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Feature Article

SHORT-TERM ENERGY SUPPLY AND DEMAND FORECASTING AT FEA

by

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INTRODUCTION

The Consumption section of the *Monthly Energy Review* has presented, since the April 1975 issue, graphic displays and discussions comparing actual and forecasted demand for petroleum products. This article is intended to provide a thorough description of the Federal Energy Administration's short-term supply and demand forecasting methodologies and the application of the methods to petroleum products, coal, and natural gas.

The Federal Energy Administration Act of 1974 (Public Law 93-275) requires FEA to establish and maintain short-term assessments of fuel supply and demand. The essential purposes in developing such short-term assessments are to:

1. Forecast the size and extent of fuel shortages due to short-term disruptions in fuel markets; and to
2. Provide a timely forecast of the impact upon fuels supply and demand of changes in the basic assumptions underlying the forecasts, including, in particular, those which would be the result of proposed new government policies.

The need for rapid revisions in the fuels supply and demand forecasts has required the use of mathematical and statistical procedures designed to simulate important characteristics of fuels markets. Such procedures are termed short-term forecasting "models."

From the beginning of FEA the development of short-term forecasting models has been ongoing by the agency. Previous to this time little work had been done on such models due to data constraints and technical problems involved in forecasting short-term movements in fuels supply and demand. The development of forecasting models at FEA necessitated the adoption of many entirely new procedures, resulting in added precision to short-term fuels supply and demand forecasting and associated policy analysis.

SHORT-TERM VERSUS LONG-TERM ANALYSIS

Generally, a "short-term" forecast refers to a projection of no more than 2 years into the future. For a number of reasons, short-term energy forecasts utilize different procedures than longer-term forecasts, such as those of

the *Project Independence Report*.¹ For example, an important element in assessing short-term fuel sufficiency is the month-to-month variation in fuel requirements due to weather and other seasonal factors. Seasonality is much less important when forecasting many years or decades into the future. In the near-term, a disruption in the current supplies of a fuel can be compensated for by withdrawals from fuel inventories. Accordingly, an analysis of short-term fuel sufficiency must consider the level of, and policies associated with, fuels held in storage, factors that are of much less importance in long-term analyses.

Another example of the basic differences involved in developing a short- versus long-term forecast is in the availability of alternative fuels.² In the short-term, the ability to redirect the national pattern of distribution and consumption of alternative fuels is highly constrained as compared to longer periods when fuel consumption technology can be significantly changed. As a result, inter-fuel substitution receives far less emphasis in short-term forecasting than it does in long-term forecasting. Finally, the current rate of fuels production, or more particularly, the upper limit on current fuels production, may be treated essentially as an invariant in the short-term. The adjustments in production in response to economic or other incentives take place over a relatively long time interval.

THE BASIC FUELS FORECASTING MODEL

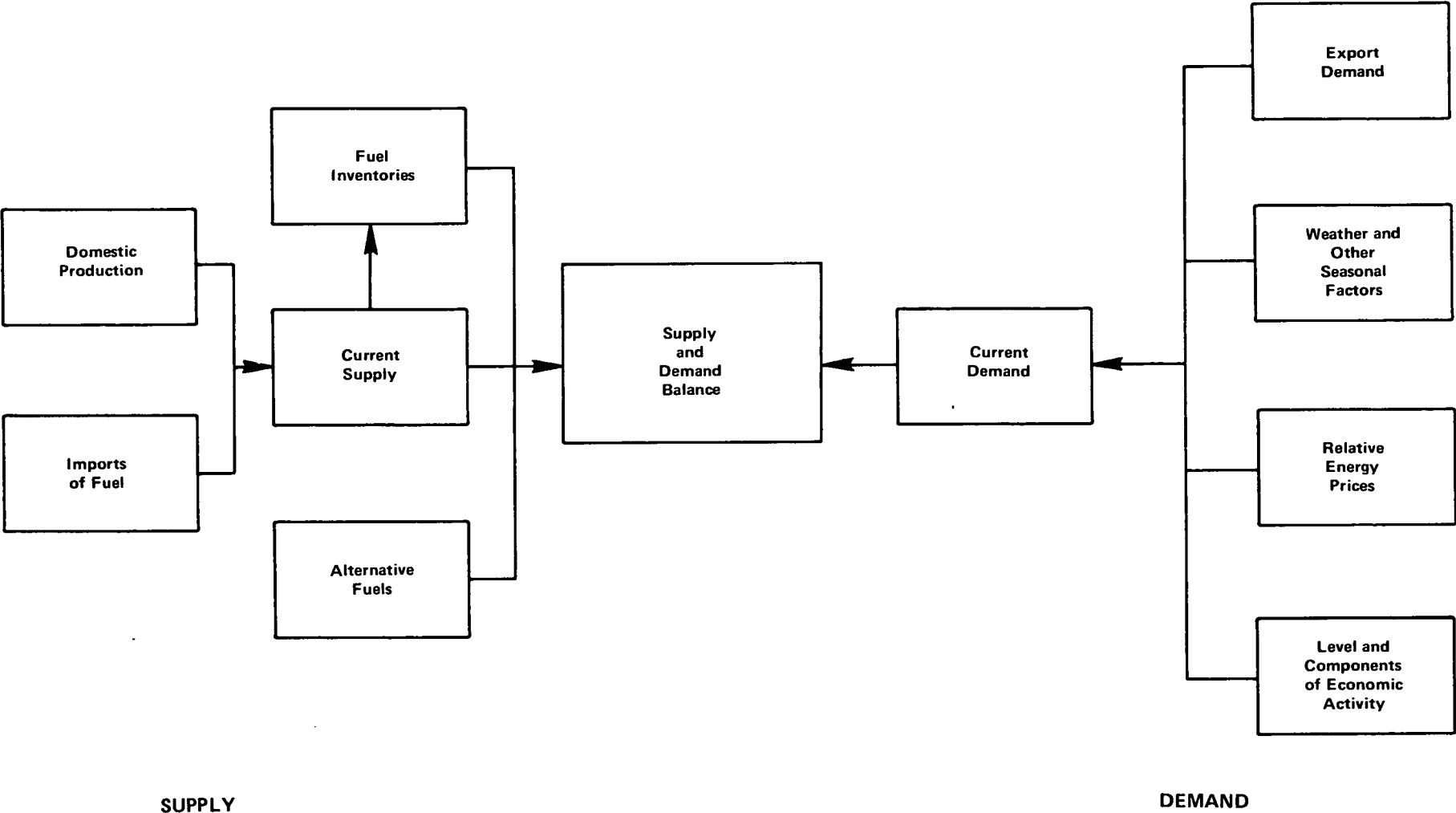
The elements of a short-term fuels forecasting model are illustrated in Figure 1. The basic procedure is to determine the demand for a fuel by assessing the important short-term factors that influence demand, such as:

- weather and other seasonal factors,
- relative energy prices,
- the level and components of economic activity, and
- fuels exports.

¹*Project Independence Report*, Federal Energy Administration, November 1974.

²A given fuel consumer may be able to use more than one fuel type. Often, such users can compensate for the reduced availability of one fuel by using more of another.

Figure 1. Basic Fuels Short-Term Supply and Demand Forecasting Model



The corresponding current supplies are determined by estimating the following:

- current domestic production,
- fuels stock levels and associated inventory policies, and
- fuels imports.

If constraints upon the market (such as an oil embargo and/or fuel price controls) imply an imbalance in current supply and demand, then the availability of, and ability to use, alternative fuels within the existing technology may be included in the analysis.

Short-term fuels forecasting models may differ according to type of fuel because of the characteristics of the various fuels markets. Examples of these characteristics may be inventory patterns among producers, intermediate suppliers, and end-users that may differ from fuel to fuel. These short-term fuel forecasting models may also differ because of particular policy issues and decisions that are incorporated in the forecasts. For example, determining the geographic distribution of shortages due to an oil embargo would require a different kind of analysis than determining the national level of fuel imports as influenced by price changes. These considerations, as well as the constraints upon the modeling procedures because of data availability and processing limitations, explain the significant differences in the short-term forecasting models now being used for petroleum products, coal, and natural gas.

THE SHORT-TERM SUPPLY AND DEMAND FORECASTING MODEL FOR PETROLEUM PRODUCTS

Due to the Arab oil embargo during the winter of 1973-74, the initial efforts for constructing a short-term fuels forecasting model were directed toward petroleum products. The essential elements of the petroleum product supply and demand forecasting model are illustrated in Figure 2.

The immediate requirement of the short-term petroleum product supply and demand forecast was to determine the size and geographic distribution of future petroleum product "short-falls" due to the reductions in imports of crude oil and petroleum products. The focus was then to design a forecasting model that would incorporate the factors influencing the geographic distribution of supply and the procedures for estimating demand. With respect to supply, it was necessary to account for:

- Alternative "yield patterns" available to refineries which determine the mix of petroleum products produced from a barrel of crude oil;
- Ability to transport crude and products from one geographic region to another; and

- Size and geographic distribution of inventories of crude and products, and the constraints on using the inventories to increase current supply.

Demand could be forecasted as the previous year's consumption with adjustments for (potential) differences in the weather, economic activity, and consumption trends.

Estimates of petroleum product requirements were developed for eight petroleum products based upon the historical relationship between fuel consumption and weather, other seasonal factors, and economic activity. At the same time a comprehensive supply model was developed. For each geographic region this model selected: Refinery yield patterns, production rates, inventory policies for crude and the eight product categories, interregional transfers of crude and products, and import rates of crude and products. The model's selection was constrained to values observed in the past and assumptions about import reductions due to the embargo. The criterion of selection was to minimize product shortages.³

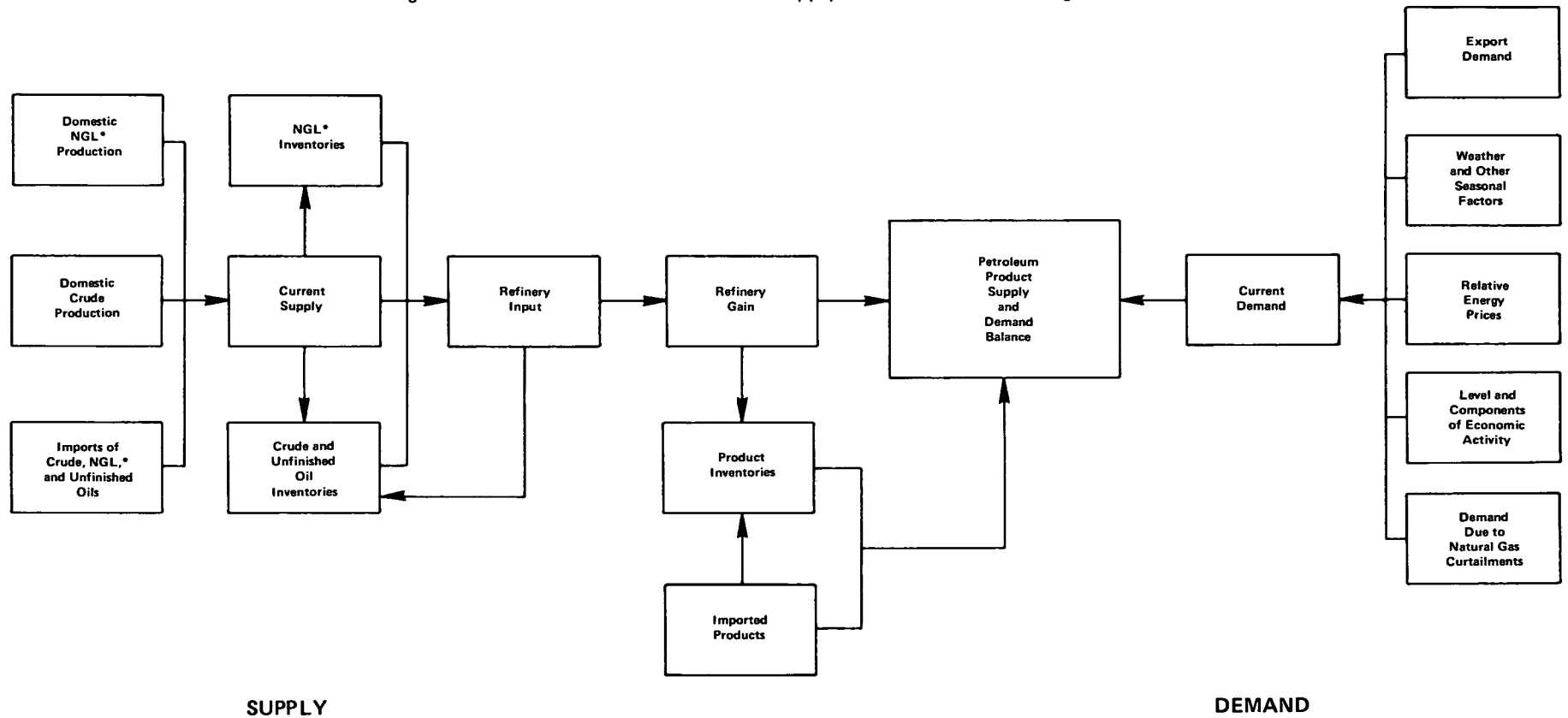
Following the end of the embargo, the emphasis of policy analysis was shifted to a consideration of the overall level of petroleum imports (sufficient to satisfy demand), in contrast to the previous emphasis on the geographic distribution of supply and demand. In particular, many policy options were developed with the intent of curtailing demand. The intent was to reduce dependence upon imports of crude oil and refined petroleum products through imposition of taxes, fees, tariffs, and changes in fuels regulatory practices. This new emphasis required a complete, detailed procedure for estimating the effect of energy price changes upon the demand for petroleum products.

Initially, price effects were determined separately and were imposed upon the simple demand relationships. The price elasticities⁴ used were based on a review of the existing literature and the price elasticities determined by the longer-term analysis conducted for Project Independence. It was first assumed that adjustments in demand due to higher prices would occur over a 9-month period. (That is, the full effects of a permanent, one-time price change were represented by an adjustment time profile lasting 9 months.) Then the time profile of short-term price effects was extended from 9

³The evolution and use of the petroleum model has been documented in a number of technical reports. The most recent report is *National Petroleum Product Supply and Demand: 1975*, Technical Report 75-5, Office of Policy and Analysis, Quantitative Methods, FEA, March 25, 1975.

⁴Price elasticities is defined as the percentage change in quantity demanded due to a 1-percent change in price.

Figure 2. Petroleum Product Short-Term Supply and Demand Forecasting Model



*Natural Gas Liquids

months to 2 years, and linked to the 3-year price effects determined for the PI. Eventually, completely new demand forecasting equations were estimated. These equations provided estimates of price effects determined simultaneously with other factors, in contrast to previous models in which price effects were determined separately. The current demand forecasting procedures continuously account for price effects over whatever time frame selected for the analysis.

An important insight gained from the evolution of the short-term petroleum supply and demand forecasting model is that its usefulness extends beyond providing a single, accurate forecast of future supply and demand. The model also provides a vehicle to assess the impact that alternative energy policies (most of which are never initiated) could be expected to have on supply and demand. The short-term petroleum supply and demand forecasting model has been intensively utilized in these policy analysis processes.

THE SHORT-TERM SUPPLY AND DEMAND FORECASTING MODEL FOR COAL

The coal supply and demand forecasting model was developed to determine the impact of a possible coal miners' strike in November 1974 upon coal supply. The essential elements of the coal forecasting model are illustrated in Figure 3. The forecasting procedures were designed to assess: (1) the immediate impact that strike-related production curtailments would have on coal deliveries, (2) the degree to which coal inventories could be used to augment current supplies, (3) the alternative fuel requirements necessitated by reduction in coal receipts, and (4) the expected production loss for coal-dependent industries, such as coking plants. The forecasting model was tailored to these particular requirements rather than designed as a complete simulation of market behavior (such as the petroleum forecasting model).

The coal forecasting model focuses upon the inventory holdings of coal. Relationships between sectoral (end-user) coal consumption and the level of economic activity are determined nationally. These relationships are disaggregated with respect to Census regions based upon historical shares; adjustments are made to projected consumption rates to reflect recent changes in coal consumption patterns not embodied in the historical data. The forecasts of current receipts are compared to the end-user demand forecasts. Any deficit is projected as satisfied by withdrawals from coal inventories, when feasible. (A surplus of receipts over forecasted demand is added to coal inventories.) Coal inventory holdings were measured both in tons and in

"weeks supply remaining," the latter measure determined by the demand forecast for each class of end-user. Sustained curtailments of current receipts will eventually deplete the supplies available to some industrial consumers. In such instances, the model reports the percent of "production lost" due to the deficiency.

Current coal receipts in each region are estimated on the basis of production rate forecasts by mining district, and the historical pattern of the sources of end-user coal receipts by mining district. This representation of the coal supply system denotes far less flexibility than the petroleum model supply system which further incorporates choices among regional production rates and yield patterns, interregional transfers of fuels, and regional import patterns.

The demand forecasting relationships for coal are similarly less sophisticated than the revised demand relationships for petroleum which are carefully documented with the effect of price changes during a given time period.

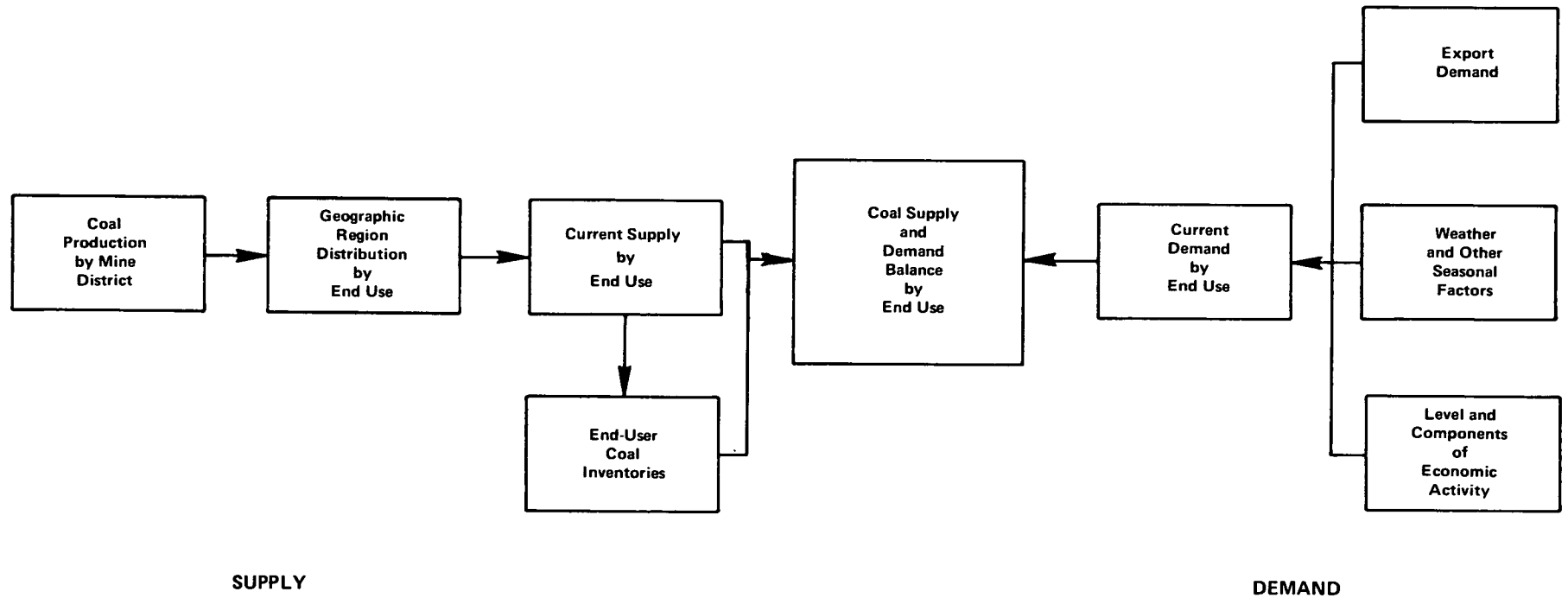
The coal forecasting model can be used to assess the capacity for coal users to withstand sharp, short-term reductions in coal production under a number of alternative scenarios. For example, in the coking industry, it would be expensive and disruptive actually to shut down coking ovens for lack of coal. Therefore, such plants tend to reduce coal consumption to minimal levels when delivery curtailments are expected rather than continue operating at full capacity until supplies are depleted. Because demand scenarios derived from the behavior of such users prior to and during previous strike periods revealed conservation practices, the model forecasted a longer period for which coal inventory holdings were considered adequate.

Generally, the coal forecasting model is capable of showing an evaluation of coal supply sufficiency for any demand scenario and production rate scenario. The FEA coal forecasting model is scheduled to be expanded during FY 1976 to include other factors, such as price effects and the impact that environmental standards have on coal consumption.

THE SHORT-TERM NATURAL GAS SUPPLY AND DEMAND FORECASTING MODEL

Production of natural gas has declined over the past several years, and at the same time, because of the relative price increases and environmental pollution problems of other fuels, natural gas has become an increasingly desirable fuel. However, because of the regulation of natural gas prices in interstate markets, gas prices do not reflect these changing supply/demand

Figure 3. Coal Short-Term Supply and Demand Forecasting Model



situations. Consequently, there is not sufficient natural gas to satisfy the economic propensity to consume it.

Although natural gas is in "short" supply in the economic sense, gas users until recently have not been seriously affected by the so-called "shortage." Predictions of supply deficiencies, termed "curtailments," are regularly made for the interstate pipelines by the Federal Power Commission (FPC). (A survey of end-user curtailments is now underway at FEA.) Recognition of these potential supply reductions is sometimes embodied in the contractual arrangements under which natural gas is purchased. Another factor which complicates the meaning of the natural gas "shortage" is Federal and State priorities for the disposition of natural gas "curtailments." Also to be considered is that supplementary gaseous fuel supplies (such as propane and synthetic natural gas) may be available to distributors or end-users to offset the pipeline curtailments of natural gas.

