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# Feature Article

# THE PRICE OF CRUDE OIL

## INTRODUCTION

For U.S. consumers of petroleum products, the years 1973 and 1974 were the most turbulent ever. In January 1975, the gasoline that is used to keep our Nation rolling cost 14.9 cents per gallon more than it did at the beginning of 1973. The heating oil that is used to keep us warm has increased 16.8 cents per gallon. The residual fuel that utilities use to generate electricity has gone up 17.2 cents per gallon. The propane that is used to dry crops has jumped 16 cents per gallon. The jet fuel that is used to fly aircraft costs the airlines 12.3 cents per gallon more. In short, all petroleum products which are important to consumers simply cost much more than they did 2 years ago.

With price controls in effect, it would seem that these extraordinary price increases would be prohibited. However, current pricing regulations were not designed to prevent price increases, but rather, to moderate them. This objective is accomplished by two features of the system. First, price increases which refiners and distributors of petroleum can implement are limited to those which cover increased product costs. In this manner a seller of refined petroleum products cannot take advantage of a shortage by tacking on a little extra to his markup. Second, the average cost of crude oil to refiners has been kept down by maintaining the wellhead price of nearly two-thirds of domestic production at the May 15, 1973, level plus \$1.35 per barrel.

In spite of the price controls on domestic crude production, the average cost of crude oil to U.S. refiners has soared since the beginning of 1973. The costs of crude to refiners which they can pass on to their customers and which eventually are passed on to ultimate consumers, called composite refiner acquisition costs, are shown in Table 1. In May 1973 refiners paid an average of \$3.85 per barrel for all their crude oil purchases. By March 1975 they were paying \$9.30 per barrel, more than twice as much.

The rise in the average cost of crude oil was in large part due to the marked increase in the cost of imported oil. The average costs of imported crude oil to the refiner, called imported refiner acquisition costs, are also shown in Table 1. In May 1973, the average imported refiner acquisition cost was \$3.92 per barrel. In March 1975 this cost had risen to \$13.17.

Even though the price of most domestic production is controlled, the average cost of domestic crude oil purchased by refiners has increased significantly as a result of very large increases in the price of the crude oil

Table 1. Refiner Acquisition Cost of Crude Oil

	Composite	Imported	Domestic
<b>1973</b>			
May	3.85	3.92	3.82
Nov.	5.45	6.49	5.00
Dec.	6.54	8.22	5.95
<b>1974</b>			
Jan.	7.46	9.59	6.72
Feb.	8.57	12.45	7.08
Mar.	8.68	12.73	7.05
Apr.	9.13	12.72	7.21
May	9.44	13.02	7.26
Jun.	9.45	13.06	7.20
Jul.	9.30	12.75	7.19
Aug.	9.17	12.68	7.20
Sep.	9.13	12.53	7.18
Oct.	9.22	12.44	7.26
Nov.	9.41	12.53	7.46
Dec.	9.28	12.82	7.39
<b>1975</b>			
Jan.	9.48	12.77	7.78
Feb.	10.05	13.05	8.29
Mar.	*9.30	*13.17	*8.29

\*Preliminary figure.

that is exempt from price controls. Domestic refiner acquisition costs, that go into making up the average cost of crude to refiners, are shown in Table 1. Domestic refiner acquisition costs have increased from \$3.82 in May of 1973 to \$8.29 in March of 1975.

There are many market actions which influence imported and domestic refiner acquisition costs. The objective in this article is to go beyond these numbers and examine the details to see how particular actions on both the foreign and domestic markets translated into increased costs for consumers during the turbulent period, January 1973 to the present.

## COST OF FOREIGN CRUDE OIL

Refiner acquisition cost for imported crude oil represents the cost of foreign oil which refiners may pass on to the consumers on a dollar-for-dollar basis. These costs include all transportation costs to the United States and any fees that the company must pay. Essentially they include the cost of the crude obtained in two types of transactions: oil purchased at arms-length<sup>1</sup> prices by

<sup>1</sup> An arms-length transaction is a sale between unrelated persons who are not members of a controlled group; the sale is considered to occur at the time and place when a binding contract is entered into between the parties.

foreign affiliates and oil acquired through producing rights and special purchase agreements with foreign governments. For income tax purposes the foreign affiliate may charge the U.S. parent company the arms-length price for the oil it has purchased in this manner. For the oil acquired through producing rights and special purchase agreements, the affiliate is permitted to charge its U.S. parent company a "transfer price" which equals the cost of acquiring oil from the host government plus a reasonable markup over cost. The amount of the markup must be such that the resulting transfer price falls in line with the price of oil purchased by third parties on the free market. In this sense, refiner acquisition costs reflect third party purchase prices, which have a minimum value equal to the cost of acquiring oil from host governments through producing rights and special purchase agreements.<sup>2</sup>

When domestic price controls were implemented in August 1973, refiner acquisition costs for imported crude averaged \$4.47 per barrel.<sup>3</sup> Following the Arab production cutbacks which began in October, supplies on the world market became tight, and as a result prices to third parties soared. Reflecting these rising prices, refiner acquisition costs rose steadily to a peak of \$13.06 per barrel in June 1974. As pre-embargo production levels were resumed and supplies increased, third party prices drifted downward. As a result, refiner acquisition costs declined from their June peak to \$12.33 per barrel in October 1974.

In November and December 1974, when foreign governments were raising their taxes and royalties, refiner acquisition costs of imported crude moved upward again, reaching \$12.82 per barrel in December. In January 1975 they fell to \$12.77 per barrel and would have fallen more in February except that a \$1-per-barrel import fee was imposed on February 1. Reflecting increased costs from the import fee, refiner acquisition costs moved to \$13.05 per barrel in February and to \$13.17 per barrel in March 1975.

### Cost of equity and buyback oil

Equity and buyback oil is oil obtained by the producing companies through producing rights and special purchase agreements with host governments and not through arms-length transactions. The cost of this oil is what the

<sup>2</sup> An important characteristic of refiner acquisition cost is that they are "book" costs and may be passed on when the refiner takes title to the crude. Because refiners take title to much of their imported crude oil when it is loaded at the port of origin, refiner acquisition costs do not necessarily reflect the costs of imported crude oil when it reaches the United States.

<sup>3</sup> The markup over average costs in August 1973 was reported to be about 25 to 50 cents per barrel.

producing company pays the host government for the oil plus the costs of production. These costs set a floor for third party purchase prices. When foreign countries increase the cost of equity/buyback oil they push up the floor of the world price structure. In order to understand how the governments have increased these equity/buyback costs, it is necessary to know what tax paid costs are, what buyback prices are, and how these combine to make up the average cost of crude oil to a producing company.

Before 1973 a large portion of crude oil obtained from foreign countries was equity oil that was produced and owned by companies with producing rights granted by the host governments. In return for these producing rights, the producing companies were required to pay the host government both a royalty and tax for the oil they produced. The sum of the tax, royalty, and the cost to produce the oil was the total cost of equity oil, and was called the "tax-paid cost."

Both the royalty and tax were, and still are, based on a reference price called the "posted price" that once was arrived at through negotiations between the host government and the producing companies. It is now set by the host government. An illustrative computation of tax-paid cost for Arabian Light 34 degree gravity, on January 1, 1974, is shown in Table 2. The first step in figuring the tax-paid cost was to compute the royalty payment (\$1.46), which was 12.5 percent of the posted price (\$11.65). The next step was to compute taxable income (\$10.09) by subtracting the royalty payment (\$1.46) and the cost of production (\$0.10) from the posted price. The tax payment (\$5.55) was 55 percent of taxable income. The tax-paid cost (\$7.11) was then the sum of the royalty payment (\$1.46), production cost (\$0.10), and the tax payment (\$5.55). Basically, all countries which have equity oil compute the tax-paid cost by this formula, with minor adjustments used by a few countries.

In January 1973 the use of buyback oil and buyback prices as a means to increase crude oil costs emerged.

**Table 2. Computation of Tax-paid Cost for Arabian Light—January 1, 1974**

1. Posted Price . . . . .	\$11.65
2. Royalty (12.5 percent of line 1) . . . . .	1.46
3. Production Cost . . . . .	0.10
4. Taxable Income (line 1 minus lines 2 and 3) . . . . .	10.09
5. Taxes (55 percent of line 4) . . . . .	5.55
6. Tax-paid Cost (sum of lines 2, 3, and 5) . . . . .	<u>\$ 7.11</u>

Well before 1973, the oil producing nations had been pressing the producing companies for more control of production in their countries. During 1972, Iraq nationalized the oil fields in the northern part of that country and was considering the nationalization of all foreign interests. But other host governments were not prepared to take this sort of action. Instead, Saudi Arabia, United Arab Emirates, and Qatar negotiated with the producing companies for 25-percent participation in their operations. These well-publicized "participation" agreements were effective January 1, 1973.

The participation agreements gave the host governments 25 percent ownership of the oil produced in their countries. This oil is known as participation oil. Most of the participation oil was sold back to the producing companies at negotiated prices commonly called "buyback" prices. Buyback prices were reportedly set at 93 percent of the posted price during 1973. The net result of the introduction of buyback oil was to increase the average cost of oil for the producing companies, since higher priced buyback oil was averaged in with equity oil.

The period 1973 to the present can be divided into four intervals based on the types of actions taken by the host governments to increase the world crude oil price floor. During the first period, 1973 through January 1, 1974, there was a dramatic increase in equity/buyback costs as a result of increases in posted prices and participation shares. Next, there was a waiting period in the first half of 1974 when participation agreements were being negotiated. Then there was a dramatic increase in tax-paid cost in the last half of 1974 when tax and royalty rates were increased. In 1975 the situation has thus far been relatively stable. The following is a chronological history of the actions taken by foreign countries to increase the costs of crude oil (see Table 3 for a summary).

#### Price increases in 1973 and early 1974

During the period January 1, 1973 through January 1, 1974, there were dramatic increases in the cost of oil to companies producing in foreign countries.

**Table 3. Significant Events in Foreign Crude Oil Price Structure**

#### PERIOD OF DRAMATIC CHANGES

##### 1973

- January — Saudi Arabia, the United Arab Emirates, and Qatar sign 25-75 participation agreement on January 1.
- April — Twenty-six cent increase in posted prices negotiated with producing companies on April 1.
- Nigeria signs 35-65 participation agreement.
- August — Thirty-two cent increase in posted prices negotiated with producing companies on August 1.
- October — Posted prices unilaterally increased by host governments by 66 to 70 percent on October 16.
- November — Production cutbacks and embargo announced on November 4.

##### 1974

- January — Posted prices increase to \$11.65 per barrel on January 1.

#### PERIOD OF INCREASED PARTICIPATION

- January — Posted prices frozen at January 1, 1974, level.
- Kuwait signs 60-40 participation agreement. Not ratified until May 1974.
- February — Qatar implements 60-40 participation agreement.
- May — Nigeria increases participation to 55-45.
- Indonesia raises posted price.
- June — Saudi Arabia signs 60-40 participation agreement retroactive to January 1, 1974.

#### PERIOD OF INCREASED TAX PAID COSTS

- July — Most members of OPEC increased royalty rate from 12.5 to 14.5 percent. Saudi Arabia did not.
- September — Saudi Arabia increases royalty rate from 12.5 to 14.5 percent retroactive to July 1, 1974. Also announced increase in royalty rate to 16.67 percent.
- October — Most members of OPEC increase royalty rate to 16.67 percent and tax rate from 55 to 65.75 percent. Saudi Arabia did not increase its tax rate.
- November — Saudi Arabia raises tax rate to 85 percent and royalty rate to 20 percent. Other countries adjust tax and royalty rates to fall in line with those of Saudi Arabia.

#### PERIOD OF PRICE STABILITY

##### 1975

- January — Saudi Arabia lowers buyback price 22 cents per barrel.
- Nigeria lowers buyback price by 48 cents per barrel.
- February — Nigeria lowers buyback price and increases tax-paid costs.

After the initial increase in equity/buyback cost when the participation agreements were signed in January 1973, the average cost of crude was increased by raising posted prices.<sup>4</sup> This increased both tax paid costs and buyback prices. The average costs of equity/buyback oil, weighted by volumes of oil taken, are shown in Table 4 for eight leading exporting countries. The details of tax paid costs and buyback prices which go into making up the average costs are shown in Table 5.

Even before the embargo period, the average cost of crude oil was increasing as foreign countries negotiated for increases in posted prices. During the period from January 1973 to August 1973, the host countries negotiated with the producing companies for increases in posted prices of nearly 54 cents per barrel based on the marker crude,<sup>5</sup> Arabian Light. Using Saudi Arabia as an example, this increase in posted price raised the average cost of equity/buyback oil from \$1.82 to \$2.14 per barrel. However, a dramatic change occurred on October 16 when the Persian Gulf members of OPEC broke from the traditional policy of negotiating prices with the producing companies and unilaterally raised posted prices by 66 to 70 percent, thus raising the average equity/buyback cost to \$3.54 for Saudi Arabian crude.

The Arab members of OPEC followed-up on their October price increases by moving to reduce world supplies. On November 4, 1973, they announced a 25-percent production cutback and an embargo on supplies to the United States. With world demand at an all time high, this reduction placed considerable upward pressure on prices. At the OPEC meetings in Teheran on December 22-23, OPEC members negotiated among themselves to raise posted prices on January 1, 1974. It was reported that the Shah of Iran initially opted for a posted price of about \$14 per barrel. Saudi Arabia and Iraq thought that this price was too high. The price eventually agreed upon was \$11.651 per barrel for the marker crude, so that tax-paid costs would equal about \$7 per barrel (as illustrated in Table 5). In his news conference at the meetings, the Shah stated that this price was taken to be competitive with the cost of producing energy from other sources, such as oil shale and the liquefaction or gasification of coal. The \$11.651 posted price for Saudi Arabian crude amounted to an

average equity/buyback cost of \$9.27 per barrel, an increase of roughly 400 percent over its January 1973 level.

An important factor in the cost of foreign oil, which is often overlooked when evaluating the dramatic increases in world crude oil prices during this period, is transportation costs. In 1973, transportation costs for some countries were nearly as much as the crude costs. They ranged from as low as around 20 cents per barrel to transport crude by pipeline from producing fields in Canada to the North Central part of the United States to as high as \$2.15 to \$2.70 per barrel to ship crude from Indonesia to the United States. Because transportation costs accounted for such a large portion of the cost of importing crude in 1973, particularly for those countries for which transportation costs were high, the percentage increase in the cost of imports to the United States (landed cost) was not as great as the percentage increases in average costs at the countries of origin. Table 6 shows average equity/buyback costs including estimated transportation costs to the United States. The average cost of equity/buyback oil plus transportation for Saudi Arabian crude was \$3.10 per barrel in January 1973 and \$11.01 per barrel after the large jump on January 1, 1974. This increase amounts to roughly a 250 percent change, whereas equity/buyback costs without transportation costs increased by roughly 400 percent.

Another important consideration is that transportation costs fluctuate depending on the supply/demand situation for tankers. During 1973, prior to the Arab embargo, imports into the United States were growing rapidly, increasing the demand for tankers. As a result, tanker rates increased considerably until the embargo when demand for tankers fell sharply. Transportation costs from Saudi Arabia to the United States rose over a dollar a barrel during 1973. However, since the embargo, transportation costs have fallen back to levels that existed in the early part of 1973.

#### Period of increased participation

After the extraordinary increases in equity/buyback cost at the end of 1973, the first 6 months of 1974 turned out to be a waiting period. Host governments were negotiating for larger shares of the producing companies. The producing companies were not sure how great the percent of participation would be, at what level buyback prices would be set, and when the new participation arrangements would be implemented. Increased shares of participation would mean an increase in the average cost of equity/buyback oil. The whole answer to the international price question centered on the negotiations

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<sup>4</sup> The increase in the cost of Nigerian crude oil during this period was an exception. The signing of a 36-65 participation agreement between the Nigerian government and producing companies effectively raised the cost of Nigerian crude oil by including higher-priced buyback oil.

<sup>5</sup> The marker crude is Arabian Light 34 degrees gravity crude oil. Posted prices for other crude oils are based on the price for the marker crude; adjustments are made for differences in quality and transportation costs.

**Table 4. Estimated Average Cost of Equity/buyback Oil for Major Countries Exporting to the United States**

	Venezuela	Nigeria	Saudi Arabia	Kuwait	U.A.E.	Iran*	Canada**	Indonesia
<b>1973</b>								
Jan.	2.22	2.34	1.82	1.80	1.86	1.68	3.16	2.04
Apr.	2.50	2.48	1.92	1.91	1.97	1.77	3.16	2.54
Aug.	2.92	2.75	2.14	2.04	2.21	1.97	3.78	2.54
Sep.	2.92	3.19	2.14	2.04	2.21	1.97	3.78	2.54
Oct.	3.41	6.08	3.54	3.39	4.20	3.36	3.78	3.21
Nov.	4.93	6.15	3.59	3.43	4.25	3.39	3.78	4.02
Dec.	5.06	5.98	3.49	3.33	4.25	3.40	3.78	4.02
<b>1974</b>								
Jan.	9.17	10.56	9.27	9.24	9.81	9.39	6.85	8.13
Feb.	9.17	10.56	9.27	9.24	9.81	9.39	11.05	8.13
Mar.	9.17	10.56	9.27	9.24	9.81	9.39	11.05	8.13
Apr.	9.17	11.01	9.27	9.24	9.81	9.39	10.88	8.91
May	9.17	11.01	9.27	9.24	9.81	9.39	10.88	8.91
Jun.	9.17	11.01	9.27	9.30	9.81	9.44	12.08	8.91
Jul.	9.52	11.06	9.32	9.31	9.85	9.50	12.08	9.69
Aug.	9.52	11.06	9.32	9.31	9.85	9.50	12.08	9.69
Sep.	9.52	11.06	9.32	9.31	9.91	9.50	12.08	9.69
Oct.	9.52	11.43	9.80	9.68	10.42	9.85	12.08	9.60
Nov.	9.92	11.43	10.36	9.68	11.20	10.29	12.08	9.69
Dec.	9.92	11.43	10.36	9.68	11.20	10.29	12.08	9.69
<b>1975</b>								
Jan.	10.31	11.14	10.22	10.15	10.91	10.46	11.68	9.69
Feb.	10.30	11.57	10.22	10.15	10.92	10.46	11.68	9.69

\*Iran, which does not have equity/buyback oil as such, bases its selling price on equity/buyback costs for Saudi Arabia.

\*\*Equity/buyback costs do not apply to Canada; costs shown for Canada include taxes on crude oil exported to the United States.

**Table 5. Tax-paid Costs and Buyback Prices: January 1973 – February 1975\***

	Saudi Arabia		Nigeria		U.A.E.		Kuwait**		Venezuela***	Indonesia***
	Tax-paid Cost	Buyback Price	Equity/buyback Price	Equity/buyback Price						
<b>1973</b>										
Jan.	1.62	2.41	2.34	NA	1.66	2.45	1.60	NA	2.22	2.04
Apr.	1.71	2.55	2.48	NA	1.76	2.59	1.69	NA	2.50	2.54
Aug.	1.90	2.85	2.78	NA	1.97	2.92	1.81	NA	2.92	2.54
Oct. 16	3.15	4.76	4.92	7.73	3.72	5.62	2.95	NA	3.41	3.21
<b>1974</b>										
Jan.	7.11	10.84	9.11	13.25	7.73	11.90	7.03	10.85	9.17	8.13
Feb.	7.11	10.84	9.11	13.25	7.73	11.90	7.03	10.85	9.17	8.13
Mar.	7.11	10.84	9.11	13.25	7.73	11.90	7.03	10.85	9.17	8.13
Apr.	7.11	10.84	9.11	13.09	7.73	11.90	7.03	10.85	9.17	8.91
May	7.11	10.84	9.11	13.09	7.73	11.90	7.03	10.85	9.17	8.91
Jun.	7.19	10.84	9.11	13.09	7.73	11.90	7.03	10.95	9.17	8.91
Jul.	7.24	10.84	9.24	12.50	7.73	11.98	7.14	10.95	9.52	9.69
Aug.	7.24	10.84	9.24	12.50	7.73	11.98	7.14	10.95	9.52	9.69
Sep.	7.24	10.84	9.24	12.50	7.84	11.98	7.14	10.95	9.52	9.69
Oct.	8.38	10.84	10.07	12.50	9.08	11.75	8.28	10.74	9.52	9.69
Nov.	9.93	10.67	10.07	12.50	10.79	11.61	7.99	10.15	9.92	9.69
Dec.	9.93	10.68	10.07	12.50	10.79	11.61	7.99	10.15	9.92	9.69
<b>1975</b>										
Jan.	9.93	10.46	10.07	12.02	10.44	11.38		10.15	10.31	9.69
Feb.	9.93	10.46	11.31	11.79	10.44	11.00		10.15	10.30	9.69

\*Iran and Canada are not included because equity oil prices are not applicable for these countries. Iran bases its price on the weighted average price of equity and buyback oil in Saudi Arabia.

\*\*Kuwait moved to a "single" price in January 1975.

\*\*\*Country has equity oil only.

NA=Not applicable.

**Table 6. Estimated Cost of Equity/buyback Oil Including Transportation to United States for Major Countries Exporting to the United States\***

	Venezuela	Nigeria	Saudi Arabia	Kuwait	U.A.E.	Iran	Canada	Indonesia
<b>1973</b>								
Jan.	2.46	2.86	3.10	3.15	3.13	3.04	3.36	3.47
Apr.	2.74	3.08	3.42	3.48	3.46	3.35	3.36	4.22
Aug.	3.24	3.53	4.07	4.04	4.13	3.96	3.98	4.69
Sep.	3.26	4.00	4.24	4.21	4.30	4.15	3.98	4.81
Oct.	3.77	6.95	5.89	5.81	6.54	5.79	4.38	5.63
Nov.	5.33	7.11	6.12	6.03	6.77	6.00	4.38	6.70
Dec.	5.41	6.82	5.62	5.53	6.39	5.61	4.38	6.35
<b>1974</b>								
Jan.	9.56	11.40	11.01	11.05	11.55	11.21	7.25	10.00
Feb.	9.57	11.41	11.05	11.09	11.58	11.25	11.45	10.03
Mar.	9.55	11.39	10.99	11.03	11.52	11.19	11.45	9.97
Apr.	9.55	11.84	10.99	11.03	11.52	11.19	11.28	10.75
May	9.55	11.84	10.98	11.02	11.52	11.19	11.28	10.75
Jun.	9.55	11.82	10.85	11.06	11.49	11.21	12.48	10.72
Jul.	9.70	11.88	11.02	11.08	11.55	11.28	12.48	11.52
Aug.	9.89	11.85	10.96	11.02	11.48	11.22	12.48	11.45
Sep.	9.87	11.81	10.88	10.93	11.46	11.13	12.48	11.35
Oct.	9.87	12.18	11.35	11.30	11.97	11.48	12.48	11.36
Nov.	10.28	12.21	11.98	11.37	12.81	11.99	12.48	11.43
Dec.	10.26	12.22	12.00	11.38	12.80	12.00	12.08	11.52
<b>1975</b>								
Jan.	10.65	11.92	11.84	11.83	12.56	12.14	12.08	11.54
Feb.	10.64	12.36	11.86	11.85	12.59	12.14	12.08	11.56

\*Transportation costs are based on AFRA rates.

between Saudi Arabia and Aramco,<sup>6</sup> and a new agreement was not reached there until June 6, 1974. During the interim, except for Canada, foreign governments did not move to increase the cost of their oil other than by increasing their shares of participation. To bring the cost of its crude in line with that of OPEC, the Canadian Government imposed a \$2.20 per barrel export tax effective January 1, 1974, and raised it to \$6.20 per barrel on February 1. These increases were very significant to the United States because Canada was our most important source of imported crude oil.

Increased participation did not occur all at once. The first country to increase its participation share in 1974 was Kuwait when it signed a 60-40 participation agreement in January. Even though this agreement was not final until it was ratified by the Kuwait General Assembly in May, it was effective January 1, 1974. In February 1974, Qatar also signed a 60-40 participation agreement. However, the immediate impact of both of these actions on the U.S. market was small since the two countries only accounted for a very small percentage of the total crude oil imported into the United States. In May 1974, the impact of the participation movement

was greatly increased when Nigeria, a large U.S. supplier, implemented a 55-45 participation agreement retroactive to April 1, 1974. All of these actions increased the average cost of crude to the producing companies. The Nigerian move increased the average cost of its equity/buyback oil by a substantial 45 cents per barrel. Indonesia, which does not have buyback oil as such, copied the Nigerian move by increasing its posted price.

