105.58	155.49	—	155.82	137.65	172.35	167.49	193.36	204.06
February	—	107.27	121.66	—	141.33	120.84	147.86	131.27	185.55	203.22
March	119.79	116.28	148.18	—	219.43	208.97	168.57	168.28	197.14	190.83
April	—	—	137.10	156.38	216.41	150.35	165.61	167.89	192.22	205.44
May	—	107.20	119.00	—	197.53	158.97	156.52	171.09	204.06	201.27
June	—	112.21	91.49	—	180.21	169.61	166.69	169.51	194.54	206.41

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

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

		Cents per thousand cubic feet
<b>1975</b>	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
<b>1976</b>	January	171.4
	February	175.2
	March	177.0
	April	178.4
	May	180.8
	June	183.2
	July	184.5
	August	185.8
	September	191.2
	October	195.0
	November	198.3
	December	208.3
	<b>AVERAGE</b>	<b>185.8</b>
<b>1977</b>	January	213.8
	February	217.0
	March	219.9
	April	223.7
	May	227.0
	June	227.3
	July	229.9
	August	230.1

Source: Bureau of Labor Statistics.

# Utility Fossil Fuels

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

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

Source: Federal Power Commission Form 423.

# Utility Fossil Fuels (Continued)

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

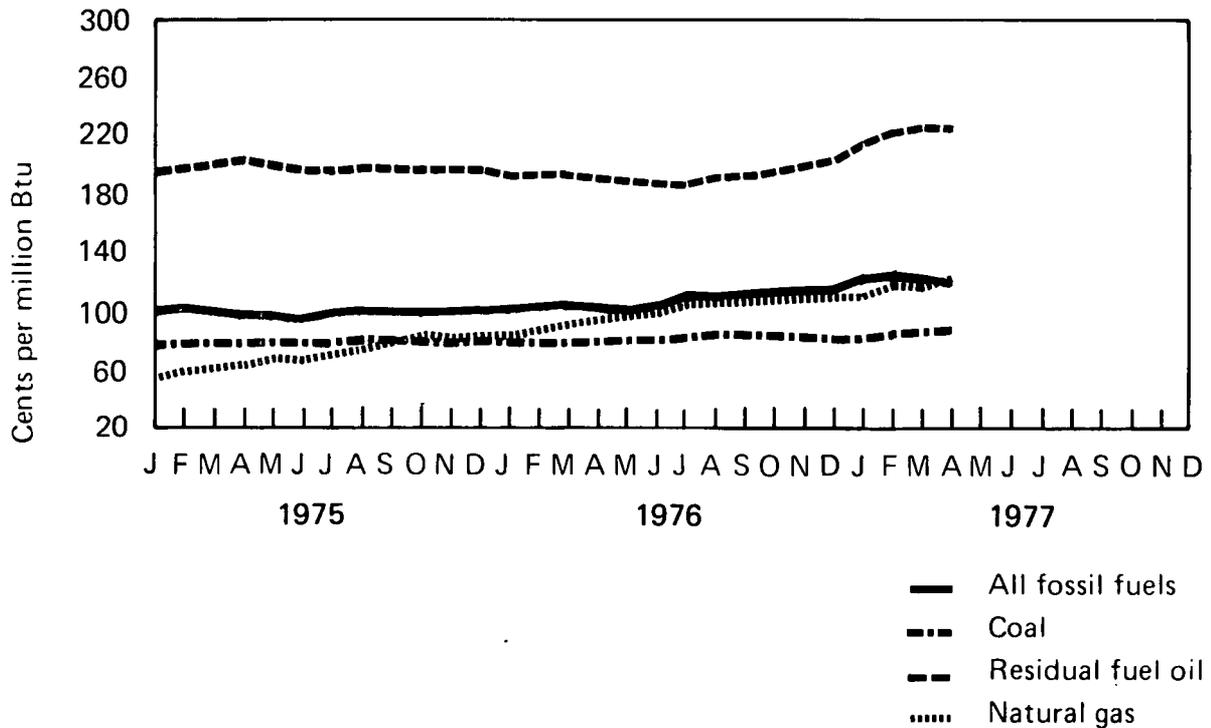
All Fossil Fuels\*

Region	1976										1977			
	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	
	Cents per million Btu													
New England	184.3	174.6	174.2	172.4	173.7	176.6	184.0	186.9	197.0	207.7	211.4	225.3	213.9	
Middle Atlantic	136.9	136.6	137.9	144.5	140.2	135.2	136.8	139.8	146.5	161.8	162.1	152.2	149.9	
East North Central	91.3	92.1	93.8	100.9	97.6	95.2	95.8	96.8	94.4	104.1	102.7	104.0	102.6	
West North Central	67.2	68.9	69.1	70.8	75.1	76.1	73.5	76.1	78.5	85.4	85.3	82.0	79.0	