The elements of a natural gas supply and demand forecasting model, therefore, must embody many non-market forces that affect current consumption. For example, if the relationship is assessed between gas consumption by residential and commercial users and weather variations, an intuitive result is achieved: as the weather becomes colder, more fuel is consumed. However, the same relationship can not be assessed for gas consumed by electric utilities because it is generally found that nationally *less* gas is consumed as the weather becomes colder. Although the latter relationship reflects normal market behavior for the warmer areas of the United States where air-conditioner use causes the peak demand period for natural gas in the summer, in other areas, reductions of natural gas deliveries during the winter heating season are the direct result of regulatory practices. Under the priority system for allocating natural gas supplies, the needs of residential and commercial customers are generally satisfied first. As these needs increase with colder weather (or other peak demand periods), the volume of gas remaining for other users, such as utilities, tends to decline. The so-called "interruptible" gas service specifically provides for reduction in contracted deliveries when required by the regulatory priorities. (In fact, under the current priority system, "firm" contract holders also continue to face the possibility of delivery reductions.) The need to combine the impact of regulatory practices with the familiar economic propensities is a complexity in the development of the natural gas forecasting model.

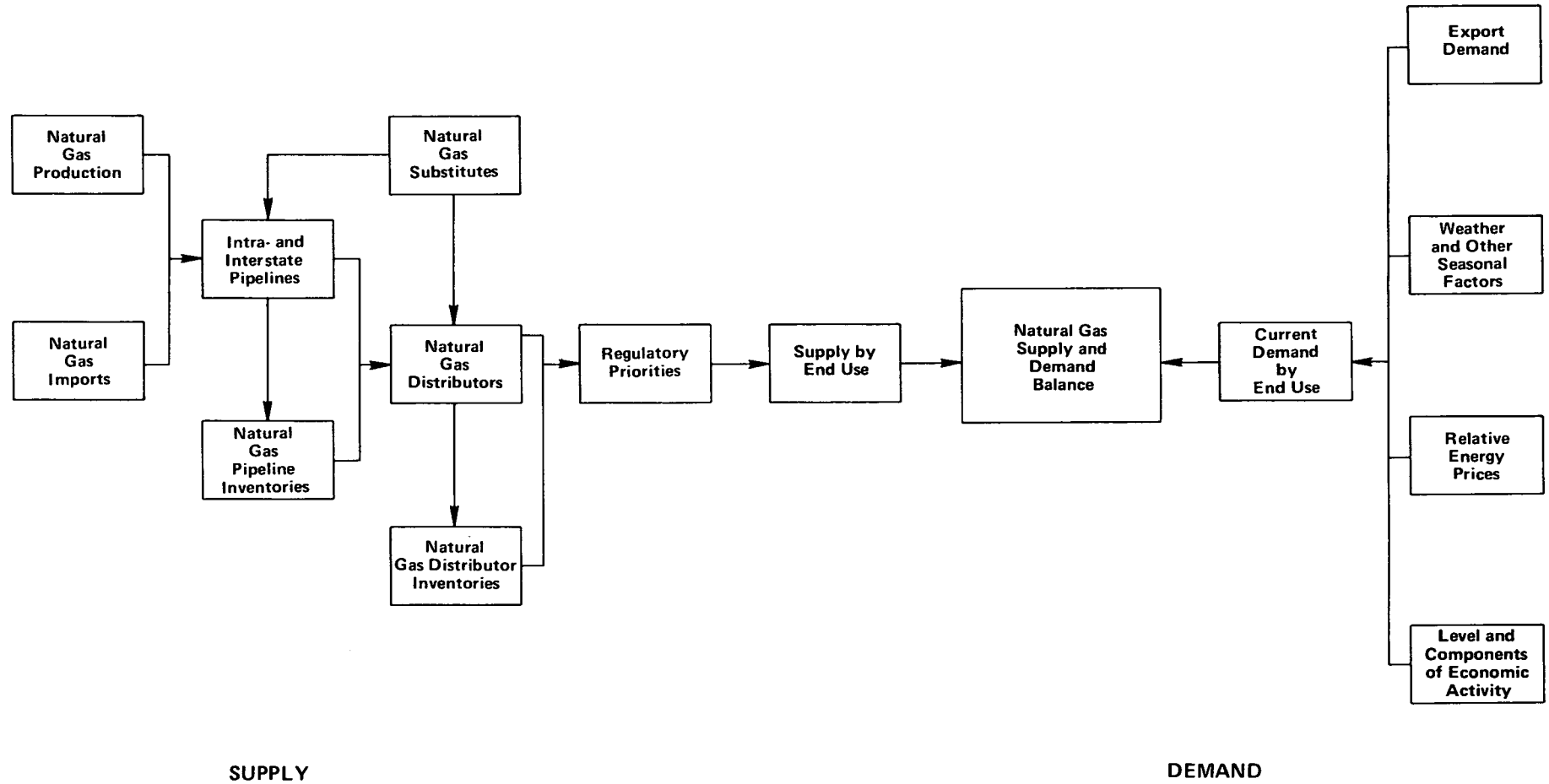
The essential elements of the natural gas forecasting model are illustrated in Figure 4. The initial model focuses upon projections of natural gas supply sufficiency in the coming winter quarters (fourth quarter of 1975 and first quarter of 1976). Due to the complexities of the natural gas markets as described, initial forecasts

are being prepared to measure the incremental change in supply sufficiency for this year by comparing with last year's supply sufficiency. Data collected by FPC and FEA, together with extrapolations of recent trends in natural gas production and distribution, will provide an estimate of expected changes in gas receipts on a State-by-State basis. For natural gas demand, an econometric analysis has been conducted to determine the influence of weather and economic activity upon gas consumption. The incremental demand of this year over last year's demand is then calculated assuming normal weather this year versus actual weather last year (projections for a severe weather assumption have also been made), and forecast economic activity this year versus actual economic activity last year. In combination, the incremental supply and demand projections comprise a forecast of "incremental shortfall" for the coming winter quarters. The forecast of incremental changes in supply and demand leaves unresolved the quantification of gas shortages already experienced last year. However, a careful identification of where gas supply deficiencies may be even more acute this year is an important first step in forecasting natural gas supply and demand and the need for alternative fuels. More complete forecasting procedures will be available shortly which incorporate such variables as inventory policies, the split between inter- and intra-State gas supplies, gas transmission and distribution systems, and augmentation of gas supplies with supplemental fuels.

THE INTEGRATED SHORT-TERM SUPPLY AND DEMAND FORECASTING MODEL

The supply and demand forecasting models for petroleum, coal, and natural gas have been developed separately in response to different policy analysis requirements. As a consequence, an accurate assessment of the structure of short-term interfuel substitution possibilities and propensities has not been addressed explicitly. The alternative fuel possibilities associated with a supply and demand scenario for a given fuel are generally considered apart from the forecasting model on a case-by-case basis. For example, estimates of the increase in demand for petroleum due to last winter's curtailments of natural gas supplies were determined on the basis of data gathered by the FPC and other sources. The expected demand increments were then added to the demand for petroleum (in particular, distillate and residual fuels) as determined by the forecasting model. The emphasis of future model development efforts will be increasingly centered upon a careful accounting of short-term fuel substitution possibilities and propensities. Analytic and data collection efforts are underway in support of an integrated short-term forecasting model. Fuel consumption patterns in industry and electric utilities are of special importance to the new modeling efforts.

Figure 4. Natural Gas Short-Term Supply and Demand Forecasting Model



The short-term fuel supply and demand forecasting procedures developed by FEA have made important contributions to the policy analysis process. The procedures are continuously improved to support a growing universe of policy analysis concerns and to provide accurate assessments of short-term national energy supply and demand.

Overview

Production of primary energy in the United States totaled 4.909 quadrillion Btu in August, up 1.4 percent from the July level. Had it not been for the wildcat strike of the Appalachian coal miners, the increase would probably have been in the range of 3 to 4 percent. Coal production "lost" due to the walkout was estimated at 4 to 5 million tons. For the first 8 months of 1975, domestic energy output was 4 percent below the similar period of 1974. Natural gas showed the sharpest decline (8 percent), while crude oil output was down more than 5 percent. Together, these two fuels accounted for two-thirds of total energy production during the 8-month period. Coal, which comprised one-fourth of total production, showed no change from last year. Combined nuclear and hydroelectric power output posted the largest increase (12 percent), but these two energy sources contributed only 8 percent to total output.

Imports of fossil fuels have increased steadily since May and in August averaged 7.0 million barrels per day of crude oil equivalent (or 40.8 trillion Btu per day). To meet the gap in crude oil requirements resulting from declining production and higher summertime demand for transportation and utility fuels, crude imports rose 8 percent during the month. Refined product imports remained essentially unchanged from July, while natural gas imports were expected to increase about 3 percent. In the first 8 months of 1975, the United States imported 1 percent less fuel than during the same period of 1974 and almost 5 percent less than this period in 1973.

The Bureau of the Census reported that the principal sources of crude oil imports in August were Nigeria (16.5 percent) and Canada (14.7 percent). Saudi Arabia, Indonesia, and Venezuela each contributed about 11 percent of the total. All OPEC countries accounted for 78 percent while Arab OPEC countries accounted for 33 percent, compared with 58 percent and 26 percent, respectively, in 1973.

Interstate pipeline companies reporting to the Federal Power Commission (FPC) have projected that curtailments of "firm" natural gas requirements for the 12-month period, April 1975 through March 1976, will be 2.9 trillion cubic feet, or 19.4 percent of firm requirements. This is a 45-percent increase over curtailments for the previous 12 months, which amounted to 2.0 trillion cubic feet (13.6 percent of firm requirements), about half of which occurred during the winter heating season (November 1974 through March 1975). Curtailments for the coming heating season are estimated at 1.3 trillion cubic feet, 30.1 percent higher than last year.

However, because distributors have supplementary gas supplies from liquefied petroleum gases or from under-

ground storage facilities, estimated pipeline curtailments are not an absolute indicator of actual future supply deficiencies to end users. FPC and FEA have prepared a joint questionnaire to obtain detailed information on end-user natural gas curtailments. A report based on questionnaire responses is expected in October.

Consumption of energy in the United States in July increased seasonally to 183 trillion Btu per day, 2 percent above the average daily rate in June. Consumption for the first 7 months of the year was about 2 percent below the same months in 1974 and 4 percent below this period in 1973.

Stocks of all oils exhibited normal seasonal patterns in August. Crude oil inventories were drawn down 6.3 million barrels (2.5 percent) and represented 19.1 days of supply. Distillate fuel stocks showed a seasonal buildup of 13 percent to 207.5 million barrels. Motor gasoline, jet fuel, and residual fuel oil inventories were virtually unchanged from the previous month, and the amount of each inventory was equivalent to approximately 30 days of supply.

Electric utilities produced 3 percent more power in August 1975 than in August 1974, while output for the period January through August was only 2 percent above the level for the corresponding period in 1974. Last year the electric utilities' production gain was less than 1 percent, far below the average annual growth rate of 7.2 percent experienced over the previous decade. Utility fuel requirements for the first 7 months of 1975 differed significantly from a year ago. Consumption of natural gas dropped 12 percent. To compensate for this decline, utilities consumed 1 percent more oil and 2 percent more coal. Also, output from nuclear power sources was expanded by 66 percent over the 12-month period.

Gasoline prices continued to rise in August. The average national selling price advanced 0.5 cent to 59.2 cents per gallon. This was the smallest increase since March and was well below the 3.1-cent advance posted last month.

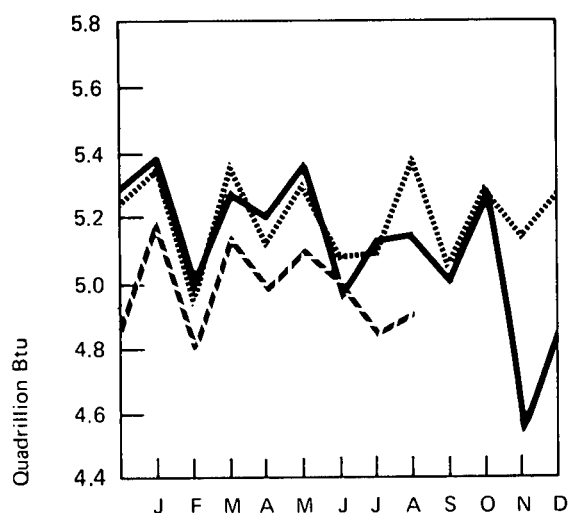
Based on FEA data, 5.9 billion gallons of gasoline were sold through service stations in June, up 5 percent from average daily sales in May. (Approximately two-thirds of all gasoline sold to end users in the United States is distributed through service stations.) No changes were reported for aggregate market shares, with nonbranded independents accounting for 9.7 percent of the total, branded independents, 75.5 percent, and refiner-marketers, 14.8 percent.

The average wellhead price of "new" domestic crude oil was \$12.30 per barrel in July, up 57 cents from the previous month. This was the largest monthly increase since December 1973 during the Arab oil embargo.

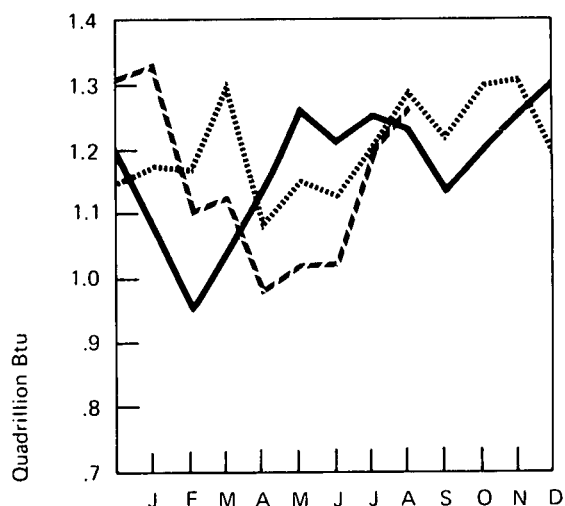
Exploration activity for oil and gas in August remained well ahead of levels experienced last year. An average of 1,645 rotary rigs were engaged in drilling for petroleum, the highest August rig count since 1962. Well completions during the month totaled 2,981, 9 percent more than in August 1974, and 55 percent more than for the same month in 1973.

Total world production of crude oil in July was 54.2 million barrels per day, up 1.2 million barrels from June. Most of the increase came from Arab OPEC countries which boosted their production 1.0 million barrels per day to 16.8 million barrels. The amount of production shut-in by these countries was reduced by 3.6 percentage points to 31.9 percent.

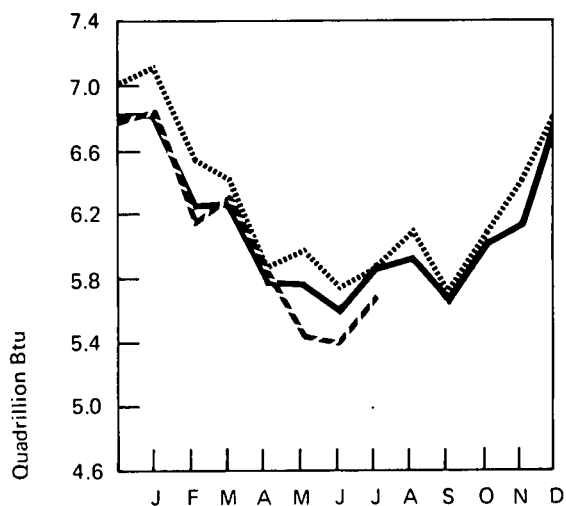
Domestic Production of Energy*



Imports of Fossil Fuels



Domestic Consumption of Energy**



*See Explanatory Note 1.

**See Explanatory Note 2.

..... 1973
 ————— 1974
 - - - - - 1975

CRUDE OIL

Domestic crude oil production in August totaled only 8,238,000 barrels per day, as output from the country's older fields continued to decline. Production for the 3-month period, June through August 1975, was 442,000 barrels per day less than that for 1974, while during the last 12-month period, the monthly decline in production averaged 37,000 barrels per day.

In order to meet the summertime high demand for transportation and utility fuels, and certain specialty items such as asphalt, refinery runs continued to rise. Input to refineries (including an estimated 500,000 barrels per day of miscellaneous liquids) averaged 13,597,000 barrels per day during August and represented 90 percent of operable capacity.

With crude oil production down and refinery runs up, August 1975 crude imports reached 4,671,000 barrels per day, twice the 1973 pre-Arab embargo level.

Stocks of crude oil, which fell slightly to 250,669,000 barrels, were equivalent to 19 days of crude oil input to refineries, slightly less than in August 1974, but approximately the same as during August 1973.

TOTAL REFINED PETROLEUM PRODUCTS

Seasonal trends in petroleum consumption increased demand for refined petroleum products in August to 15,962,000 barrels per day. Product demand for June through August 1975 was 0.6 and 5.6 percent less than for the same periods in 1974 and 1973, respectively, while per capita demand, was down 1.5 and 7.1 percent, respectively.

Refined product imports remained essentially unchanged from July. Import requirements are not expected to increase substantially until the high-demand heating season begins in late fall.

NATURAL GAS LIQUIDS

Domestic demand for natural gas liquids in June was 19.6 percent below the level for the same month in 1974. (June 1974 was an abnormally high month for the summer, however.)

Demand during the first half of 1975 averaged 1,303,000 barrels per day, representing a drop of 7.7 percent from the first half of 1974.

Production of natural gas liquids declined 3.0 percent from the first half of 1974. June production was down 4.0 percent.

Imports for the first half of the year were 13.2 percent below those reported for the corresponding period in 1974.

Because domestic demand and refinery use of NGL declined at a greater rate than production, June stocks, including both those at processing plants and refineries, reached an all time high for the month of 125,215,000 barrels (6.2 percent above June 1974).

NATURAL GAS

Marketed production of natural gas was estimated to be 1,650 billion cubic feet in August and 13,429 billion cubic feet for the first 8 months of 1975. Both figures were 7.8 percent below those reported for the corresponding periods last year.

Imports of natural gas were down 1.3 percent from the first 8 months of 1974.

Domestic producer sales to interstate pipeline companies showed the largest decline for the 8-month period, falling 19.5 percent below sales during the first 8 months of 1974.

COAL

Production of bituminous coal and lignite in August was 49.3 million tons. Had it not been for the wildcat strike of the Appalachian coal miners which began mid-August, production would have been 4 to 5 million tons higher. No comparison can be made with last August due to the 5-day miners' "memorial holiday" which occurred during the third week of that month and resulted in a production loss of about 5 million tons.

July domestic consumption of coal was 2.3 percent lower than July 1974. Consumption by the electric utility sector was essentially the same as last July, but the other consuming sectors used 10.6 percent less coal during the month.

Coal exports in July declined for the second consecutive month after increasing January through May. Exports were also 13.1 percent below July 1974.

End-of-July coal stocks exhibited a seasonal decline of 4.7 percent during the month but remained about 3.0 percent above levels of a year ago.

Crude Oil

		Crude Input to Refineries		Domestic Production		Imports		Stocks*	
		In thousands of barrels per day						In thousands of barrels	
		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	8,432	8,622	3,797	3,758	253,623	249,476
	October	12,286	12,430	8,616	8,651	3,810	3,936	256,430	255,003
	November	12,332	12,402	8,569	8,458	3,958	3,997	258,123	256,271
	December	12,519	12,671	8,514	8,471	3,869	3,979	252,158	248,808
1975	January	12,297	12,442	8,439	8,644	4,029	3,964	258,163	253,836
	February	12,135	12,144	8,575	8,488	3,828	4,061	264,348	264,833
	March	11,905	11,961	8,476	8,333	3,656	3,853	267,564	271,410
	April	11,803	11,837	8,440	8,567	3,378	3,416	269,294	275,393
	May	11,983	11,985	8,371	8,464	3,486	3,493	263,336	274,123
	June	12,417	12,421	8,409	8,344	3,905	3,907	262,873	268,564
	July		R13,002		R8,304		R4,337		R256,965
	August		**13,097		**8,238		**4,671		**250,669

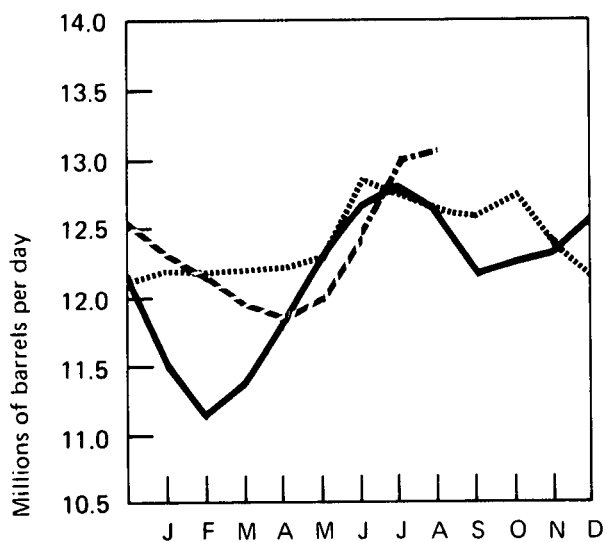
*See definitions.