On June 6, 1974, Saudi Arabia announced that it had signed a 60-40 participation agreement with Aramco retroactive to January 1, 1974. The effect of the agreement on the cost of Saudi crude was to raise the average equity/buyback cost to Aramco by about \$1.22 per barrel. Iran, which does not have equity/buyback oil, quickly adjusted the price of its crude to fall in line with that of Saudi Arabia. The costs shown in Table 4 are based on the 60-40 participation agreement. Thus, in effect, during this period the Persian Gulf members pushed up the average costs of crude oil without changing any "prices."

#### Period of increased tax-paid cost

The last half of 1974 was a period in which the host governments raised the average costs of equity/buyback oil by increasing tax-paid costs.

<sup>6</sup>Aramco, comprised of Exxon, Standard of California, Texaco, and Mobil, is the producing consortium in Saudi Arabia.

The Saudi announcement started a series of actions in the second half of the year which drove up the cost of equity oil. On July 1, 1974, shortly after the Saudi Arabian announcement, most members of OPEC increased tax-paid costs by increasing royalty rates 2 percentage points, from 12.5 percent to 14.5 percent. The impact of these increases on the average cost of equity/buyback oil was relatively small, amounting to about 5 cents per barrel for those countries which employed it. At that time Saudi Arabia disassociated itself from the royalty rate increase.

However, in September 1974 Saudi Arabia did raise their royalty rate to 14.5 percent, retroactive to July 1, 1974. Simultaneously, Saudi Arabia also announced an increase in their royalty rate to 16.67 percent to be effective October 1, 1974.

Other OPEC members quickly increased royalty rates to 16.67 percent; however, they went a step further and also increased tax rates, a more important factor in the tax-paid cost equation, from 55 to 65.75 percent. Not all members of OPEC participated in the October increase, but for those that did, the tax-paid costs jumped considerably (83 cents per barrel for Nigeria). The impact of these increases on the average cost of equity/buyback oil was significant, amounting to 37 cents per barrel for Nigerian crude.

Saudi Arabia waited until November 1974 to drop its newest bombshell on the world market. Effective November 1, 1974, the Saudi tax rate was raised to 85 percent and the royalty rate to 20 percent. Moreover, Saudi Arabia applied the October OPEC increase in the tax rate retroactively to October 1. In one dramatic move, Saudi Arabia increased tax-paid cost by \$2.69 per barrel. At the same time, however, they lowered buyback prices by 16 cents per barrel. The net effect of these actions was to increase the cost of Saudi equity/buyback oil by \$1.09 per barrel over its September level. Afterwards, other foreign countries adjusted their costs to fall in line with those of Saudi Arabia.

Tax-paid costs were increased by the host governments to reduce the markup by the producing companies on equity oil. Since the host governments were selling their own oil close to buyback prices, third party prices were thus brought in line with buyback prices. As tax-paid costs were brought close to buyback, the profit margin for equity oil was reduced.

#### Price increases: 1975

Thus far, 1975 has been a period of relative price stability on the foreign market. Saudi Arabia lowered its buyback price another 22 cents in January, reducing the

average cost of equity/buyback oil by 14 cents per barrel. Nigeria lowered the buyback price by 48 cents per barrel in January and another 23 cents per barrel in February. However, in February they increased tax-paid costs by \$1.24 per barrel, which resulted in an increase of 43 cents per barrel in the cost of equity/buyback oil during that month.

#### DOMESTIC PRICES

Movements in the world crude oil price structure affect domestic crude prices. Domestic refiner acquisition cost represents the average cost per barrel to refiners for domestic crude. This cost equals the average price at the wellhead plus transportation costs and fees. To understand movements in domestic refiner acquisition cost and how these movements relate to changes in the world structure, it is useful to look at the domestic wellhead price structure and how it developed into what it is today.

During the first half of 1973, the United States was experiencing a general wave of inflation. As price levels rose in general, so did domestic crude oil prices, which were matching increases in foreign prices during this period. The average posted price of domestic crude oil rose from \$3.40 per barrel in January 1973 to \$3.90 in August 1973 (Table 7).

As a result of general inflation, on June 13, 1973, the President froze prices of almost all products, including crude oil. During the freeze period, plans were made for a comprehensive price regulatory program called Phase IV. Basically, the program allowed for price increases only to the extent that they permitted a dollar-for-dollar passthrough of allowable cost increases.

On August 19, 1973, Phase IV pricing regulations for the petroleum industry were implemented. A two-tier system for the regulation of domestic crude oil prices was established. Under the system, prices for a portion of production were controlled at an amount equal to their May 15, 1973, levels plus 35 cents, while the balance was allowed to be sold at prices free from controls. To qualify as uncontrolled oil, production had to be "new"<sup>7</sup> or "released"<sup>7</sup> oil. In November 1973, stripper oil<sup>7</sup> was also exempt from controls. On December 19, 1973, controlled prices were permitted to rise by \$1.00 per barrel, bringing the average price of controlled oil to its present level of \$5.25.

The average cost of domestic crude oil depends on the prices of uncontrolled and controlled oil and the volume of each produced. Table 8 shows the percentages of

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<sup>7</sup>See definitions.

**Table 7. Domestic Crude Oil Prices**

	Controlled	Uncontrolled	Wellhead Average
<b>1973</b>			
Jan.	3.40	NA	NA
May	3.62	NA	NA
Aug.	3.90	NA	NA
Sep.	4.25	5.12	*
Oct.	4.25	5.62	4.47
Nov.	4.25	8.50	5.43
Dec.	5.25	9.51	6.49
<b>1974</b>			
Jan.	5.25	9.82	7.08
Feb.	5.25	9.87	7.01
Mar.	5.25	9.88	7.10
Apr.	5.25	9.88	7.10
May	5.25	9.95	7.01
Jun.	5.25	9.95	6.99
Jul.	5.25	9.95	6.94
Aug.	5.25	9.98	6.86
Sep.	5.25	10.10	6.85
Oct.	5.25	10.74	7.12
Nov.	5.25	10.83	7.09
Dec.	5.25	11.08	7.23
<b>1975</b>			
Jan.	5.25	11.28	*
Feb.	5.25	11.39	*
Mar.	5.25	**11.43	*

\*Wellhead average could not be calculated for these months because estimates of the percentage of new oil produced are not available.

\*\*Preliminary figure.

NA=Not applicable.

**Table 8. Percentage Distribution of Domestic Crude Oil**

	Old	Uncontrolled	New	Released	Stripper
<b>1973</b>					
Oct.	76	24	7	4	13
Nov.	71	29	10	6	13
Dec.	71	29	10	6	13
<b>1974</b>					
Jan.	60	40	17	10	13
Feb.	62	38	15	10	13
Mar.	60	40	16	11	13
Apr.	60	40	16	11	13
May	62	38	15	10	13
Jun.	63	37	15	9	13
Jul.	64	36	15	9	12
Aug.	66	34	14	8	12
Sep.	67	33	13	8	12
Oct.	66	34	14	8	12
Nov.	67	33	13	8	12
Dec.	66	34	14	8	12

controlled and uncontrolled production since the beginning of the two-tier system. The percentage of uncontrolled oil increased rapidly after the two-tier system was implemented; by January 1974 it reached about 40

percent, where it remained until April. Since the amount of new oil exempt from controls is based on production from a lease in the corresponding month of 1972, production of new and released oil varies from month to month in relation to production during each month of 1972. In the beginning of 1972, production was relatively low because of limits placed on production by some of the States. As a result, uncontrolled production for the first few months of 1974 was relatively high. By August 1974, however, exempt oil declined to about 34 percent where it remained for the rest of the year.

Controlled and uncontrolled oil prices at the wellhead and the average of the two are shown in Table 7. In January 1973, domestic wellhead prices averaged about \$3.40 per barrel. By May, domestic prices, in keeping with foreign price increases, had risen to \$3.62 per barrel.

In September 1973, after the two-tier system was enacted, the uncontrolled oil price rose to \$5.12 per barrel. In October, when foreign oil prices were increased by about 66 percent, uncontrolled oil prices reached \$5.62 per barrel. In November, when the Arab embargo was imposed, the uncontrolled oil price jumped to \$8.50 per barrel. By January 1974, the uncontrolled oil price was up to \$9.82 per barrel. Uncontrolled oil prices remained a little less than \$10 per barrel through August 1974, during the waiting period on the world market.

When world cost of crude shot up after the signing of the Saudi Arabian participation agreement, so did uncontrolled domestic oil prices. Uncontrolled oil prices were increased first in some fields and later in others. As increased postings moved from field to field, the average price of uncontrolled oil moved upward. In September it rose 12 cents per barrel. By October 1974 nearly all domestic postings had been increased from their August levels and the average uncontrolled oil price stood at \$10.74 up 64 cents from the September level. By January 1975, immediately prior to the imposition of the \$1-dollar-per-barrel import fee, the uncontrolled oil price was \$11.28 per barrel and still rising. By March it had reached \$11.43, but was still considerably below the imported refiner acquisition cost. Early reports for April indicate that new oil prices are still rising, further closing the gap between domestic and foreign crude oil prices.

## OUTLOOK

In the near term it can be expected that the cost of imported crude will rise as a result of the \$1 fee implemented on February 1 and the additional \$1 fee to be levied on June 1. In March, the full impact of the

February fee was not reflected in imported refiner acquisition costs due to the timing of foreign purchases. The full impact should be realized in April's figure. Naturally, we can expect the imported refiner acquisition cost to increase further following the implementation of the June fee.

But how much imported refiner acquisition costs will rise is another question. In February, it was estimated that refiner acquisition costs would have declined slightly, reflecting lower third party purchases on the world market, had it not been for the fee.

However, the outlook for further decreases in imported refiner acquisition costs, excluding the import fees, is dim. Third party purchase prices are already close to the price floor established by equity/buyback costs. Furthermore, the Shah of Iran has stated that it may be necessary for OPEC to raise the price floor by \$2 per barrel. If this occurs, the total increase in imported refiner acquisition costs, counting the import fees, could be as much as \$4 a barrel.

The average cost to consumers will not rise the full amount of any increase in imported refiner acquisition

costs because of price controls on domestic crude oil. However, the impact should be significant because imports account for about one-third of the total crude purchased by refiners, and uncontrolled oil, whose price should follow import costs upward, accounts for approximately another one-fourth of the refiner's purchases. If imported refiner acquisition costs increase by \$4 a barrel, the impact on refined product prices would be roughly 5 to 6 cents a gallon, assuming that increased costs are distributed proportionately to all products.

A final consideration is the impact of the import fees on the volume of imports. A decline in imports would result in less higher-priced foreign oil per average barrel that refiners purchase. In March 1975, composite refiner acquisition costs declined by 79 cents per barrel though imported cost increased, and domestic refiner acquisition cost remained unchanged. The reason was that the volume of imported crude oil taken title to in that month amounted to a much lower percentage of total purchases than it did in February. If imports show a decline as a result of the fee, this decline would offset, in part, the increased cost in the average barrel due to the fee.

# Part 1

## Overview

Domestic production of energy for the period January through April 1975 continued to be below the level for the same period last year by about 4 percent. Production of crude oil was down more than 6 percent while natural gas dropped 8 percent. In contrast, coal output was up almost 2 percent.

Imports of fossil fuels in April declined, for the third consecutive month, to a level 25 percent below the average daily level in January. For the first 4 months of the year, total imports were 8 percent greater than for the corresponding period in 1974, when imports were reduced by the Arab oil embargo. Compared with the same months in 1973, however, imports showed a decline of almost 4 percent. All of this year's growth over 1974 can be attributed to a 47-percent increase in imports of crude oil. Refined petroleum product and natural gas imports, on the other hand, have declined by 24 percent and 5 percent, respectively, from their levels of a year ago. In fact, imports of refined products in April were at their lowest level since September 1970.

Preliminary FEA data indicated that Arab countries provided 21 percent of crude oil imports in April compared with 27 percent during the fourth quarter of 1974. Other sources of April crude oil imports were: Nigeria, 18 percent; Canada and Venezuela, each 14 percent; Iran and Indonesia, each 9 percent; and Caribbean island transshipments, 8 percent. Venezuela and the Caribbean islands were the source of 90 percent of the refined products imported during the month.

Consumption of energy in the United States in March declined seasonally to a level 7 percent below the average daily rate for February. Consumption during the first quarter of the year remained about the same as during the first quarter of 1974 when the Arab embargo was in effect, but was almost 4 percent below the same period in 1973. Refined petroleum products have supplied 45 percent of the Nation's energy needs so far this year. Natural gas and coal have been the next largest contributors, supplying 31 percent and 18 percent, respectively. The balance for the first quarter has been met by hydroelectric and nuclear power.

The Continental United States accumulated 7 percent more distillate oil heating degree-days during the 1974-75 heating season (July through April for this purpose) than it did during the 1973-74 season, indicating comparatively colder temperatures. Surprisingly, this increase in the number of degree-days was not reflected in greater demand for distillate fuel oil, which was essentially the same for both years. Total oil heating degree-days for the season, however, were 1.3 percent below (warmer) the normal (1941-70 average).

Stocks of crude oil showed a normal seasonal build-up of 5 percent during April, while stocks of motor gasoline declined seasonally by 10 percent. Stocks of other oils, however, did not follow seasonal patterns. Inventories of distillate and residual fuel oils, which normally begin to rise in April, fell by 14 percent and 16 percent, respectively. Jet fuel stocks also declined, but only by 4 percent. Petroleum inventories compared favorably with the levels of a year ago, however, and represented the following days of supply: crude oil, 24 days; motor gasoline, 33 days; jet fuel, 28 days; distillate fuel oil, 46 days; and residual fuel oil, 23 days. Coal inventories at the end of March represented a 64-day supply compared with 68 days in March 1974.

Electric utilities produced 2 percent more power in April 1975 than in April 1974. Production for the first 4 months of the year ran about 3 percent above the output level for the same period last year. This increase follows a year when the gain was less than 1 percent, considerably below the average annual growth rate of 7.2 percent experienced over the previous decade.

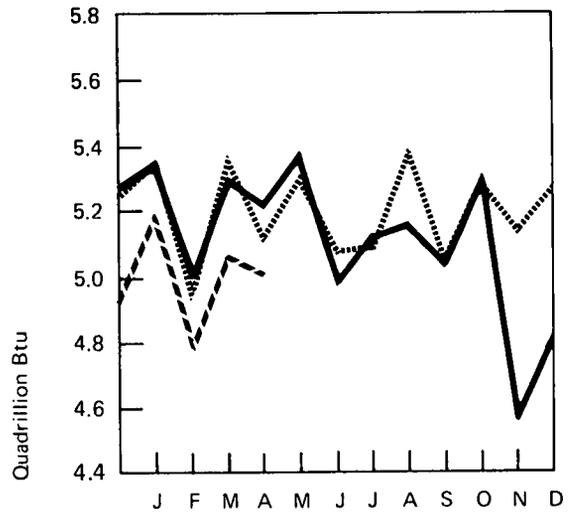
Gasoline prices continued to edge upward during April, reflecting in part the \$1-per-barrel import fee imposed on crude oil on February 1, 1975. Within the 2 months since then, the average retail gasoline price has risen 1.0 cent per gallon, while the price at which retailers purchase gasoline has climbed 1.4 cents. Consequently, the average dealer margin has declined 0.4 cent per gallon. Preliminary market shares data indicated that branded independent marketers accounted for 75.9 percent of all gasoline gallonage sold through service stations during February. Sales by refiner-marketers amounted to 14.8 percent of the total, and the remaining 9.3 percent was sold by nonbranded independent marketers. (Gasoline sales at service stations account for about two-thirds of all gasoline sold to end-users in the United States.)

The average wellhead price of "new" domestic crude oil posted the tenth consecutive monthly increase during March. The new oil price was \$11.43 per barrel, up \$1.55 from the March 1974 level. The average cost of domestic crude purchased by refiners during March was unchanged from the previous month, and, although the refiner acquisition cost of imported crude rose 12 cents per barrel, the composite cost of crude purchased by refiners declined 79 cents to a level comparable with December 1974.

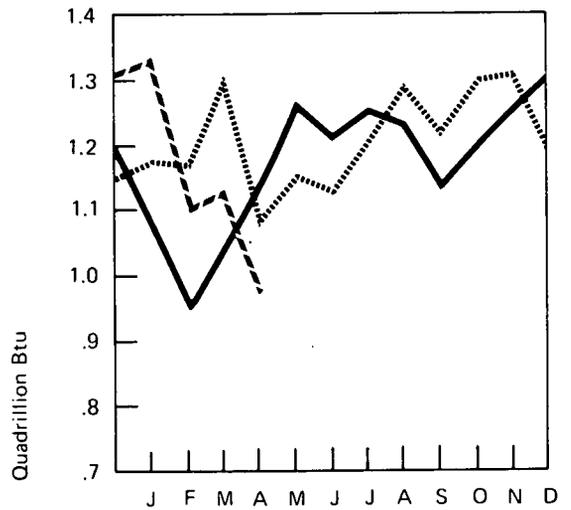
Most indicators of resource development showed a downturn in activity during April. For the third month in a row, the number of seismic crews exploring for oil and gas declined. The average number of rotary rigs

drilling for hydrocarbons was also down from March, and, as a result, there were 332 fewer wells drilled during April. In comparison, last year there were 15 more wells drilled during April than in March. This April's total of 2,758 wells, however, was still well ahead of the April 1974 total of 2,592.

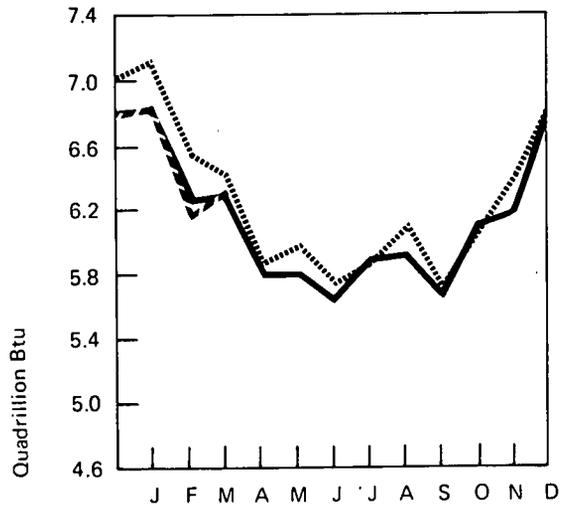
Domestic Production of Energy\*



Imports of Fossil Fuels



Domestic Consumption of Energy\*\*



\*See Explanatory Note 1.

\*\*See Explanatory Note 2.

..... 1973  
 ——— 1974  
 - - - 1975

## CRUDE OIL

The United States crude oil supply position continued its downward trend in April. Production was 563,000 barrels per day less than output in April 1974, a decrease of 6.3 percent.

Crude oil imports declined for the third consecutive month. The 3,293,000-barrel-per-day import level was about 600,000 barrels below the post-embargo (May 1974 to March 1975) average.

Crude input to refineries during April averaged 11,789,000 barrels per day, or 78.5 percent of the country's total refinery capacity, the lowest ratio in recent years. In February 1973, during the depths of the embargo, crude input to refineries equaled 79.1 percent of operable capacity, whereas in April 1973 crude input averaged 89.6 percent.

Crude oil stocks continued to rise, reaching their highest levels since July 1957. The 286,227,000 barrels in inventory equaled 24 days of crude oil input to refineries.

## TOTAL REFINED PETROLEUM PRODUCTS

Domestic demand for total refined products for April 1975 averaged 15,664,000 barrels per day, 1.6 percent less than in April 1974.

Imports of refined petroleum products fell to 1,770,000 barrels per day, the lowest level since September 1970. Product imports during the month were 34 percent lower than in April 1974.

## OIL HEATING DEGREE-DAYS

In April, distillate oil heating degree-days for all PAD Districts were considerably above both the normal for the month and the previous April, indicating colder than normal temperatures.

So far this heating season, the continental United States has accumulated 7.3 percent more (colder) heating degree-days than for the same period in the 1973-74 heating season, but 1.3 percent less (warmer) than normal.

## NATURAL GAS LIQUIDS

Production in February was down 4.7 percent from the previous February; prelimi-

nary figures for March also reveal a decline of about 5.0 percent.

Stocks at the end of February stood at 94,683,000 barrels, 11.7 percent higher than a year ago.

Imports were down 15.7 percent in January 1975 compared with the preceding January.

## NATURAL GAS

Marketed production in April was projected to be 4.0 percent lower than in April 1974. Projected production for the first 4 months of the year was down 8.4 percent compared with the same period in 1974.

Projected imports for the month were 1.3 percent less than for last April, and for the first 4 months were 11.5 percent less than the corresponding period in 1974.

Producer sales to interstate pipelines in February were 8.7 percent below February 1974.

## COAL

Production of coal in April 1975 continued at the same rate as for the previous 3 months, between 1 and 2 percent over 1974.

Domestic coal consumption in March 1975 was 4 percent greater than in March 1974. Most of the growth occurred in the electric utility sector, and for the first time this year, the other consuming sectors showed a slight increase in consumption.

Exports in March 1975 were 5.7 million tons, the highest monthly level since October and November 1974, when foreign countries increased their stockpiles in anticipation of the coal strike.

# Crude Oil

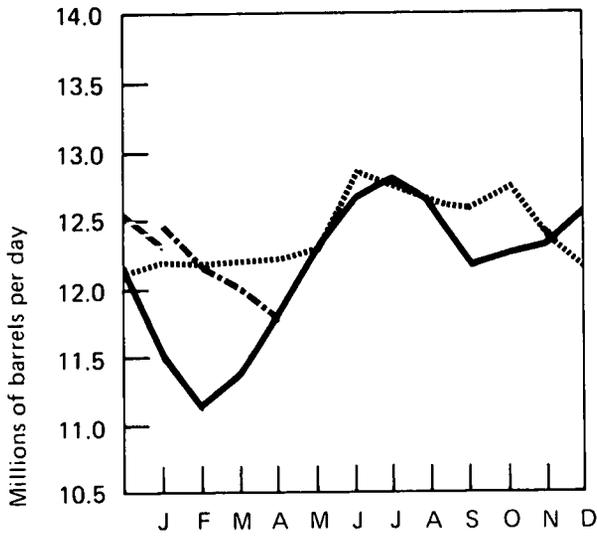
	Crude Input to Refineries		Domestic Production		Imports		Stocks*	
	In thousands of barrels per day							
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
1972								
January	11,388		9,114		2,046		236,776	
February	11,356		9,336		2,081		238,882	
March	11,345		9,462		2,067		244,860	
April	11,184		9,513		2,004		253,492	
May	11,478		9,614		2,160		265,305	
June	11,841		9,522		2,085		257,601	
July	11,885		9,496		2,182		251,913	
August	11,915		9,483		2,112		244,333	
September	12,112		9,508		2,364		237,085	
October	11,871		9,482		2,516		239,949	
November	11,851		9,426		2,299		237,519	
December	12,113		9,335		2,667		232,803	
1973								
January	12,190		9,179		2,732		224,056	
February	12,187		9,395		2,873		221,893	
March	12,201		9,272		3,162		230,696	
April	12,208		9,292		3,049		235,383	
May	12,281		9,262		3,215		244,777	
June	12,862		9,214		3,220		235,846	
July	12,750		9,217		3,501		230,750	
August	12,635		9,169		3,593		235,660	
September	12,560		9,065		3,471		228,280	
October	12,758		9,224		3,739		233,520	
November	12,374		9,161		3,452		237,001	
December	12,150		9,063		2,891		229,504	
1974								
January	11,491		8,907		2,382		220,261	
February	11,102		9,156		2,248		228,004	
March	11,355		8,950		2,462		231,705	
April	11,823		8,952		3,267		243,687	
May	12,333	12,777	8,903		3,908	3,748	256,726	252,270
June	12,697	12,709	8,777		3,925	3,957	255,762	253,008
July	12,811	12,905	8,754	8,698	4,091	4,167	255,936	252,399
August	12,644	12,731	8,682	8,717	3,924	3,852	251,905	247,040
September	12,124	12,253	8,621	8,622	3,797	3,758	253,623	249,476
October	12,286	12,430	8,568	8,651	3,810	3,936	256,430	255,003
November	12,332	12,402	8,596	8,458	3,958	3,997	258,123	256,271
December	12,519	12,671	8,352	8,471	3,869	3,979	252,158	248,808
1975								
January	12,297	12,436	8,439	8,644	4,029	3,964	258,163	253,836
February		12,144		8,489		4,061		264,833
March		**11,961		**8,333		**3,853		**271,410
April		**11,786		**8,389		**3,293		**286,227

\*See definitions.