South Atlantic	119.2	120.0	118.9	130.7	126.2	125.6	127.2	129.1	134.7	146.5	142.5	137.3	132.7	
East South Central	90.4	90.9	90.0	93.2	94.6	94.4	93.8	92.3	96.7	99.8	101.8	100.1	100.3	
West South Central	93.5	94.6	98.6	101.2	102.9	102.4	101.6	106.2	106.9	113.6	119.8	116.9	117.5	
Mountain	56.1	50.1	53.0	55.4	57.9	55.3	55.4	54.2	53.9	53.0	55.2	60.4	64.3	
Pacific	196.2	180.3	177.2	180.2	195.7	195.9	199.1	214.5	218.9	219.2	213.6	209.8	217.6	
<b>NATIONAL AVG.</b>	<b>106.4</b>	<b>105.8</b>	<b>107.0</b>	<b>113.2</b>	<b>112.9</b>	<b>110.7</b>	<b>111.1</b>	<b>115.2</b>	<b>118.6</b>	<b>126.8</b>	<b>128.4</b>	<b>123.5</b>	<b>122.0</b>	

\*See Explanatory Note 20.

Source: Federal Power Commission Form 423.

### National Average



**Coal**

Region	1976										1977			
	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	
	Cents per million Btu													
New England	124.8	127.0	122.3	127.9	127.8	125.4	125.6	125.6	124.4	127.6	126.8	127.5	127.9	
Middle Atlantic	100.2	101.7	102.5	107.5	103.3	102.6	102.6	100.2	101.2	105.9	101.2	100.8	102.5	
East North Central	85.0	86.8	86.6	92.4	90.9	89.8	89.2	90.2	90.7	90.7	91.5	94.1	93.9	
West North Central	64.1	65.8	64.7	65.3	70.1	71.0	69.3	69.6	67.6	66.5	68.4	71.5	72.5	
South Atlantic	100.8	100.8	100.7	104.4	103.5	103.4	105.4	103.8	104.1	105.4	106.5	108.1	108.4	
East South Central	83.4	85.1	84.5	85.5	85.7	87.2	88.3	87.4	90.6	91.2	94.1	93.6	96.5	
West South Central	26.4	26.4	27.3	32.4	36.4	42.4	43.7	51.5	56.6	58.8	61.1	64.3	60.2	
Mountain	34.6	32.2	35.9	35.3	36.8	36.2	38.2	39.1	38.1	37.6	38.9	41.1	42.4	
Pacific	75.5	75.7	75.2	75.8	75.7	75.7	76.0	75.6	74.5	77.6	80.5	74.0	70.8	
<b>NATIONAL AVG.</b>	<b>83.7</b>	<b>84.6</b>	<b>84.6</b>	<b>85.7</b>	<b>86.4</b>	<b>86.9</b>	<b>86.9</b>	<b>86.6</b>	<b>86.6</b>	<b>85.9</b>	<b>88.0</b>	<b>89.9</b>	<b>90.1</b>	