**Preliminary data.

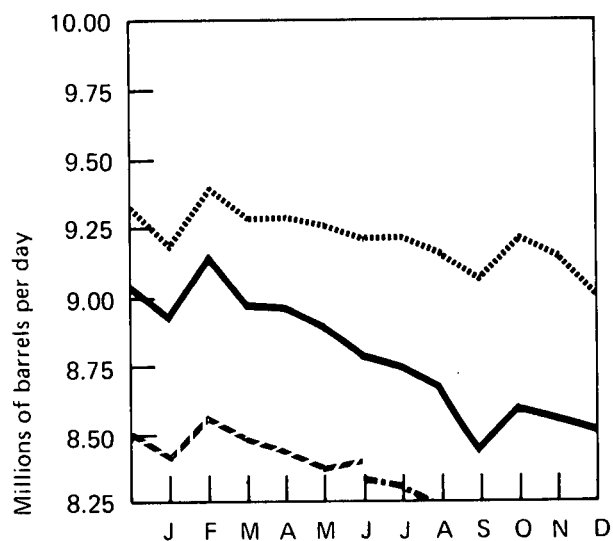
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

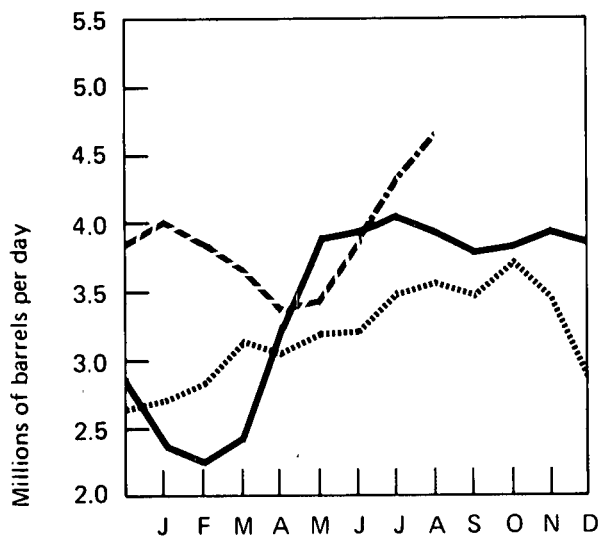
Crude Input to Refineries*



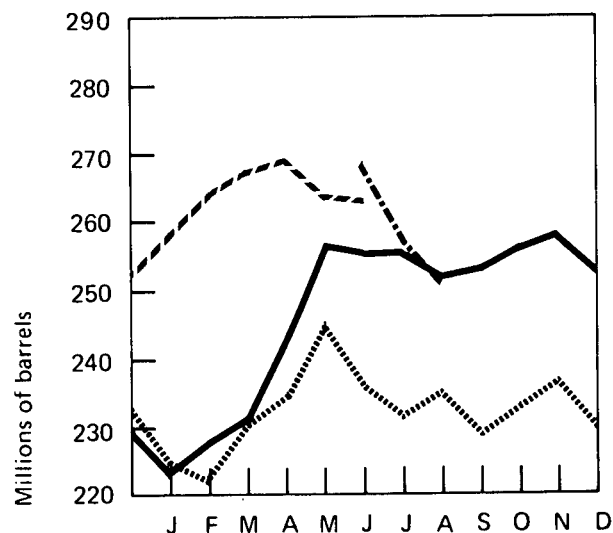
Domestic Production*



Imports*



Stocks*



*See Explanatory Note 3.

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

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	18,112	2,811	2,484
	February	17,248	17,370	2,348	2,138
	March	16,316	16,567	2,074	1,920
	April	16,041	16,105	1,655	1,810
	May	15,118	15,306	1,690	1,776
	June	15,611	15,688	1,502	1,602
	July		R15,880		R1,875
	August		**15,962		**1,872

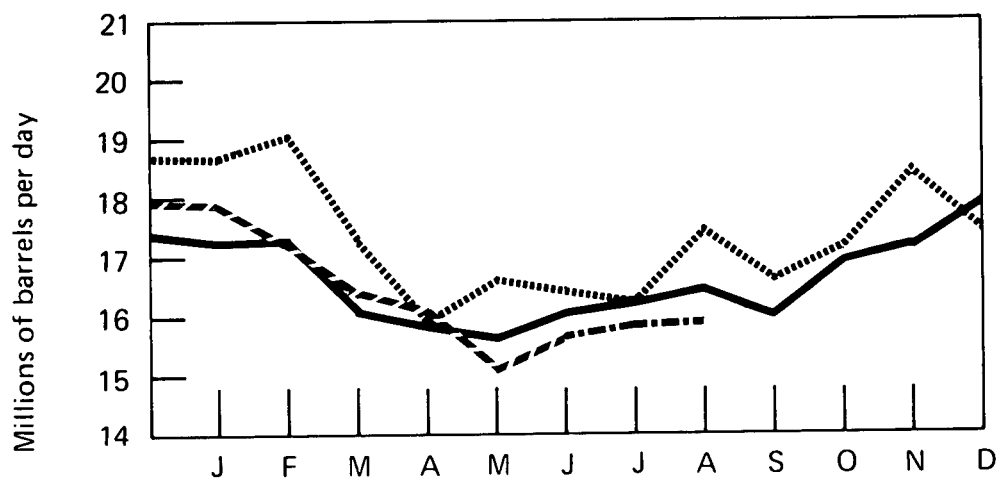
*See definitions.

**Preliminary data.

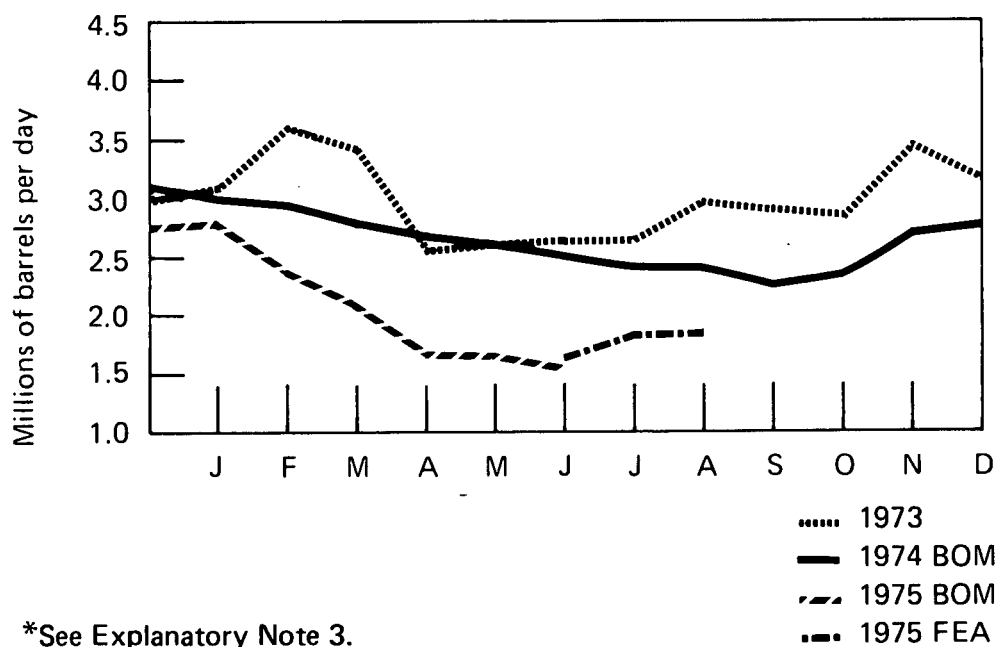
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

Domestic Demand*



Imports*



*See Explanatory Note 3.

Motor Gasoline

		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	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	
1973	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	
1974	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	224,719	227,363
1975	January	6,206	6,228	6,509	6,574	262	203	242,285	244,425
	February	6,096	6,205	6,276	6,279	171	168	251,915	251,189
	March	6,326	6,408	6,070	6,068	150	146	248,685	245,181
	April	6,718	6,574	6,046	5,997	133	127	232,556	231,542
	May	6,871	6,855	6,126	6,063	142	135	213,947	211,183
	June	7,076	6,951	6,669	6,622	177	156	207,114	205,713
	July		R6,957		R6,992		R167		R211,942
	August		**7,090		**6,807		**277		**211,739

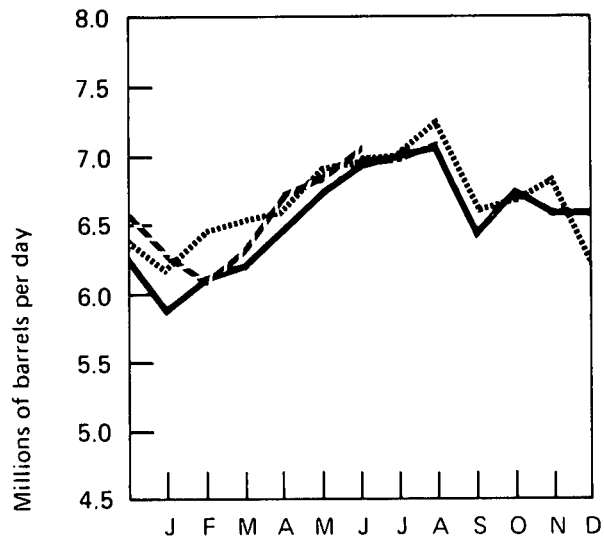
*See definitions.

**Preliminary data.

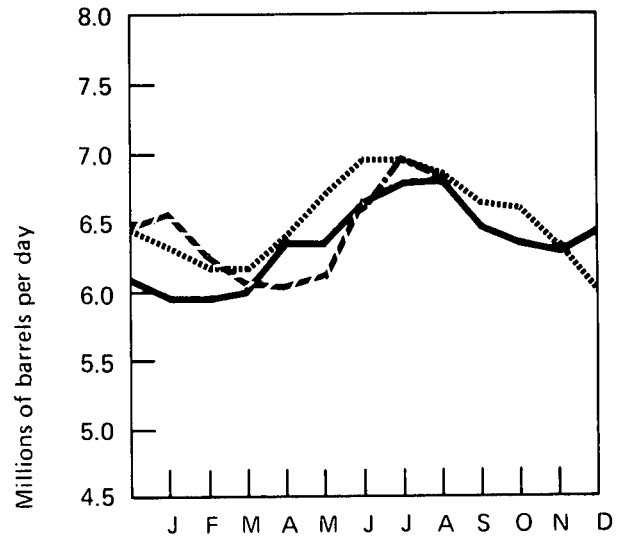
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

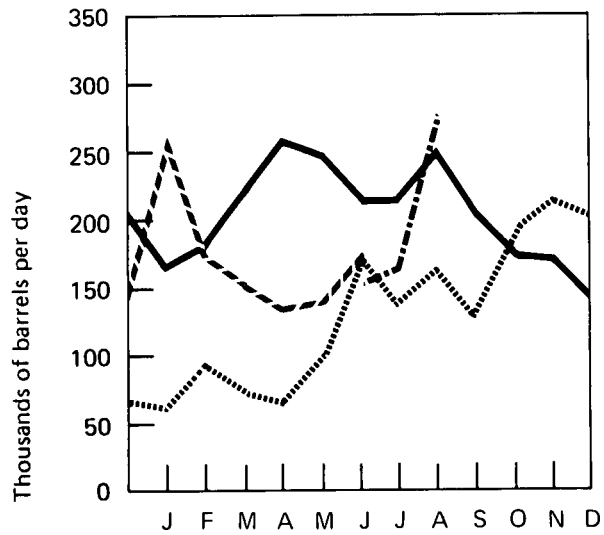
Domestic Demand*



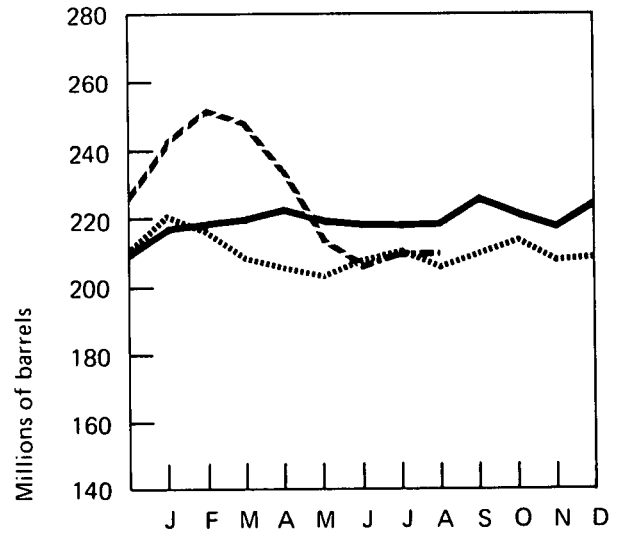
Production*



Imports*



Stocks*



*See Explanatory Note 3.

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

Jet Fuel

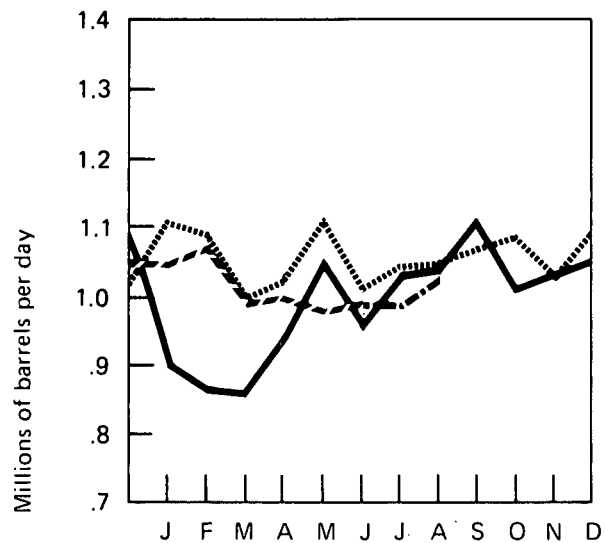
		Domestic Demand		Production		Imports		Stocks	
				In thousands of barrels per day				In thousands of barrels	
		BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
1972	January	1,021		784		179		25,857	
	February	1,141		900		220		25,230	
	March	1,008		906		167		27,147	
	April	986		877		124		27,568	
	May	999		887		159		28,885	
	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	
1973	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	
1974	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	29,776	30,957
1975	January	1,041	1,001	831	847	229	164	30,321	31,221
	February	1,075	1,032	835	849	200	167	29,133	30,641
	March	982	1,018	896	892	130	136	30,456	30,906
	April	1,006	1,034	864	863	138	212	30,263	32,083
	May	977	996	861	857	133	124	30,719	31,587
	June	989	996	839	837	106	112	29,337	30,122
	July		984		880		106		R30,167
	August		*1,032		*953		*108		*31,045

*Preliminary data.

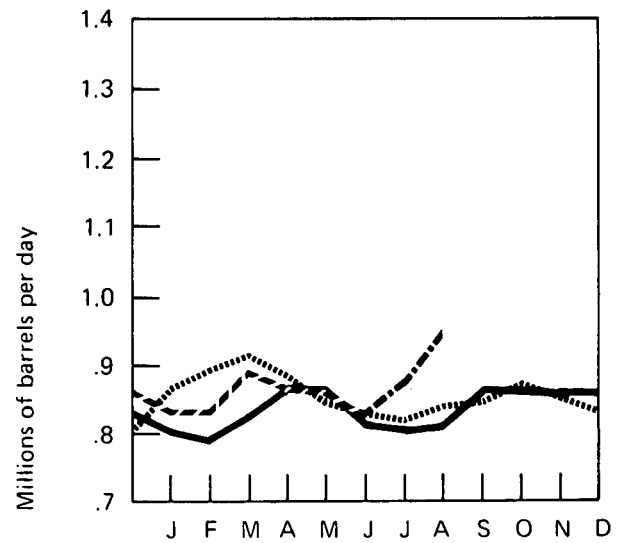
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

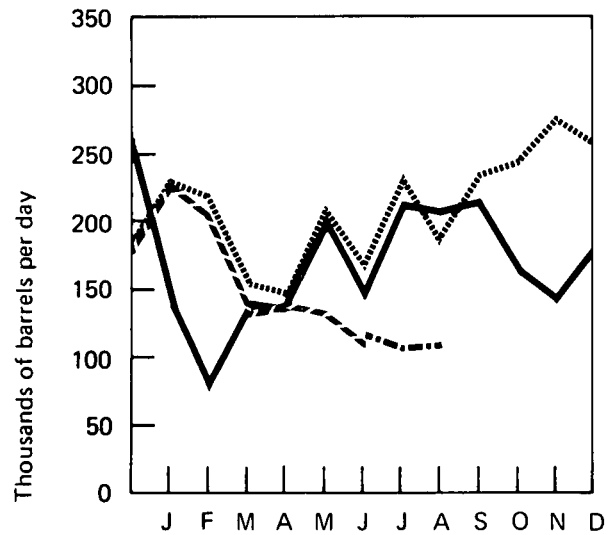
Domestic Demand*



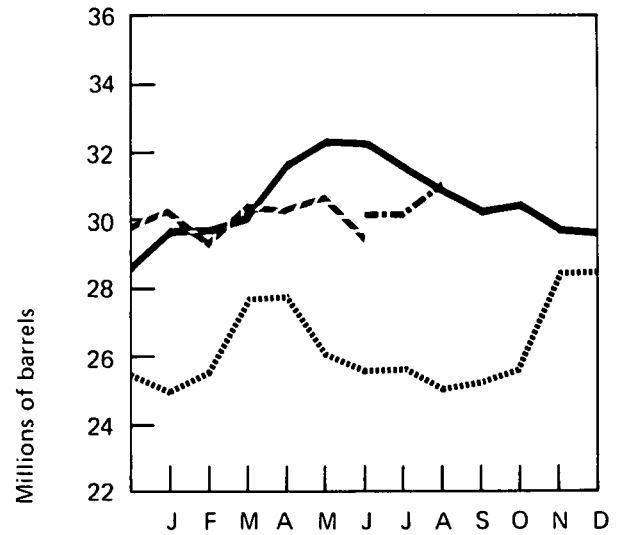
Production*



Imports*



Stocks*



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

*See Explanatory Note 3.

Distillate 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	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	
1973	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	
1974	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	223,717	227,877
1975	January	3,953	4,055	2,852	2,954	324	350	199,715	204,576
	February	3,967	4,004	2,679	2,707	302	295	176,696	176,530
	March	3,293	3,460	2,531	2,614	256	217	161,111	156,980
	April	3,094	3,103	2,486	2,532	110	131	146,214	143,714
	May	2,382	2,435	2,431	2,496	136	144	152,027	150,068
	June	2,266	2,272	2,574	2,639	68	74	163,306	163,252
	July		R2,147		R2,659		124		R182,975
	August		**1,951		**2,653		**91		**207,496

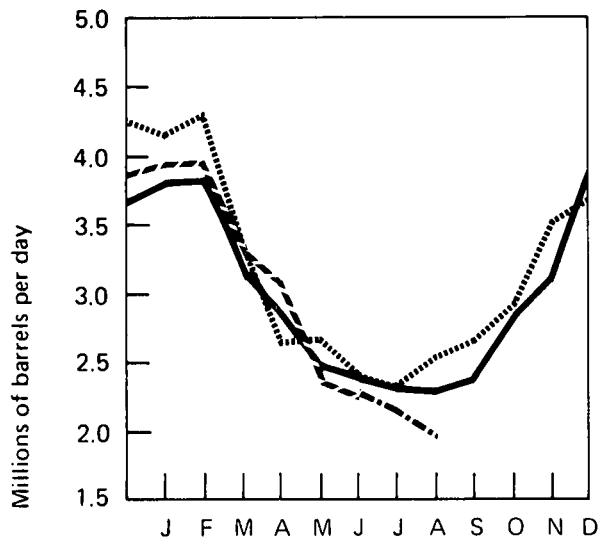
*See definitions.

**Preliminary data.

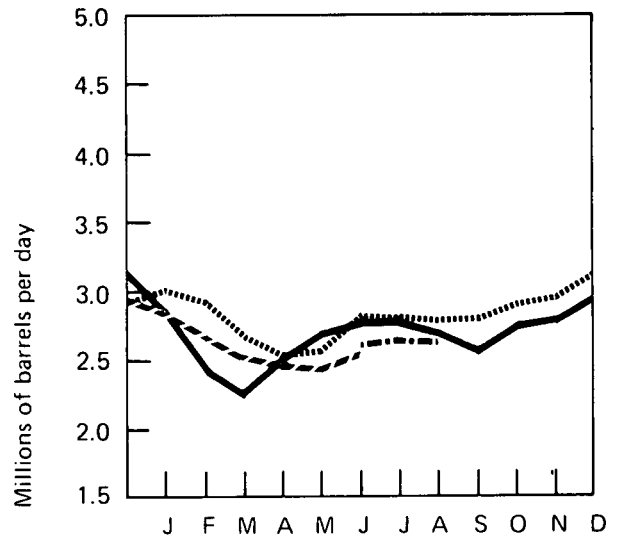
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

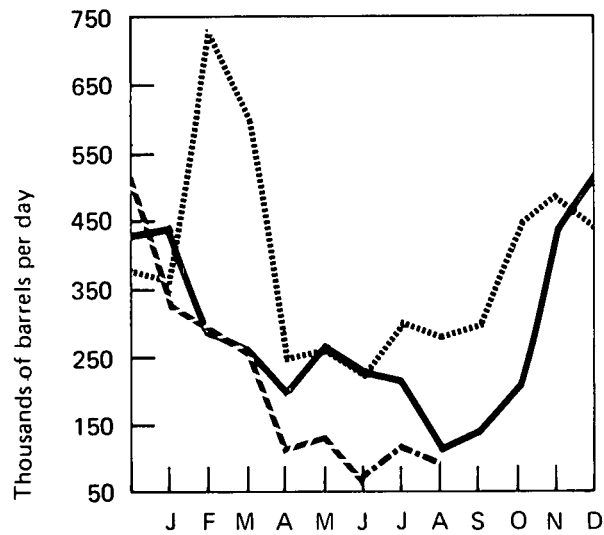
Domestic Demand*



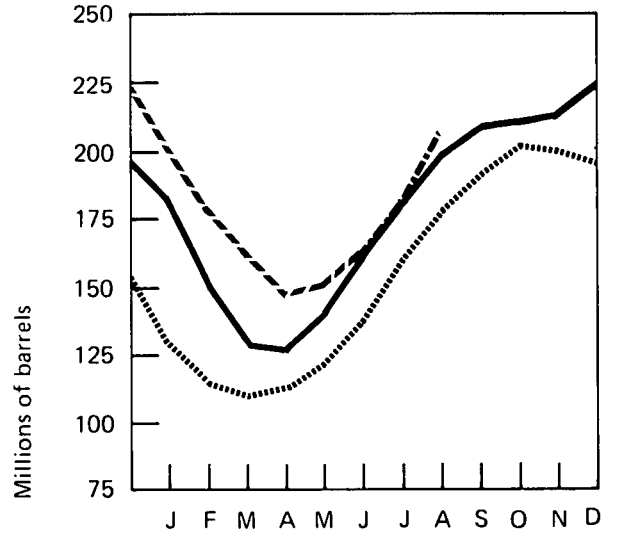
Production*



Imports*



Stocks*



*See Explanatory Note 3.