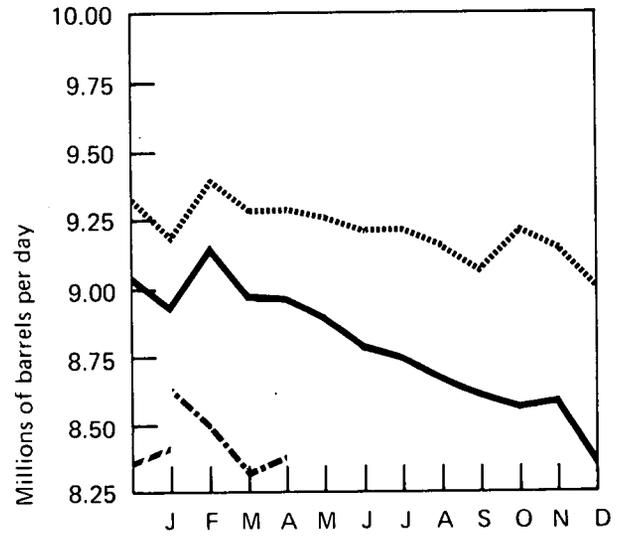
\*\*Preliminary data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

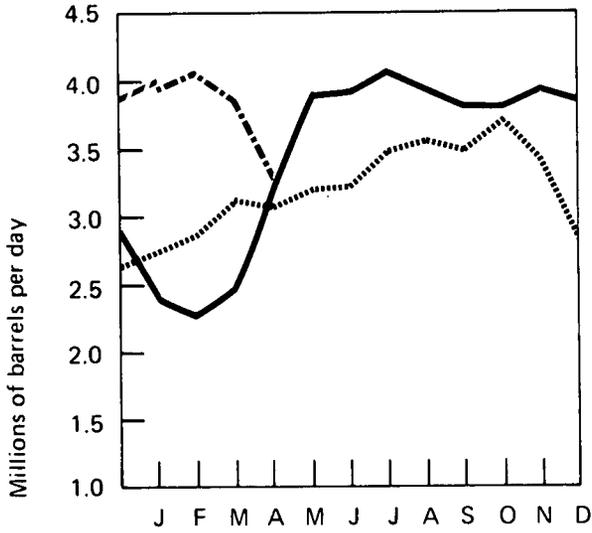
**Crude Input to Refineries\***



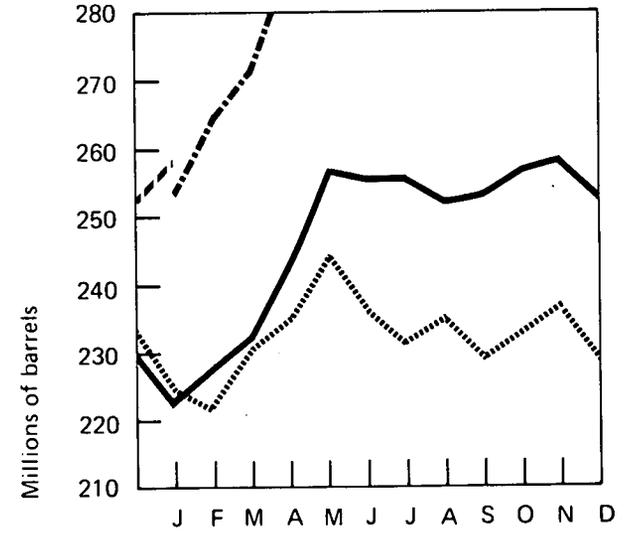
**Domestic Production\***



**Imports\***



**Stocks\***



..... 1973  
 ——— 1974 BOM  
 - - - 1975 BOM  
 - - - 1975 FEA, API

\*See Explanatory Note 3.

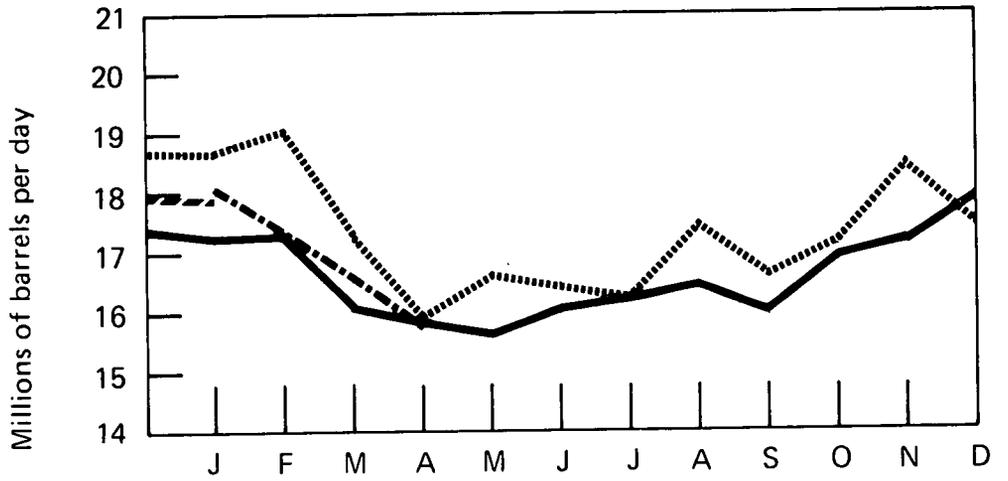
# Total Refined Petroleum Products

		Domestic Demand		Imports*	
		In thousands of barrels per day			
		BOM	FEA	BOM	FEA
1972	January	16,735		2,721	
	February	17,861		2,764	
	March	16,870		2,730	
	April	15,529		2,298	
	May	14,801		2,208	
	June	15,615		2,382	
	July	14,821		2,215	
	August	15,936		2,344	
	September	15,489		2,342	
	October	16,455		2,607	
	November	17,610		2,653	
	December	18,738		3,039	
1973	January	18,713		3,125	
	February	19,094		3,635	
	March	17,216		3,448	
	April	15,921		2,545	
	May	16,626		2,626	
	June	16,481		2,670	
	July	16,372		2,678	
	August	17,499		2,999	
	September	16,656		2,941	
	October	17,202		2,894	
	November	18,492		3,470	
	December	17,538		3,164	
1974	January	17,270		2,973	
	February	17,371		2,973	
	March	16,045		2,753	
	April	15,919		2,703	
	May	15,720	15,740	2,580	2,454
	June	16,176	16,191	2,493	2,218
	July	16,301	15,853	2,397	2,140
	August	16,546	15,803	2,434	2,281
	September	15,994	16,318	2,225	2,180
	October	17,025	17,121	2,340	2,361
	November	17,214	17,129	2,704	2,581
	December	17,997	17,588	2,781	2,638
1975	January	17,983	R18,112	2,811	R2,484
	February		R17,370		2,138
	March		R**16,567		**1,919
	April		**15,664		**1,770

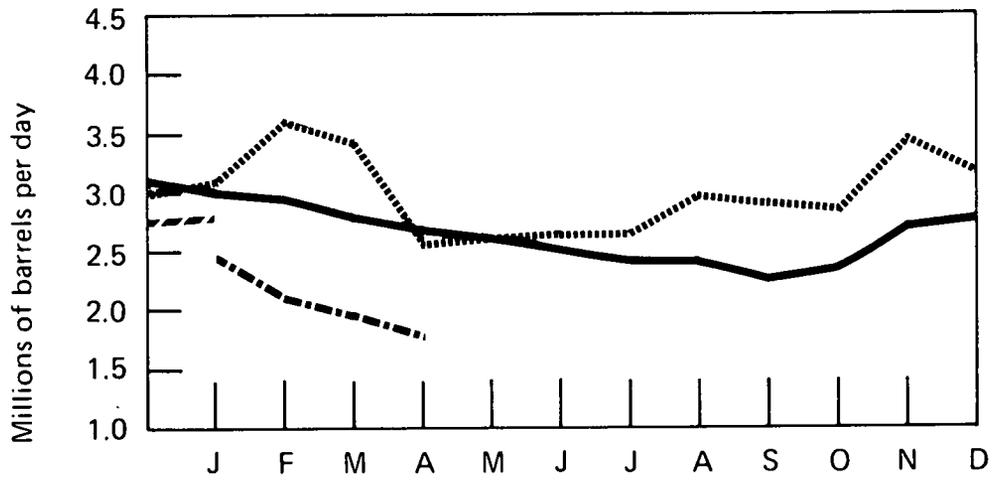
\*See definitions. \*\*Preliminary data. R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

### Domestic Demand\*



### Imports\*



\*See Explanatory Note 3.

- ..... 1973
- 1974 BOM
- 1975 BOM
- · - · 1975 FEA, API

# Motor Gasoline

	Domestic Demand		Production*		Imports		Stocks*	
	In thousands of barrels per day							
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
<b>1972</b> January	5,549		6,151		51		239,633	
February	5,710		5,989		66		249,927	
March	6,412		5,913		67		236,831	
April	6,283		5,833		52		225,153	
May	6,445		6,023		74		214,736	
June	6,822		6,244		75		200,143	
July	6,673		6,612		69		200,710	
August	6,938		6,588		81		192,706	
September	6,453		6,605		70		199,690	
October	6,350		6,532		71		207,776	
November	6,479		6,436		69		208,930	
December	6,378		6,424		69		212,770	
<b>1973</b> January	6,118		6,341		59		221,823	
February	6,437		6,855		95		216,367	
March	6,513		6,150		71		207,581	
April	6,541		6,377		63		204,708	
May	6,907		6,714		101		202,081	
June	6,964		6,993		174		208,374	
July	7,023		6,986		133		211,488	
August	7,257		6,880		164		205,122	
September	6,581		6,619		127		210,278	
October	6,677		6,621		194		214,525	
November	6,823		6,375		216		207,343	
December	6,237		6,099		202		209,395	
<b>1974</b> January	5,804		5,900		163		217,463	
February	6,100		5,969		184		219,058	
March	6,162		5,982		225		220,307	
April	6,457		6,311		260		223,752	
May	6,745	6,406	6,328	6,301	250	228	218,670	229,878
June	6,919	6,895	6,663	6,642	211	145	217,381	226,652
July	6,959	6,941	6,792	6,835	212	122	218,838	227,195
August	7,061	6,849	6,815	6,776	253	192	218,951	231,015
September	6,388	6,652	6,453	6,485	202	140	227,031	230,181
October	6,712	6,542	6,336	6,340	171	175	220,748	229,275
November	6,547	6,659	6,292	6,257	174	264	218,385	225,226
December	6,558	6,551	6,419	6,451	141	170	R224,719	227,363
<b>1975</b> January	6,206	6,228	6,509	6,574	262	203	242,285	244,425
February		6,205		6,279		169		251,189
March		**6,408		**6,067		**147		**245,181
April		**6,649		**6,068		**100		**221,799

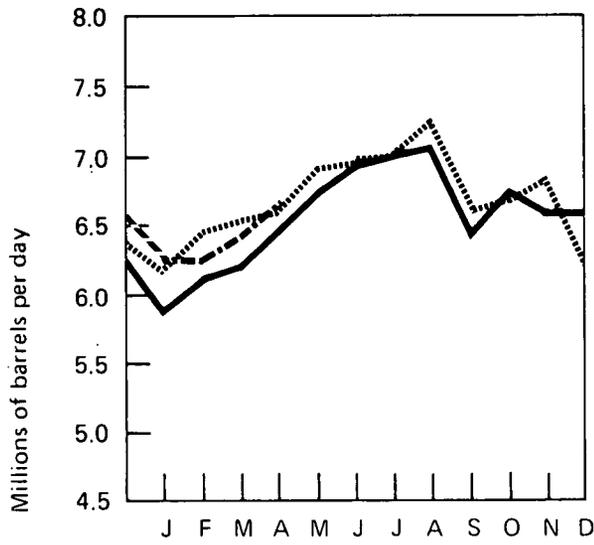
\*See definitions.

\*\*Preliminary data.

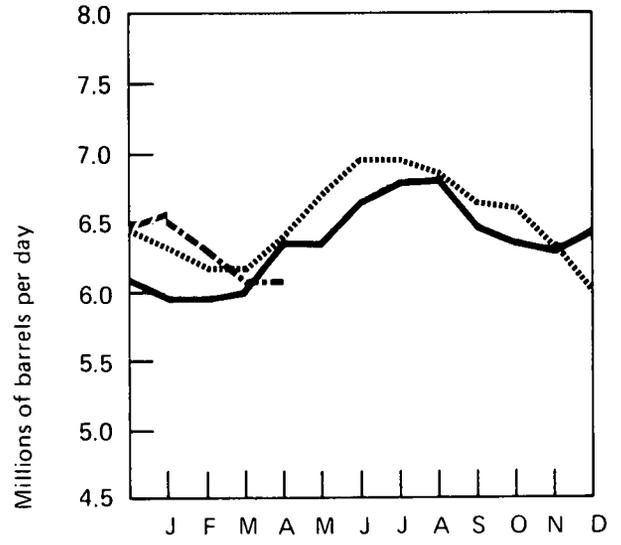
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

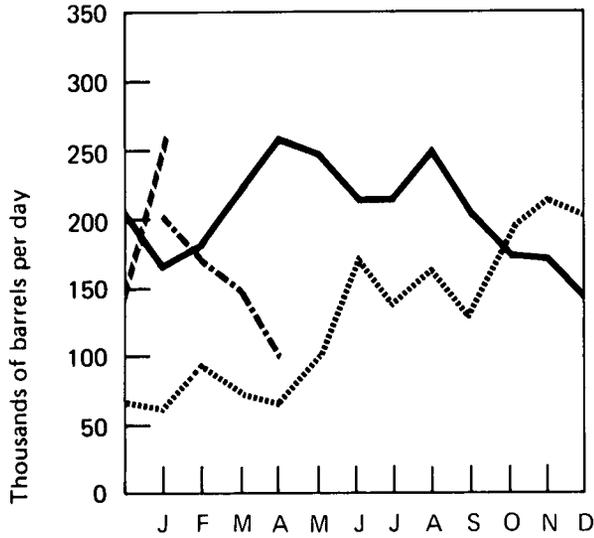
**Domestic Demand\***



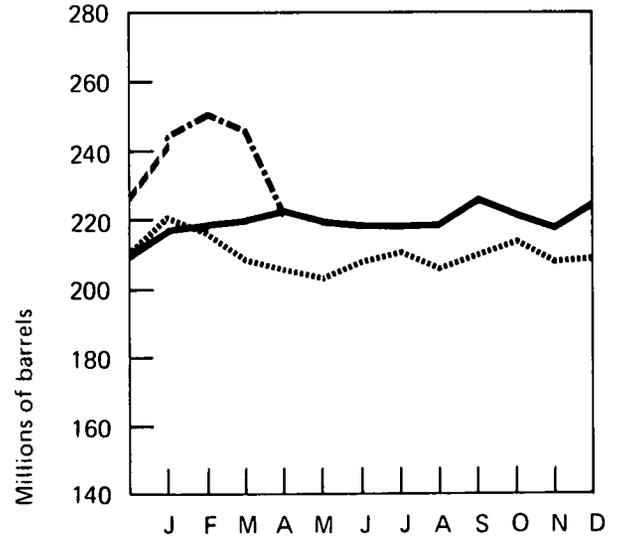
**Production\***



**Imports\***



**Stocks\***



..... 1973  
 ——— 1974 BOM  
 - - - 1975 BOM  
 - · - 1975 FEA, API

\*See Explanatory Note 3.

# Jet Fuel

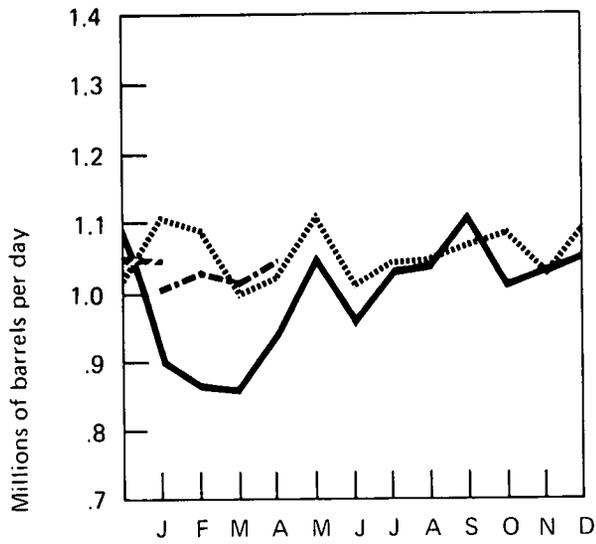
	Domestic Demand		Production		Imports		Stocks	
	In thousands of barrels per day							
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
<b>1972</b> January	1,021		784		179		25,857	
February	1,141		900		220		25,230	
March	1,008		906		167		27,147	
April	986		877		124		27,568	
May	999		887		159		28,885	
June	1,163		859		292		28,356	
July	1,000		873		165		29,429	
August	946		837		181		31,649	
September	1,035		810		190		30,597	
October	1,171		822		286		28,633	
November	1,050		800		184		26,650	
December	1,030		811		189		25,493	
<b>1973</b> January	1,110		864		231		24,814	
February	1,090		898		221		25,437	
March	994		917		152		27,585	
April	1,015		887		145		27,881	
May	1,112		840		211		25,825	
June	1,007		836		164		25,447	
July	1,046		825		232		25,661	
August	1,049		844		180		24,851	
September	1,070		847		235		25,149	
October	1,104		875		246		25,577	
November	1,025		852		275		28,539	
December	1,087		830		259		28,544	
<b>1974</b> January	895		800		136		29,732	
February	860		783		75		29,617	
March	956		832		139		29,996	
April	941		868		132		31,725	
May	1,053	915	868	873	205	97	32,324	33,574
June	952	1,016	810	886	141	115	32,200	33,128
July	1,028	1,032	802	813	214	188	31,671	32,231
August	1,031	1,076	805	849	206	202	30,989	31,594
September	1,109	1,100	867	883	217	183	30,186	30,587
October	1,011	1,092	868	905	161	216	30,564	31,488
November	1,032	1,055	863	861	140	222	29,616	31,303
December	1,043	1,138	861	908	178	219	R29,776	30,957
<b>1975</b> January	1,041	1,001	831	847	229	164	30,321	31,221
February		1,031		849		166		30,641
March		*1,018		*892		*135		*30,906
April		*1,047		*859		*166		*29,766

\*Preliminary data.

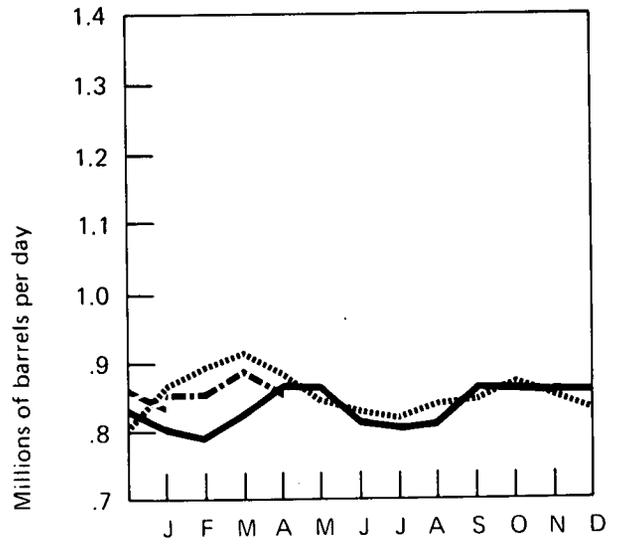
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

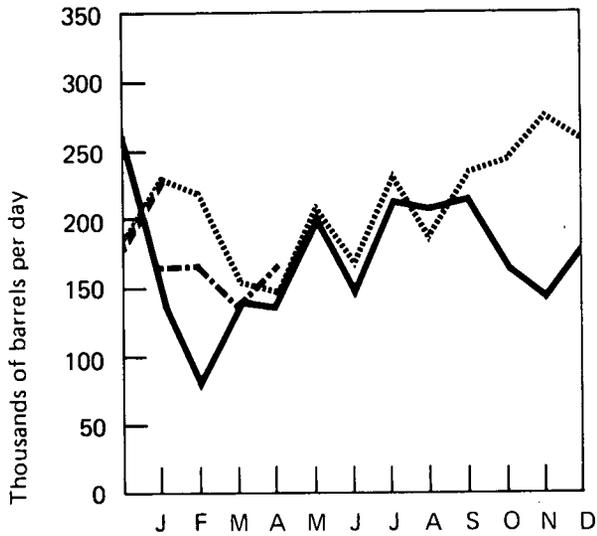
**Domestic Demand\***



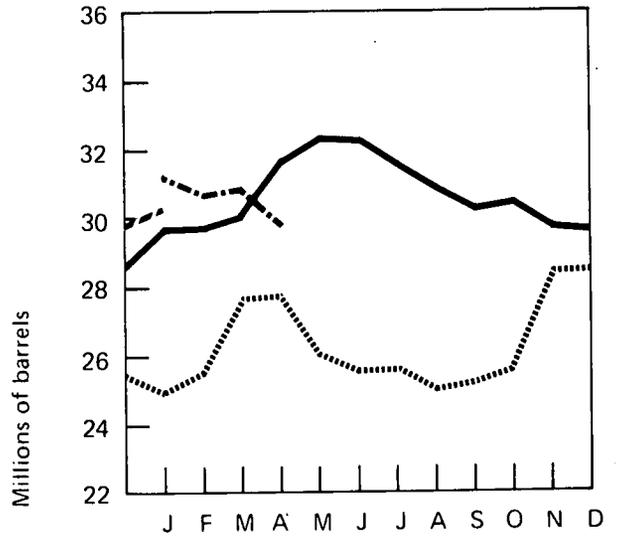
**Production\***



**Imports\***



**Stocks\***



..... 1973  
 ——— 1974 BOM  
 - - - 1975 BOM  
 - . - 1975 FEA, API

\*See Explanatory Note 3.

# Distillate Fuel Oil

	Domestic Demand		Production*		Imports		Stocks*	
	In thousands of barrels per day							
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
<b>1972</b> January	3,723		2,538		197		160,027	
February	4,164		2,653		204		122,154	
March	3,482		2,564		257		101,728	
April	2,778		2,476		189		98,288	
May	2,250		2,585		132		112,892	
June	2,194		2,623		96		128,739	
July	1,765		2,529		97		155,557	
August	2,064		2,582		92		174,674	
September	2,205		2,624		99		190,250	
October	2,759		2,722		203		195,530	
November	3,383		2,719		227		182,581	
December	4,232		2,938		382		154,284	
<b>1973</b> January	4,138		3,028		364		130,958	
February	4,302		2,937		731		113,276	
March	3,337		2,667		602		111,270	
April	2,635		2,510		240		114,698	
May	2,673		2,544		268		119,104	
June	2,419		2,825		222		137,844	
July	2,328		2,752		318		160,869	
August	2,555		2,801		288		177,271	
September	2,675		2,813		313		190,171	
October	2,930		2,911		451		202,965	
November	3,508		2,922		492		200,182	
December	3,690		3,136		439		196,421	
<b>1974</b> January	3,820		2,880		449		181,179	
February	3,835		2,399		293		149,125	
March	3,145		2,226		267		128,822	
April	2,848		2,522		216		125,553	
May	2,453	2,616	2,704	2,741	271	288	141,806	151,345
June	2,386	2,249	2,783	2,818	228	175	160,645	173,639
July	2,302	2,251	2,792	2,881	214	168	182,458	198,374
August	2,295	2,271	2,704	2,779	111	112	198,673	217,632
September	2,377	2,473	2,551	2,655	144	143	208,269	227,069
October	2,863	2,816	2,770	2,787	213	264	209,908	234,257
November	3,145	3,058	2,801	2,883	443	403	212,875	241,125
December	3,855	3,923	2,924	3,028	517	466	R223,717	227,877
<b>1975</b> January	3,953	4,055	2,852	2,954	324	350	199,715	204,576
February		4,004		2,707		295		176,530
March		**3,460		**2,614		**217		**156,980
April		**2,925		**2,446		**182		**135,431

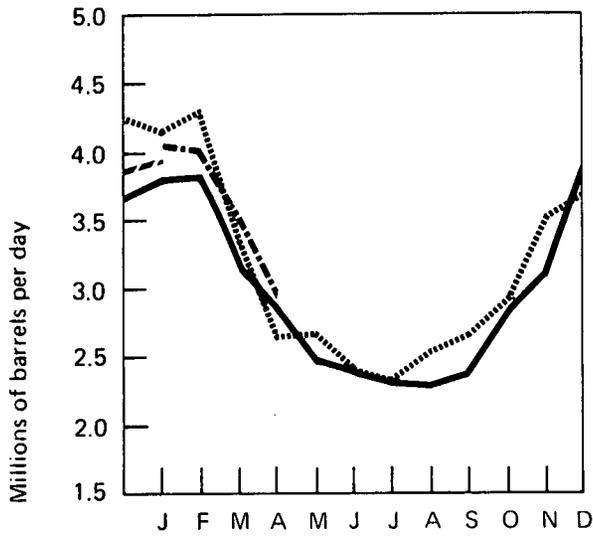
\*See definitions.