**Residual Fuel Oil\***

Region	1976										1977			
	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	
	Cents per million Btu													
New England	185.7	170.0	177.8	175.4	182.8	179.5	188.1	192.0	198.9	213.6	223.5	231.7	218.5	
Middle Atlantic	197.1	190.3	187.3	184.3	189.3	190.0	199.5	200.5	208.3	220.5	235.8	237.2	230.8	
East North Central	198.4	202.8	211.8	214.8	222.8	221.4	225.8	223.9	227.9	247.5	267.7	257.8	256.3	
West North Central	153.0	145.6	148.8	151.3	148.4	149.6	156.8	167.9	191.5	201.0	210.3	205.5	298.7	
South Atlantic	179.6	171.3	171.9	174.1	176.6	180.4	184.1	189.2	197.0	212.4	213.7	222.8	217.8	
East South Central	176.0	170.9	166.9	171.0	171.3	163.8	166.6	167.8	166.4	166.2	182.7	180.4	180.5	
West South Central	187.4	182.0	176.4	173.3	178.6	166.4	176.6	180.3	179.9	192.0	198.1	201.9	200.3	
Mountain	220.8	206.4	212.4	217.2	224.8	213.0	221.9	209.3	181.2	201.0	210.9	220.9	220.6	
Pacific	232.7	229.2	229.1	228.7	228.8	230.2	231.2	234.1	233.4	231.3	231.0	232.1	235.8	
<b>NATIONAL AVG.</b>	<b>196.7</b>	<b>188.1</b>	<b>187.4</b>	<b>187.0</b>	<b>191.8</b>	<b>191.9</b>	<b>198.8</b>	<b>203.5</b>	<b>207.5</b>	<b>217.2</b>	<b>223.3</b>	<b>228.0</b>	<b>226.2</b>	

**Natural Gas\*\***

Region	1976										1977			
	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	
	Cents per million Btu													
New England	134.5	144.0	153.7	154.1	153.9	154.4	155.4	185.2	186.1	200.1	200.1	200.1	200.1	
Middle Atlantic	150.3	111.5	108.0	114.8	114.5	122.7	125.2	111.9	127.8	211.3	349.8	155.9	155.4	
East North Central	127.7	135.3	139.8	138.2	147.8	148.4	153.0	168.8	188.9	186.5	174.7	170.6	184.7	
West North Central	68.0	73.4	78.1	78.4	81.4	81.9	80.8	84.1	84.0	86.1	93.4	88.8	96.0	
South Atlantic	78.2	84.0	83.1	88.7	82.9	88.3	89.3	89.1	90.4	80.4	112.1	93.6	85.7	
East South Central	148.0	128.6	123.0	136.9	132.5	137.7	158.5	162.2	160.8	165.1	170.3	157.8	154.7	
West South Central	92.3	94.0	98.1	100.4	101.6	101.8	101.0	106.6	106.8	108.1	114.6	111.2	113.7	
Mountain	90.4	87.4	89.5	90.8	101.7	104.3	112.2	118.2	136.0	133.3	115.0	129.1	134.9	
Pacific	152.6	147.3	147.6	146.6	155.3	166.5	169.0	177.5	188.7	196.8	189.2	181.0	204.5	
<b>NATIONAL AVG.</b>	<b>97.4</b>	<b>100.8</b>	<b>104.4</b>	<b>106.2</b>	<b>106.5</b>	<b>109.8</b>	<b>109.9</b>	<b>113.1</b>	<b>111.3</b>	<b>111.1</b>	<b>123.5</b>	<b>121.1</b>	<b>125.6</b>	

\*See Explanatory Note 20.

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

Source: Federal Power Commission Form 423.

## **Petroleum Consumption**

Petroleum consumption by the 19 International Energy Agency (IEA) countries rose 5.8 percent in the first half of 1977 over the level for the comparable 1976 period. The United States and Japan registered the largest increases (8.8 percent and 6.5 percent, respectively). The United Kingdom had a smaller increase of 1.8 percent. Several IEA countries registered minor declines during the period. Consumption in Italy was down 1.2 percent; West Germany, down 0.8 percent; and Canada, down 0.5 percent. Consumption in France (not a member of IEA) was 1.5 percent lower.