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

Residual Fuel Oil

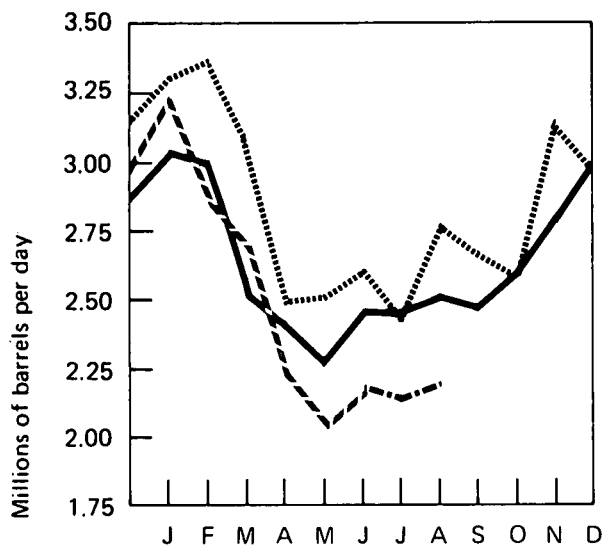
		Domestic Demand		Production		Imports		Stocks	
				In thousands of barrels per day				In thousands of barrels	
		BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
1972	January	2,815		924		1,892		59,440	
	February	3,171		963		1,923		50,891	
	March	2,682		828		1,926		51,566	
	April	2,444		739		1,676		49,425	
	May	2,111		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	74,939	74,521
1975	January	3,242	3,103	1,415	1,399	1,647	1,529	60,233	68,628
	February	2,849	2,723	1,354	1,304	1,402	1,308	66,495	65,061
	March	2,668	2,589	1,299	1,244	1,292	1,252	64,148	61,891
	April	2,225	2,184	1,245	1,204	1,047	1,069	66,340	64,121
	May	2,049	1,909	1,151	1,113	1,123	1,068	73,498	72,088
	June	2,179	2,201	1,152	1,118	904	953	69,660	67,641
	July		R2,141		R1,160		1,110		R71,358
	August		*2,211		*1,143		*1,044		*70,436

*Preliminary data.

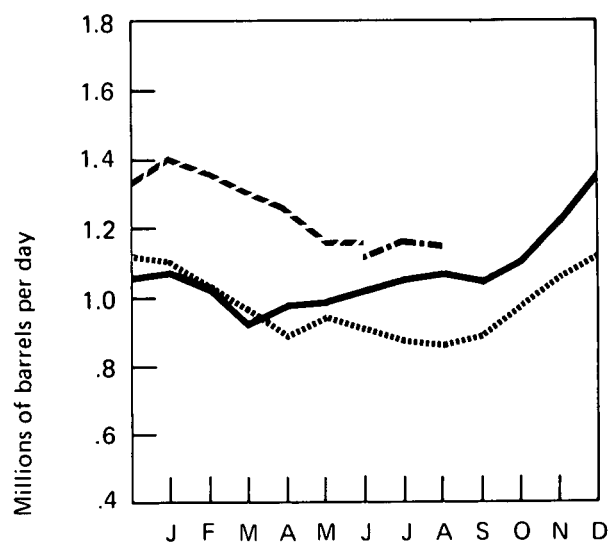
R=Revised data.

Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

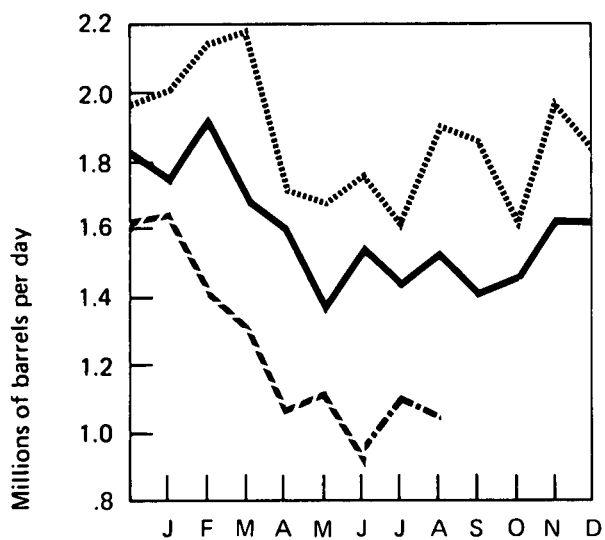
Domestic Demand*



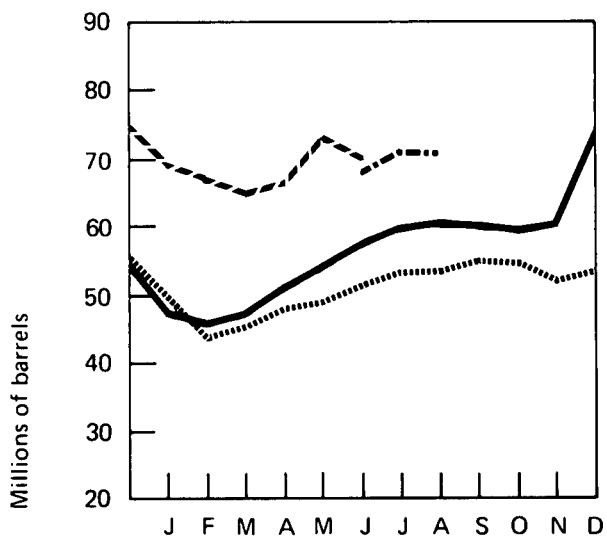
Production*



Imports*



Stocks*



*See Explanatory Note 3.

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

Natural Gas Liquids

		Domestic Demand*	Production*		Used at Refineries*	Imports	Stocks*
			At processing plants	At refineries			In thousands of barrels
			In thousands of barrels per day				
1972	January	1,746	1,705	339	832	196	R82,805
	February	1,752	1,747	359	842	182	R73,170
	March	R1,416	1,768	360	811	186	R73,438
	April	1,181	1,769	361	775	R119	R79,754
	May	R996	1,737	364	791	147	R91,512
	June	1,114	1,734	361	795	134	R99,556
	July	1,121	1,731	372	794	141	R107,330
	August	R1,244	1,739	369	791	164	R112,246
	September	1,244	1,751	359	835	R169	R116,184
	October	1,525	1,769	345	869	202	R111,983
	November	1,768	1,757	336	917	R222	R100,130
	December	1,946	1,721	350	866	231	R84,243
1973	January	1,994	1,680	361	839	R312	R68,792
	February	1,857	1,745	359	836	312	R60,606
	March	1,407	1,734	378	790	260	R63,873
	April	1,299	1,750	373	733	201	R71,266
	May	1,270	1,739	421	733	R217	R80,650
	June	1,149	1,727	388	757	163	R89,433
	July	1,109	1,737	410	849	199	R99,631
	August	1,281	1,748	390	858	R240	R105,068
	September	1,297	1,741	370	833	206	R110,002
	October	1,499	1,756	377	835	249	R109,639
	November	1,703	1,774	331	876	286	R104,192
	December	1,607	1,729	338	842	R232	R98,940
1974	January	R1,778	1,699	327	794	R304	R91,210
	February	1,593	1,728	337	777	294	R90,145
	March	1,408	1,741	341	720	224	R94,817
	April	1,321	1,696	353	690	215	R101,352
	May	R1,180	R1,690	340	678	182	R110,881
	June	1,242	1,684	368	718	R199	R117,915
	July	1,187	1,657	364	723	163	R125,427
	August	1,221	1,676	361	742	163	R131,675
	September	R1,360	1,638	348	738	R166	R133,215
	October	1,493	1,686	330	788	200	R130,557
	November	1,596	1,694	301	795	199	R124,447
	December	1,692	1,670	286	796	230	R114,295
1975	January	1,708	1,630	307	756	257	R105,400
	February	1,512	1,646	296	734	R181	R100,945
	March	1,404	1,658	280	731	178	R99,168
	April	1,242	1,635	273	667	176	R100,408
	May	R1,002	1,607	299	628	97	R112,737
	June	798	R1,646	323	659	166	125,215

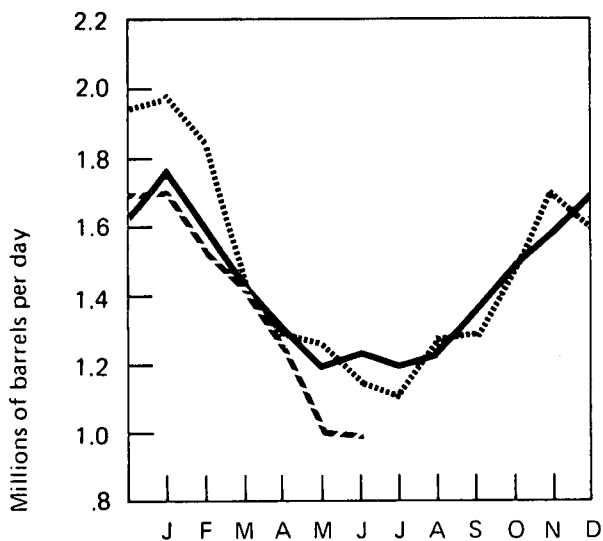
*See Explanatory Note 4.

**Preliminary data.

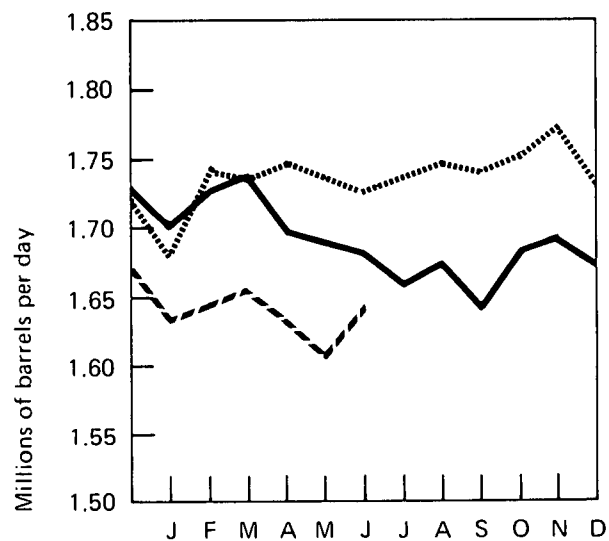
R=Revised data.

Source: Bureau of Mines.

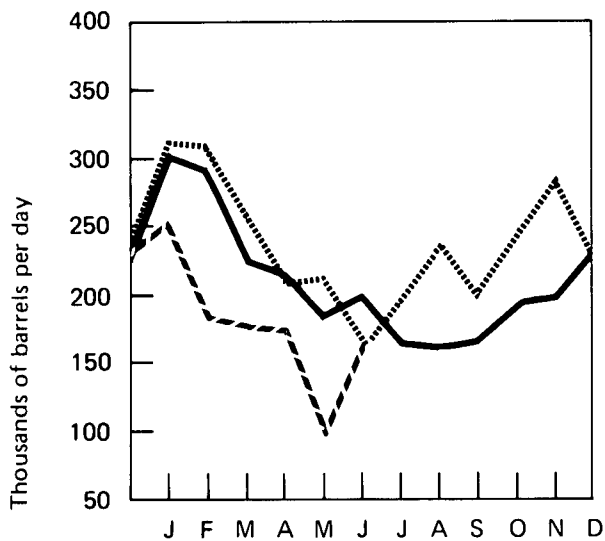
Domestic Demand



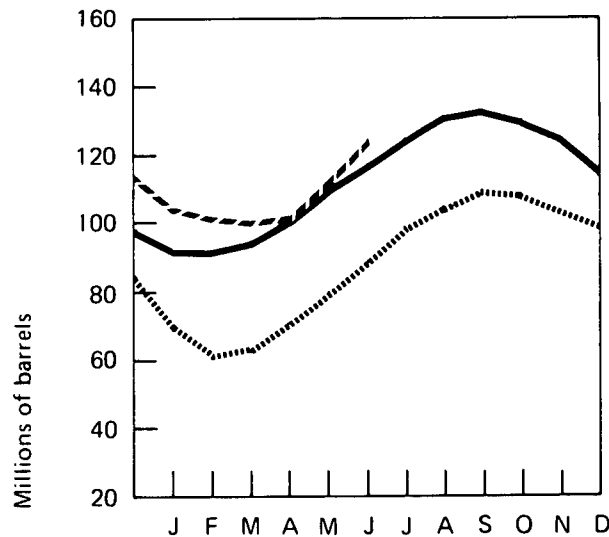
Production at Processing Plants



Imports



Stocks



..... 1973
 ————— 1974
 - - - - - 1975

Natural Gas

		Marketed Production	Domestic Producer Sales to Major Interstate Pipelines	Imports
		In billion cubic feet		
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	1,929	1,033	86
	February	1,759	941	79
	March	1,886	1,027	85
	April	1,793	987	83
	May	1,846	981	80
	June	1,740	928	74
	July	1,818	947	74
	August	1,790	932	76
	September	1,755	871	70
	October	1,767	936	83
	November	1,729	921	82
	December	1,790	959	87
1975	January	1,771	950	81
	February	1,635	867	75
	March	1,733	948	83
	April	1,669	906	83
	May	R 1,681	898	81
	June	R * 1,630	859	R 78
	July	** 1,660		R ** 73
	August	** 1,650		** 75

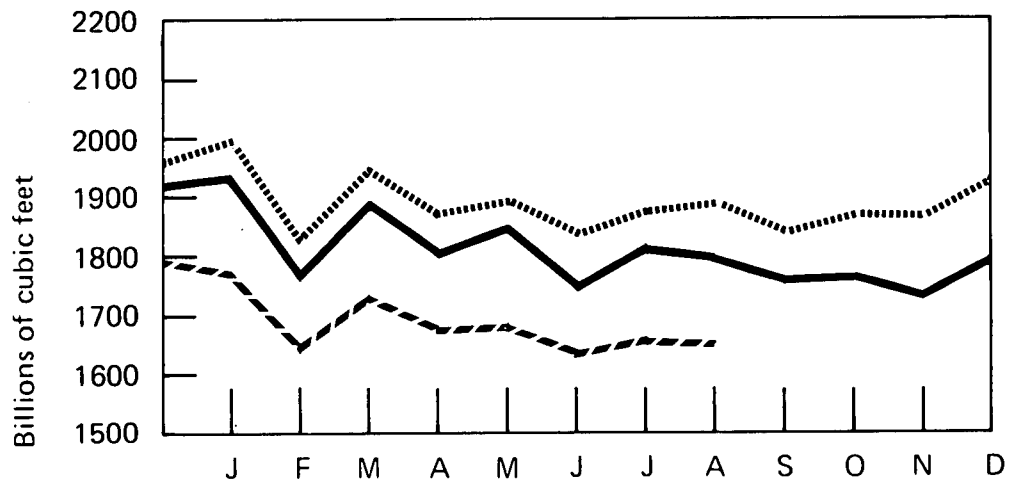
*Preliminary data.

**Projected data.

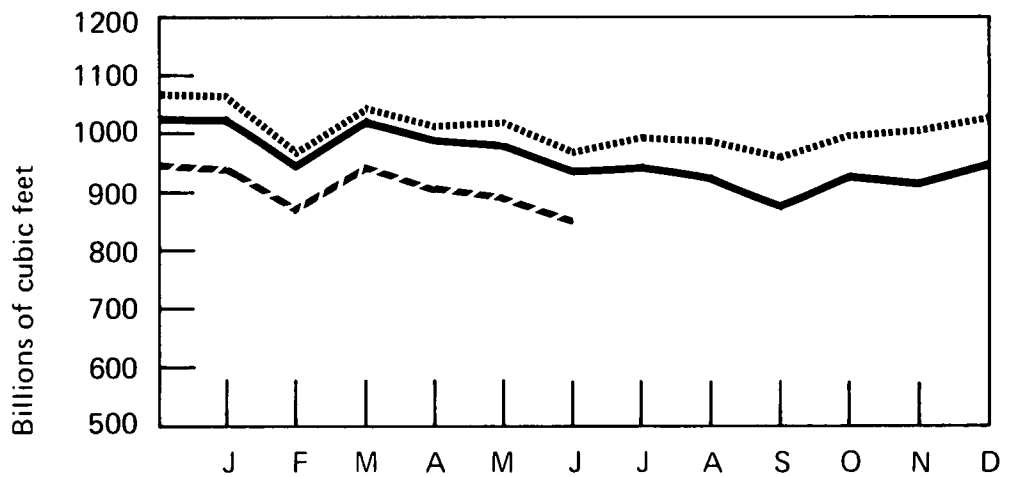
R=Revised data.

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

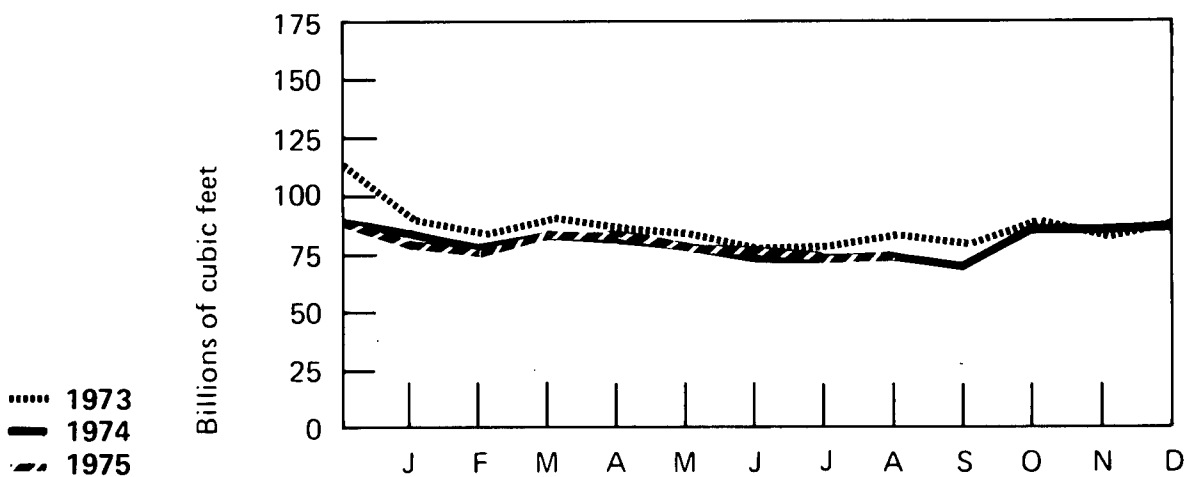
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



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	50,063	53,530	2,813	97,614
	February	45,252	49,851	4,627	96,420
	March	45,408	51,027	3,179	99,895
	April	43,195	54,181	4,944	106,972
	May	44,612	57,448	6,032	110,018
	June	R44,322	47,884	6,369	R111,935
	July	R48,605	R49,205	5,307	106,091
	August	48,647	R51,605	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	96,024
	February	45,725	51,135	4,470	97,164
	March	47,396	51,910	5,653	97,904
	April	43,753	R53,135	6,159	102,745
	May	42,683	R55,370	7,011	109,796
	June	R44,876	R55,730	6,269	R114,791
	July	47,548	45,560	4,691	109,401
	August		*** 49,345		

*See Explanatory Note 5.

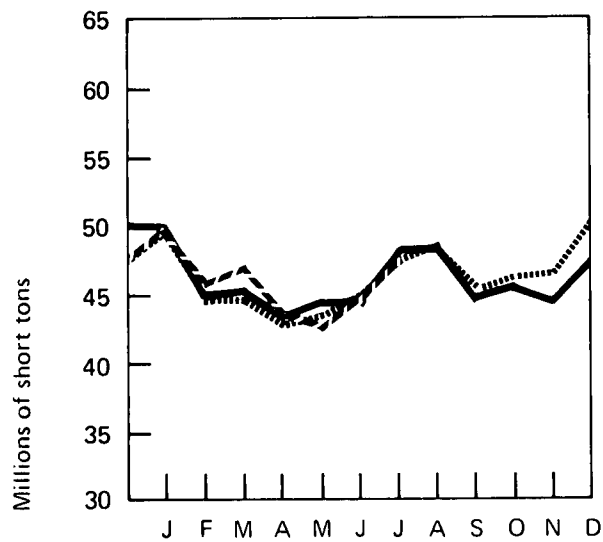
**See Explanatory Note 6.