\*\*Preliminary data.

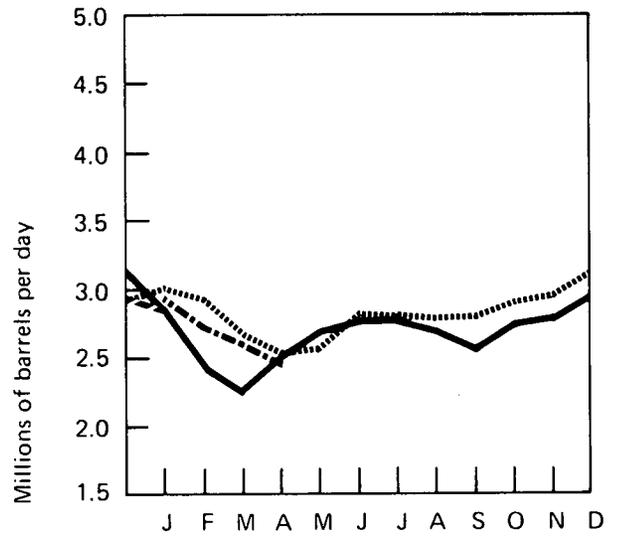
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

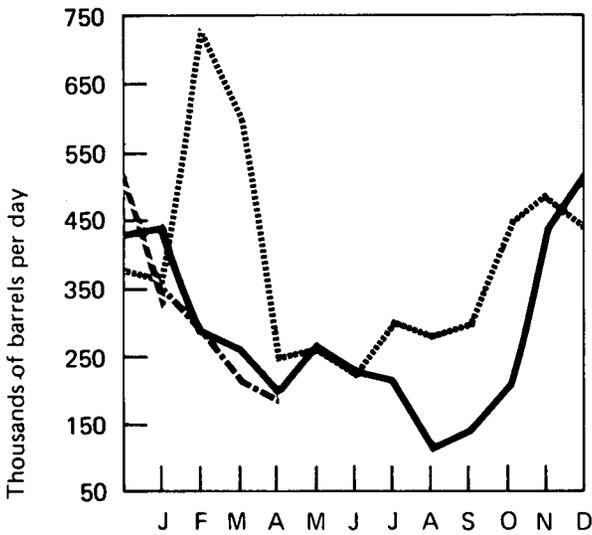
**Domestic Demand\***



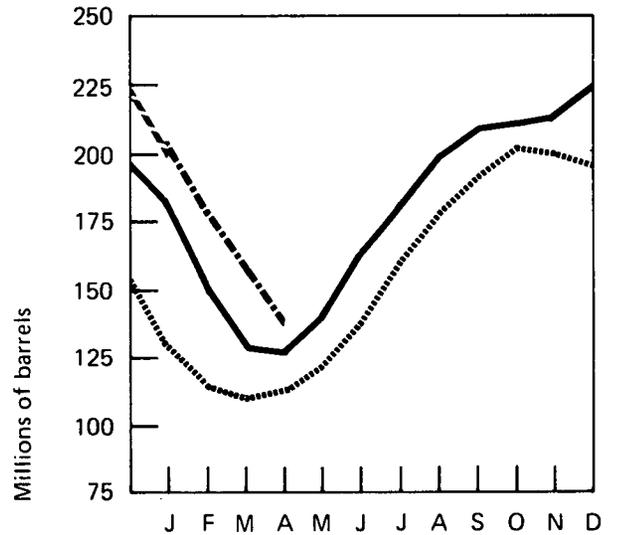
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

..... 1973  
 — 1974 BOM  
 - - - 1975 BOM  
 - · - 1975 FEA, API

## OIL HEATING DEGREE-DAYS\*

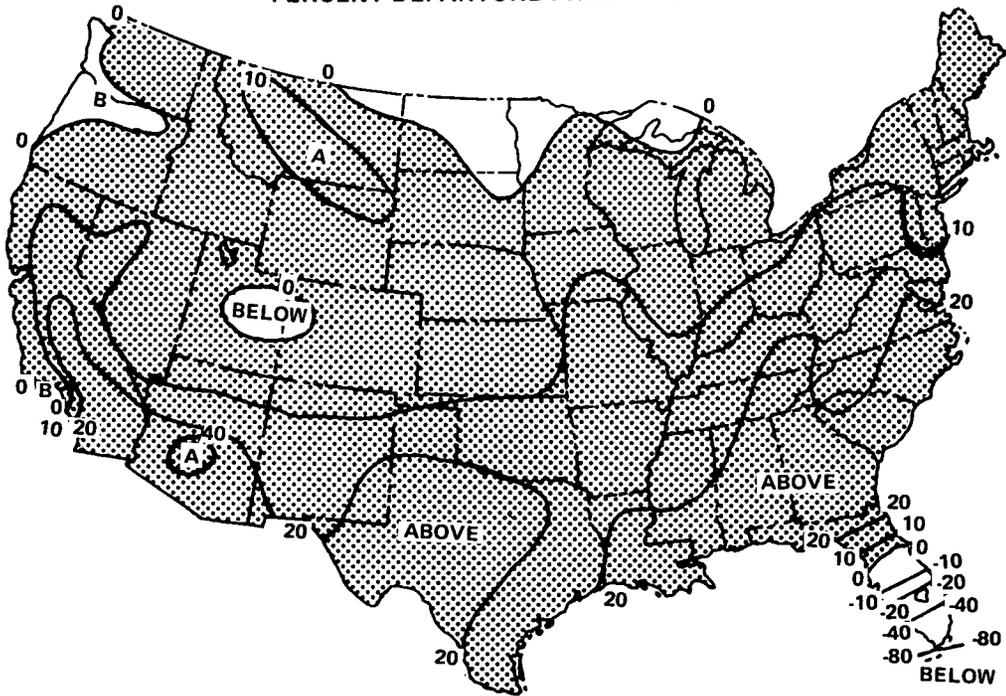
Petroleum Administration for Defense (PAD) Districts	April (March 31 - April 27)			Cumulative Since July 1, 1974		
	1975	1974**	Normal (1941-1970)**	1974-75	1973-74**	Normal (1941-1970)**
PAD District I	465.5	336.7 (+38.2)	360.5 (+29.1)	4,414.0	4,131.4 (+6.8)	4,535.0 (-2.7)
New England	599.7	476.5 (+25.9)	514.0 (+16.7)	5,705.6	5,428.6 (+5.1)	5,793.7 (-1.5)
Conn., Maine, Mass., N.H., R.I., Vt.						
Middle Atlantic	555.0	382.2 (+45.2)	416.0 (+33.4)	5,031.8	4,761.9 (+5.7)	5,144.5 (-2.2)
Del., Md., N.J., N.Y., Pa.						
Lower Atlantic	159.8	116.4 (+37.3)	106.9 (+49.5)	1,971.0	1,657.0 (+18.9)	2,138.7 (-7.8)
Fla., Ga., N.C., S.C., Va., W. Va.						
PAD District II	614.3	435.9 (+40.9)	463.2 (+32.6)	6,238.0	5,763.5 (+8.2)	6,108.8 (+2.1)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N.Dak., Ohio, Okla., S.Dak., Tenn., Wis.						
PAD District III	130.9	86.7 (+50.9)	83.5 (+56.7)	2,136.5	1,821.9 (+17.3)	2,268.2 (-5.8)
Ala., Ark., La., Miss., N.Mex., Tex.						
PAD District IV	638.9	486.2 (+31.4)	516.0 (+23.8)	6,039.0	5,750.9 (+5.0)	6,046.1 (-0.1)
Colo., Idaho, Mont., Utah, Wyo.						
PAD District V	458.3	346.4 (+32.3)	368.2 (+24.4)	3,798.7	3,667.4 (+3.6)	3,910.5 (-2.9)
Ariz., Calif., Nev., Oreg., Wash.						
U.S. Total	487.5	351.4 (+38.7)	374.9 (+30.1)	4,724.7	4,404.7 (+7.3)	4,788.3 (-1.3)

\*See Explanatory Note 4 for explanation of oil heating degree-days.

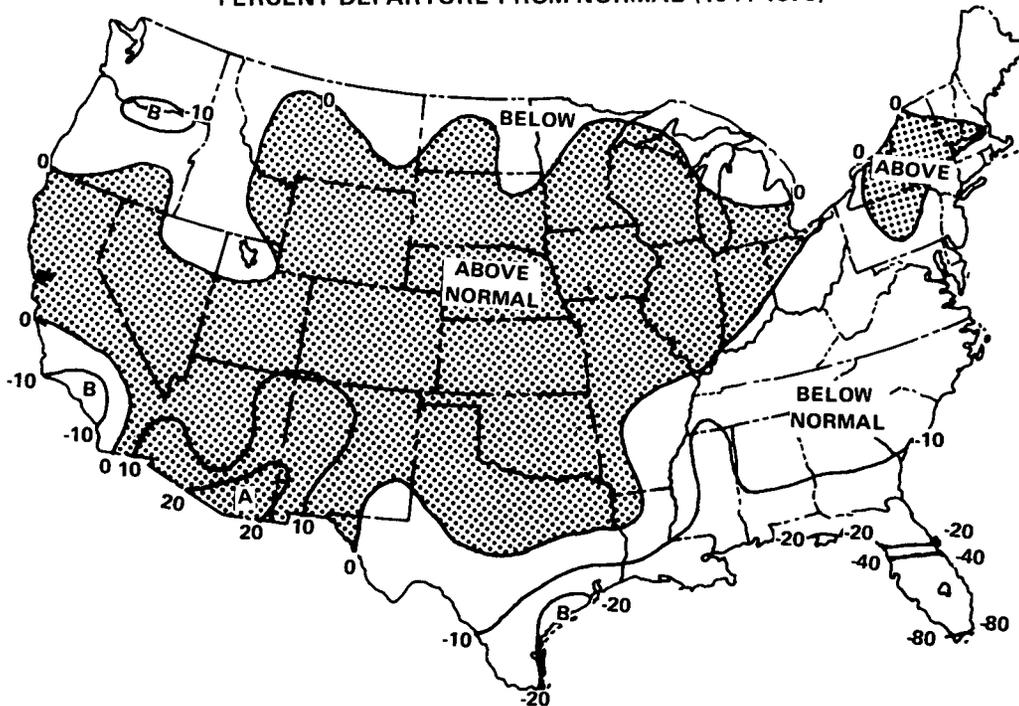
\*\*Percentage change in parentheses.

HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1974  
APRIL 27, 1975

PERCENT DEPARTURE FROM 1973-74



PERCENT DEPARTURE FROM NORMAL (1941-1970)



NOTE: Above normal heating degree-days correspond to below normal temperatures.

Source: Department of Commerce—NOAA.

Based on preliminary telegraphic reports.

# Residual Fuel Oil

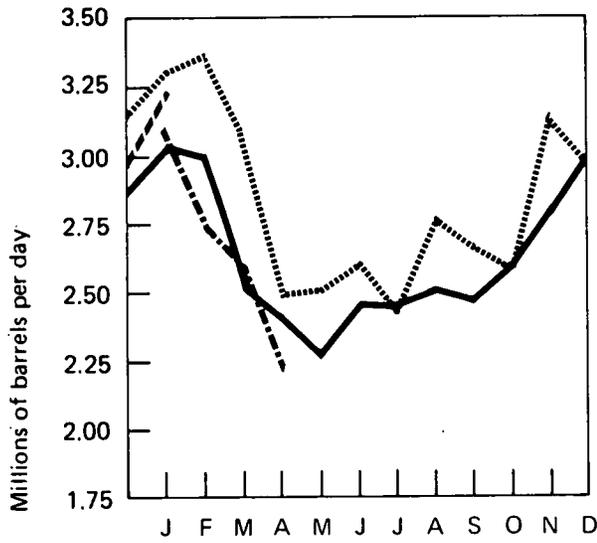
		Domestic Demand		Production		Imports		Stocks	
				In thousands of barrels per day				In thousands of barrels	
		BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
1972	January	2,815		924		1,892		59,440	
	February	3,171		963		1,923		50,891	
	March	2,682		828		1,926		51,566	
	April	2,444		739		1,676		49,425	
	May	2,111		664		1,573		53,035	
	June	2,196		661		1,649		56,109	
	July	2,107		673		1,594		60,230	
	August	2,257		674		1,653		61,399	
	September	2,239		710		1,625		63,692	
	October	2,362		745		1,655		63,758	
	November	2,843		890		1,769		57,702	
	December	3,151		1,124		1,968		55,216	
1973	January	3,306		1,112		2,019		49,154	
	February	3,382		1,038		2,147		43,058	
	March	3,084		955		2,196		44,711	
	April	2,477		877		1,705		47,044	
	May	2,521		948		1,668		49,207	
	June	2,607		915		1,761		51,811	
	July	2,412		882		1,597		53,363	
	August	2,755		851		1,913		53,586	
	September	2,676		878		1,849		55,091	
	October	2,590		984		1,597		54,964	
	November	3,158		1,061		1,979		51,985	
	December	2,944		1,158		1,826		53,480	
1974	January	3,035		1,072		1,732		46,548	
	February	3,010		1,029		1,923		45,004	
	March	2,516		912		1,674		47,222	
	April	2,432		984		1,587		51,339	
	May	2,251	2,111	995	992	1,353	1,250	54,356	64,548
	June	2,455	2,177	1,026	1,058	1,549	1,260	57,891	68,646
	July	2,432	2,135	1,056	1,091	1,433	1,197	59,787	73,066
	August	2,539	2,368	1,067	1,126	1,530	1,342	60,988	76,011
	September	2,454	2,419	1,032	1,070	1,400	1,274	60,251	72,723
	October	2,610	2,501	1,099	1,112	1,464	1,369	58,679	72,090
	November	2,819	2,631	1,229	1,226	1,636	1,453	60,363	73,581
	December	2,965	2,881	1,335	1,350	1,612	1,561	R74,939	74,521
1975	January	3,242	3,103	1,415	1,399	1,647	1,529	69,233	68,628
	February		2,723		1,303		1,308		65,061
	March		*2,589		*1,244		*1,252		*61,891
	April		*2,222		*1,275		*1,048		*51,951

\* Preliminary data.

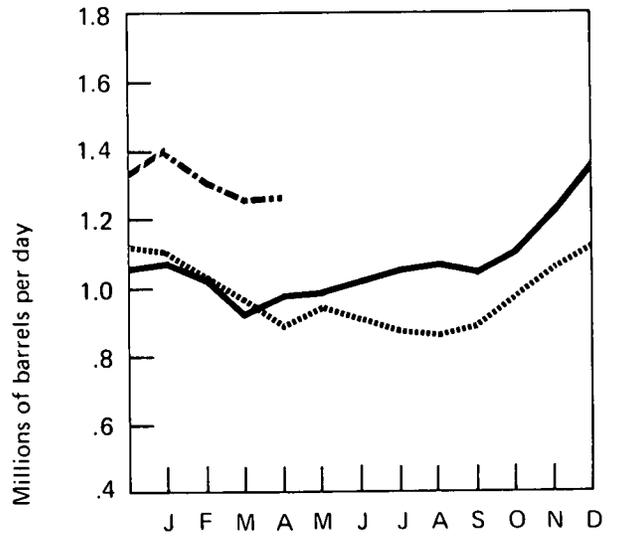
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated; April 1975 data are from American Petroleum Institute (API).

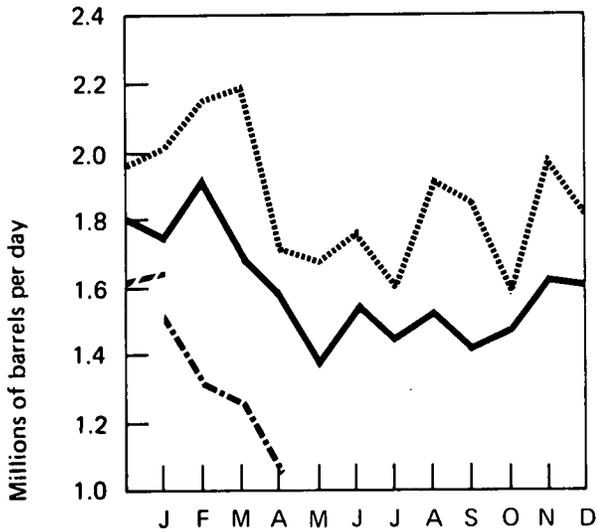
**Domestic Demand\***



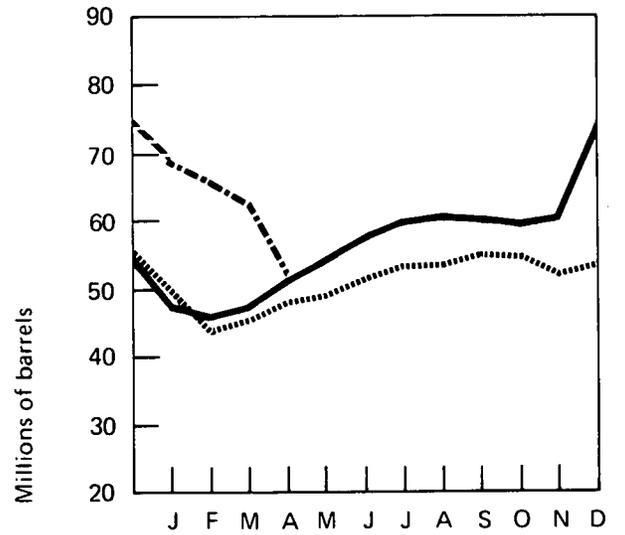
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

- ..... 1973
- 1974 BOM
- 1975 BOM
- · - · 1975 FEA, API

# Natural Gas Liquids

		Domestic Demand*	Production*	Imports	Stocks*
		In thousands of barrels per day			In thousands of barrels
1972	January	1,746	1,705	196	76,704
	February	1,752	1,747	182	68,232
	March	1,417	1,768	186	68,777
	April	1,181	1,769	118	75,101
	May	995	1,737	147	84,984
	June	1,114	1,734	134	92,831
	July	1,121	1,731	141	100,363
	August	1,243	1,739	164	104,397
	September	1,244	1,751	168	108,853
	October	1,525	1,769	202	105,098
	November	1,768	1,757	221	94,673
	December	1,946	1,721	231	79,238
1973	January	1,994	1,680	313	64,343
	February	1,857	1,745	312	55,997
	March	1,407	1,734	260	58,471
	April	1,299	1,750	201	65,297
	May	1,270	1,739	216	73,942
	June	1,149	1,727	163	83,057
	July	1,109	1,737	199	93,362
	August	1,281	1,748	239	98,996
	September	1,297	1,741	206	103,907
	October	1,499	1,756	249	104,215
	November	1,703	1,774	286	98,320
	December	1,607	1,729	231	94,106
1974	January	1,779	1,699	305	85,820
	February	1,593	1,728	294	R84,737
	March	1,408	1,741	224	89,362
	April	1,321	1,696	215	95,707
	May	1,181	1,689	182	104,739
	June	1,242	1,684	200	111,356
	July	1,187	1,657	163	118,804
	August	1,221	1,676	163	125,120
	September	1,359	1,638	167	126,454
	October	1,493	1,686	200	123,634
	November	1,596	1,694	199	118,026
	December	1,692	1,670	230	108,377
1975	January	1,708	1,630	257	98,843
	February		1,646		94,683
	March		**1,655		

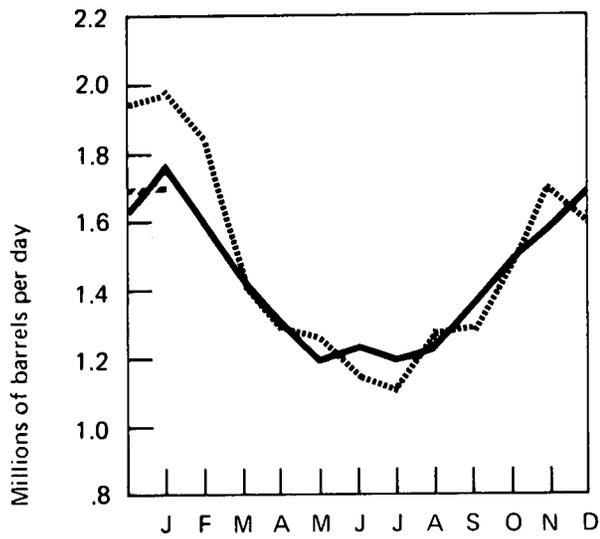
\*See Explanatory Note 5.

\*\*Preliminary data.

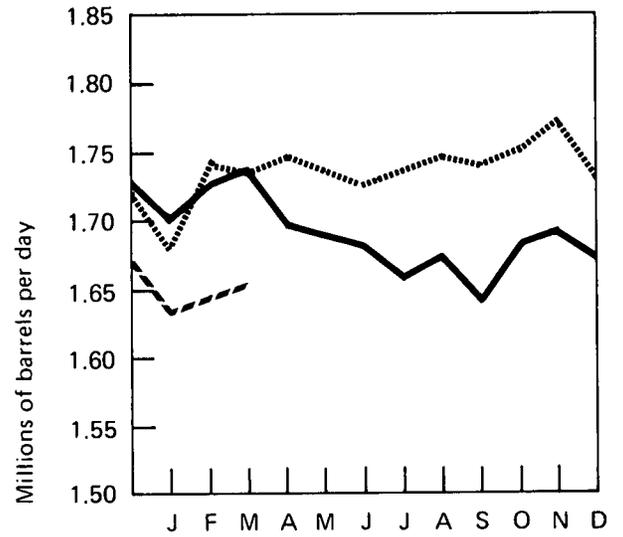
R=Revised data.

Source: Bureau of Mines.

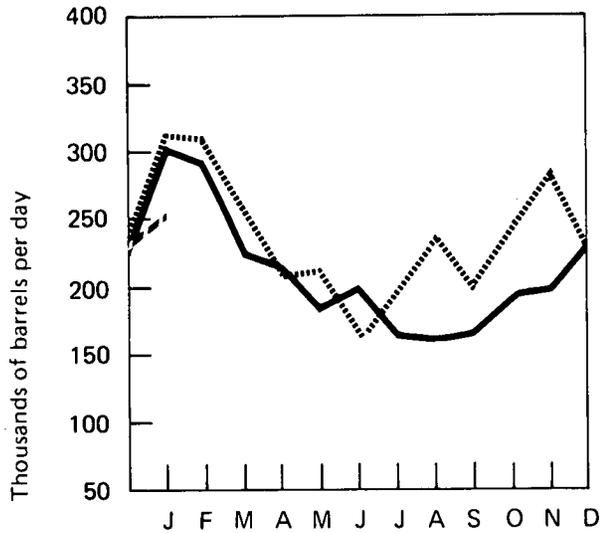
**Domestic Demand**



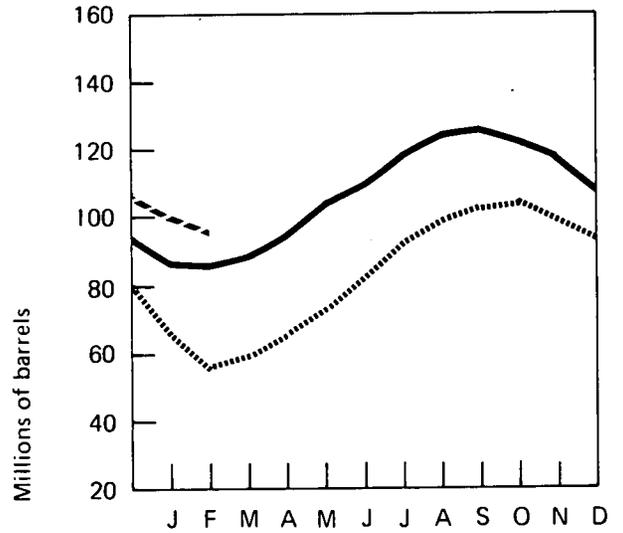
**Production**



**Imports**



**Stocks**



..... 1973  
———— 1974  
- - - - 1975

# Natural Gas

		Marketed Production	Domestic Producer Sales to Major Interstate Pipelines In billion cubic feet	Imports
1972	January	1,994	1,086	117
	February	1,902	1,035	112
	March	1,937	1,091	88
	April	1,893	1,050	134
	May	1,867	1,045	111
	June	1,797	985	108
	July	1,837	1,013	102
	August	1,859	1,007	97
	September	1,854	970	114
	October	1,889	1,040	103
	November	1,896	1,041	111
	December	1,961	1,065	111
1973	January	1,994	1,069	93
	February	1,821	963	84
	March	1,952	1,052	91
	April	1,864	1,007	88
	May	1,898	1,026	86
	June	1,839	963	79
	July	1,880	999	80
	August	1,896	994	85
	September	1,840	956	82
	October	1,875	1,001	91
	November	1,863	1,000	85
	December	1,926	1,038	89
1974	January	1,944	1,033	86
	February	1,773	941	79
	March	1,907	1,027	85
	April	1,812	987	83
	May	1,853	981	80
	June	1,777	928	74
	July	1,827	947	74
	August	1,797	932	76
	September	1,761	871	70
	October	1,775	936	83
	November	1,735	921	82
	December	1,800	959	87
1975	January	R1,771	950	81
	February	R*1,627	867	75
	March	R**1,740		**80
	April	**1,670		**79

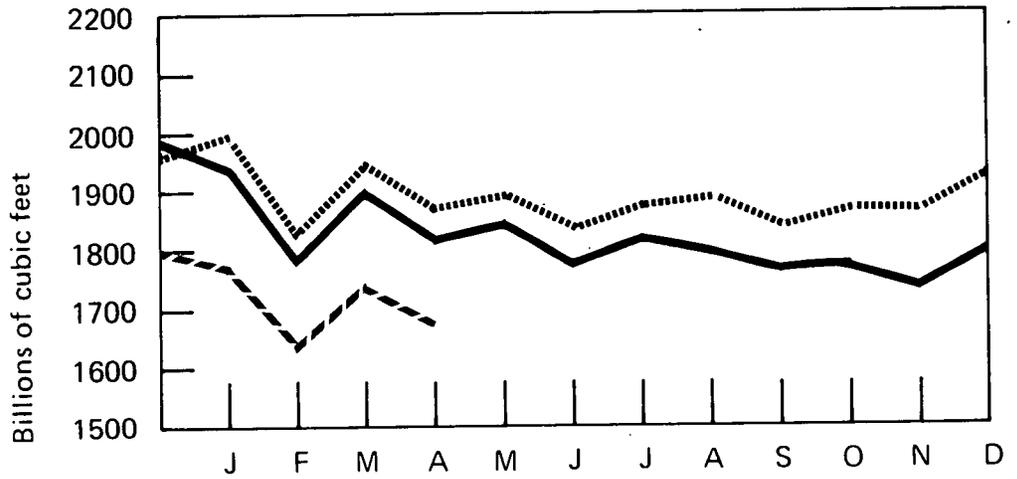
\*Preliminary data.