## **Crude Oil Production**

Crude oil production by the Organization of Petroleum Exporting Countries (OPEC) dropped to 29.9 million barrels a day in July, 1.1 million below the mark for June. This reduced production rate is in response to an oil surplus on the world market. Stocks are high in consuming countries principally because of heavy imports in the spring to compensate for last winter's draw-downs.

The largest reductions in July crude oil production were in Iraq (down 500,000 barrels a day) and Iran (down almost 400,000 barrels a day). Production was also off close to 200,000 barrels a day in both Libya and Nigeria. Saudi Arabia, on the other hand, showed a production increase of 240,000 barrels a day. Canada reduced production 280,000 barrels a day to 1.1 million, in line with its conservation policy, while Mexico raised production by 50,000 barrels a day to 1.05 million.

The Central Intelligence Agency lowered its estimate of Saudi Arabia's productive capacity by about 1 million barrels a day to 10.5 million. This reduces the overall OPEC capacity to 37.5 million barrels a day and changes some of the shut-in calculations. It now appears that 20.4 percent of total OPEC production capacity is shut-in.

# Petroleum Consumption

## Petroleum Consumption for Major Free World Industrialized Countries

		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
Thousands of barrels per day									
<b>1973</b>	<b>AVG.</b>	<b>33,600</b>	<b>5,000</b>	<b>2,693</b>	<b>2,219</b>	<b>1,974</b>	<b>1,597</b>	<b>1,525</b>	<b>3,467</b>
<b>1974</b>	<b>AVG.</b>	<b>32,390</b>	<b>4,872</b>	<b>2,408</b>	<b>2,094</b>	<b>1,857</b>	<b>1,630</b>	<b>1,521</b>	<b>3,449</b>
<b>1975</b>	Jan	34,100	4,729	2,183	2,190	1,981	1,691	1,792	3,741
	Feb	34,100	5,191	2,455	2,243	1,907	1,872	1,767	3,825
	Mar	31,600	4,918	2,234	1,952	1,731	1,558	1,558	3,285
	Apr	31,200	4,202	2,431	2,202	1,826	1,592	1,530	3,578
	May	28,600	4,041	2,253	1,640	1,482	R1,471	1,174	3,058
	June	29,300	4,135	2,106	1,642	1,416	1,550	1,289	3,195
	July	29,400	4,265	2,319	1,491	1,322	R1,493	1,234	2,961
	Aug	29,200	4,234	2,360	1,300	1,208	R1,449	1,105	3,082
	Sept	30,400	4,543	2,309	1,785	1,501	R1,469	1,465	3,338
	Oct	31,000	4,409	2,328	1,917	1,707	1,555	1,679	2,981
	Nov	31,000	4,747	2,361	2,077	1,723	1,577	1,448	3,423
	Dec	35,100	5,447	2,502	2,658	1,821	1,880	1,600	3,863
	<b>AVG.</b>	<b>31,235</b>	<b>4,568</b>	<b>2,319</b>	<b>1,925</b>	<b>1,633</b>	<b>R1,595</b>	<b>1,468</b>	<b>3,382</b>
<b>1976</b>	Jan	35,100	4,941	2,464	2,432	1,679	1,785	1,775	3,943
	Feb	34,400	5,246	2,497	2,492	1,865	1,754	1,743	3,991
	Mar	34,300	5,165	R2,747	2,372	1,879	1,747	1,641	3,907
	Apr	31,500	4,526	2,339	2,116	1,716	1,518	1,423	3,457
	May	29,900	4,218	2,325	1,795	1,417	1,509	1,253	3,226
	June	31,300	4,429	2,373	1,603	1,416	1,560	1,236	3,459
	July	31,100	4,416	2,624	1,624	1,346	1,531	1,343	3,323
	Aug	31,100	4,461	2,522	1,668	1,276	1,585	1,360	3,395
	Sept	32,200	4,517	2,521	1,966	1,477	1,514	1,592	3,806
	Oct	32,300	4,523	2,391	1,908	1,544	1,560	1,464	3,780
	Nov	35,900	5,160	2,700	2,204	1,750	1,822	1,393	4,233
	Dec	39,100	5,846	2,571	2,687	1,869	2,008	1,779	4,593
	<b>AVG.</b>	<b>33,180</b>	<b>4,786</b>	<b>2,507</b>	<b>2,071</b>	<b>1,603</b>	<b>1,658</b>	<b>1,500</b>	<b>3,758</b>
<b>1977</b>	Jan	R37,800	5,428	2,389	2,518	1,830	R1,797	R1,683	R4,191
	Feb	R38,700	6,019	2,441	R2,385	1,844	R1,919	1,809	R4,241
	Mar	R35,100	5,540	R2,519	R2,109	R1,818	R1,664	R1,548	R3,955
	Apr	32,900	4,716	2,425	R2,044	R1,670	1,526	R1,363	3,630
	May	31,700	4,321	2,359	R1,846	R1,545	1,573	1,252	3,398
	June	32,000	4,400	R2,495	1,717	1,447	1,359	1,324	3,375
	July	NA	NA	NA	1,349	NA	NA	1,233	NA
	<b>AVG.</b>	<b>34,659</b>	<b>5,061</b>	<b>2,438</b>	<b>1,991</b>	<b>1,691</b>	<b>1,637</b>	<b>1,455</b>	<b>3,794</b>