***Preliminary data.

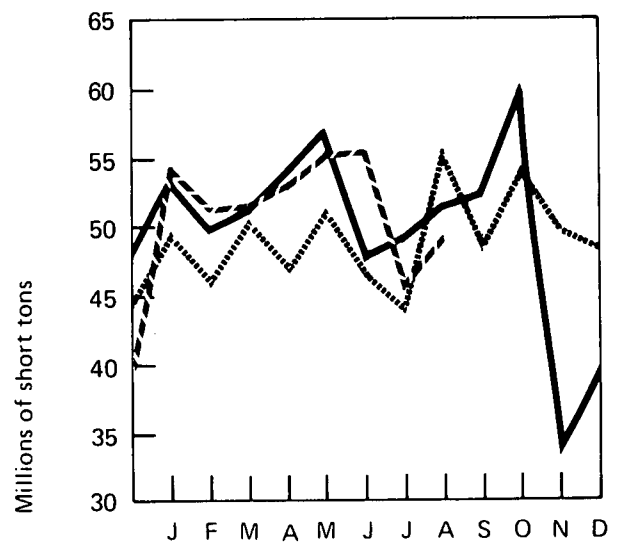
R=Revised data.

Source: Bureau of Mines.

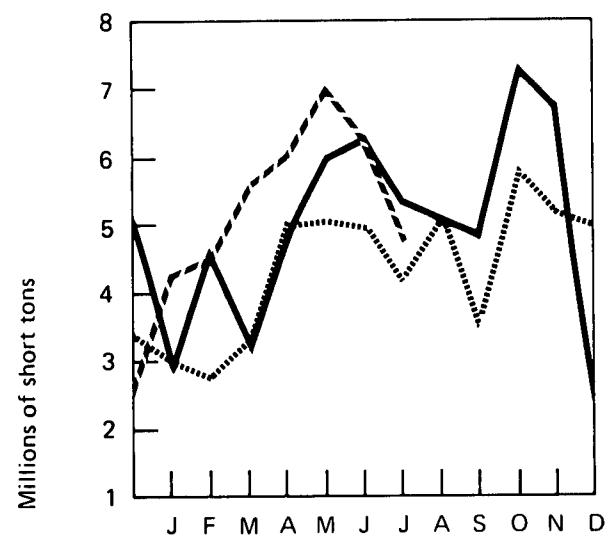
Domestic Consumption



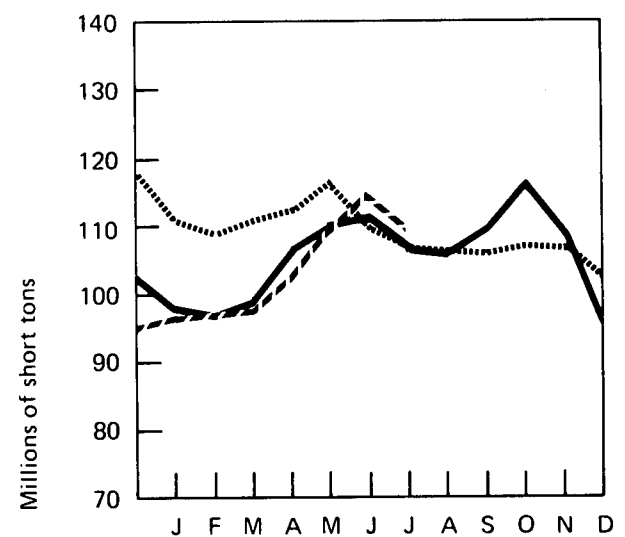
Production



Exports



Stocks



..... 1973
 ————— 1974
 - - - - - 1975

ELECTRIC UTILITIES

Preliminary data indicate that August 1975 production of electricity by utilities was 179,234 million kilowatt hours, 3.2 percent above the level for August 1974. Production during the first 8 months of 1975 totaled 1,276,278 million kilowatt hours, up 1.9 percent from the 1,252,085 million kilowatt hours produced during the same period in 1974.

Coal stockpiles at powerplants declined from an 89-day supply at the end of June to an 80-day supply at the end of July; oil stockpiles declined from an 88- to an 85-day supply during the month.

Electric utility consumption of natural gas in July 1975 was 359,160 million cubic feet, 11.0 percent below consumption in July 1974. During the first 7 months of 1975, utilities consumed 11.9 percent less gas, but 0.8 percent more oil and 2.1 percent more coal than during the same months in 1974.

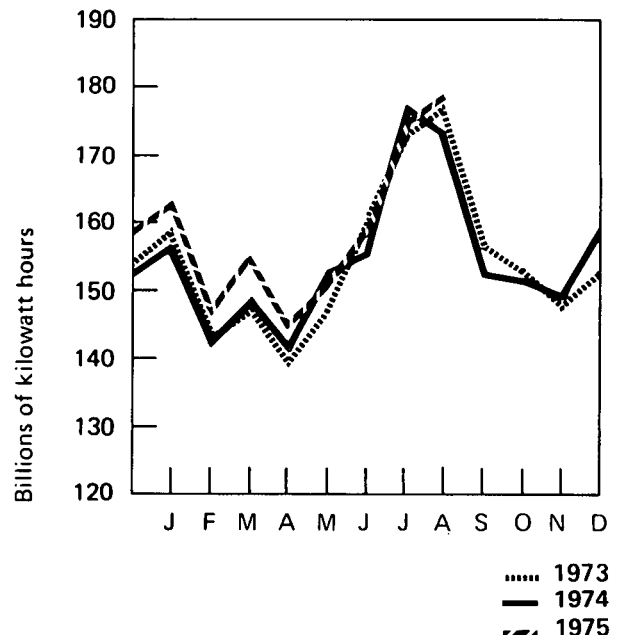
Kilowatt-hour sales of electricity to residential and commercial customers during the first half of 1975 totaled 296,276 million kilowatt hours, up 6.6 percent for residential customers and 8.0 percent for commercial customers from the same period in 1974. Sales to industry, on the other hand, totaling 320,598 million kilowatt hours, were down 5.3 percent from the first 6 months of 1974.

Total sales for the first half of 1975 were 841,957 million kilowatt hours, 1.9 percent greater than the first half of 1974.

Electric Utilities

		Total Net Production	Percentage Produced from Each Source					
		In millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro- electric	Other*
1972	January	144,575	45.5	18.0	16.6	2.9	16.9	0.1
	February	137,301	45.8	17.3	18.1	2.6	16.1	0.1
	March	140,056	44.4	15.2	20.0	3.1	17.2	0.1
	April	132,138	43.6	13.5	22.3	2.8	17.7	0.1
	May	137,745	43.4	12.7	24.0	2.1	17.7	0.1
	June	145,523	42.4	13.4	25.5	2.6	16.0	0.1
	July	157,846	42.2	14.1	25.7	3.0	14.9	0.1
	August	162,822	42.8	13.8	25.8	3.5	14.0	0.1
	September	147,358	43.5	14.7	25.5	3.2	13.0	0.1
	October	143,742	44.4	16.4	22.2	3.4	13.5	0.1
	November	143,867	45.7	18.3	17.2	3.8	14.9	0.1
	December	154,350	46.0	19.5	14.4	3.9	16.1	0.1
1973	January	159,320	47.2	19.4	13.1	3.9	16.3	0.1
	February	143,109	47.4	18.2	14.1	4.1	16.1	0.1
	March	147,754	45.7	16.2	16.2	4.5	17.3	0.1
	April	139,273	46.1	14.4	17.9	4.2	17.3	0.1
	May	147,021	44.3	14.7	20.2	3.9	16.8	0.1
	June	160,962	43.3	16.1	21.6	4.2	14.7	0.1
	July	173,461	43.9	16.5	22.6	4.0	12.9	0.1
	August	177,022	44.4	17.3	21.9	4.4	11.9	0.1
	September	156,294	45.7	17.3	21.1	4.9	10.9	0.1
	October	153,797	45.6	17.7	19.9	4.9	11.8	0.1
	November	147,823	47.2	17.6	16.1	5.5	13.5	0.1
	December	153,284	47.9	16.3	13.3	5.3	17.0	0.2
1974	January	156,906	47.0	16.6	13.3	4.8	18.2	0.1
	February	142,371	46.6	15.7	13.3	5.6	18.6	0.2
	March	149,933	45.3	14.6	15.8	5.8	18.4	0.1
	April	141,913	44.5	13.9	16.9	4.9	19.6	0.2
	May	153,439	44.3	14.7	18.4	4.2	18.2	0.2
	June	156,027	43.3	14.7	20.3	4.4	17.1	0.2
	July	177,797	42.9	15.6	20.9	5.6	14.8	0.2
	August	173,699	43.1	15.6	20.3	7.0	13.8	0.2
	September	152,083	42.9	16.4	19.3	7.1	14.1	0.2
	October	151,786	44.3	16.7	18.6	7.0	13.2	0.2
	November	149,581	44.9	18.4	15.2	7.2	14.1	0.2
	December	159,309	45.6	19.3	12.4	8.1	14.4	0.2
1975	January	163,498	45.8	18.7	12.1	8.1	15.2	0.1
	February	146,338	46.0	17.0	12.3	8.3	16.3	0.1
	March	154,932	44.6	15.0	R13.0	9.2	18.1	R0.1
	April	R145,289	44.2	14.6	14.0	8.7	18.3	0.2
	May	151,168	42.5	13.9	16.9	8.2	18.3	0.2
	June	159,963	43.4	14.3	18.0	7.2	16.9	0.2
	July	R175,856	43.1	14.2	19.4	8.6	14.5	0.2
	August	179,234						

Total Net Production



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

R=Revised data.

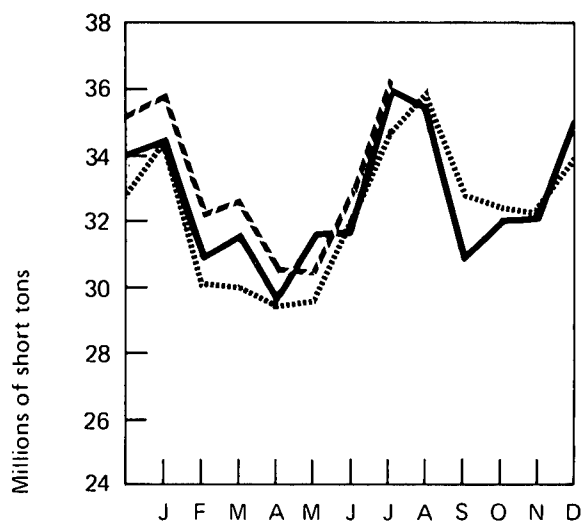
Sources: Federal Power Commission.

Production data for latest month are from Edison Electric Institute.

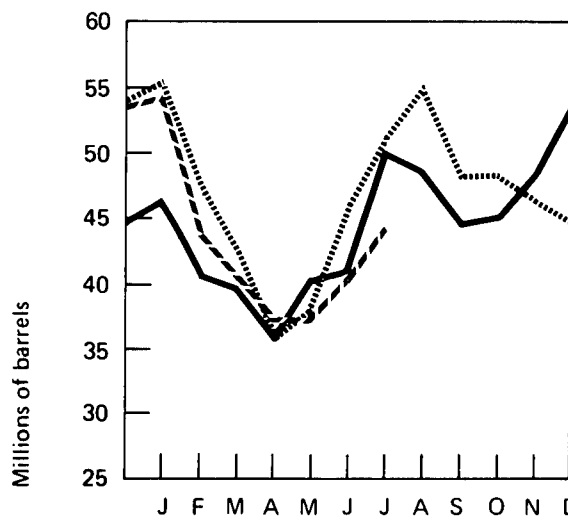
Fuel Consumption

		Coal	Oil	Gas
		In thousands of short tons	In thousands of barrels	In millions of cubic feet
1972	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
1973	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	31,951	46,421	371,221
	July	34,863	51,352	422,396
	August	36,093	55,356	419,507
	September	32,814	48,103	353,040
	October	32,470	48,188	328,630
	November	32,154	46,420	252,341
	December	34,141	44,850	216,988
1974	January	34,599	46,745	219,338
	February	30,857	40,687	201,587
	March	31,638	39,645	254,175
	April	29,679	35,959	259,313
	May	31,700	40,831	306,945
	June	31,719	41,227	346,584
	July	36,111	50,119	403,391
	August	35,555	48,970	380,585
	September	30,989	44,550	313,079
	October	32,127	45,268	298,109
	November	32,211	48,525	238,908
	December	35,176	53,648	207,095
1975	January	35,853	54,169	204,931
	February	32,104	43,670	188,684
	March	32,783	40,399	210,283
	April	30,452	37,099	213,580
	May	30,410	37,015	271,790
	June	33,058	40,791	306,147
	July	36,367	44,329	359,160

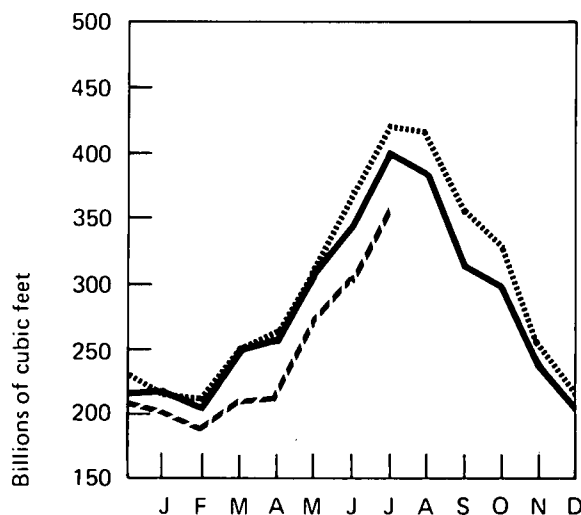
Coal Consumption



Oil Consumption



Gas Consumption



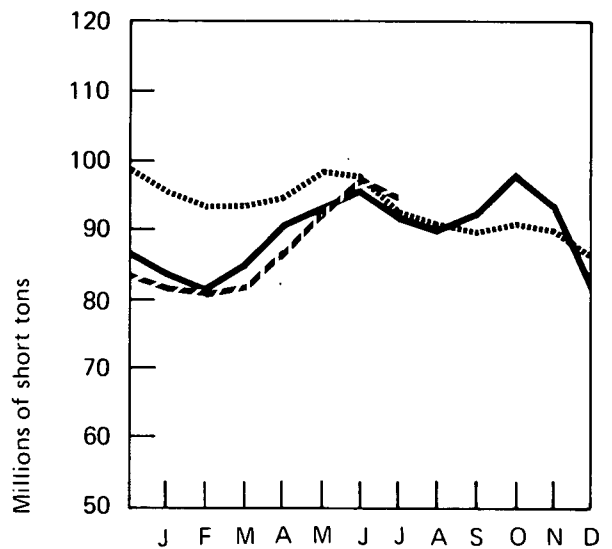
Source: Federal Power Commission.

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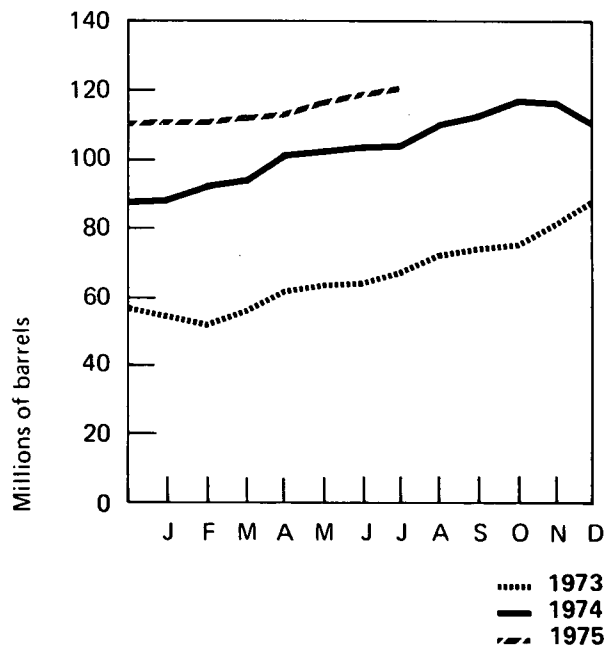
Electric Utilities (Continued)

		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
	March	81,872	113,377
	April	86,656	113,930
	May	93,027	116,940
	June	97,834	119,653
	July	94,067	121,076

Coal Stocks

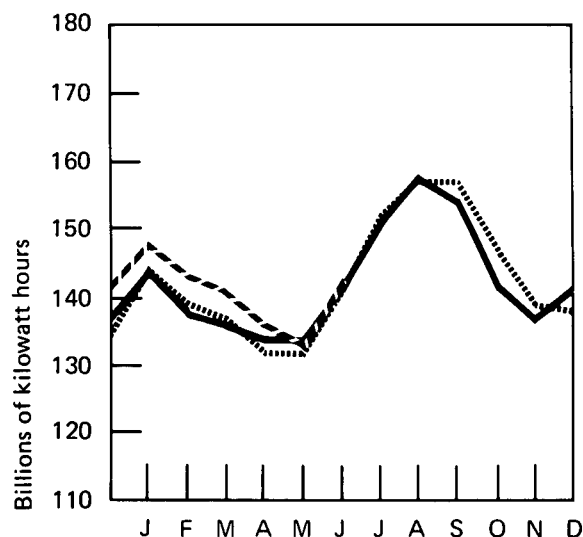


Oil Stocks



		Sales			
		Residential	Commercial	Industrial	Other*
		In millions of kilowatt hours			
1972	January	46,353	27,965	50,526	4,579
	February	45,652	27,921	50,552	4,619
	March	43,559	27,856	52,086	4,606
	April	40,460	27,765	51,992	4,422
	May	38,044	27,983	53,489	4,430
	June	41,213	30,257	53,673	4,469
	July	47,813	32,211	52,702	4,666
	August	51,463	33,535	55,023	4,723
	September	50,888	33,522	55,548	4,928
	October	44,352	31,068	56,213	4,823
	November	41,672	29,426	55,251	4,986
	December	47,139	29,764	53,923	5,060
1973	January	52,840	31,182	55,274	5,209
	February	49,601	30,445	54,591	4,909
	March	46,315	30,100	55,866	4,822
	April	41,821	29,038	55,937	4,571
	May	39,825	30,060	56,838	4,638
	June	44,967	33,194	57,368	4,764
	July	54,123	36,147	57,152	5,140
	August	56,742	36,820	58,865	5,054
	September	56,210	36,711	59,178	5,211
	October	47,207	33,289	60,514	5,032
	November	43,175	31,363	58,464	5,085
	December	46,442	29,788	56,190	4,896
1974	January	52,846	30,608	55,754	4,995
	February	47,832	29,542	54,978	4,708
	March	46,154	29,309	55,999	4,693
	April	43,294	28,986	56,497	4,610
	May	41,215	29,876	57,386	4,685
	June	46,596	32,800	58,077	4,641
	July	53,435	35,229	57,899	4,965
	August	56,558	36,414	59,803	5,069
	September	53,252	35,830	60,366	4,983
	October	44,177	32,112	60,053	4,792
	November	42,773	30,968	57,361	4,969
	December	50,368	31,757	53,878	4,974
1975	January	55,547	33,026	54,280	5,245
	February	52,185	32,441	53,142	4,984
	March	49,974	32,005	53,192	4,914
	April	46,883	31,335	52,526	4,737
	May	43,226	31,608	53,364	4,745
	June	48,461	35,266	54,104	4,777

Total Sales



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

..... 1973
— 1974
- - - 1975

NUCLEAR POWER

The 48 nuclear powerplants in commercial operation performed at 68 percent of capacity during August. Once again, a record-high average operating power level was achieved; the August figure of 20,618,000 kilowatts was 1.6 percent above the previous record in July.

Following an unusually low volume in July, uranium enrichment deliveries increased to 890 metric tons of separative work in August, 21 percent higher than the current monthly average for 1975. Foreign orders, primarily for Euratom and Japan Atomic, constituted 40 percent of the total, and amounted to nearly \$16 million in revenue for the U.S. Energy Research and Development Administration.

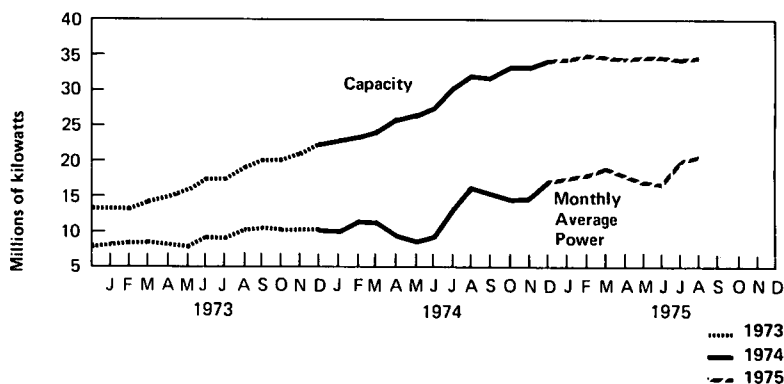
Construction permits were granted by the Nuclear Regulatory Commission for two pressurized water reactors, Catawba 1 and 2, which are to be operated by the Duke Power Company.

The Westinghouse Electric Corporation recently defaulted on a major portion of its future contracts to provide concentrated uranium ore to electric utility companies. Westinghouse revealed that as of January 1, 1976, the company would be 80 million pounds short on its commitments. Had the company not defaulted, its net loss could have been as much as \$1.2 billion, at a potential future price of \$25 per pound for concentrate, since most of the negated contracts were signed at a delivery price of \$10 per pound. However, Westinghouse has notified the affected utilities that it is prepared to honor 18.75 percent of the obligations accrued as of January 1, and, in addition, it will supply one-half of the remaining 81.25 percent at cost of production, provided "adequate reserves of uranium are found." The balance will be supplied at the prevailing market rate at time of delivery.