\*\*Projected data.

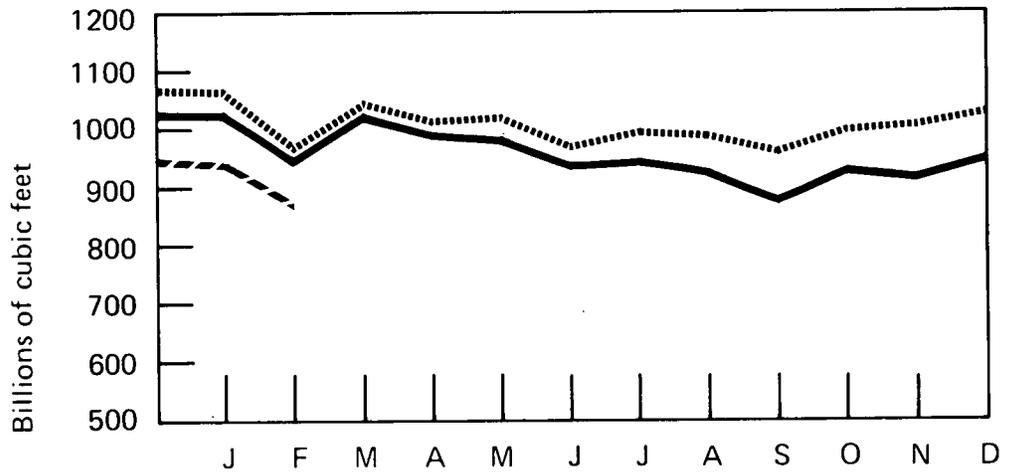
R=Revised data.

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

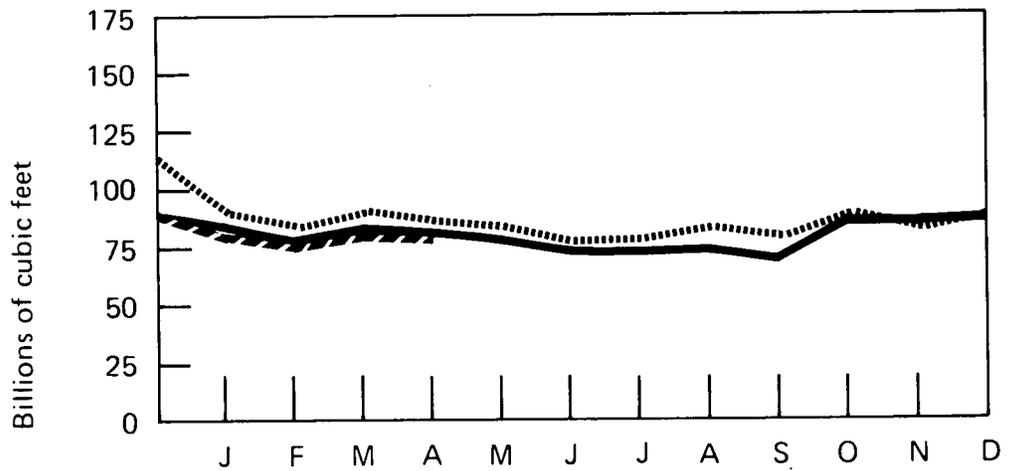
### Marketed Production



### Domestic Producer Sales to Major Interstate Pipelines



### Imports



..... 1973  
 ——— 1974  
 - - - 1975

# Coal

## Bituminous and Lignite

		Domestic Consumption*	Production**	Exports	Stocks
In thousands of short tons					
1972	January	43,951	49,680	3,660	91,178
	February	43,178	49,112	3,630	92,183
	March	43,773	54,438	4,624	96,795
	April	40,158	49,814	4,915	102,981
	May	40,588	52,879	5,416	110,577
	June	40,505	50,083	4,882	115,723
	July	43,071	40,964	3,627	111,353
	August	44,698	52,169	6,337	114,665
	September	42,002	49,374	4,923	116,196
	October	43,050	51,671	5,210	120,135
	November	44,104	50,297	5,380	121,401
	December	47,698	44,904	3,392	117,442
1973	January	49,838	49,379	2,954	111,120
	February	44,652	45,893	2,669	108,870
	March	44,814	50,547	3,377	111,490
	April	42,689	46,999	5,063	112,585
	May	43,628	51,420	5,140	116,890
	June	45,115	46,613	4,969	109,960
	July	47,715	43,801	4,188	107,390
	August	48,840	55,874	5,133	106,910
	September	45,471	48,338	3,424	106,230
	October	46,427	54,382	5,882	107,490
	November	46,703	49,826	5,214	107,169
	December	50,130	48,666	4,889	103,022
1974	January	R50,063	53,530	2,813	R97,614
	February	R45,252	49,851	4,627	R96,420
	March	45,408	51,027	3,179	R99,895
	April	43,195	54,181	4,944	106,490
	May	44,612	57,448	6,032	110,190
	June	44,461	47,884	6,369	112,030
	July	48,187	49,206	5,307	106,491
	August	48,647	51,604	5,088	105,810
	September	44,371	52,472	4,893	109,205
	October	45,670	60,293	7,342	116,514
	November	44,589	33,524	6,744	108,710
	December	47,436	39,980	2,587	95,572
1975	January	49,669	54,885	4,254	95,158
	February	R46,147	R50,645	4,470	R97,262
	March	***47,396	R51,960	5,653	***97,904
	April		***54,885		

\*See Explanatory Note 6.

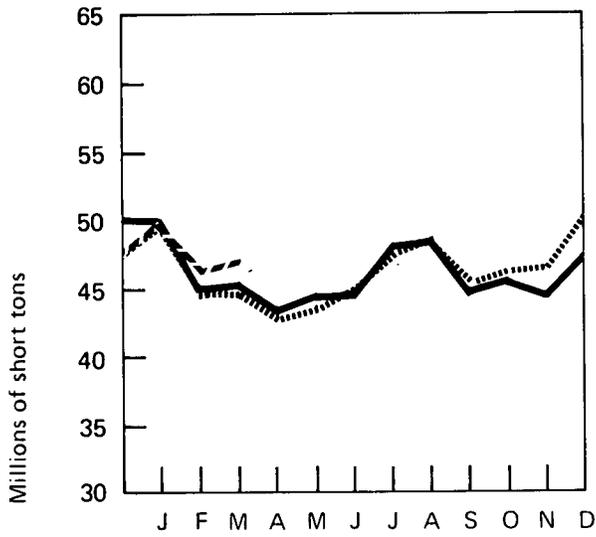
\*\*See Explanatory Note 7.

\*\*\*Preliminary data.

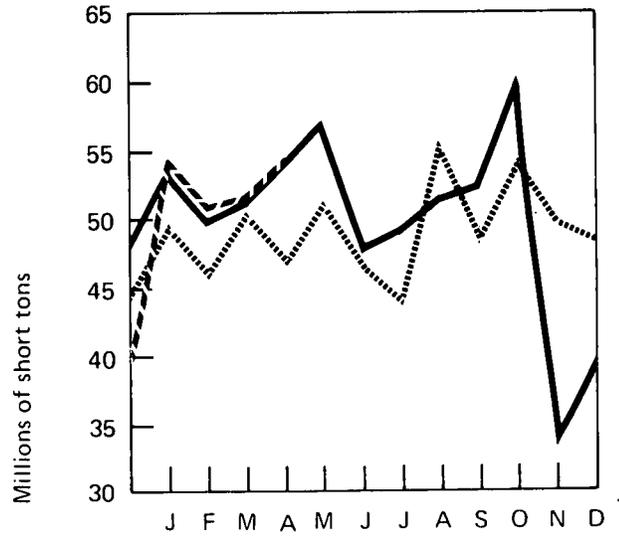
R = Revised data.

Source: Bureau of Mines.

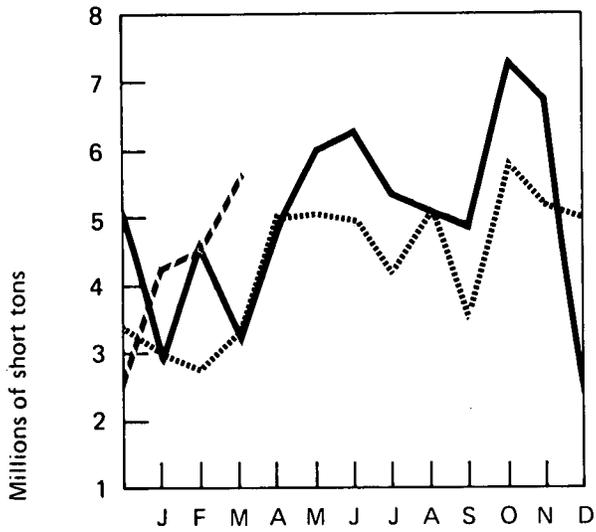
Domestic Consumption



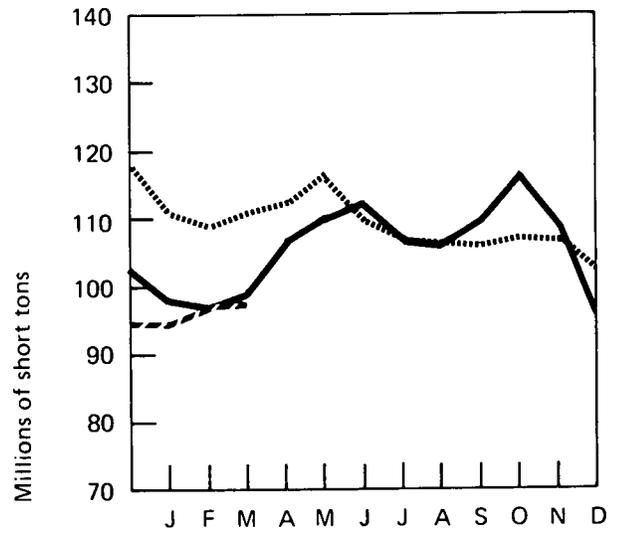
Production



Exports



Stocks



..... 1973  
—— 1974  
- - - 1975

# Part 3

## **ELECTRIC UTILITIES**

Production of electricity by utilities in April 1975 was up 2 percent from April 1974 and 4 percent from April 1973.

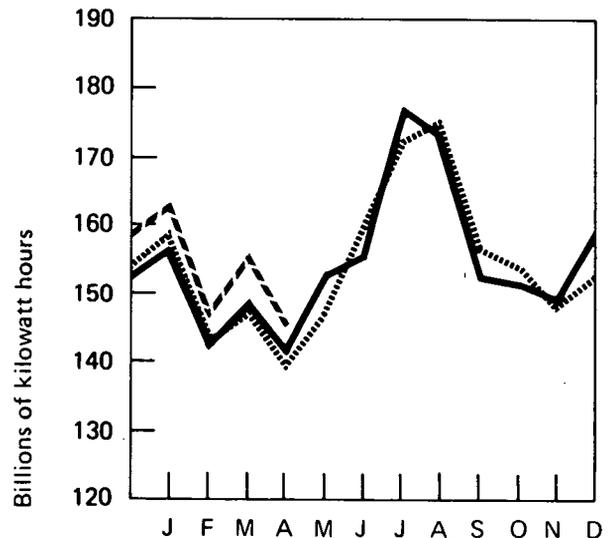
Production for the first 4 months of 1975 was about 3 percent greater than the corresponding periods in both 1974 and 1973.

# Electric Utilities

# Electric Utilities

		Total Production	Percentage Produced from Each Source					
		In millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro-electric	Other*
1972	January	144,575	45.4	17.9	16.6	2.9	16.9	0.3
	February	137,301	45.7	17.3	18.0	2.6	16.1	0.3
	March	140,056	44.3	15.2	20.0	3.0	17.2	0.3
	April	132,138	43.6	13.4	22.3	2.7	17.7	0.3
	May	137,745	43.3	12.7	24.0	2.1	17.6	0.3
	June	145,523	42.3	13.3	25.5	2.6	15.9	0.4
	July	157,846	42.1	14.1	25.7	2.9	14.9	0.3
	August	162,822	42.8	13.7	25.7	3.5	13.9	0.4
	September	147,358	43.4	14.7	25.5	3.2	12.9	0.3
	October	143,742	44.3	14.1	25.2	3.2	13.0	0.2
	November	143,867	45.7	18.3	17.2	3.7	14.8	0.3
	December	154,350	45.9	19.5	14.4	3.9	16.0	0.3
1973	January	159,320	47.2	19.3	13.1	3.9	15.8	0.7
	February	143,109	47.4	18.1	14.0	4.1	16.0	0.4
	March	147,754	45.6	16.2	16.2	4.5	17.2	0.3
	April	139,273	46.0	14.4	17.9	4.2	17.2	0.3
	May	147,021	44.2	14.6	20.2	3.8	16.8	0.4
	June	160,962	43.5	16.0	21.6	4.2	14.5	0.2
	July	172,539	44.1	16.5	22.5	4.0	12.7	0.2
	August	175,928	44.5	17.2	21.6	4.4	11.9	0.4
	September	156,304	45.6	17.2	21.0	4.9	11.0	0.3
	October	153,888	45.6	17.6	19.8	4.8	11.8	0.4
	November	140,785	47.3	16.6	16.5	5.7	13.5	0.4
	December	153,276	47.9	16.3	13.2	5.1	17.1	0.4
1974	January	R156,906	R47.0	R16.6	R13.3	R4.8	R18.2	R0.1
	February	R142,371	R46.6	15.7	13.3	R5.6	R18.6	R0.2
	March	R149,933	45.3	R14.6	R15.8	R5.8	R18.4	R0.1
	April	R141,913	R44.5	R13.9	R16.9	R4.9	R19.6	0.2
	May	R153,439	44.3	14.7	18.4	R4.2	R18.2	R0.2
	June	R156,027	R43.3	R14.7	R20.3	R4.4	R17.1	0.2
	July	R177,797	R42.9	R15.6	R20.9	R5.6	R14.8	R0.2
	August	R173,699	R43.1	15.6	20.3	R7.0	R13.8	R0.2
	September	R152,083	R42.9	R16.4	R19.3	7.1	R14.1	0.2
	October	R151,786	R44.3	R16.7	R18.6	7.0	R13.2	0.2
	November	R149,581	R44.9	18.4	15.2	R7.2	R14.1	R0.2
	December	R159,309	R45.6	19.3	12.4	R8.1	R14.4	R0.2
1975	January	R163,498	R45.8	R18.7	R12.1	R8.1	15.2	0.1
	February	R146,338	R46.0	17.0	12.3	R8.3	16.3	R0.1
	March	156,006						
	April	145,207						

Total Production



..... 1973  
 — 1974  
 - - - 1975

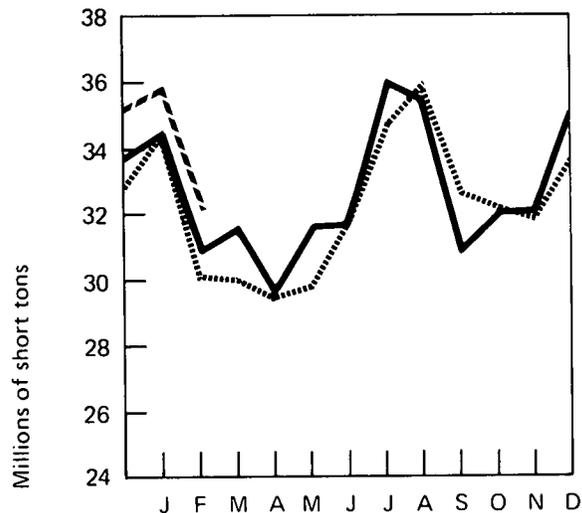
\*Includes electricity produced from geothermal power, wood, and waste.  
 R=Revised data.

Sources: Federal Power Commission.  
 Production data for latest 2 months are from Edison Electric Institute.

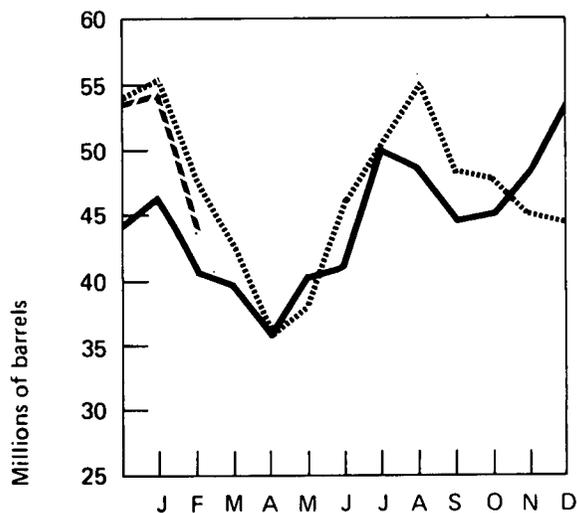
### Fuel Consumption

	Coal	Oil	Gas	
	In thousands of short tons	In thousands of barrels	In millions of cubic feet	
<b>1972</b>	January	30,231	46,555	251,029
	February	28,946	43,325	258,859
	March	28,472	38,809	294,804
	April	26,093	32,325	312,229
	May	26,823	32,106	351,543
	June	27,749	35,098	394,585
	July	30,214	40,646	433,533
	August	31,651	41,073	448,594
	September	28,988	38,723	398,799
	October	29,133	42,876	337,567
	November	29,926	47,914	262,447
	December	32,817	54,479	234,683
<b>1973</b>	January	34,591	55,773	219,270
	February	30,921	46,978	212,983
	March	30,746	42,701	255,314
	April	29,209	35,845	267,151
	May	29,683	38,097	316,989
	June	31,953	46,669	363,239
	July	34,833	50,956	414,408
	August	36,065	55,166	482,053
	September	32,723	47,937	418,776
	October	32,398	48,033	327,010
	November	31,856	45,158	247,038
	December	33,704	44,696	217,049
<b>1974</b>	January	R34,599	R46,745	R219,338
	February	R30,857	R40,687	R201,587
	March	R31,638	R39,645	R254,175
	April	R29,679	R35,959	R259,313
	May	R31,700	R40,831	R306,945
	June	R31,719	R41,227	R346,584
	July	R36,111	R50,119	R403,391
	August	R35,555	R48,970	R380,585
	September	R30,989	R44,550	R313,079
	October	R32,127	R45,268	R298,109
	November	R32,211	R48,525	R238,908
	December	R35,176	R53,648	R207,095
<b>1975</b>	January	R35,853	R54,169	R204,931
	February	R32,104	R43,670	R188,684

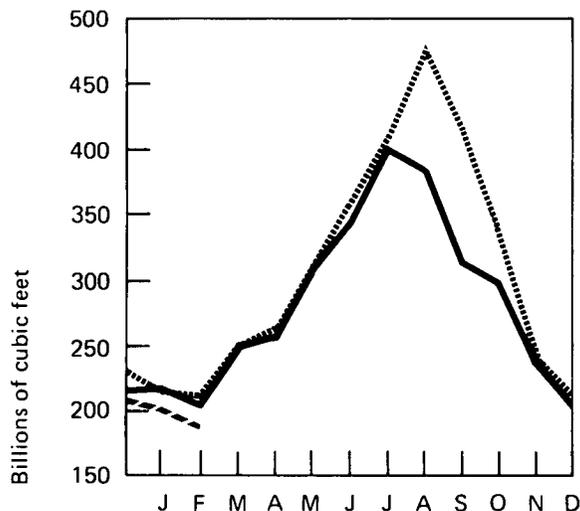
### Coal Consumption



### Oil Consumption



### Gas Consumption



R=Revised data.

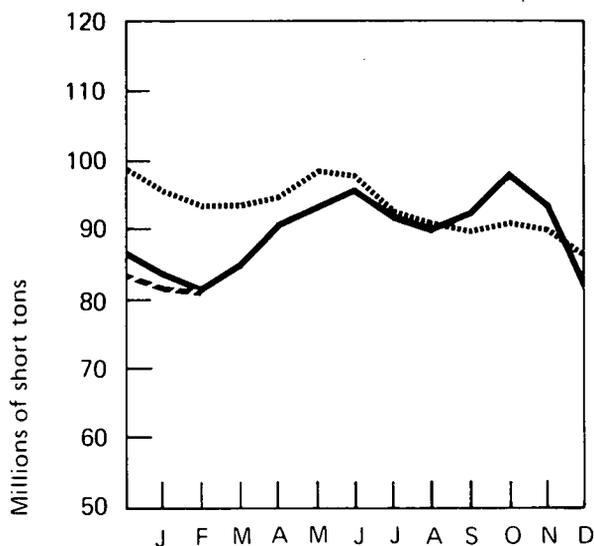
Source: Federal Power Commission.

..... 1973  
 ——— 1974  
 - - - 1975

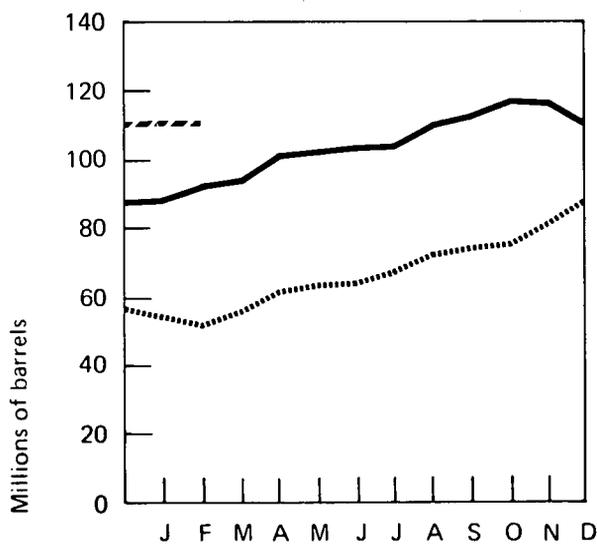
# Electric Utilities (Continued)

		Stocks at End of Month	
		Coal	Oil
		In thousands of short tons	In thousands of barrels
1972	January	76,876	46,055
	February	77,138	47,111
	March	80,296	52,213
	April	84,984	55,730
	May	91,778	57,399
	June	96,553	58,815
	July	93,760	60,786
	August	96,611	66,024
	September	98,396	66,004
	October	102,205	65,531
	November	102,477	62,067
	December	98,671	57,686
1973	January	95,017	53,691
	February	92,993	50,858
	March	93,986	54,885
	April	94,991	62,411
	May	98,722	64,259
	June	97,995	65,003
	July	92,215	67,987
	August	91,356	73,259
	September	90,156	74,863
	October	91,428	76,343
	November	90,369	81,224
	December	86,880	88,228
1974	January	83,366	89,053
	February	80,962	92,645
	March	84,257	94,187
	April	90,901	100,210
	May	93,628	103,606
	June	95,811	104,316
	July	91,616	105,919
	August	89,691	110,997
	September	92,704	113,570
	October	98,373	117,564
	November	93,825	116,558
	December	83,652	111,990
1975	January	81,429	110,304
	February	81,065	111,581

Coal Stocks



Oil Stocks



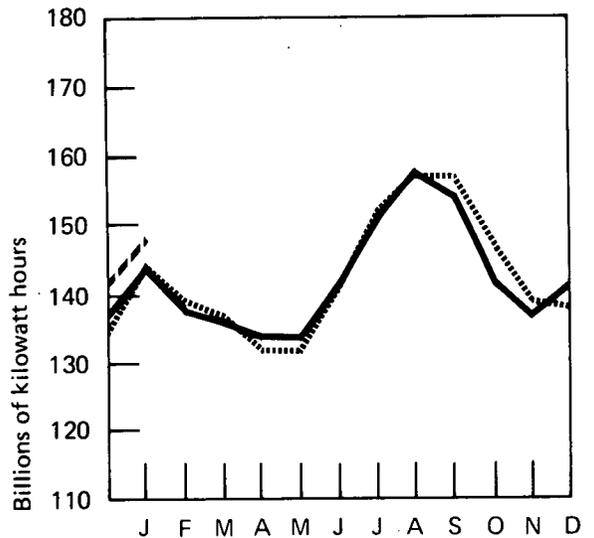
..... 1973  
 ——— 1974  
 - - - 1975

Source: Federal Power Commission.