(Year to date)

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

\*\*Excludes liquefied petroleum gases and condensates.

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

†Principal products only.

††Excludes the United States.

NA=Not available.

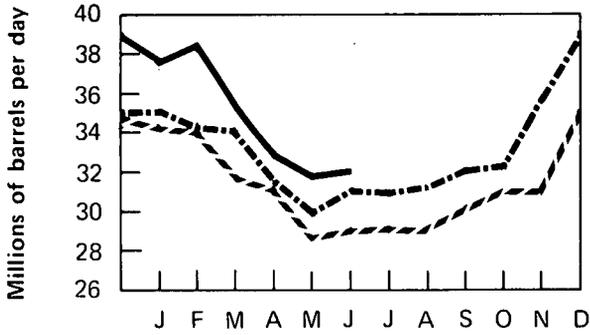
R=Revised data.

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

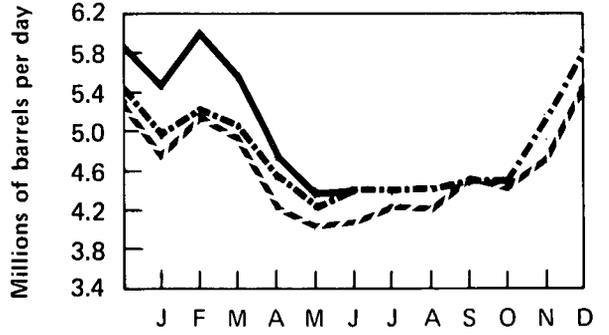
Source: Central Intelligence Agency, *International Oil Developments, Statistical Survey*, 21 September 1977.