U.S. Nuclear Powerplant Operations

		Net Electrical Capacity	Net Monthly Average Power	Percent of Total Domestic Electricity Generation
		In thousands of kilowatts		
1972	January	8,896	5,720	2.9
	February	8,896	5,165	2.6
	March	9,400	5,750	3.0
	April	10,200	5,124	2.7
	May	10,680	3,918	2.1
	June	11,350	5,375	2.6
	July	12,138	6,227	2.9
	August	12,138	7,742	3.5
	September	12,138	6,589	3.2
	October	13,594	6,539	3.2
	November	13,594	7,475	3.7
	December	13,594	8,125	3.9
1973	January	13,594	8,395	3.9
	February	13,594	8,821	4.1
	March	14,382	8,991	4.5
	April	15,253	8,161	4.2
	May	16,126	7,657	3.9
	June	17,827	9,429	4.2
	July	17,827	9,355	4.0
	August	19,349	10,463	4.4
	September	20,400	10,815	4.9
	October	20,400	10,036	4.9
	November	21,271	11,308	5.5
	December	22,826	10,543	5.3
1974	January	23,156	10,194	4.8
	February	23,926	11,992	5.6
	March	24,455	11,715	5.8
	April	26,012	9,826	4.9
	May	26,820	8,791	4.2
	June	27,898	9,740	4.4
	July	30,524	13,577	5.6
	August	32,195	16,442	7.0
	September	31,759	15,159	7.1
	October	33,614	14,409	7.1
	November	33,630	14,528	7.2
	December	34,467	17,375	8.1
1975	January	34,841	17,843	8.1
	February	35,049	18,063	8.3
	March	34,836	19,091	9.2
	April	34,167	17,516	8.7
	May	34,167	R16,613	8.2
	June	34,472	R16,097	R7.2
	July	34,472	R20,297	R8.6
	August	*34,730	*20,618	*8.6

U.S. Nuclear Powerplants



*Preliminary data.

R=Revised data.

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

Status of Nuclear Powerplants — August 31, 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	30	0	54	37,000
Construction permit granted	19	0	45	0	64	64,000
Construction permit pending	22	4	47	1	74	82,000
Orders placed for plant	10	0	20	0	30	35,000
Publicly announced	—	—	—	19	19	24,000
Total	74	5	142	20	241	242,000

*Includes 1 Liquid Metal Fast Breeder Reactor and 19 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment — August 1975

	Domestic Customers	Foreign Customers	Total
Separative Work Performed (in metric tons of separative work units)	538.276	351.648	889.924
Cost (in millions of dollars)	26.307	15.740	42.047
Product Quantity (in metric tons of uranium)	113.943	126.498	240.441
Average Enrichment (in percent U-235)	3.154	2.316	2.712
Feed Requirement (in metric tons of uranium)	666.720	519.644	1,186.364

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

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

Country	Number of Reactors	Capacity In gross electrical megawatts	Generation of Electricity		
			Generation August	Percent of Capacity August	Year 1974
			In billions of gross kilowatt hours		
Canada	5	2,380	1.25	71	74
Federal Republic of Germany	7	3,450	1.96	76	57
France	10	3,070	1.45	64	57
Great Britain	29	6,140	*1.89	*41	61
India	3	620	NA	NA	55
Italy	3	630	0.30	64	61
Japan	8	3,890	1.01	35	61
Spain	3	1,120	0.72	87	75
Sweden	5	3,310	0.54	22	20
Switzerland	3	1,050	0.28	36	76
United States	52	37,330	16.79	61	57
Total	128	62,990	26.19	56	58

* Figures are for 4-week operating period.

NA=Not available.

Source: Nucleonics Week Magazine.

Summary of Monthly Nuclear Fuel Cycle — July 1975

Fuel Cycle Activity	Product	Processed Material*	Percent Utilization of Industry Capacity	Energy Content of Processed Material**	Energy Consumed in Fuel Cycle Activity***	Cost Contribution to Electric Power†
		In MTU except where noted		In billion Btu		In mills per kilowatt hour
Milling	Yellowcake (U ₃ O ₈) Deliveries	465	36	159,000	258	0.54
Conversion	Uranium Hexafluoride (UF ₆) Deliveries	255	16	87,000	55	0.07
Enrichment	Enriched UF ₆ Deliveries	68 (228 MT-SWU)	16	467,000	6,630	0.86
Fabrication	Finished Fuel Assemblies Produced	130	54	266,000	205	0.46
Powerplant Operation	New Fuel Receipts	53	—	109,000	—	—
	Electricity Generated	16,292 (million kWhe)	58	161,000	2,800	8.37
	Spent Fuel Discharged	0	—	—	—	—
Reprocessing	Spent Fuel Received	8	—	—	—	0.02
	Spent Fuel Reprocessed	0	—	—	—	—

*Units of measure are discussed in Explanatory Notes 7 and 8.

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

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

† Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000-MWe reactor operating at 80 percent capacity factor, given in U.S.A.E.C. 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.

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

Source: FEA.

ENERGY CONSUMPTION

Domestic energy consumption in July 1975 totaled 5.676 quadrillion Btu, 3.6 percent below the July 1974 level of 5.886. No sectoral breakdown is available for the month as yet.

The revised consumption total for June was 5.392 quadrillion Btu, of which 1.851 quadrillion Btu was consumed by the residential and commercial sector, down 0.1 percent from the level for June 1974. Direct consumption of primary fuels amounted to 43.2 percent of total sector consumption (coal was 0.8 percent, dry natural gas, 17.9 percent, and petroleum products, 24.5 percent). Consumption of electricity accounted for the remaining 56.8 percent.

The industrial sector consumed 2.023 quadrillion Btu in June 1975, down 8.5 percent from the level for June 1974. Coal accounted for 15.5 percent of the total, 31.6 percent was dry natural gas, 20.5 percent was petroleum products, and 32.3 percent was electricity.

Consumption in the transportation sector was 1.518 quadrillion Btu, up 0.9 percent from the level for June 1974. Petroleum products comprised 96.6 percent of the total. Natural gas used for pipeline transportation and electricity used by railroads and for street and highway lighting accounted for the balance.

PETROLEUM CONSUMPTION AND FORECAST

Total demand for petroleum products during August was 15.962 million barrels per day. This was 143,000 barrels per day above the forecast level, but 584,000 barrels per day below last year.

Domestic demand for motor gasoline during August was 7.090 million barrels per day, which was 144,000 barrels per day, or 2.1 percent, above the forecast level of 6.946 million barrels per day.

Domestic demand for distillate fuel oil during August was 1.951 million barrels per day. This was 273,000 barrels per day, or 12.3 percent, below the forecast level.

Domestic demand for residual fuel oil during August was 2.211 million barrels per day,

which was 265,000 barrels per day, or 13.6 percent, above the forecast level of 1.946 million barrels per day, but 328,000 barrels per day below the same period last year.

Energy Consumption

Energy Consumption by the Residential and Commercial Economic Sectors¹

		Coal	Natural Gas (dry)	Petroleum ²	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
In quadrillion (10 ¹⁵) Btu								
1973	January	0.038	1.277	0.707	0.299	R0.716	R3.037	R3.037
	February	0.032	1.131	0.653	0.285	0.610	2.711	R5.748
	March	0.025	0.940	0.620	0.272	0.629	2.486	R8.233
	April	0.016	0.755	0.527	0.253	0.569	2.120	R10.353
	May	0.017	0.543	0.562	0.250	0.612	1.983	R12.336
	June	0.017	0.350	R0.511	0.279	R0.714	R1.869	R14.205
	July	0.017	0.270	R0.503	0.321	R0.814	R1.925	R16.130
	August	0.018	0.243	0.560	0.332	R0.835	R1.987	R18.118
	September	0.024	0.269	R0.538	0.330	R0.690	R1.852	R19.970
	October	0.028	0.339	0.592	0.287	R0.651	1.897	R21.867
	November	0.031	0.617	R0.658	R0.266	R0.615	R2.188	R24.055
	December	0.033	0.897	0.648	0.271	R0.665	R2.515	R26.569
	TOTAL	0.295	7.632	R7.077	3.445	R8.120	R26.569	
1974	January	0.041	R1.174	0.664	0.296	0.705	R2.880	R2.880
	February	0.035	R1.040	0.593	0.275	0.611	R2.554	R5.434
	March	0.028	R0.912	0.568	0.269	0.644	R2.420	R7.854
	April	0.019	R0.760	0.532	0.258	0.597	R2.165	R10.019
	May	0.017	R0.500	0.499	0.254	0.657	R1.926	R11.945
	June	0.016	R0.353	0.510	0.282	R0.692	R1.853	R13.798
	July	0.015	R0.286	0.506	0.315	R0.852	R1.974	R15.772
	August	0.021	R0.257	0.522	0.330	0.818	R1.947	R17.719
	September	0.026	R0.271	0.513	0.316	0.659	R1.786	R19.505
	October	0.028	R0.393	0.591	0.272	0.641	R1.925	R21.430
	November	0.028	R0.574	0.575	0.263	0.643	R2.083	R23.513
	December	0.032	R0.944	0.630	0.292	0.744	R2.641	R26.155
	TOTAL	0.306	R7.463	6.701	3.420	R8.264	R26.154	
1975	January	0.036	1.210	0.651	0.315	0.771	2.984	2.984
	February	0.023	1.127	0.556	0.300	0.661	2.668	R5.652
	March	0.025	1.058	R0.568	0.291	0.710	R2.653	R8.305
	April	0.011	0.902	R0.508	0.278	0.649	R2.349	R10.654
	May	0.011	0.529	R0.459	0.267	0.678	R1.944	R12.598
	June	0.015	0.331	0.454	0.297	0.754	1.851	14.449
	TOTAL	0.122	5.157	3.198	1.748	4.224	14.449	

Energy Consumption by the Industrial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ³	Hydroelectric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
In quadrillion (10 ¹⁵) Btu									
1973	January	0.393	0.812	0.640	0.003	0.189	R0.452	R2.488	R2.488
	February	0.362	0.746	0.591	0.003	0.186	0.399	2.286	R4.775
	March	0.369	0.787	0.561	0.003	0.191	0.441	2.351	R7.126
	April	0.363	0.783	0.477	0.003	0.191	0.430	2.247	R9.373
	May	0.369	0.843	0.508	0.003	0.194	0.475	2.392	R11.764
	June	0.351	R0.792	R0.462	0.003	0.196	R0.502	R2.305	R14.069
	July	0.345	R0.845	R0.455	0.003	0.195	R0.494	R2.337	R16.406
	August	0.340	R0.898	R0.506	0.003	0.201	R0.505	R2.453	R18.859
	September	0.329	R0.883	R0.487	0.003	0.202	R0.422	R2.327	R21.186
	October	0.363	R1.014	R0.535	0.003	0.206	R0.469	R2.591	R23.777
	November	0.374	R1.005	R0.595	0.003	0.199	R0.460	R2.637	R26.413
	December	0.412	1.031	0.586	0.003	0.192	R0.470	2.693	R29.107
	TOTAL	4.370	R10.438	R6.403	0.036	2.341	R5.518	R29.107	
1974	January	0.390	R0.807	0.605	0.003	0.190	0.452	R2.448	R2.448
	February	0.366	R0.785	0.541	0.003	0.188	0.417	R2.299	R4.747
	March	0.369	R0.812	0.518	0.003	0.191	0.458	R2.351	R7.098
	April	0.363	R0.651	0.485	0.003	0.193	0.446	R2.142	R9.240
	May	0.354	R0.783	0.455	0.003	0.196	0.506	R2.296	R11.536
	June	0.337	R0.723	0.465	0.003	0.198	R0.486	R2.212	R13.748
	July	0.336	R0.809	0.462	0.003	0.198	R0.535	R2.342	R16.090
	August	0.346	R0.856	0.476	0.003	0.204	0.506	R2.391	R18.481
	September	0.348	R0.935	0.468	0.003	0.206	0.430	R2.390	R20.871
	October	0.358	R0.994	0.539	0.003	0.205	0.484	R2.583	R23.454
	November	0.323	R0.991	0.525	0.003	0.196	0.478	R2.516	R25.970
	December	0.319	R0.926	0.575	0.003	0.184	0.469	R2.475	R28.445
	TOTAL	4.209	R10.072	6.111	0.036	2.348	R5.667	R28.445	
1975	January	0.356	0.680	0.594	0.003	0.185	0.454	2.272	2.272
	February	0.355	0.601	0.507	0.003	0.181	0.399	2.047	4.320
	March	0.378	0.611	R0.518	0.003	0.181	0.443	R2.134	R6.454
	April	0.353	0.514	R0.464	0.003	0.179	0.418	R1.931	R8.386
	May	0.333	0.529	R0.419	0.003	0.182	0.463	R1.929	R10.314
	June	0.314	0.639	0.414	0.003	0.185	0.468	2.023	12.338
	TOTAL	2.089	3.574	2.917	0.018	1.094	2.645	12.338	

Energy Consumption by the Transportation Economic Sector¹

		Coal	Natural Gas (dry) ⁴	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
		In quadrillion (10 ¹⁵) Btu						
1973	January	0.001	0.085	1.511	0.005	0.013	1.615	1.615
	February	0.001	0.076	1.417	0.005	0.011	1.510	3.125
	March	0.001	0.070	1.502	0.005	0.012	1.589	4.714
	April	0.001	0.062	1.412	0.005	0.010	1.490	6.204
	May	0.001	0.056	1.540	0.004	0.011	1.612	7.816
	June	0.001	R0.046	1.471	0.004	0.011	R1.533	9.350
	July	0.001	R0.045	1.528	0.004	0.011	1.589	10.939
	August	0.001	R0.046	1.588	0.005	0.012	R1.651	R12.590
	September	0.001	R0.047	1.437	0.005	0.010	R1.499	R14.089
	October	0.001	0.055	1.520	0.005	0.011	1.592	R15.681
	November	0.001	0.066	1.523	0.005	0.012	1.607	R17.288
	December	0.001	0.078	1.491	0.005	0.013	1.589	R18.877
	TOTAL	0.009	R0.733	17.940	0.058	0.137	R18.877	
1974	January	0.001	0.072	1.398	0.005	0.013	1.489	1.489
	February	0.001	0.066	1.300	0.005	0.011	1.384	2.873
	March	0.001	0.063	1.416	0.005	0.012	1.496	4.369
	April	0.001	0.051	1.397	0.005	0.011	1.465	5.834
	May	0.001	0.047	1.484	0.005	0.012	1.548	7.381
	June	0.001	0.039	1.449	0.005	0.011	1.505	8.886
	July	0.001	0.040	1.513	0.005	0.012	1.570	10.456
	August	0.001	0.040	1.532	0.005	0.012	1.590	12.046
	September	0.001	0.044	1.392	0.005	0.010	1.452	13.498
	October	0.001	0.050	1.506	0.005	0.012	1.574	15.072
	November	0.001	0.057	1.453	0.005	0.013	1.529	16.602
	December	0.001	0.068	1.546	0.006	0.014	1.634	18.235
	TOTAL	0.009	0.636	17.386	0.060	0.144	18.235	
1975	January	0.001	0.069	1.499	0.006	0.014	1.587	1.587
	February	0.001	0.063	1.334	0.005	0.012	1.415	3.002
	March	0.001	0.061	R1.456	0.005	0.013	R1.536	R4.538
	April	0.001	0.051	R1.456	0.005	0.012	R1.524	R6.062
	May	0.001	0.038	R1.481	0.005	0.012	R1.536	R7.598
	June	0.001	0.035	1.466	0.005	0.012	1.518	9.116
	TOTAL	0.003	0.317	8.691	0.031	0.074	9.116	

¹See Explanatory Note 9 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for the sector calculations is provided in the footnotes of the "Energy Consumption by Economic Sector and Primary Source" table on page 48. Printed totals may differ slightly from the sum of their row/column components due to independent rounding.

²The 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.

³The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 47.7 percent for 1974 and 1975.

⁴The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.5 percent for 1974 and 1975.

R=Revised data.

Energy Consumption (Continued)

Energy Consumption by Economic Sector and Primary Source — June 1975 [In quadrillion (10¹⁵) Btu]

Sector ¹	Primary Energy Source					Primary Energy Consumption
	Coal ²	Natural Gas (dry) ³	Petroleum ⁴	Hydroelectric ⁵	Nuclear ⁶	
Residential and Commercial	0.015	0.331	0.454	—	—	0.799
Industrial	0.314	0.639	0.414	0.003	—	1.371
Transportation	0.001	0.035	1.466	—	(⁹)	1.502
Electric Utilities	0.743	0.312	0.250	0.292	0.124	1.720
TOTAL	1.072	1.317	2.584	0.295	0.124	5.392

¹ See Explanatory Note 9 (page 75) for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

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

³ Aggregate data are from the Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. Data from the American Gas Association are used for the Residential and Commercial Sector. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.5 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

⁴ Aggregate petroleum data are from the Bureau of Mines. FPC provided data on oil consumed by electric utilities. Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline - 100 percent; naphtha jet fuel - 100 percent; kerosine jet fuel - 97 percent; distillate fuel oil - 30.3 percent; residual fuel oil - 11.2 percent; all other products - 4.7 percent. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974 Bureau of Mines data on consumption: Residential and Commercial - 52.3 percent; Industrial - 47.7 percent.

⁵ 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.

⁶ FPC nuclear power production.

⁷ 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.

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

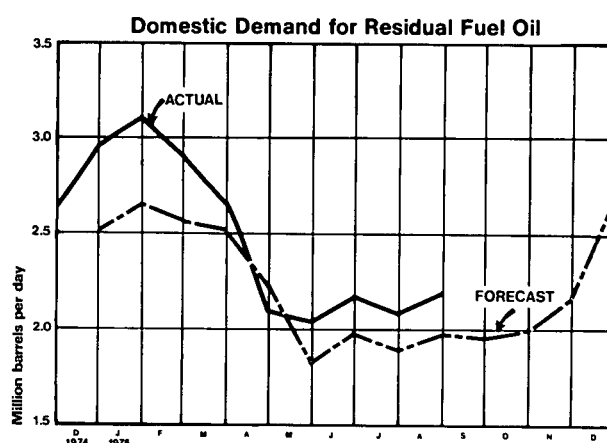
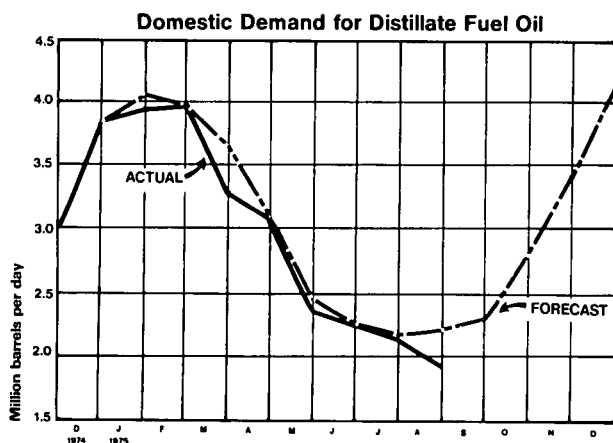
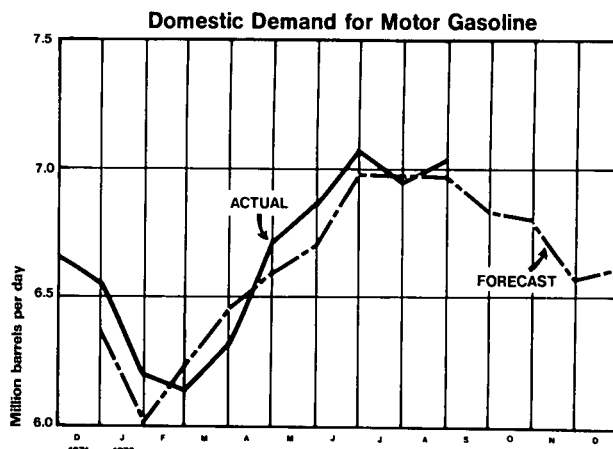
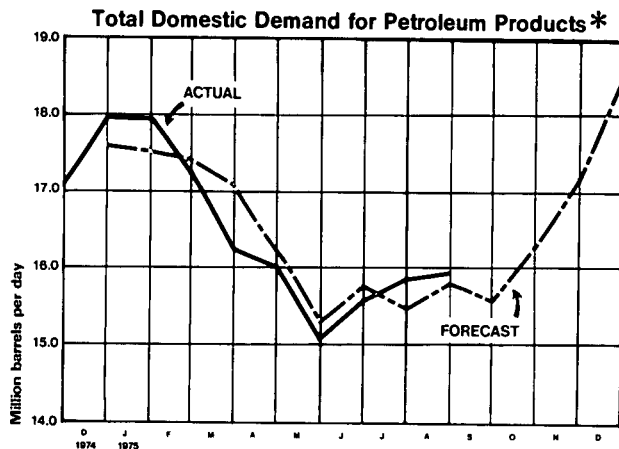
⁹ Negligible.