Sales

		Residential	Commercial	Industrial	Other*	Total
In millions of kilowatt hours						
1972	January	46,353	27,965	50,526	4,579	129,423
	February	45,652	27,921	50,552	4,619	128,744
	March	43,559	27,856	52,086	4,606	128,107
	April	40,460	27,765	51,992	4,422	124,639
	May	38,044	27,983	53,489	4,430	123,946
	June	41,213	30,257	53,673	4,469	129,612
	July	47,813	32,211	52,702	4,666	137,392
	August	51,463	33,535	55,023	4,723	144,744
	September	50,888	33,522	55,548	4,928	144,886
	October	44,352	31,068	56,213	4,823	136,456
	November	41,672	29,426	55,251	4,986	131,335
	December	47,139	29,764	53,923	5,060	135,886
1973	January	52,840	31,182	55,274	5,209	144,505
	February	49,601	30,445	54,591	4,909	139,546
	March	46,315	30,100	55,866	4,822	137,103
	April	41,821	29,038	55,937	4,571	131,367
	May	39,825	30,060	56,838	4,638	131,361
	June	44,967	33,194	57,368	4,764	140,293
	July	54,123	36,147	57,152	5,140	152,562
	August	56,742	36,820	58,865	5,054	157,481
	September	56,210	36,711	59,178	5,211	157,310
	October	47,207	33,289	60,514	5,032	146,042
	November	43,175	31,363	58,464	5,085	138,087
	December	46,442	29,788	56,190	4,896	137,316
1974	January	52,846	30,608	55,754	4,995	144,203
	February	47,832	29,542	54,978	4,708	137,060
	March	46,154	29,309	55,999	4,693	136,155
	April	43,294	28,986	56,497	4,610	133,387
	May	41,215	29,876	57,386	4,685	133,162
	June	46,596	32,800	58,077	4,641	142,114
	July	53,435	35,229	57,899	4,965	151,528
	August	56,558	36,414	59,803	5,069	157,844
	September	53,252	35,830	60,366	4,983	154,431
	October	44,177	32,112	60,053	4,792	141,134
	November	42,773	30,968	57,361	4,969	136,071
	December	50,368	31,757	53,878	4,974	140,977
1975	January	55,547	33,026	54,280	5,245	148,098

Total Sales



\*Includes street lighting and trolley cars.  
Source: Federal Power Commission.

..... 1973  
— 1974  
- - - 1975

## NUCLEAR POWER

The average capacity factor of the U.S. nuclear power industry decreased to 53 percent during April. Corresponding figures for February and March were 56 and 59 percent, respectively. The main reason for the low capacity factor was the scheduled temporary shutdown of 26 plants.

The average enrichment of material produced at U.S. gaseous diffusion plants for use in domestic reactors has increased steadily since February. During April the average enrichment was 2.75 percent U-235, while the March and February figures were 2.64 and 2.53 percent, respectively.

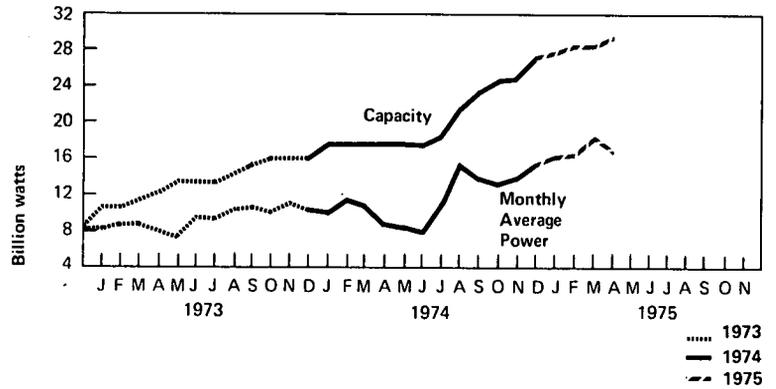
During March 1975, yellowcake ( $U_3O_8$ ) deliveries (which approximate production) were 64 percent of industry capacity. Corresponding figures for January and February were 33 and 42 percent, respectively.

One nuclear powerplant, Rancho Seco (850 megawatts), located in Sacramento, California, came into full commercial operation during April.

**U.S. Nuclear Powerplant Operations**

	Capacity	Monthly Average Power	Percent of Total Domestic Electricity Generation
In electrical megawatts			
<b>1972</b>			
January	7,349	5,720	2.9
February	7,349	5,165	2.6
March	7,349	5,750	3.0
April	7,349	5,124	2.7
May	7,349	3,918	2.1
June	7,349	5,375	2.6
July	7,349	6,227	2.9
August	8,149	7,742	3.5
September	8,149	6,589	3.2
October	8,149	6,539	3.2
November	8,149	7,475	3.7
December	8,653	8,125	3.9
<b>1973</b>			
January	10,901	8,395	3.9
February	10,901	8,821	4.1
March	11,701	8,991	4.5
April	12,501	8,161	4.2
May	13,769	7,657	3.8
June	13,769	9,429	4.2
July	13,769	9,355	4.0
August	14,640	10,463	4.4
September	15,513	10,815	4.9
October	16,179	10,036	4.8
November	16,179	11,308	5.7
December	16,179	10,543	5.1
<b>1974</b>			
January	17,734	10,230	4.9
February	17,734	11,744	5.5
March	17,734	11,015	5.5
April	17,734	8,746	4.3
May	17,734	8,254	4.0
June	17,710	8,223	4.0
July	18,722	11,321	4.8
August	21,571	15,605	6.7
September	23,667	13,894	6.6
October	24,736	13,515	6.7
November	24,641	14,080	6.8
December	27,399	15,509	7.6
<b>1975</b>			
January	27,944	16,271	7.5
February	28,464	16,472	7.6
March	28,464	18,182	8.7
April	*29,520	*16,482	*8.2

**U.S. Nuclear Powerplants**



\*Preliminary data.

Sources: Capacity data and Monthly Average Power data for June 1974 forward are from U.S. Nuclear Regulatory Commission; remaining data are from Federal Power Commission.

## Status of Nuclear Powerplants — April 30, 1975

Status	Number of Plants				Capacity	
	Boiling Water Reactors	High-Temperature Gas Reactors	Pressurized Water Reactors	Other*	Total	In Electrical Megawatts
Licensed to operate	23	1	29	0	53	36,000
Construction permit granted	19	0	44	0	63	63,000
Construction permit pending	22	4	49	0	75	84,000
Orders placed for plant	11	2	18	1	32	37,000
Publicly announced	—	—	—	21	21	26,000
<b>Total</b>	<b>75</b>	<b>7</b>	<b>140</b>	<b>37</b>	<b>244</b>	<b>246,000</b>

\*Includes 1 Liquid Metal Fast Breeder Reactor and 14 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

## Commercial Nuclear Power Generation by Major Non-Communist Countries—April 1975

Country	Number of Reactors	Capacity In gross electrical megawatts	Generation for Month In billions of kilowatt hours	Capacity Factor	
				April 1975	Year 1974
				In percent	
Canada	5	2,380	1.08	63	74
Federal Republic of Germany	7	3,450	1.91	77	57
France	10	3,050	1.45	66	57
Great Britain	29	6,140	*2.60	*63	61
India	3	620	0.20	45	55
Italy	3	630	0.34	76	61
Japan	8	3,890	0.35	12	61
Spain	3	1,120	0.37	46	75
Sweden	4	2,710	1.09	56	20
Switzerland	3	1,050	0.75	99	76
United States	51	35,480	14.02	53	57
<b>Total</b>	<b>126</b>	<b>61,520</b>	<b>24.16</b>	<b>55</b>	<b>58</b>

\* Figures are for 4-week operating period.

Source: Nucleonics Week Magazine.

## U.S. Uranium Enrichment — April 1975

	Domestic Customers	Foreign Customers	Total
Separative Work Performed (in metric tons of separative work units)	377.50	227.84	605.34
Cost (in millions of dollars)	17.470	10.458	27.927
Product Quantity (in metric tons of uranium)	100.02	76.85	176.87
Average Enrichment (in percent U-235)	2.750	2.366	2.583
Feed Requirement (in metric tons of uranium)	499.09	325.76	824.85

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

Summary of Monthly Nuclear Fuel Cycle – February 1975

FUEL CYCLE ACTIVITY	PRODUCT	QUANTITY*			COST	
		Processed Material In MTU except where noted	Percent Utilization of Industry Capacity	Energy Content of Processed Material** In billion Btu except where noted	Energy Consumed in Fuel Cycle Activity***	Contribution to Electric Power† In mills per kilowatt hour
Milling	Yellowcake (U <sub>3</sub> O <sub>8</sub> ) Deliveries	713	64	250,000	467	0.54
Conversion	Uranium Hexa- fluoride (UF <sub>6</sub> ) Deliveries	++ 1,119	78	382,000	240	0.07
Enrichment	Enriched UF <sub>6</sub> Delivered	257 (907 MT-SWU)	+++	463,000	26,400	0.86
Fabrication	Uranium Dioxide (UO <sub>2</sub> ) in Fuel Assemblies	117	49	239,000	74	0.46
	Unused UO <sub>2</sub> at Reactor Sites	76	—	—	—	—
Powerplant Operation	Electricity Generated	15,515 (billion KWhe)	59	—	560 (billion KWhe)	8.37
	Spent Fuel Discharged	48	—	—	—	—
Reprocessing	Spent Fuel Received	13	—	—	—	0.02
	Spent Fuel Reprocessed	0	—	—	—	—

\*Units of measure are discussed Explanatory Notes 8 and 9.

\*\*Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6:1 feed-to-product ratio at the enrichment plant.

\*\*\*Energy requirements for processing obtained from U.S.A.E.C. Report No. WASH-1148.

†Cost contribution is computed from unit prices paid for current month's production and requirement for a 1000-Mwe reactor operating at 80 percent capacity factor, given in AEC Report No. WASH 1174-74. Because of the long lead time required for nuclear fuel processing, the sum of the numbers in this column does not necessarily reflect the fuel cost of current electricity production.

++An additional 385 MTU of UF<sub>6</sub> was delivered to U.S. customers from Eldorado, Canada.

+++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 enrichment in the 1980's.

Source: FEA.

## ENERGY CONSUMPTION

Total domestic energy consumption in March declined seasonally to 6.318 quadrillion Btu, a level comparable with March of last year. On an average daily basis, consumption was 7 percent below the level for February (0.204 quadrillion Btu/day in March versus 0.222 in February).

No sectoral breakdown is available for March as yet, but in February, when total consumption was 6.221 quadrillion Btu, energy consumption by the Residential and Commercial Sector was 2.261 quadrillion Btu, up 2.0 percent from February 1974. Direct consumption of primary fuels amounted to 57.0 percent of the total, of which coal was 1.1 percent, dry natural gas, 31.2 percent, and petroleum products, 24.7 percent. Consumption of electricity accounted for the remaining 43.0 percent.

The Industrial Sector consumed 2.534 quadrillion Btu in February 1975, down 3.8 percent from February 1974. Coal accounted for 13.0 percent of the 1975 figure, 44.0 percent was dry natural gas, 20.0 percent was petroleum products, and 23.0 percent was electricity.

Consumption in the Transportation Sector was 1.426 quadrillion Btu, up 3.0 percent from February 1974. Petroleum products accounted for 94.2 percent of the 1975 figure. The balance consisted of natural gas consumed by pipelines and electricity used by railroads and for street and highway lighting.

## PETROLEUM CONSUMPTION AND FORECAST

Total demand for petroleum products during the 4 weeks ending May 9 was 15.62 million barrels per day, 0.50 million barrels per day or 3.1 percent below the forecast level of 16.12 million barrels per day.

Domestic demand for motor gasoline for the 4 weeks ending May 9 was 6.71 million barrels per day, 0.06 million barrels per day above the forecast level of 6.65 million barrels per day.

Domestic demand for distillate fuel oil for the 4 weeks ending May 9 was 2.80 million barrels per day, 0.05 million barrels per day below the forecast level of 2.85 million barrels per day.

Domestic demand for residual fuel oil was 2.04 million barrels per day for the 4 weeks ending May 9. This was 0.04 million barrels per day below the forecast level of 2.08 million barrels per day.

# Energy Consumption

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

		Coal	Natural Gas (dry) <sup>2</sup>	Petroleum <sup>3</sup>	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
In quadrillion (10 <sup>15</sup> ) Btu								
1973	January	0.037	0.837	0.705	0.299	0.716	2.594	2.594
	February	0.032	0.752	0.653	0.285	0.613	2.335	4.929
	March	0.025	0.691	0.618	0.272	0.631	2.237	7.166
	April	0.017	0.616	0.524	0.297	0.672	2.126	9.292
	May	0.017	0.555	0.560	0.251	0.617	2.000	11.292
	June	0.016	0.460	0.508	0.278	0.710	1.972	13.264
	July	0.017	0.450	0.546	0.322	0.811	2.146	15.410
	August	0.018	0.432	0.558	0.333	0.880	2.221	17.631
	September	0.024	0.435	0.538	0.330	0.734	2.061	19.692
	October	0.028	0.543	0.590	0.287	0.654	2.102	21.794
	November	0.031	0.652	0.659	0.266	0.604	2.212	24.006
	December	0.033	0.772	0.646	0.273	0.671	2.365	26.371
1974	January	0.042	0.786	0.662	0.296	0.682	2.468	2.468
	February	0.035	0.725	0.590	R0.275	R0.592	R2.217	4.685
	March	0.029	0.691	0.565	0.269	0.637	2.191	6.876
	April	0.019	0.572	0.524	0.258	0.589	1.962	8.838
	May	0.016	0.513	0.497	R0.255	R0.661	R1.942	10.780
	June	0.016	0.438	0.508	0.283	0.687	1.932	12.712
	July	0.014	0.439	0.508	R0.315	R0.835	R2.111	14.823
	August	0.021	0.437	0.519	R0.329	R0.818	R2.124	16.947
	September	0.026	0.472	0.510	R0.316	R0.666	R1.990	18.937
	October	0.028	R0.544	0.586	0.272	0.652	R2.082	21.019
	November	0.028	R0.619	0.572	0.264	0.650	R2.133	23.152
	December	0.032	R0.743	R0.618	0.292	0.747	R2.432	25.584
1975	January	R0.036	R0.742	R0.614	0.315	R0.773	R2.480	2.480
	February	0.024	0.707	0.558	0.301	0.671	2.261	4.741

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

		Coal	Natural Gas (dry) <sup>4</sup>	Petroleum <sup>5</sup>	Hydroelectric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
In quadrillion (10 <sup>15</sup> ) Btu									
1973	January	0.393	1.252	0.637	0.003	0.189	0.452	2.926	2.926
	February	0.362	1.126	0.591	0.003	0.186	0.400	2.668	5.594
	March	0.369	1.035	0.560	0.003	0.191	0.443	2.601	8.195
	April	0.363	0.922	0.475	0.003	0.191	0.431	2.385	10.580
	May	0.368	0.830	0.507	0.003	0.194	0.477	2.379	12.959
	June	0.351	0.688	0.460	0.003	0.196	0.501	2.199	15.158
	July	0.344	0.673	0.494	0.003	0.195	0.491	2.200	17.358
	August	0.340	0.647	0.505	0.003	0.201	0.531	2.227	19.585
	September	0.330	0.651	0.486	0.003	0.202	0.449	2.121	21.706
	October	0.364	0.812	0.534	0.003	0.207	0.472	2.392	24.098
	November	0.375	0.975	0.597	0.003	0.208	0.454	2.604	26.702
	December	0.412	1.155	0.585	0.003	0.192	0.472	2.819	29.521
1974	January	0.389	1.232	0.603	0.003	0.192	0.443	2.862	2.862
	February	0.365	1.136	0.538	0.003	0.188	0.405	2.635	5.497
	March	0.369	1.082	0.538	0.003	0.191	0.452	2.635	8.132
	April	0.364	0.896	0.477	0.003	0.193	0.440	2.373	10.505
	May	0.353	0.804	0.453	0.003	0.196	0.508	2.317	12.822
	June	0.336	0.686	0.464	0.003	0.198	0.481	2.168	14.990
	July	0.338	0.687	0.463	0.003	0.198	0.525	2.214	17.204
	August	0.346	0.684	0.474	0.003	0.204	0.508	2.219	19.423
	September	0.349	0.740	0.465	0.003	0.206	0.434	2.197	21.620
	October	0.358	R0.852	0.535	0.003	0.205	0.492	R2.442	24.062
	November	0.322	R0.970	0.521	0.003	0.196	0.483	R2.492	26.554
	December	0.319	R1.164	R0.563	0.003	0.184	0.471	R2.701	29.255
1975	January	R0.356	R1.163	R0.560	0.003	0.185	R0.454	R2.721	2.721
	February	0.330	1.108	0.509	0.003	0.181	0.403	2.534	5.255

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

		Coal	Natural Gas (dry) <sup>6</sup>	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
		In quadrillion (10 <sup>15</sup> ) Btu						
<b>1973</b>	January	0.001	0.084	1.511	0.005	0.012	1.613	1.613
	February	0.001	0.076	1.414	0.005	0.011	1.507	3.120
	March	0.001	0.070	1.500	0.005	0.012	1.588	4.708
	April	0.001	0.062	1.413	0.004	0.009	1.489	6.197
	May	0.001	0.056	1.539	0.004	0.009	1.609	7.806
	June	0.001	0.047	1.470	0.004	0.010	1.532	9.338
	July	0.001	0.046	1.527	0.004	0.010	1.588	10.926
	August	0.001	0.044	1.586	0.004	0.011	1.646	12.572
	September	0.001	0.044	1.435	0.005	0.011	1.496	14.068
	October	0.001	0.055	1.519	0.005	0.011	1.591	15.659
	November	0.001	0.066	1.524	0.005	0.011	1.607	17.266
	December	0.001	0.078	1.490	0.005	0.012	1.586	18.852
<b>1974</b>	January	0.001	0.073	1.398	0.005	0.012	1.489	1.489
	February	0.001	0.068	1.299	0.005	0.011	1.384	2.873
	March	0.001	0.064	1.415	0.005	0.012	1.497	4.370
	April	0.001	0.053	1.397	0.005	0.011	1.467	5.837
	May	0.001	0.048	1.483	0.004	0.010	1.546	7.383
	June	0.001	0.041	1.449	0.004	0.010	1.505	8.888
	July	0.001	0.041	1.513	0.004	0.011	1.570	10.458
	August	0.001	0.041	1.532	0.005	0.012	1.591	12.049
	September	0.001	0.044	1.393	0.005	0.011	1.454	13.503
	October	0.001	R0.051	1.506	0.005	0.012	R1.575	15.078
	November	0.001	0.058	1.454	0.005	0.012	1.530	16.608
	December	0.001	0.069	R1.563	0.005	0.013	R1.651	18.259
<b>1975</b>	January	0.001	R0.069	R1.496	0.005	0.012	R1.583	1.583
	February	0.001	0.066	1.343	0.005	0.011	1.426	3.009

<sup>1</sup> The methodology used for the Residential and Commercial, Industrial, and Transportation Sector calculations is provided in the footnotes of the "Energy Consumption by Economic Sector and Primary Source" table on page 50.

<sup>2</sup> The percentage share used in calculating Residential and Commercial consumption of natural gas was 38.5 percent for 1973 and 37.6 percent for 1974 and 1975.

<sup>3</sup> The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 52.3 percent for 1974 and 1975.

<sup>4</sup> The percentage share used in calculating Industrial consumption of natural gas was 57.6 percent for 1973 and 58.9 percent for 1974 and 1975.

<sup>5</sup> The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 47.7 percent for 1974 and 1975.

<sup>6</sup> The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.5 percent for 1974 and 1975.

Energy Consumption by Economic Sector and Primary Source — February 1975 [In quadrillion (10<sup>15</sup>) Btu]

Sector	Primary Energy Source					Primary Energy Consumption	Electricity Distributed <sup>6</sup>	Net Energy Consumption	Electrical Energy Loss Distributed <sup>7</sup>	Ultimate Energy Disposition
	Coal <sup>1</sup>	Natural Gas (dry) <sup>2</sup>	Petroleum <sup>3</sup>	Hydroelectric <sup>4</sup>	Nuclear <sup>5</sup>					
Residential and Commercial	0.024	0.707	0.558	—	—	1.289	0.301	1.590	0.671	2.261
Industrial	0.330	1.108	0.509	0.003	—	1.950	0.181	2.131	0.403	2.534
Transportation	0.001	0.066	1.343	—	( <sup>8</sup> )	1.410	0.005	1.415	0.011	1.426
Electric Utilities	0.723	0.192	0.272	0.258	0.127	1.572	—	—	—	—
TOTALS	1.078	2.073	2.682	0.261	0.127	6.221	0.487	5.136	1.085	6.221

<sup>1</sup>Data are from the Bureau of Mines. Includes anthracite and bituminous coal and lignite.

<sup>2</sup>Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. The remainder is distributed to each economic sector using the following percentage shares, derived from 1974 Bureau of Mines data on consumption: Residential and Commercial - 37.6%; Industrial - 58.9%; Transportation - 3.5%.

<sup>3</sup>Aggregate petroleum data are from the Federal Energy 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%; naphtha jet fuel - 100%; kerosine jet fuel - 97%; distillate fuel oil - 30.3%; residual fuel oil - 11.2%; all other products - 4.7%. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974 Bureau of Mines data on consumption: Residential and Commercial - 52.3%; Industrial - 47.7%.

<sup>4</sup>FPC hydroelectric power production plus net imports of electricity from Canada. These imports, estimated at 0.011 quadrillion Btu per month, were assumed to be from hydroelectric power sources. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines annual figure for 1974.

<sup>5</sup>FPC nuclear power production.

<sup>6</sup>Electricity was distributed using FPC and 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>7</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>8</sup>Negligible.