# Petroleum Consumption

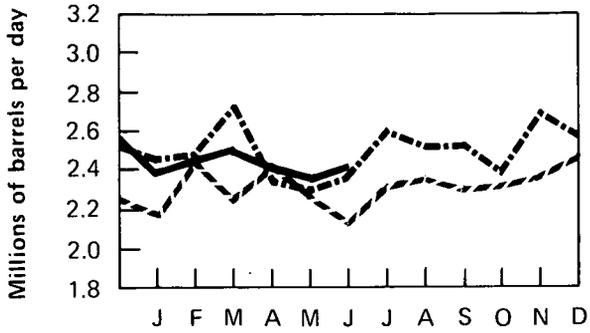
Total IEA



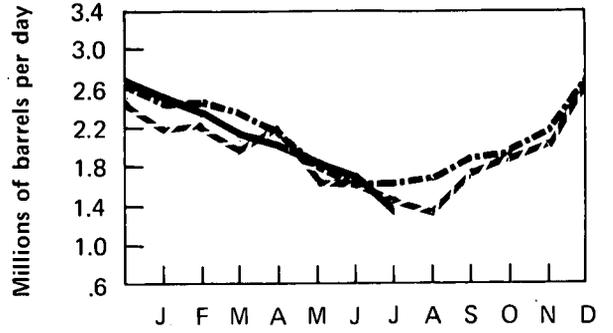
Japan\*



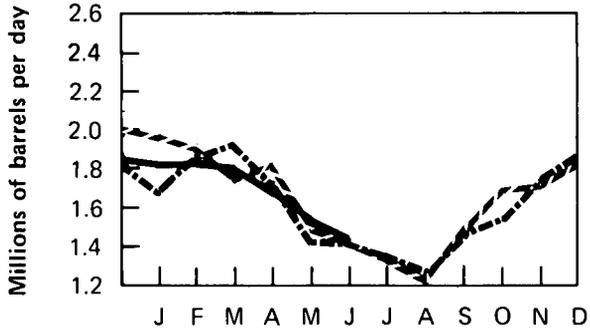
West Germany



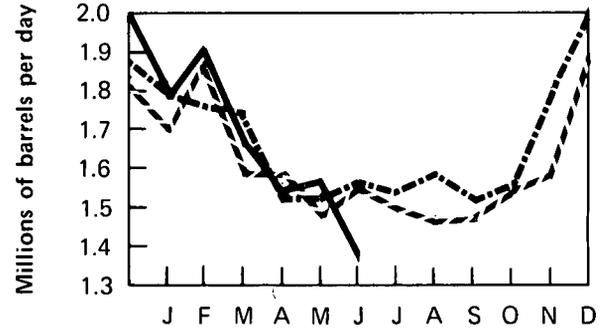
France\*\*



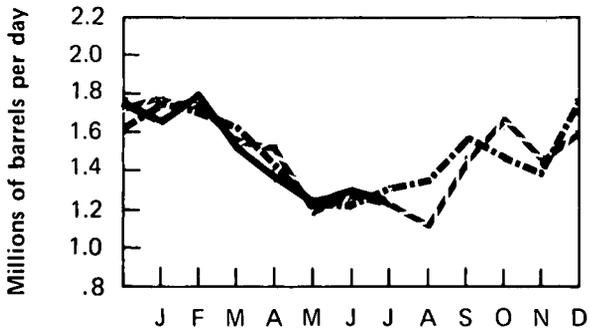
United Kingdom



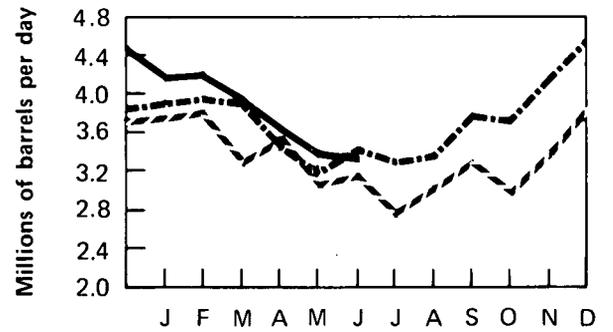
Canada



Italy\*\*\*



Other IEA†



\*Excludes liquefied petroleum gases and condensates.

\*\*Not a member of IEA.

\*\*\*Principal products only.

†Excludes the United States.