Electricity Distributed ⁷	Net Energy Consumption	Electrical Energy Loss Distributed ⁸	Ultimate Energy Disposition
0.297	1.097	0.754	1.851
0.185	1.555	0.468	2.023
0.005	1.506	0.012	1.518
—	—	—	—
0.487	4.158	1.234	5.392

Percent Changes in Energy Consumption for June 1975 by Source

	June 1975 Consumption In quadrillion (10 ¹⁵) Btu	Percent Change from June 1974	Cumulative Percent Change from 1974 (January through June)
Refined Petroleum Products	2.584	— 3.5	— 0.2
Motor Gasoline	1.114	+ 2.3	+ 2.9
Jet Fuel	0.167	+ 4.0	+ 7.1
Distillate	0.396	— 5.0	+ 2.5
Residual	0.411	—11.2	— 3.0
Other Petroleum Products	0.496	—10.5	— 8.2
Natural Gas (Dry)	1.317	—10.4	— 7.0
Coal (Anthracite, bituminous, and lignite)	1.072	+ 1.3	+ 0.3
Electricity (Sales)	0.487	+ 0.3	+ 1.9
Total Energy Use	5.392	— 3.2	— 1.5
Economic Sector Consumption			
Residential and Commercial	1.851	— 0.1	+ 4.7
Industrial	2.023	— 8.5	—10.3
Transportation	1.518	+ 0.9	+ 2.6

Petroleum Consumption and Forecast



*See Explanatory Note 10.

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 — Based on BOM data except for two most recent months, which are based on FEA data.

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.

Part 6

OIL AND GAS EXPLORATION

The average number of rotary rigs drilling for oil and gas in August climbed to 1,645, an increase of 29 over the number drilling in July. This was the highest August rig count since 1962 and reflects an 8.4-percent increase over the same month a year ago.

There were 2,981 wells drilled during August, 9.1 percent more than the number drilled in August 1974, and 55.3 percent more than the same month in 1973. Gas well successes continued to increase during the month; it was the second consecutive month in which the number of gas wells brought in exceeded the number for the corresponding month in 1974.

The number of seismic crews prospecting for hydrocarbons in August reflected a gain of 3 crews (all marine) over the number for July. Of the 289 total crews, 249 were operating onshore and 40 offshore. Last August there were 321 active crews (287 onshore and 34 offshore). As noted in previous issues, marine crews log about 20 times as much mileage per month as land crews.

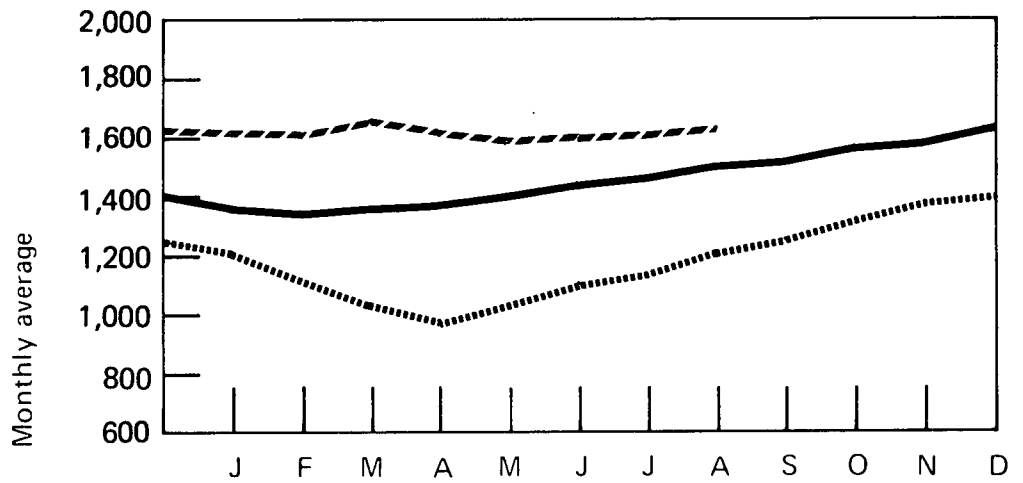
Resource Development

Oil and Gas Exploration

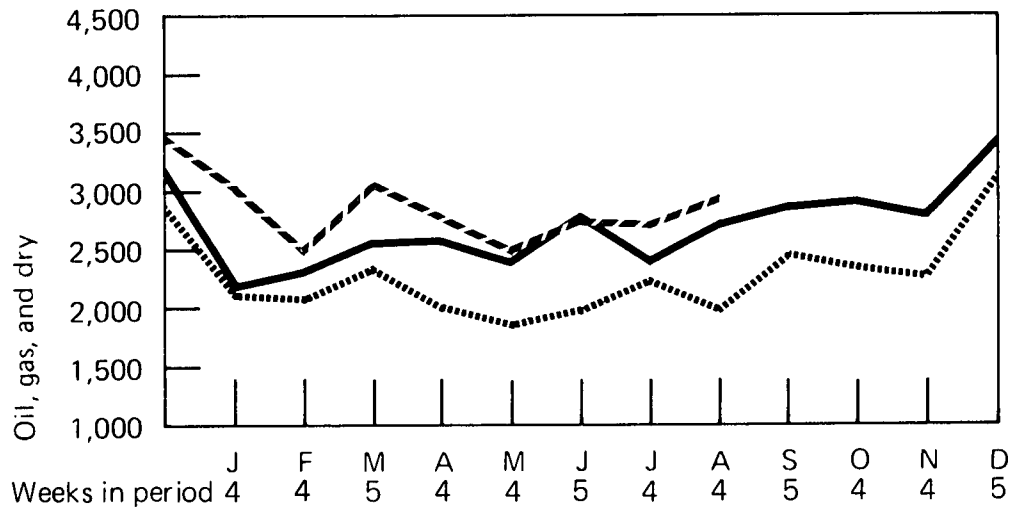
		Rotary Rigs in Operation	Wells Drilled				Total Footage of Wells Drilled
		Monthly average	Oil	Gas	Dry	Total	
1972	January	1,147	807	281	851	1,939	9,441,238
	February	1,071	965	350	955	2,270	12,381,669
	March	1,034	1,210	394	889	2,493	12,406,433
	April	1,002	923	355	788	2,066	9,902,253
	May	1,005	920	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
	May	1,592	1,100	451	891	2,442	12,054,485
	June	1,613	1,246	509	1,022	2,777	13,539,783
	July	1,616	1,229	557	920	2,706	12,545,391
	August	1,645	1,272	587	1,122	2,981	14,221,292

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

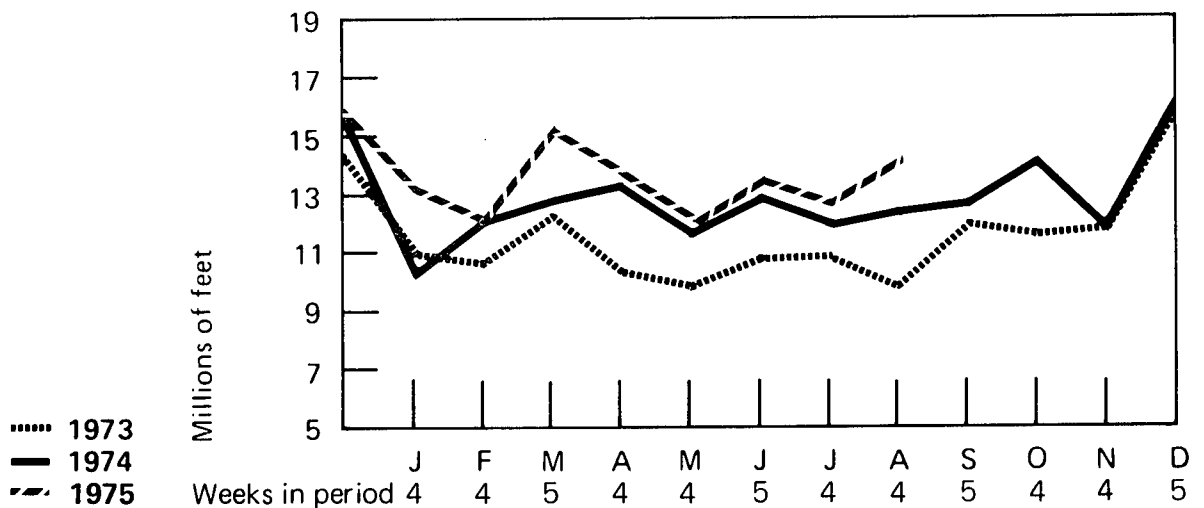
Rotary Rigs in Operation



Total Wells Drilled



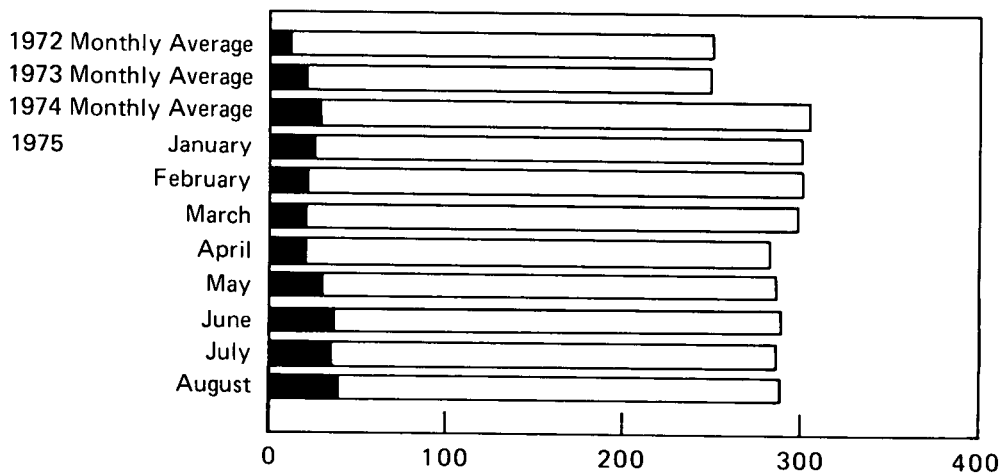
Total Footage of Wells Drilled



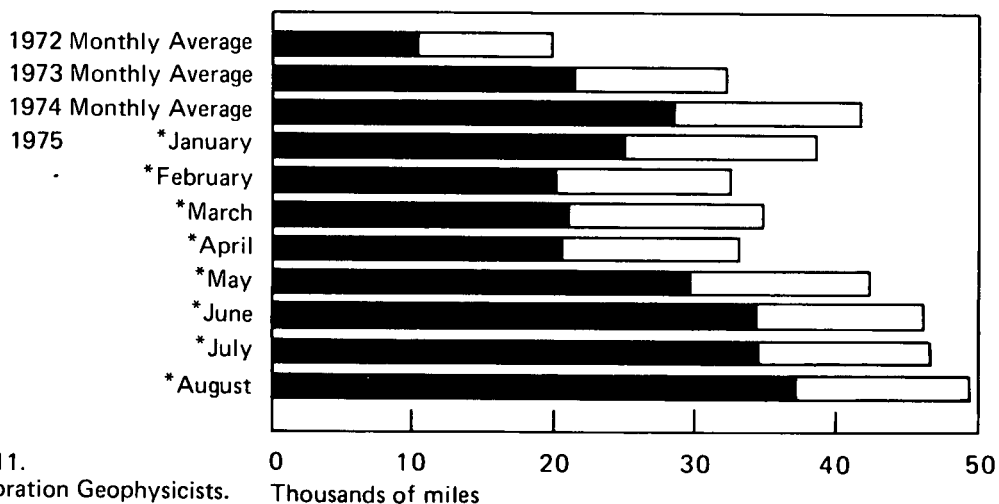
Oil and Gas Exploration (Continued)

	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
1974 Monthly Average	31	274	305	28,482	13,219	41,701
				Estimates*		
May	35	278	313	32,550	13,677	46,227
June	38	279	317	34,200	13,283	47,483
July	35	299	334	32,550	14,710	47,260
August	34	287	321	31,620	14,120	45,740
September	34	287	321	30,600	13,664	44,264
October	32	288	320	29,760	14,169	43,929
November	30	276	306	27,000	13,140	40,140
December	25	275	300	23,250	13,529	36,779
1975						
January	27	274	301	25,110	13,480	38,590
February	24	278	302	20,160	12,353	32,513
March	23	276	299	21,390	13,578	34,968
April	23	260	283	20,700	12,379	33,079
May	32	254	286	29,760	12,496	42,256
June	38	251	289	34,200	11,950	46,150
July	37	249	286	34,410	12,250	46,660
August	40	249	289	37,200	12,250	49,450

Crews Engaged in Seismic Exploration



Line Miles of Seismic Exploration



*See Explanatory Note 11.

Source: Society of Exploration Geophysicists.

Thousands of miles

MOTOR GASOLINE

The average nationwide selling price of regular gasoline advanced 0.5 cent per gallon during August to 59.2 cents, continuing the upward trend that began in January 1975. This increase, however, was the smallest since March. The dealer margin remained constant at 8.4 cents per gallon.

FEA's monthly survey of 21 of the Nation's largest marketers of gasoline indicated that 13 of them increased their prices, 3 reduced prices, and 5 did not change prices. These actions reflect a slowdown from the price increases experienced during the previous 3 months. In July, 20 of these companies raised prices, and in May and June all 21 did.

HEATING OIL

FEA's monthly survey of 21 of the Nation's largest producers of heating oil indicated that 15 of them increased their prices in August while the remainder held prices constant. Eleven of the companies had increases of 1 cent or more. This was the largest number of producers to raise prices since January 1974. These increases represent potential higher prices for heating oil consumers when distributors pass on the price increases to their customers.

NATURAL GAS

The average price of natural gas purchases by major interstate pipeline companies increased 1.5 cents per thousand cubic feet to 39.8 cents. The average selling price for these companies increased 0.9 cent per thousand cubic feet to 82.8 cents.

The average price of natural gas sold to residential customers for heating use advanced 0.7 cent per thousand cubic feet to 151.8 cents.

CRUDE OIL

During July, the average domestic "new" oil price was \$12.30 per barrel, 57 cents (or 8.6 percent) above the June price of \$11.73 per barrel. This increase follows the second \$1-per-barrel fee on imported crude oil imposed on June 1.

The preliminary estimate for the average cost of domestic crude purchased by refiners during July was \$8.37 per barrel, 4 cents above the revised June figure.

The preliminary July estimate for the refiner acquisition cost of imported crude was \$14.03 per barrel, 12 cents below the June figure of \$14.15 per barrel. This decrease reflects a substitution of lower cost crude oil imports for more expensive crude imports. Crude oil from Indonesia remained the most expensive.

The preliminary estimate for the composite cost of crude petroleum purchased by refiners during July was \$10.57 per barrel, 24 cents above the revised June figure of \$10.33 per barrel. Most of the advance was due to an increase in imported crude oil purchases in anticipation of an expected OPEC price increase on October 1.

UTILITY FOSSIL FUELS

The national average cost of fossil fuels delivered to utilities during May was 101.0 cents per million Btu, 0.5 cent below the level for April. Most of the decrease was attributed to a decline in the cost of residual fuel oil purchased by utilities and an increase in the percentage of less expensive gas purchases. An increase in utility gas purchases is normal for the spring months when utilities purchase gas not used by residential consumers.

The national average cost of coal delivered to utilities rose 1.3 cents during May to 81.8 cents per million Btu. While contract prices continued their gradual advance, spot prices resumed their downward trend. No significant regional coal price fluctuations occurred.

Nationally, residual fuel costs exhibited a decrease of 3.7 cents per million Btu, the first decline in utility residual costs since January 1975. All regions, with the exception of the East South Central region, incurred cost decreases.

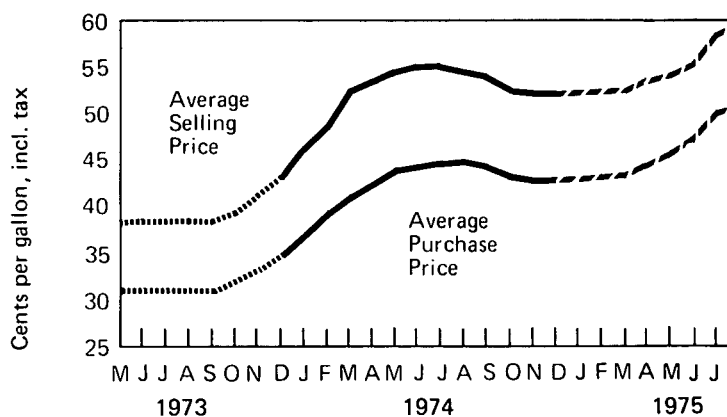
The national average cost of natural gas delivered to utilities rose 3.7 cents per million Btu during May. The two largest utility gas consuming regions, the West South Central and the West North Central, had increases of 4.3 and 4.1 cents per million Btu, respectively. However, the Pacific Region, which is the third largest consuming region, registered a utility gas cost reduction of 7.7 cents per million Btu.

Motor Gasoline

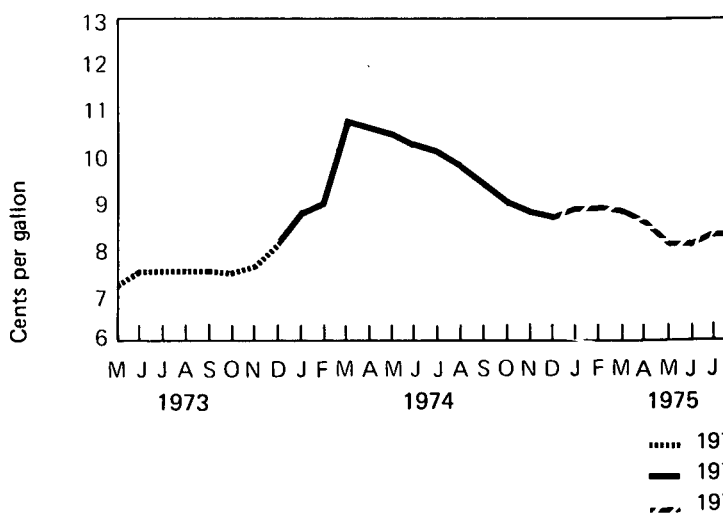
Regular Gasoline at Retail Outlets

		Average Selling Price	Average Purchase Price	Average Dealer Margin
		Cents per gallon, including tax*		
1973	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
1974	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
1975	January	52.4	43.4	9.0
	February	52.5	43.5	9.0
	March	52.6	43.8	8.8
	April	53.5	44.9	8.6
	May	54.3	46.0	8.3
	June	55.6	47.5	8.1
	July	58.7	50.3	8.4
	August	59.2	50.8	8.4

Average Retail Prices For Regular



Average Margins For Regular



*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.

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 — August 22, 1975

	Cents per gallon, including tax
Regular Gasoline	
Major	59.8
Independent	55.8
National Average	59.2
Premium Gasoline	
Major	64.2
Independent	59.8
National Average	63.6
Diesel Fuel*	
Truck Stops	
Major	52.6
Independent	51.2
National Average	52.1
Service Stations	
Major	54.2
Independent	51.4
National Average	52.6

*See Explanatory Note 12.

Source: Lundberg Survey, Inc.

Average Margins for Major and Independent Retail Dealers — August 22, 1975

	Cents per gallon
Regular Gasoline	
Major	8.8
Independent	6.3
National Average	8.4
Diesel Fuel*	
Truck Stops	
Major	5.8
Independent	10.0
National Average	8.1
Service Stations	
Major	8.1
Independent	10.6
National Average	8.9

*See Explanatory Note 12.

Source: Lundberg Survey, Inc.

Average Regional Retail Selling Prices and Dealer Margins for Regular Gasoline — August 22, 1975

FEA Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	57.9	7.9
1B Mid Atlantic	60.7	8.2
1C Lower Atlantic	59.4	8.4
2 Mid Continent	59.3	8.1
3 Gulf Coast	56.7	9.6
4 Rocky Mountain	59.2	9.3
5 West Coast	59.9	8.2
National Average	59.2	8.4

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Retail Gasoline Price Changes for Major Oil Companies During August 1975
and Entitlement Position* During July

Company	Effective Date of Change	Amount of Change Cents per gallon	Entitlement Position (July)
Amerada Hess		None	Seller
American Petrofina	August 9	-1.50	Seller
Ashland	August 8	0.50 (Twin Cities)	Seller
Atlantic Richfield	August 9	1.00	Seller
B.P.	August 8	-1.00	Seller
Cities Service	August 15	1.00	Buyer
Champlin	August 2	0.50	Buyer
Continental		None	Buyer
Exxon	August 15	1.00	Buyer
Getty		None	Seller
Gulf	August 19	1.00	Buyer
Kerr-McGee	August 9	1.00	Buyer
Mobil	August 13	0.50	Seller
Phillips		None	Seller
Shell	August 19	1.00	Buyer
Standard Oil of California	August 7	1.20	Seller
Standard Oil of Indiana	August 4	1.00	Buyer
Standard Oil of Ohio	August 8	-1.00	Seller
Sun	August 16	1.00	Seller
Texaco	August 9	1.00	Buyer
Union Oil of California		None	Buyer

*See definitions.

Source: FEA.

Major Brand Regular Gasoline, August 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	39.66	0.85	35.27	0.86	4.39	-0.01
Mid-Atlantic	39.01	0.59	35.14	0.59	3.57	0
Southeast	38.45	0.77	34.64	0.77	3.81	0
Central	39.75	0.68	35.59	0.68	4.16	0
Western	38.91	0.66	35.17	0.67	3.74	-0.01
Southwest	38.12	0.71	34.12	0.71	4.00	0
Pacific	38.21	0.75	34.47	0.75	3.74	0
National Average	38.87	0.71	34.91	0.71	3.96	0

Source: FEA.