Energy Consumption by Economic Sector and Primary Source - Cumulative January-February 1975 [In quadrillion (10<sup>15</sup>) Btu]

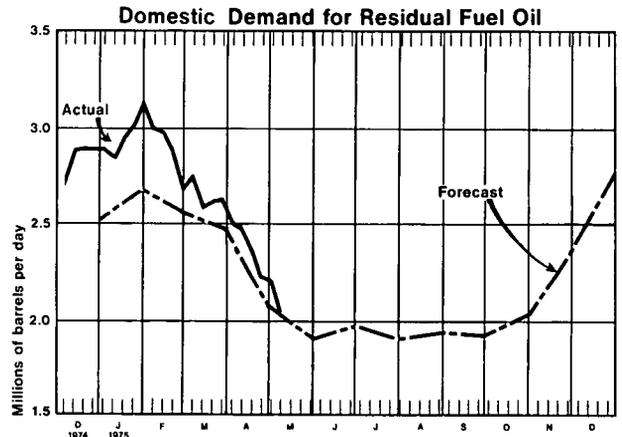
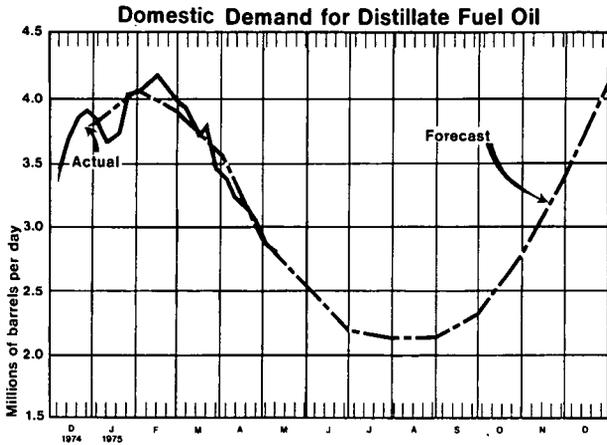
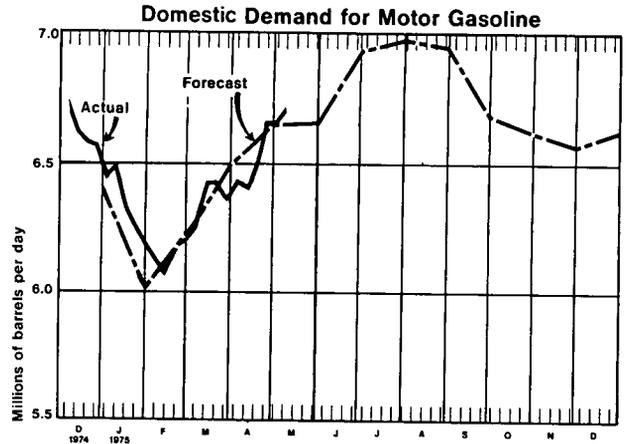
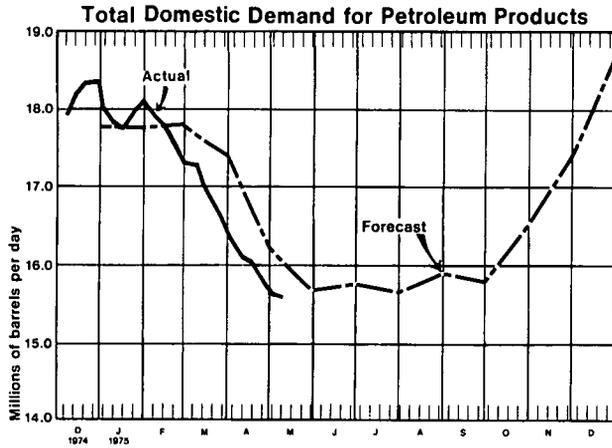
Sector	Primary Energy Source					Primary Energy Consumption	Electricity Distributed <sup>6</sup>	Net Energy Consumption	Electrical Energy Loss Distributed <sup>7</sup>	Ultimate Energy Disposition
	Coal <sup>1</sup>	Natural Gas (dry) <sup>2</sup>	Petroleum <sup>3</sup>	Hydroelectric <sup>4</sup>	Nuclear <sup>5</sup>					
Residential and Commercial	0.060	1.449	1.172	—	—	2.681	0.616	3.297	1.444	4.741
Industrial	0.686	2.271	1.069	0.006	—	4.032	0.366	4.398	0.857	5.255
Transportation	0.002	0.135	2.839	—	( <sup>8</sup> )	2.976	0.010	2.986	0.023	3.009
Electric Utilities	1.517	0.401	0.609	0.522	0.267	3.316	—	—	—	—
TOTALS	2.265	4.256	5.689	0.528	0.267	13.005	0.992	10.681	2.324	13.005

The footnotes for the cumulative table are the same as the monthly table.

**Percent Changes in Energy Consumption for February 1975 by Source**

	<b>February 1975 Consumption</b>	<b>Percent Change from February 1974</b>	<b>Cumulative Percent Change from 1974 (January and February)</b>
	In quadrillion (10 <sup>15</sup> ) Btu		
<b>Refined Petroleum Products</b>	2.683	0.0	+ 0.9
Motor Gasoline	0.912	+ 1.7	+ 4.4
Jet Fuel	0.161	+19.9	+15.8
Distillate	0.653	+ 4.4	+ 5.3
Residual	0.479	- 9.5	- 3.6
Other Petroleum Products	0.478	- 4.5	- 9.6
<b>Natural Gas (Dry)</b>	2.073	- 2.1	- 4.1
<b>Coal (Anthracite, bituminous, and lignite)</b>	1.078	+ 1.2	+ 5.3
<b>Electricity (Sales)</b>	0.487	+ 4.1	+ 3.2
<b>Total Energy Use</b>	6.221	- 0.2	- 0.4
<b>Economic Sector Consumption</b>			
Residential and Commercial	2.261	+ 2.0	+ 1.2
Industrial	2.534	- 3.8	- 4.4
Transportation	1.426	+ 3.0	+ 4.7

# Petroleum Consumption Forecast



## Notes

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

**Actuals** — Four-week moving averages.

**Forecast** — Forecast petroleum product demand assumes normal weather conditions and projected economic activity. The forecast is periodically revised to take into account actual weather conditions and actual values of other predictor variables as they become available.

## OIL AND GAS EXPLORATION

The average number of rotary rigs drilling for oil and gas was 1,604 during April, a decrease of 47 rigs from the previous month. However, the April figure represented an increase of 223 rigs, or 16 percent, over the same month last year.

The number of oil wells drilled in April was up 25 percent from April 1974, while the number of gas wells was down 28 percent.

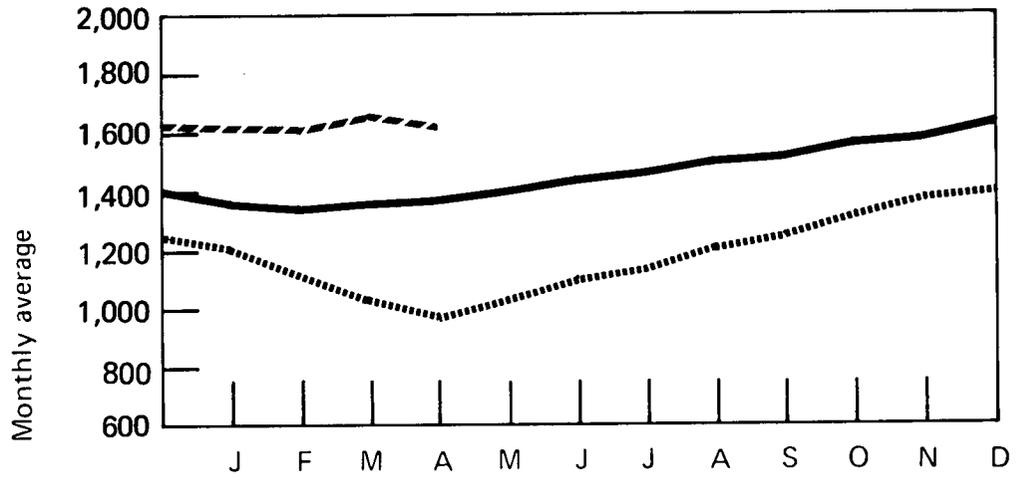
There were 283 seismic crews (260 land, 23 marine) exploring for hydrocarbons during April, a decrease of 16 crews from the March count. This was the third consecutive monthly decline and also the largest single-month decline since the monthly seismic crew count was introduced in May 1974.

# Oil and Gas Exploration

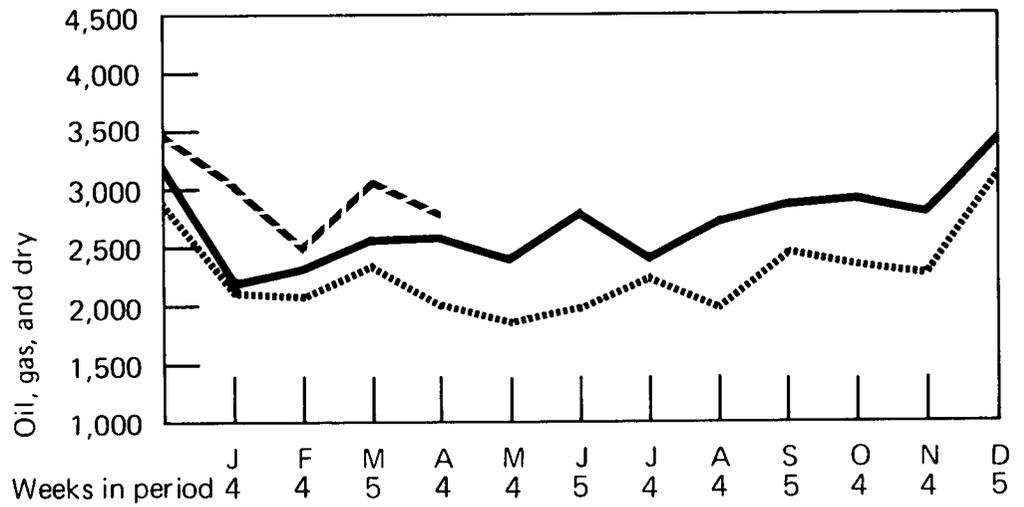
		Rotary Rigs in Operation	Wells Drilled				Total Footage of Wells Drilled
			Monthly average	Oil	Gas	Dry	
1972	January	1,147	807	281	851	1,939	9,441,238
	February	1,071	965	350	955	2,270	12,381,669
	March	1,034	1,210	394	889	2,493	12,406,433
	April	1,002	923	355	788	2,066	9,902,253
	May	1,005	920	332	816	2,068	10,218,488
	June	1,049	1,042	395	903	2,340	11,009,513
	July	1,104	833	335	795	1,963	9,212,931
	August	1,130	946	410	924	2,280	11,334,867
	September	1,152	1,065	468	1,009	2,542	11,634,026
	October	1,165	792	539	919	2,250	10,944,312
	November	1,186	860	535	975	2,370	12,360,912
	December	1,241	985	536	1,290	2,811	14,190,138
1973	January	1,219	758	406	899	2,063	10,972,665
	February	1,126	777	487	765	2,029	10,655,936
	March	1,049	953	504	909	2,366	12,317,756
	April	993	699	489	777	1,965	10,433,987
	May	1,046	749	407	647	1,803	9,622,110
	June	1,118	767	432	795	1,994	10,814,600
	July	1,155	912	504	840	2,256	10,995,939
	August	1,222	724	456	739	1,919	9,632,819
	September	1,266	854	690	940	2,484	12,075,280
	October	1,334	790	554	958	2,302	11,693,672
	November	1,390	822	606	865	2,293	11,823,350
	December	1,405	1,087	827	1,208	3,122	15,529,582
1974	January	1,372	763	577	803	2,143	10,391,797
	February	1,355	901	600	816	2,317	12,160,308
	March	1,367	936	638	1,003	2,577	12,844,135
	April	1,381	947	700	945	2,592	13,349,007
	May	1,412	957	520	870	2,347	11,459,595
	June	1,432	1,238	586	982	2,806	12,976,388
	July	1,480	1,008	461	884	2,353	11,801,777
	August	1,518	1,210	555	968	2,733	12,409,855
	September	1,527	1,200	600	1,091	2,891	12,676,090
	October	1,584	1,131	551	1,241	2,923	14,080,534
	November	1,596	1,088	626	1,053	2,767	11,794,937
	December	1,643	1,339	791	1,274	3,404	15,707,092
1975	January	1,615	1,299	655	1,040	2,994	13,189,222
	February	1,611	1,097	458	933	2,488	12,070,712
	March	1,651	1,341	658	1,091	3,090	15,472,260
	April	1,604	1,181	506	1,071	2,758	13,544,705

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

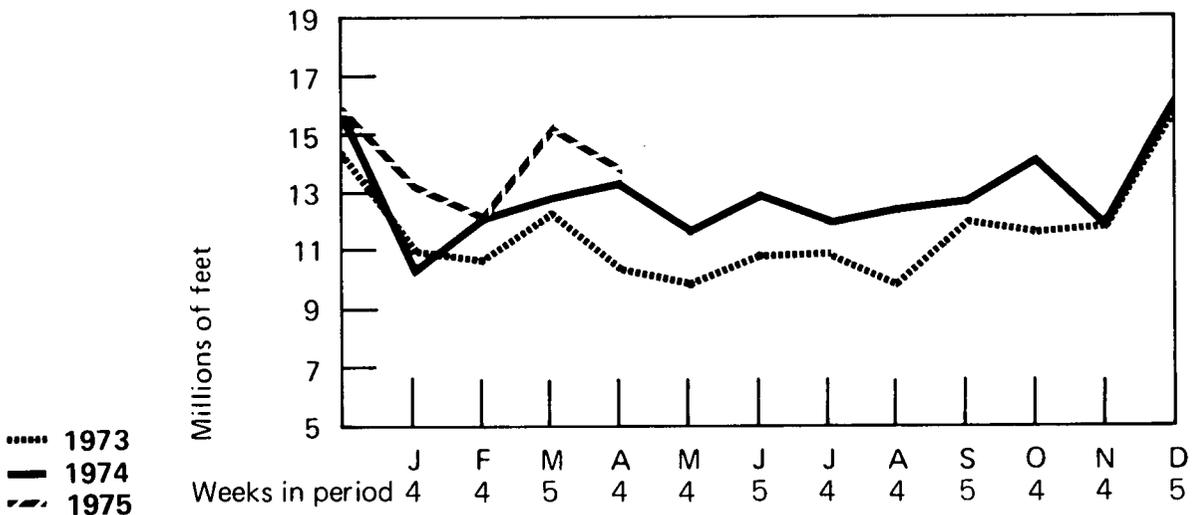
### Rotary Rigs in Operation



### Total Wells Drilled



### Total Footage of Wells Drilled

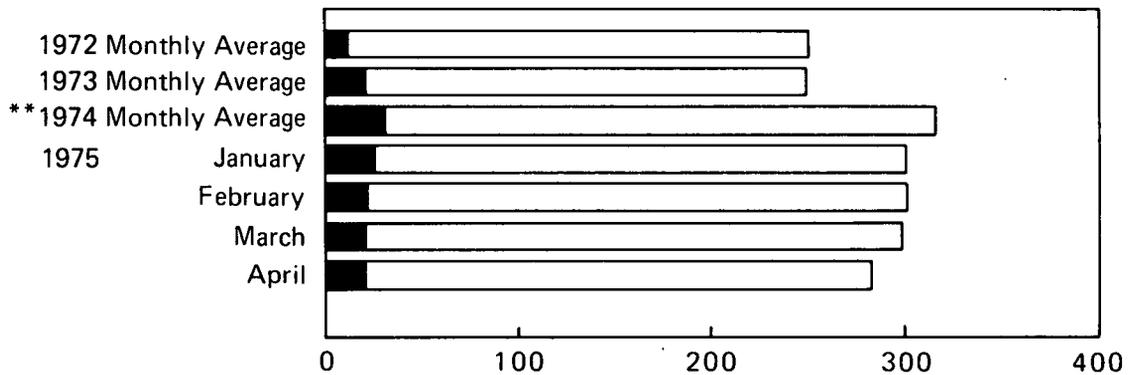


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# Oil and Gas Exploration (Continued)

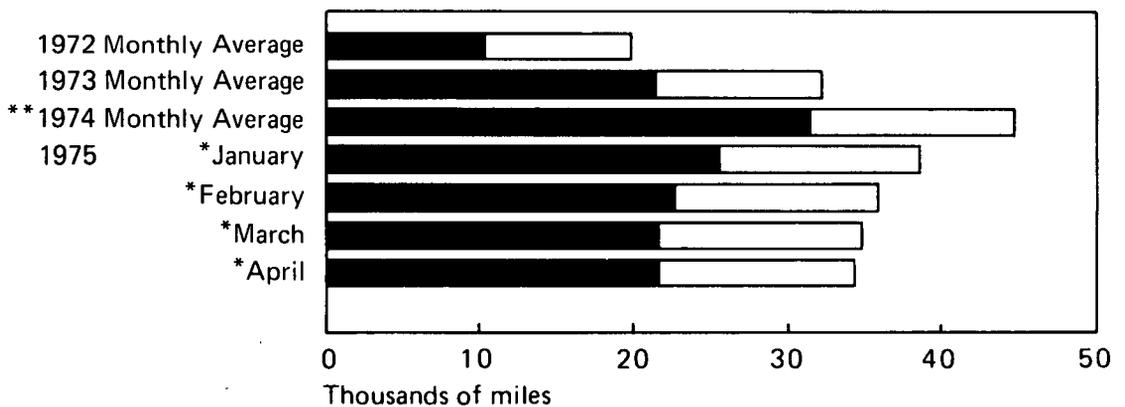
	Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
	Offshore	Onshore	Total	Offshore	Onshore	Total
1972 Monthly Average	12	239	251	10,306	9,333	19,639
1973 Monthly Average	23	227	250	21,579	10,597	32,175
<b>1974</b>					<b>Estimates*</b>	
May	35	278	313	33,320	13,066	46,386
June	38	279	317	36,176	13,113	49,289
July	35	299	334	33,320	14,053	47,373
August	34	287	321	32,368	13,489	45,857
September	34	287	321	32,368	13,489	45,857
October	32	288	320	30,464	13,586	44,000
November	30	276	306	28,564	12,972	41,532
December	25	275	300	23,800	12,925	36,725
<b>1975</b>						
January	27	274	301	25,704	12,878	38,582
February	24	278	302	22,848	13,066	35,914
March	23	276	299	21,896	12,972	34,868
April	23	260	283	21,896	12,220	34,116

Crews Engaged in Seismic Exploration



Offshore  
 Onshore

Line Miles of Seismic Exploration



\*See Explanatory Note 10.

\*\*Includes May-December only.

Source: Society of Exploration Geophysicists.

## MOTOR GASOLINE

The average nationwide selling price of regular gasoline increased in April by 0.9 cent per gallon over the March level. The average price that retailers paid advanced by an even greater amount of 1.1 cents per gallon, reflecting in part the \$1-per-barrel import fee on crude oil implemented on February 1. As a result, the retail dealer margin was reduced by 0.2 cent in April. The retailer purchase price has increased a total of 1.4 cents per gallon (or 58.8 cents per barrel) in the 2 months since the import fee was imposed.

The national average price of diesel fuel sold at truck stops during April was 50.5 cents per gallon, an increase of 0.4 cent over the March price. The national average price of sales at service stations also increased 0.4 cent to 50.6 cents per gallon.

A survey during April of 21 of the Nation's largest marketers of gasoline indicated that 19 of them increased prices; the remaining 2 made no changes. This was the largest number of companies to increase prices since the survey was begun in October 1973.

For these 21 major companies, the average price paid to them by jobbers rose 1.13 cents to 29.72 cents per gallon.

## NATURAL GAS

The average price of natural gas purchased by major interstate pipeline companies from domestic producers decreased 2.8 cents per thousand cubic feet in January.

The average price of natural gas purchased from Canadian and Mexican sources increased 29.5 cents per thousand cubic feet over the December price of 74.5 cents. This large gain was due to the 66-percent increase in gas export prices imposed by Canada on January 1.

The average price of natural gas sold by major interstate pipeline companies in January rose 4.0 cents to 71.4 cents per thousand cubic feet.

## CRUDE OIL

During March the average "new" oil price was \$11.43 per barrel, an increase of 4 cents from the revised February price of \$11.39.

The preliminary estimate for the refiner acquisition cost of imported crude petro-

leum was \$13.17 per barrel, up 12 cents from the revised February figure of \$13.05.

The preliminary estimate for the average cost of domestic crude purchased by refiners during March was unchanged from the revised February figure of \$8.29 per barrel.

The preliminary estimate for the composite cost of crude oil purchased by refiners during March was \$9.30 per barrel, a substantial decrease of 79 cents from the revised February figure of \$10.09. This decline was due to a decrease in the volume of higher-priced imported crude purchased during March.

## UTILITY FOSSIL FUELS

The national average cost of all fossil fuels delivered to utilities in January 1975 decreased 10.4 cents per million Btu from its December 1974 level. This was the first decline since March 1974. Even though the cost of both utility fuel oil and coal decreased, the major portion of the reduction in the average cost resulted from the substitution of less expensive coal for more expensive fuel oil. During January, coal purchases accounted for 8.8 percent more of the total Btu's purchased by utilities, whereas oil purchases accounted for 5.1 percent less.

The national average cost of coal delivered to utilities dropped 8.0 cents per million Btu during January. A shift between contract and spot purchases accounted for a significant portion of this reduction. On a national basis, less expensive contract coal purchases increased 48.7 percent over December levels while more expensive spot coal purchases increased only 5.5 percent. The remainder of the coal cost decrease was a result of a 15.6-cent-per-million Btu decline in the average spot price of coal.

Residual fuel prices in January declined 4.4 cents per million Btu from the previous month.

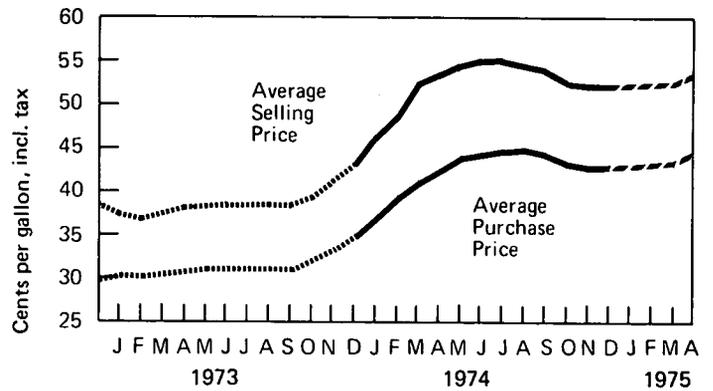
The average price of natural gas delivered to utilities during January registered a slightly larger-than-normal increase of 3.2 cents per million Btu. The most significant increase, based upon the volume of deliveries that were affected, occurred in the Pacific Region (14.8 cents per million Btu).

# Motor Gasoline

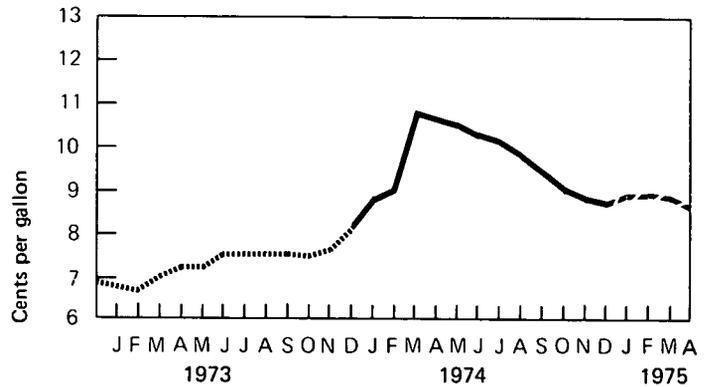
## Regular Gasoline at Retail Outlets

	Average Selling Price	Average Purchase Price	Average Dealer Margin
	Cents per gallon, including tax*		
<b>1973</b> January	37.3	30.5	6.8
February	36.8	30.1	6.7
March	37.9	30.8	7.1
April	38.3	31.0	7.3
May	38.5	31.2	7.3
June	38.8	31.2	7.6
July	38.8	31.2	7.6
August	38.8	31.2	7.6
September	38.7	31.1	7.6
October	39.7	32.2	7.5
November	41.3	33.6	7.7
December	43.3	35.1	8.2
<b>1974</b> January	46.3	37.4	8.9
February	48.8	39.7	9.1
March	52.3	41.4	10.9
April	53.4	42.7	10.7
May	54.7	44.1	10.6
June	55.1	44.8	10.3
July	55.2	45.0	10.2
August	54.9	45.1	9.8
September	54.2	44.8	9.4
October	52.4	43.4	9.0
November	52.0	43.2	8.8
December	52.0	43.3	8.7
<b>1975</b> January	52.4	43.4	9.0
February	52.5	43.5	9.0
March	R52.6	R43.8	8.8
April	53.5	44.9	8.6

Average Retail Prices For Regular



Average Margins For Regular



..... 1973  
 ——— 1974  
 - - - 1975

\*To derive prices excluding taxes, 12.0 cents per gallon may be deducted for 1973 and 12.2 cents per gallon may be deducted for 1974 and 1975.

R=Revised data.

Sources: Platts Oilgram through September 1973.

FEA from October 1973 through December 1974.

Lundberg Survey, Inc., from January 1975 forward.

### Average Selling Prices at Major and Independent Retail Outlets—April 18, 1975

	Cents per gallon, including tax
Regular Gasoline	
Major	54.1
Independent	49.6
National Average	53.5
Premium Gasoline	
Major	58.8
Independent	53.8
National Average	58.2
Diesel Fuel*	
Truck Stops	
Major	51.4
Independent	49.9
National Average	50.5
Service Stations	
Major	52.0
Independent	49.2
National Average	50.6

\*See Explanatory Note 11.

Source: Lundberg Survey, Inc.

### Average Margins for Major and Independent Retail Dealers—April 18, 1975

	Cents per gallon
Regular Gasoline	
Major	8.9
Independent	7.3
National Average	8.6
Diesel Fuel*	
Truck Stops	
Major	6.1
Independent	9.3
National Average	7.4
Service Stations	
Major	7.3
Independent	8.0
National Average	7.5

\*See Explanatory Note 11.