--- 1975  
 - - - 1976  
 ——— 1977

# Crude Oil Production

## Crude Oil Production for Major Petroleum Exporting Countries – July 1977

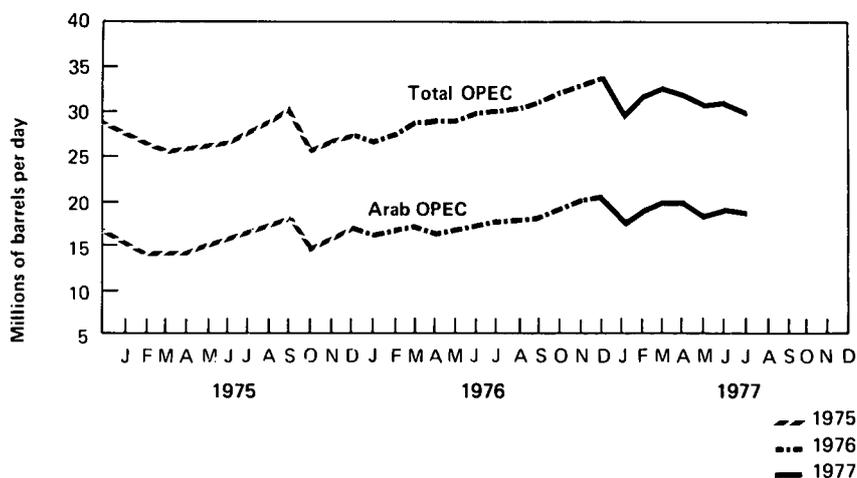
Country	Production						Production Capacity	Production Shut in
	1972 Year	1973 Year	1974 Year	1975 Year	1976 Year	1977 July**	July	July
Thousands of barrels per day								
Algeria	1,040	1,070	960	960	990	1,050	1,080	2.8
Iraq	1,465	2,020	1,970	2,260	2,280	1,900	3,000	36.7
Kuwait*	3,283	3,020	2,545	2,085	2,150	1,740	3,500	50.3
Libya	2,239	2,175	1,520	1,480	1,930	1,890	2,500	24.4
Qatar	482	570	520	440	490	400	700	42.8
Saudi Arabia*	6,016	7,595	8,480	7,075	8,580	9,800	10,500	6.7
United Arab Emirates	1,202	1,535	1,680	1,665	1,940	2,010	2,390	15.9
<b>Subtotal: Arab OPEC</b>	<b>15,727</b>	<b>17,985</b>	<b>17,675</b>	<b>15,965</b>	<b>18,360</b>	<b>18,790</b>	<b>23,670</b>	<b>20.6</b>
Ecuador	78	210	175	160	190	150	225	33.3
Gabon	125	150	200	225	220	230	250	8.0
Indonesia	1,080	1,340	1,375	1,305	1,500	1,700	1,800	5.5
Iran	5,023	5,860	6,020	5,350	5,880	4,710	6,700	29.7
Nigeria	1,815	2,055	2,255	1,785	2,070	2,060	2,300	10.4
Venezuela	3,219	3,365	2,975	2,345	2,290	2,230	2,600	14.2
<b>Subtotal: Non-Arab OPEC</b>	<b>11,340</b>	<b>12,980</b>	<b>13,000</b>	<b>11,170</b>	<b>12,150</b>	<b>11,080</b>	<b>13,875</b>	<b>20.1</b>
<b>TOTAL OPEC</b>	<b>27,067</b>	<b>30,965</b>	<b>30,675</b>	<b>27,135</b>	<b>30,510</b>	<b>29,870</b>	<b>37,545</b>	<b>20.4</b>
Canada	1,540	1,800	1,695	1,460	1,300	1,130	1,800	37.2
Mexico	440	465	580	720	850	1,050	1,100	4.5
<b>TOTAL OPEC, Canada, Mexico</b>	<b>29,047</b>	<b>33,230</b>	<b>32,950</b>	<b>29,315</b>	<b>32,660</b>	<b>32,050</b>	<b>40,445</b>	<b>20.8</b>
<b>Total World</b>	<b>50,550</b>	<b>R55,755</b>	<b>R55,875</b>	<b>52,990</b>	<b>R57,190</b>	<b>58,400</b>		

\*Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in July 1977 amounted to approximately 380,000 barrels per day.

\*\*Estimated.

Sources: Central Intelligence Agency, *International Oil Developments, Statistical Survey*, 21 September 1977 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 Specific Refined Petroleum Products

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

## **Domestic Demand for Total Refined Petroleum Products**

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

## **Electricity Production**

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

## **Entitlement Position**

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month. An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by 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 quality in the nearest field for which prices were posted; and (2) the amount mandated in the Monthly Price Adjustment Schedules published by FEA in the *Federal Energy Guidelines* (Part 212.77-13847 Appendix).

#### **Major Brand**

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

#### **Motor Gasoline Production**

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

#### **Motor Gasoline Stocks**

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

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

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

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

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

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

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

#### **New Crude Oil**

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

#### **Nonbranded Independent Marketer**

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

#### **Old Crude Oil**

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

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

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

#### **Property**

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

#### **Refined Petroleum Products Imports**

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

### **Refiner Acquisition Cost**

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

### **Released Crude Oil**

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

### **Residual Fuel Oil**

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

### **Rotary Rig**

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

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

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

### **Startup Test Phase of Nuclear Powerplant**

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

### **Stripper Well Property**

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

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

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

### **Uncontrolled Crude Oil**

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

### **Unrecouped Costs**

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

### **Upper Tier Crude Oil**

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

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

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) the amount mandated in the Monthly Price Adjustment Schedules published by FEA in the *Federal Energy Guidelines* (Part 212.77 .13847 Appendix).

### **Well**

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

## Explanatory Notes

1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear powerplants and industrial hydroelectric power production.

The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.

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

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

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

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

Assumptions underlying the current short-term forecast are: normal weather and a level of economic activity

producing real GNP growth rates of 5.8, 5.4, and 5.1 percent for 1977, 1978, and 1979, respectively.

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

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

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

9. Cooling degree-days can be used as a measurement of energy consumption by air-conditioning systems. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65° F by convention. Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration from approximately 200 weather stations around the country. These data are used to calculate statewide cooling degree-day averages based on the population of the area surrounding each weather station. The population-weighted State figures are aggregated into Petroleum Administration for Defense Districts and the national average, also using a population weighting scheme.

10. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of  $U_3O_8$ . After the conversion stage, the units of measure are either metric tons (MT) of  $F_6$  or metric tons of uranium (MTU). The later 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.

11. 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 (MWhe) or kilowatt hours (KWhe). 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).

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

13. The indicator, U.S. Dependence on Petroleum Imports, shows the fraction of domestic petroleum demand constituted by imports of crude oil and refined petroleum products. To factor out the effects of temporary stock level changes, the fraction is calculated as the difference between demand and domestic production, divided by demand. Imports from Arab nations (which include both direct and indirect quantities) are shown separately.

14. The index, Energy Consumption per GNP Dollar, is a ratio of total U.S. energy consumption in Btu to gross national product in constant 1972 dollars. The index is adjusted seasonally and for normal weather conditions.

15. The Consumer Energy Price Indicator (CEPI) is an index of the quantity-weighted average of direct energy costs to the consumer (1972 base year). It reflects, therefore, changes in both the prices of individual fuels and in the relative quantities of each fuel consumed. Included in the computation of the CEPI are automotive gasoline and the principal residential fuels (heating oil, natural gas, and electricity).

16. 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.

17. 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.

18. 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.

19. 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.

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

## Approximate Heat Content of Various Fuels

### Petroleum

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

Natural gas liquids 4.023 million Btu/barrel

### Natural gas

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

### Coal

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

## Electricity Conversion Heat Rates

### Fossil fuel steam-electric

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

Nuclear steam-electric 10,660 Btu/kilowatt hour

Hydroelectric 10,383 Btu/kilowatt hour

Electricity Consumption 3,412 Btu/kilowatt hour

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