Source: Lundberg Survey, Inc.

### Average Regional Retail Selling Prices and Dealer Margins for Regular Gasoline—April 18, 1975

FEA Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	52.2	8.4
1B Mid Atlantic	54.9	8.3
1C Lower Atlantic	53.8	8.7
2 Mid Continent	53.1	8.1
3 Gulf Coast	51.7	10.1
4 Rocky Mountain	53.2	9.7
5 West Coast	53.5	8.8
National Average	53.5	8.6

Source: Lundberg Survey, Inc.

## Motor Gasoline (Continued)

### Retail Gasoline Price Changes for Major Oil Companies During April 1975 and Entitlement Position\* During March

Company	Effective Date of Change	Amount of Change	Entitlement Position (March)
		Cents per gallon	
Amerada Hess	April 10	1.0	Seller
American Petrofina	April 19	0.5	Seller
Ashland	April 22	1.0 (S.E., N.E., E.)	Seller
		0.5 (all other areas)	
Atlantic Richfield	April 10	1.9	Seller
B.P.	April 12	1.0	Seller
Cities Service	April 29	1.0	Buyer
Champlin	April 26	0.96	Buyer
Continental	April 10	1.0	Buyer
Exxon	April 24	1.0	Seller
Getty	April 30	1.0	Seller
Gulf	April 29	1.0	Buyer
Kerr-McGee	April 1	2.92	Buyer
Mobil	April 26	0.5	Buyer
Phillips	April 3	1.0	Seller
Shell		None	Buyer
Standard Oil of California	April 10	0.5	Seller
Standard Oil of Indiana		None	Buyer
Standard Oil of Ohio	April 12	1.0	Seller
Sun	April 3	1.0	Buyer
Texaco	April 17	1.0	Seller
Union Oil of California	April 1	3.0	Buyer

\*See definitions.

Source: FEA Survey.

### Major Brand Regular Gasoline, April 1975

Marketing Region	Retail DTW Price	Change from Previous Month	Branded Jobber Price	Change from Previous Month	Regional Jobber Margin	Change from Previous Month
			Cents per gallon, excluding tax			
Northeast	33.97	0.66	29.58	0.67	4.39	-0.01
Mid Atlantic	33.75	1.08	29.88	1.08	3.87	0
Southeast	33.17	0.94	29.35	0.93	3.82	0.01
Central	34.57	1.31	30.42	1.30	4.15	0.01
Western	33.52	0.79	29.77	0.78	3.75	0.01
Southwest	33.24	1.41	29.24	1.40	4.00	0.01
Pacific	33.51	1.73	29.77	1.73	3.74	0
Average	33.68	1.14	29.72	1.13	3.96	0.01

Source: FEA Survey.

# Heating Oil

## Price Changes for Major Oil Companies During March 1975

Company	Effective Date	Amount of Change Cents per gallon
Amerada Hess		None
American Petrofina	April 10	0.91
Ashland		None
Atlantic Richfield		None
B.P.		None
Cities Service		None
Champlin	April 26	0.32
Continental	April 5	1.0
Exxon		None
Getty		None
Gulf		None
Kerr—McGee	April 1	4.0
Mobil	April 9	0.5
Phillips	April 8	1.0
Shell		None
Standard Oil of California		None
Standard Oil of Indiana	April 25	2.2
Standard Oil of Ohio	April 12	-1.75
Sun		None
Texaco	April 7	1.5 (Mid and Far West)
Union Oil of California	April 1	2.0

Source: FEA Survey.

# Natural Gas

## Natural Gas Prices Reported by Major Interstate Pipeline Companies

	PURCHASES			SALES		Total Sales
	From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users	To Resellers*	
Cents per thousand cubic feet						
1973 December	24.5	47.6	26.3	46.4	52.2	52.3
1974 January	24.3	42.7	25.7	48.1	55.0	55.1
February	25.4	43.2	26.8	49.8	56.4	56.4
March	25.7	43.2	27.0	50.8	56.9	56.9
April	25.8	46.4	27.4	49.3	57.6	57.4
May	25.7	49.3	27.5	49.9	58.6	57.9
June	26.0	47.7	27.5	50.8	59.4	58.5
July	26.3	58.7	28.6	52.5	62.0	61.1
August	26.1	57.5	28.4	55.2	64.4	63.5
September	27.3	58.8	29.5	54.7	65.2	64.3
October	27.5	58.9	29.9	56.3	64.4	64.0
November	28.5	70.9	31.7	58.7	66.8	66.6
December	32.6	74.5	35.8	60.3	67.2	67.4
1975 January	29.8	104.0	35.2	67.6	71.1	71.4

\*Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt.  
Source: Federal Power Commission.

# Crude Oil

## Percentage of Domestic Production Sold at Controlled and Uncontrolled Prices

		Controlled		Uncontrolled	
		Old Oil	New Oil	Released	Stripper
1974	January	60	17	10	13
	February	62	15	10	13
	March	60	16	11	13
	April	60	16	11	13
	May	62	15	10	13
	June	63	15	9	13
	July	64	15	9	12
	August	66	14	8	12
	September	67	13	8	12
	October	66	14	8	12
	November	67	13	8	12
	December	66	14	8	12

Source: FEA.

## Domestic Crude Petroleum Prices at the Wellhead

		Old	New
		Dollars per barrel	
1974	January	5.25	9.82
	February	5.25	9.87
	March	5.25	9.88
	April	5.25	9.88
	May	5.25	9.88
	June	5.25	9.95
	July	5.25	9.95
	August	5.25	9.98
	September	5.25	10.10
	October	5.25	10.74
	November	5.25	10.90
	December	5.25	11.08
1975	January	5.25	11.28
	February	5.25	R11.39
	March	5.25	*11.43

\*Preliminary figure based on early reports.

R=Revised.

Source: FEA.

### Refiner Acquisition Cost of Crude Petroleum\*

		Domestic	Imported	Composite
		Dollars per barrel		
1974	January	6.72	9.59	7.46
	February	7.08	12.45	8.57
	March	7.05	12.73	8.68
	April	7.21	12.72	9.13
	May	7.26	13.02	9.44
	June	7.20	13.06	9.45
	July	7.19	12.75	9.30
	August	7.20	12.68	9.17
	September	7.18	12.53	9.13
	October	7.26	12.44	9.22
	November	7.46	12.53	9.41
	December	7.39	12.82	9.28
1975	January	7.78	12.77	9.48
	February	R8.29	R13.05	R10.09
	March	**8.29	**13.17	**9.30

\*See Explanatory Note 12.

\*\*Preliminary data.

R = Revised data.

Source: FEA.

### Estimated Landed Cost of Imported Crude Petroleum From Selected Countries\*

		Algeria	Canada	Indonesia	Iran	Nigeria	Saudi Arabia	U. A. Emirates	Venezuela
		Dollars per barrel							
1973	December	NA	6.32	6.42	6.37	8.54	5.49	NA	6.70
1974	January	NA	6.70	NA	8.53	12.13	NA	NA	10.28
	February	NA	10.90	NA	12.11	12.74	NA	NA	11.31
	March	NA	11.14	12.13	13.02	13.26	NA	NA	11.78
	April	13.63	11.02	12.49	12.83	13.67	11.59	NA	11.38
	May	14.67	11.47	12.95	13.84	13.83	11.53	NA	11.28
	June	14.43	12.56	13.21	13.44	13.03	11.32	13.06	10.39
	July	13.65	12.65	13.77	13.02	12.75	11.97	12.34	10.64
	August	13.96	12.49	14.38	12.31	12.70	12.16	12.69	11.20
	September	13.83	12.51	13.42	11.87	12.28	11.45	NA	11.01
	October	13.20	12.53	14.24	12.07	12.12	11.51	12.84	10.95
	November	13.43	12.33	13.45	12.15	12.83	12.15	13.54	11.15
	December	13.08	12.15	14.15	11.63	12.88	11.75	14.59	11.37
1975	January	12.72	12.43	13.30	12.11	12.07	12.07	13.14	11.37
	February**	12.11	12.15	13.52	11.86	12.18	11.94	12.67	11.56

NA = Not available.

\*See Explanatory Note 12.

\*\*Does not include \$1.00 import fee.

Source: FEA.

# Utility Fossil Fuels

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

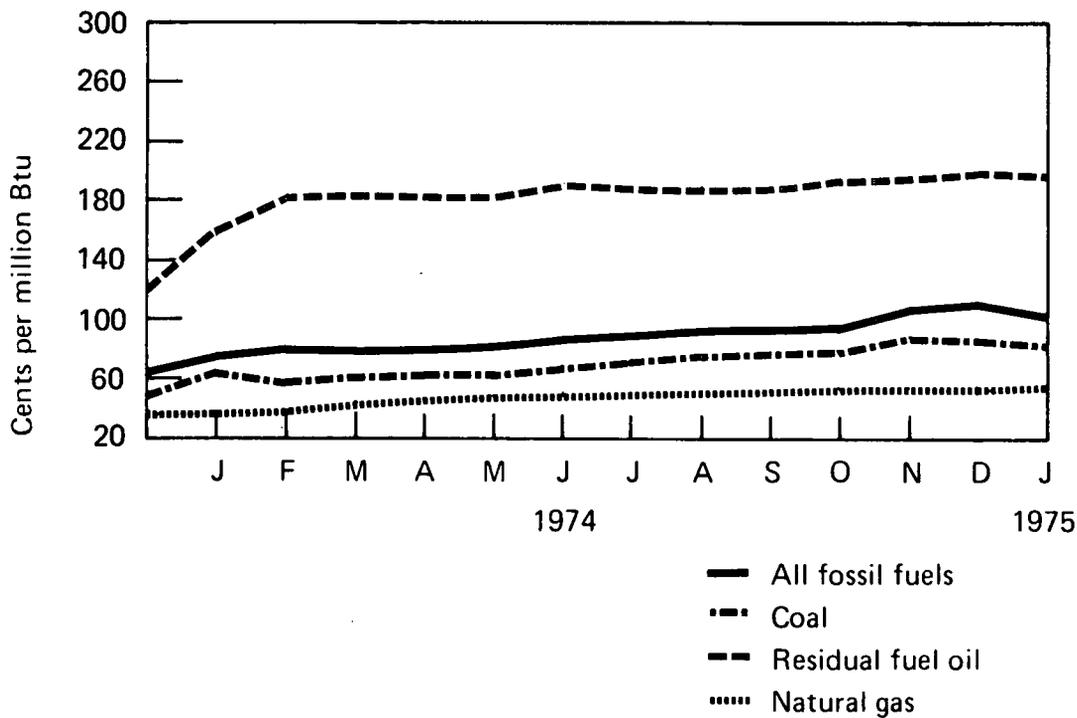
### All Fossil Fuels\*

Cents per million Btu

Region	1974												1975
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
New England	147.7	175.7	192.7	186.8	180.0	184.7	186.2	191.4	191.6	192.6	198.7	196.6	193.6
Middle Atlantic	111.6	129.0	123.9	124.9	124.2	137.6	144.7	147.8	137.5	139.1	170.7	181.6	145.2
East North Central	52.5	57.0	62.3	63.7	68.9	76.9	79.1	82.7	82.5	84.6	102.0	100.9	86.6
West North Central	47.8	40.5	36.5	42.4	43.9	47.2	45.3	50.3	51.0	50.0	60.0	63.3	63.5
South Atlantic	88.5	100.6	102.8	105.9	109.8	119.0	123.7	128.2	132.3	128.4	144.3	144.2	125.1
East South Central	46.0	52.4	54.1	54.4	58.3	62.5	65.7	68.2	69.7	75.2	86.7	86.4	79.4
West South Central	48.9	46.2	48.0	44.1	47.3	50.0	59.4	57.1	52.1	53.7	58.0	57.5	59.8
Mountain	43.7	48.1	42.7	43.1	36.3	40.3	45.0	46.8	45.0	47.8	45.8	46.8	54.6
Pacific	119.7	160.3	114.1	117.8	122.4	117.9	118.9	118.8	127.3	132.8	157.7	191.3	190.0
National Average	74.4	81.6	80.9	81.1	81.2	87.7	92.2	95.4	95.9	97.7	111.3	114.7	104.3

\*See Explanatory Note 13.

### National Average



**Coal**

Cents per million Btu

Region	1974												1975
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
New England	102.8	114.2	132.0	136.8	128.8	95.9	106.8	93.7	93.9	110.3	108.0	93.5	113.0
Middle Atlantic	60.2	69.5	73.1	80.8	79.3	88.6	94.3	97.4	95.2	94.6	117.4	114.4	99.1
East North Central	48.9	52.4	57.4	59.2	65.3	71.7	73.0	77.7	78.1	79.5	95.0	92.2	80.0
West North Central	36.7	36.3	37.7	41.0	41.7	42.0	44.0	48.3	50.5	48.7	57.0	56.0	56.7
South Atlantic	66.3	76.7	81.7	85.3	88.0	90.2	100.4	107.5	114.5	112.6	126.8	125.8	102.3
East South Central	43.3	49.8	51.6	52.7	54.2	57.9	57.7	61.6	64.1	69.7	77.8	80.7	76.3
West South Central	13.6	13.6	13.6	13.6	13.6	17.7	17.7	17.7	17.7	21.0	21.0	21.0	21.0
Mountain	25.9	26.8	26.1	26.7	24.9	25.7	25.0	25.1	25.1	26.7	28.3	26.4	27.9
Pacific	35.0	NA	35.1	35.3	35.6	35.5	37.8	38.3	39.0	38.5	38.6	38.5	38.4
National Average	51.4	56.9	60.8	64.0	65.8	69.5	72.9	77.3	79.1	80.9	90.3	88.9	80.9

**Residual Fuel Oil\***

Cents per million Btu

Region	1974												1975
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
New England	156.6	190.5	208.1	199.4	193.1	201.1	199.2	201.8	199.8	202.0	207.5	205.7	202.5
Middle Atlantic	186.5	208.1	212.2	196.0	208.6	207.7	208.6	204.5	200.7	205.4	205.7	211.5	202.7
East North Central	110.3	127.2	158.3	183.6	138.7	198.2	182.7	164.4	161.5	161.3	167.1	164.6	144.9
West North Central	160.0	154.8	169.1	178.2	160.9	179.3	152.7	178.1	182.6	179.5	190.7	190.6	189.6
South Atlantic	140.6	167.3	172.7	172.8	174.9	181.5	178.7	178.9	179.3	183.3	182.2	182.2	180.9
East South Central	112.5	132.2	136.0	153.0	164.9	171.5	169.6	172.6	173.9	171.8	167.9	172.0	174.0
West South Central	107.5	126.8	144.6	159.4	152.1	161.1	187.5	179.3	108.8	186.0	179.7	171.7	177.1
Mountain	159.2	174.9	172.1	174.1	194.4	199.2	176.2	179.0	186.7	185.0	185.1	180.0	192.3
Pacific	155.5	191.2	161.8	180.8	188.7	202.5	204.9	220.3	222.3	223.8	219.5	233.0	223.6
National Average	158.2	185.9	188.0	186.5	188.1	194.9	194.2	194.6	194.3	198.2	198.9	202.1	197.7

**Natural Gas\*\***

Cents per million Btu

Region	1974												1975
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN
New England	57.1	73.3	134.2	116.4	116.3	124.7	138.7	141.2	132.5	NA	NA	NA	NA
Middle Atlantic	64.2	72.7	72.4	59.5	59.3	77.3	85.2	74.2	80.5	64.8	70.0	64.3	86.1
East North Central	63.8	62.4	65.7	60.1	72.0	76.1	77.3	80.5	84.3	83.3	80.3	93.9	91.0
West North Central	35.7	38.0	39.5	41.2	41.8	41.7	42.1	43.3	43.8	43.0	44.8	42.3	43.6
South Atlantic	51.7	57.3	61.9	63.2	57.8	59.8	60.9	58.3	55.8	58.5	60.2	64.7	60.3
East South Central	45.5	48.1	47.7	50.7	50.5	52.8	63.3	58.9	71.2	74.3	76.9	87.8	76.2
West South Central	32.9	35.2	37.6	39.1	39.5	43.6	43.8	46.8	46.0	47.8	51.5	52.2	55.6
Mountain	47.9	54.5	48.4	48.3	48.8	49.2	50.8	49.5	52.1	55.7	56.6	70.7	66.9
Pacific	48.2	47.6	46.6	49.8	50.4	50.7	60.0	64.0	64.7	65.9	64.0	68.4	83.2
National Average	37.3	39.8	42.5	43.6	44.0	47.9	49.8	51.8	52.4	53.2	54.0	55.0	58.2

NA = Not Available.

\*See Explanatory Note 13.

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

Source: Federal Power Commission.

## Definitions

### Base Production Control Level

The total number of barrels of domestic crude petroleum produced from a particular property in the corresponding month of 1972.

### Ceiling Price

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

### Controlled Crude Oil

Domestically produced crude petroleum that is subject to the ceiling price for crude oil. For a particular property which is not a stripper-well lease, the volume of controlled oil equals the base production control level minus an amount of released oil equal to the new oil production from that property.

### Crude Oil Domestic Production

The volume of crude oil flowing out of the ground. Domestic production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

### Crude Oil Imports

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

### Crude Oil Input to Refineries

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

### Crude Oil Stocks

Stocks held at refineries and at pipeline terminals. Does not include stocks held on leases (storage facilities adjacent to the wells), which historically total approximately 13 million barrels.

### Dealer Tankwagon (DTW) Price

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

### Distillate Fuel Oil

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

### Domestic Demand for Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net increase in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies.

### Domestic Non-controlled Crude Oil

That portion of domestic crude oil production including new, released, and stripper oil which may be sold at a price exceeding the ceiling price.

### 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 purchase "old" oil. A refiner must purchase entitlements for the amount of "old" oil he processes in excess of the national "old" oil supply ratio, defined as total "old" oil purchases by refiners as a percent of total crude runs to stills.

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

### Jobber

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

**Jobber Margin**

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

**Jobber Price**

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

**Landed Cost**

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

**Line Miles of Seismic Exploration**

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

**Motor Gasoline Production**

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

**Motor Gasoline Stocks**

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

**Natural Gas Imports**

This is based on data collected by the Federal Power Commission from major interstate pipeline companies.

**Natural Gas Liquids**

Products obtained from natural gasoline plants, cycling plants, and fractionators after processing the natural gas. Included are ethane, liquified 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, kerosine, and distillate fuel oil.

**Natural Gas Marketed Production**

Gross withdrawals from the ground, less gas used for repressuring and quantities vented and flared. Gas volumes are reported at a base pressure of 14.73 pounds per square inch absolute at 60°F. Data are from Bureau of Mines and are collected from reports received from the Interstate Oil Compact Commission provided by State agencies.

**New Oil**

The volume of domestic crude petroleum produced from a property in a specific month which exceeds the base production control level for that property.

**Old Oil**

Same as controlled crude oil.

**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.

**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 Oil**

That portion of the base production control level for a property which is equal to the volume of new oil produced in that month and which may be sold above the ceiling price. The amount of released oil may not exceed the base production control level for that property.

**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 refiner fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

**Rotary Rig**

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

**Separative Work Unit (SWU)**

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

uranium feed and 3 kilograms of separative work units (3 SWU).

**Stripper Well Lease**

A property of which the average daily production of crude petroleum and petroleum condensates, including natural gas liquids, per well did not exceed 10 barrels per day during the preceding calendar month.

**Total Refined Petroleum Products Imports**

Imports of motor gasoline, naphtha-type jet fuel, kerosine-type jet fuel, liquified petroleum gases, kerosine, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, and asphalt. Imports of bonded bunkers, jet fuel, distillate and residual fuel oils for onshore military use, and receipts from Puerto Rico, the Virgin Islands, and Guam are based on data reported to the Oil Import Administration of FEA.

**Well**

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

## Explanatory Notes

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

2. 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 imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1975 electricity imports were estimated on the basis of imports levels during 1974.

3. Graphic presentations of petroleum volumetric data show Bureau of Mines (BOM) figures for 1973 through January 1975 and FEA (or API when noted) figures for February 1975 forward. FEA monthly data are based on the *Weekly Petroleum Statistics Report* which presents volumetric data on domestic petroleum receipts and imports for all refiners and bulk terminal operators, as well as production and stock levels for each major petroleum product.

Conceptually, the major difference between FEA and BOM data occurs in the "Stocks" series. Stock levels reported by FEA for the major petroleum products are higher than those reported by BOM, because the FEA series includes stocks of independent terminal operators not counted by BOM. Beginning in December 1974, however, BOM data reflect the inclusion of approximately 100 additional bulk terminals in the coverage of primary stocks, bringing the data base for the 2 series into closer agreement.

In the current issue, cumulative 1972, 1973, and 1974 petroleum data presented in the text are based on BOM figures. Discussions of cumulative 1975 data are based on BOM figures for January, FEA figures for February and March, and API figures for April.

4. Oil heating degree-days relate demand for distillate heating fuel to outdoor air temperature. Heating degree-days are defined as deviations of the mean daily temperature at a sampling station below a base temperature equal to 65°F by convention. Numerous

studies have shown that when the outside temperature is 65°, most buildings can maintain an indoor air temperature of 70° without the use of heating fuels.

Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration, Department of Commerce, from approximately 200 weather stations around the country. These data are used to calculate statewide heating degree-day averages based on population. The population-weighted State figures are aggregated into Petroleum Administration for Defense Districts and the national average, using a weighting scheme based on each State's consumption of distillate fuel oil per degree-day (1972 data base).

5. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this volume do not include amounts utilized at refineries for blending purposes in the production of finished products, principally gasoline. Consumption of NGL at refineries for this purpose has remained at a fairly constant level since 1972 of around 700,000 - 850,000 barrels per day. NGL domestic demand statistics do incorporate, however, some liquefied gases produced at refineries (LRG) which are used for fuel and petrochemical feedstocks. The NGL production and stock series reported in this volume include only those liquids obtained from or held as stocks at natural gas processing plants and do not incorporate minor quantities of these liquids produced and/or held as stocks at refineries.

6. Bituminous coal and lignite consumption data reported by the Bureau of Mines are derived from information provided by the Federal Power Commission, Department of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

7. 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.

8. 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<sub>3</sub>O<sub>8</sub>. After the conversion stage, the units of measure are either metric tons (MT) of UF<sub>6</sub> or metric tons of

uranium (MTU). The latter designation expresses only the elemental uranium content of  $UF_6$ .

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

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

The electrical energy produced by a plant is expressed either as megawatt hours (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 megawatt hours), multiply the average power level (in megawatts) by the number of hours during that period.

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

10. Mileage estimates for 1974 and 1975 were derived by multiplying the monthly seismic crew counts by the average number of miles traversed per crew month in 1973.

11. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected truck stops plus additional retail gasoline dealers that sold diesel fuel. Consequently, diesel fuel prices for January 1975 forward are not exactly comparable to prior data. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.

12. 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. The estimated landed cost of imported crude petroleum from selected countries does not represent the total cost of all imported crude. Imported crude costs to U.S. company-owned refineries in the Caribbean are not included in the landed cost, and costs of crude petroleum from countries which export only small amounts to the U.S. are also excluded.

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

# Units of Measure

## Weight

1 metric ton                    *contains*                    1.102 short tons

## Conversion Factors for Crude Oil

### Average gravity

1 barrel (42 gallons)                    *weighs*                    0.136 metric tons  
(0.150 short tons)

1 metric ton                    *contains*                    7.33 barrels

1 short ton                    *contains*                    6.65 barrels

## Conversion Factors for Uranium

1 short ton (U<sub>3</sub>O<sub>8</sub>)                    *contains*                    0.769 metric tons of uranium

1 short ton (UF<sub>6</sub>)                    *contains*                    0.613 metric tons of uranium

1 metric ton (UF<sub>6</sub>)                    *contains*                    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                    5.517 million Btu/barrel

Gasoline                    5.248 million Btu/barrel

Jet fuel, average                    5.592 million Btu/barrel

Naphtha-type                    5.355 million Btu/barrel

Kerosine-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                    4.031 million Btu/barrel

### Natural gas

Wet                    1,093 Btu/cubic foot

Dry                    1,021 Btu/cubic foot

### Coal

#### Bituminous and lignite

Production                    24.01 million Btu/short ton

Consumption                    23.65 million Btu/short ton

Anthracite                    25.40 million Btu/short ton

## Electricity Conversion Heat Rates

### Fossil fuel steam-electric

Coal                    10,176 Btu/kilowatt hour

Gas                    10,733 Btu/kilowatt hour

Oil                    10,826 Btu/kilowatt hour

Nuclear steam-electric                    10,660 Btu/kilowatt hour

Hydroelectric                    10,389 Btu/kilowatt hour

Electricity Consumption                    3,412 Btu/kilowatt hour

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