Heating Oil

Price Changes for Major Oil Companies During August 1975

Company	Effective Date	Amount of Change
		Cents per gallon
Amerada Hess	August 13	1.00
American Petrofina		None
Ashland		None
Atlantic Richfield	August 9	1.00
B.P.	August 8	1.00
Cities Service	August 8	1.00
Champlin		None
Continental	August 14	1.00
Exxon	August 15	.50
Getty	August 17	.60
Gulf	August 19	1.00
Kerr-McGee	August 9	.50
Mobil	August 13	1.00
Phillips	August 16	1.60
Shell	August 9	1.50
Standard Oil of California	August 15	.70
Standard Oil of Indiana		None
Standard Oil of Ohio	August 8	1.00
Sun		None
Texaco	August 9	1.00
Union Oil of California		None

Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES	
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**
		Cents per thousand cubic feet				
1973	December	24.5	47.6	26.3	46.4	52.2
1974	January	24.3	42.7	25.7	48.1	55.0
	February	25.4	43.2	26.8	49.8	56.4
	March	25.7	43.2	27.0	50.8	56.9
	April	25.8	46.4	27.4	49.3	57.6
	May	25.7	49.3	27.5	49.9	58.6
	June	26.0	47.7	27.5	50.8	59.4
	July	26.3	58.7	28.6	52.5	62.0
	August	26.1	57.5	28.4	55.2	64.4
	September	27.3	58.8	29.5	54.7	65.2
	October	27.5	58.9	29.9	56.3	64.4
	November	28.5	70.9	31.7	58.7	66.8
	December	32.6	74.5	35.8	60.3	67.2
1975	January	29.8	104.0	35.2	67.6	71.1
	February	29.5	105.8	35.2	70.1	74.1
	March	31.6	102.5	37.0	70.4	77.8
	April	32.9	102.8	38.3	71.1	82.3
	May	34.7	100.6	39.8	71.1	83.7

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

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

Source: Federal Power Commission.

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

		Price
		In cents per thousand cubic feet
1974	January	113.3
	February	115.2
	March	116.9
	April	118.2
	May	119.9
	June	120.3
	July	122.0
	August	124.2
	September	125.6
	October	127.4
	November	131.4
	December	134.2
1975	January	137.9
	February	141.3
	March	142.7
	April	147.1
	May	150.1
	June	152.1
	July	151.1
	August	151.8

Source: Bureau of Labor Statistics.

Crude Oil

Percentage of Domestic Production Sold at Controlled and Uncontrolled Prices

		Controlled	Uncontrolled	Released	Stripper
		Old Oil	New Oil		
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
1975	* January	58	19	10	12
	* February	61	17	9	12
	March	60	18	10	12

*Total does not add to 100 due to rounding.

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	11.39
	March	5.25	11.47
	April	5.25	11.64
	May	5.25	11.69
	June	5.25	11.73
	July	5.25	*12.30

*Preliminary figure based on early reports.

Source: FEA.

Crude Oil (Continued)

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	8.29	13.05	10.09
	March	8.38	13.28	9.91
	April	8.23	13.26	9.83
	May	8.33	13.27	9.79
	June	R8.33	14.15	R10.33
	July	**8.37	**14.03	**10.57

*See Explanatory Note 13.

**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
	** March	12.46	12.79	13.94	12.08	12.56	11.78	13.40	11.66
	** April	12.36	12.95	13.71	12.34	12.46	12.16	12.55	11.61
	** May	12.41	12.08	13.71	11.93	12.34	12.27	13.29	11.54
	** June	12.37	11.90	13.73	12.51	12.49	11.93	12.48	11.51
	** July	12.69	12.15	13.98	11.83	12.37	12.08	12.78	11.46

NA=Not available.

*See Explanatory Note 13.

**Does not include \$1.00 import fee imposed on February 1, 1975, nor the additional \$1.00 fee imposed on June 1.

Source: FEA.

Utility Fossil Fuels

COST OF FOSSIL FUELS DELIVERED TO STEAM-ELECTRIC UTILITY PLANTS

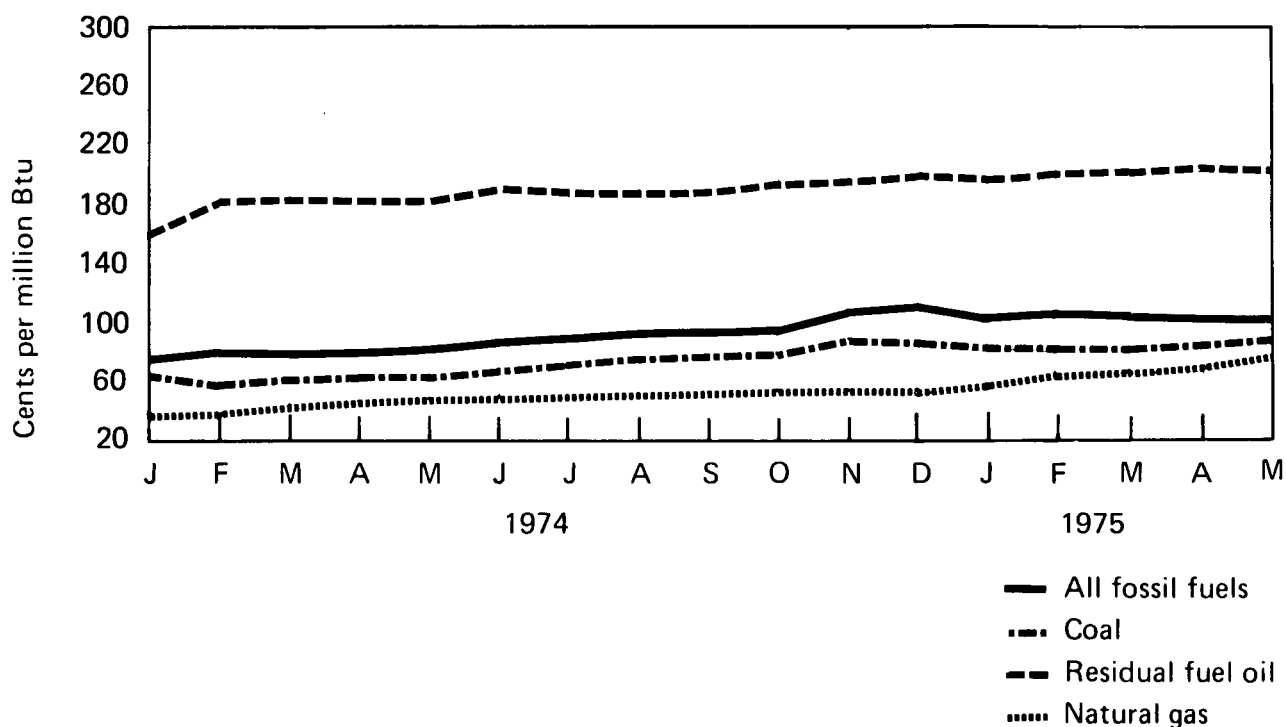
All Fossil Fuels*

Cents per million Btu

Region	1974						1975						
	MAY	JUNE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	180.0	184.7	186.2	191.4	191.6	192.6	198.7	196.6	193.6	198.8	192.2	196.3	190.5
Middle Atlantic	124.2	137.6	144.7	147.8	137.5	139.1	170.7	181.6	145.2	147.1	141.3	138.3	138.5
East North Central	68.9	76.9	79.1	82.7	82.5	84.6	102.0	100.9	86.6	85.6	86.9	86.6	87.4
West North Central	43.9	47.2	45.3	50.3	51.0	50.0	60.0	63.3	63.5	69.0	85.5	64.5	60.3
South Atlantic	109.8	119.0	123.7	128.2	132.3	128.4	144.3	144.2	125.1	120.2	120.4	120.4	120.1
East South Central	58.3	62.5	65.7	68.2	69.7	75.2	86.7	86.4	79.4	83.1	83.0	83.0	84.8
West South Central	47.3	50.0	59.4	57.1	52.1	53.7	58.0	57.5	59.8	67.4	68.9	70.0	72.9
Mountain	36.3	40.3	45.0	46.8	45.0	47.8	45.8	46.8	54.6	62.9	54.5	51.7	52.1
Pacific	122.4	117.9	118.9	118.8	127.3	132.8	157.7	191.3	190.0	194.4	196.3	209.7	187.3
National Average	81.2	87.7	92.2	95.4	95.9	97.7	111.3	114.7	104.3	106.4	104.2	101.5	101.0

*See Explanatory Note 14.

National Average



Coal

Cents per million Btu

Region	1974								1975				
	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	128.8	95.9	106.8	93.7	93.9	110.3	108.0	93.5	113.0	134.8	126.9	135.4	125.7
Middle Atlantic	79.3	88.6	94.3	97.4	95.2	94.6	117.4	114.4	99.1	104.7	99.7	98.2	101.7
East North Central	65.3	71.7	73.0	77.7	78.1	79.5	95.0	92.2	80.0	78.4	79.3	80.4	82.0
West North Central	41.7	42.0	44.0	48.3	50.5	48.7	57.0	56.0	56.7	57.9	59.4	60.9	57.7
South Atlantic	88.0	90.2	100.4	107.5	114.5	112.6	126.8	125.8	102.3	97.0	97.4	100.8	98.8
East South Central	54.2	57.9	57.7	61.6	64.1	69.7	77.8	80.7	76.3	79.5	80.1	80.1	81.5
West South Central	13.6	17.7	17.7	17.7	17.7	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0
Mountain	24.9	25.7	25.0	25.1	25.1	26.7	28.3	26.4	27.9	30.6	32.0	30.3	31.1
Pacific	35.6	35.5	37.8	38.3	39.0	38.5	38.6	38.5	38.4	57.7	57.2	56.8	57.0
National Average	65.8	69.5	72.9	77.3	79.1	80.9	90.3	88.9	80.9	81.7	80.6	80.5	81.8

Residual Fuel Oil*

Cents per million Btu

	1974								1975				
Region	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	193.1	201.1	199.2	201.8	199.8	202.0	207.5	207.5	202.5	204.1	204.3	202.9	200.1
Middle Atlantic	208.6	207.7	208.6	204.5	200.7	205.4	205.7	211.5	202.7	204.1	204.4	203.2	200.1
East North Central	138.7	198.2	182.7	164.4	161.5	161.3	167.1	164.6	144.9	165.0	163.4	183.1	157.0
West North Central	160.9	179.3	152.7	178.1	182.6	179.5	190.7	190.6	189.6	182.3	171.5	167.8	163.9
South Atlantic	174.9	181.5	178.7	178.9	179.3	183.3	182.2	182.2	180.9	181.6	186.8	188.9	187.7
East South Central	164.9	171.5	169.6	172.6	173.9	171.8	167.9	172.0	174.0	171.6	163.4	159.7	161.0
West South Central	152.1	161.1	187.5	179.3	108.8	186.0	179.7	171.7	177.1	178.2	175.8	191.5	177.7
Mountain	194.4	199.2	176.2	179.0	186.7	185.0	185.1	180.0	192.3	192.4	190.3	206.0	198.0
Pacific	188.7	202.5	204.9	220.3	222.3	223.8	219.5	233.0	223.6	235.0	241.1	261.1	260.6
National Average	188.1	194.9	194.2	914.6	194.3	198.2	198.9	202.1	197.7	202.0	204.8	209.3	205.6

Natural Gas

Cents per million Btu

Region	1974								1975				
	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	116.3	124.7	138.7	141.2	132.5	NA	NA	NA	NA	NA	97.1	112.4	110.8
Middle Atlantic	59.3	77.3	85.2	74.2	80.5	64.8	70.0	64.3	86.1	84.5	82.4	101.7	98.3
East North Central	72.0	76.1	77.3	80.5	84.3	83.3	80.3	93.9	91.0	92.7	93.0	105.5	120.8
West North Central	41.8	41.7	42.1	43.3	43.8	43.0	44.8	42.3	43.6	43.8	51.5	54.5	58.6
South Atlantic	57.8	59.8	60.9	58.3	55.8	58.5	60.2	64.7	60.3	68.5	72.6	70.2	71.2
East South Central	50.5	52.8	63.3	58.9	71.2	74.3	76.9	87.8	76.2	79.5	82.2	82.7	76.4
West South Central	39.5	43.6	43.8	46.8	46.0	47.8	51.5	52.2	55.6	63.0	64.5	67.0	71.3
Mountain	48.8	49.2	50.8	49.5	52.1	55.7	56.6	70.7	66.9	66.7	63.7	67.4	68.1
Pacific	50.4	50.7	60.0	64.0	64.7	65.9	64.0	68.4	83.2	83.6	80.5	90.1	82.4
National Average	44.0	47.9	49.8	51.8	52.4	53.2	54.0	55.0	58.2	65.2	66.4	68.9	72.6

NA=Not available.

*See Explanatory Note 14.

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

Source: Federal Power Commission.

PETROLEUM CONSUMPTION

Data for the IEA countries (the 18 signatory nations of the International Energy Agreement in Paris last year—Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States) indicated that these nations reduced their consumption from a high of 36.8 million barrels per day in February 1973 to 30.2 million barrels per day in April 1975, the last month for which complete data are available.

CRUDE OIL PRODUCTION

In July Arab OPEC production of crude oil increased substantially from 15.8 to 16.8 million barrels per day. The amount shut-in by these countries declined by 3.6 percentage points from the June level to 31.9 percent. The non-Arab OPEC production increase was smaller, from 10.8 to 11.1 million barrels per day. The amount shut-in was also reduced but only by 1.5 percentage points. Worldwide, there was a 1.2 million barrel-per-day increase in crude oil production to 54.2 million barrels per day.

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

		Total IEA*	Japan	West Germany	France**	United Kingdom	Canada	Italy***	Other IEA†
In thousands of barrels per day									
1973	Jan	35,100	4,121	2,868	2,743	2,315	1,667	1,781	3,681
	Feb	36,800	4,532	2,850	2,687	2,313	R1,747	1,866	R4,551
	Mar	33,500	4,450	2,707	2,528	2,271	1,584	1,710	3,585
	Apr	31,000	4,008	2,809	2,296	2,038	R1,431	1,420	R3,371
	May	30,900	3,822	2,546	1,890	1,939	1,486	1,285	3,219
	Jun	30,600	3,950	2,674	1,685	1,697	R1,474	1,255	R3,079
	July	29,600	3,783	2,196	1,566	1,637	1,490	1,303	2,855
	Aug	31,600	3,790	2,738	1,495	1,615	R1,557	1,255	R3,232
	Sept	31,000	3,813	2,618	1,932	1,727	1,427	1,462	3,333
	Oct	33,600	4,212	R2,969	2,482	2,150	1,680	1,610	R3,777
	Nov	35,200	4,562	2,883	2,593	2,258	1,801	1,551	3,653
	Dec	33,700	4,716	2,481	2,768	1,906	1,828	1,698	3,533
1974	Jan	33,200	R4,273	2,556	2,523	2,045	R1,823	1,755	R3,478
	Feb	33,200	R4,708	1,969	2,389	R2,127	1,863	1,751	R3,411
	Mar	31,200	4,508	2,173	2,249	2,133	R1,658	1,621	R3,062
	Apr	30,200	3,804	2,539	R1,970	1,899	R1,560	R1,396	R3,083
	May	29,600	3,718	2,403	R1,915	R1,704	R1,572	R1,349	R3,134
	Jun	29,600	3,710	2,414	R2,103	1,545	R1,455	R1,290	R3,010
	July	29,900	R3,573	2,548	R1,703	R1,531	1,534	R1,368	3,045
	Aug	30,100	3,787	R2,476	R1,506	R1,513	R1,463	R1,237	R3,078
	Sept	30,600	R3,868	2,473	R1,996	R1,663	R1,414	R1,487	R3,701
	Oct	32,300	R3,843	2,613	R2,045	R2,049	R1,680	R1,536	R3,554
	Nov	32,700	R4,086	2,432	R2,260	2,108	R1,713	R1,587	R3,559
	Dec	33,900	R4,401	2,261	R2,492	R1,983	R1,831	1,707	R3,720
1975	Jan	R32,900	R3,850	2,183	2,185	1,993	1,691	R1,725	R3,475
	Feb	33,000	R4,242	2,455	2,238	1,913	1,870	1,737	R3,535
	Mar	R30,300	R3,978	2,234	R1,948	1,773	1,548	1,482	R2,969
	Apr	30,200	3,463	2,431	2,202	1,872	1,606	1,403	3,384
	May	NA	R3,304	2,253	1,636	1,488	1,522	1,171	NA
	Jun	NA	3,323	2,106	1,644	1,404	1,512	1,194	NA

*The 18 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United States, inland consumption excludes bunkers, refinery fuel, and losses.

**Not a member of IEA.

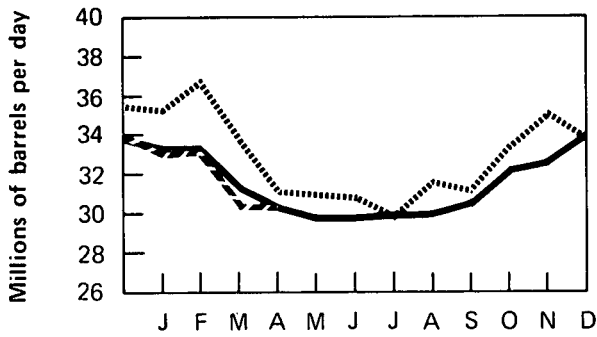
***Principal products only.

†Excludes the United States.

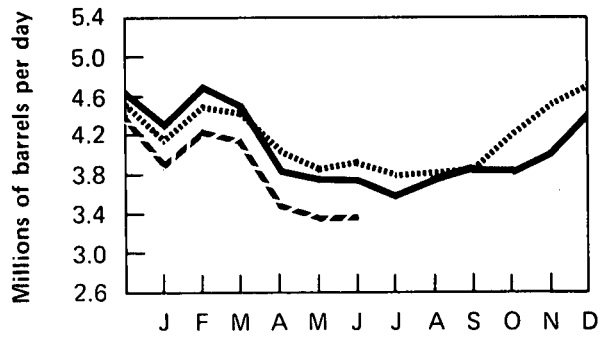
NA=Not available.

Source: Central Intelligence Agency.

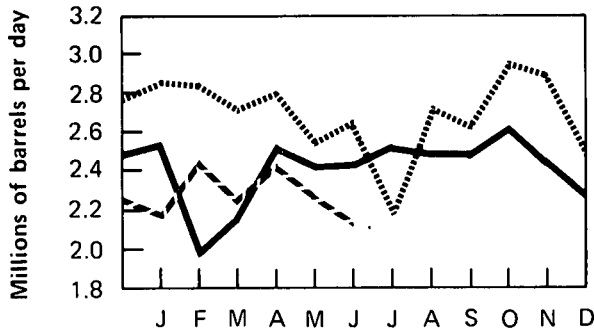
Total IEA



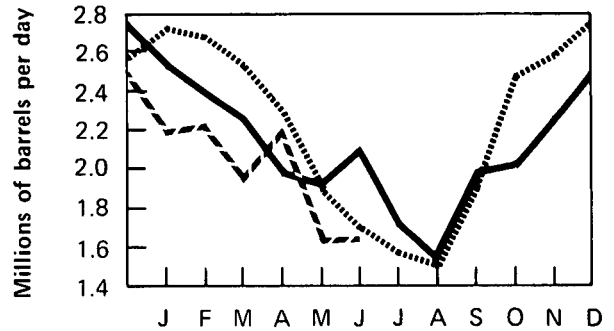
Japan



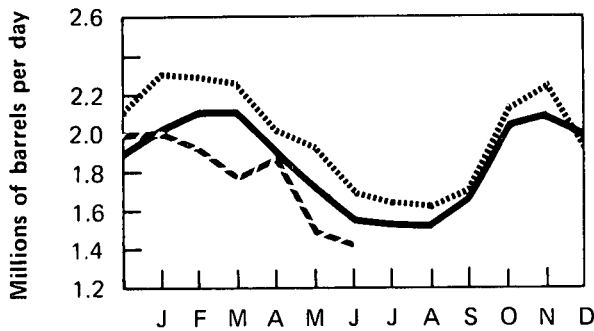
West Germany



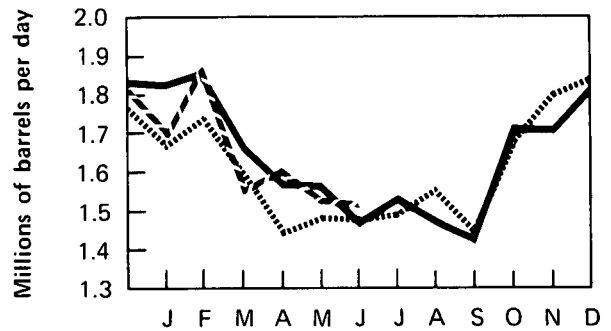
France*



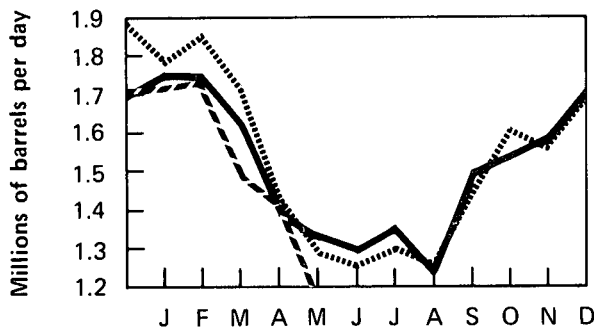
United Kingdom



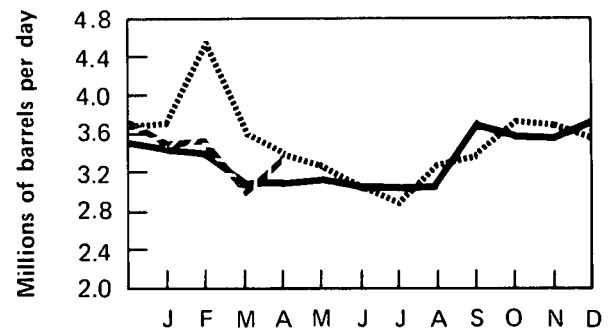
Canada



Italy**



Other IEA***



*Not a member of IEA.

**Principal products only.

***Excludes the United States.

..... 1973
 — 1974
 - - - 1975

Crude Oil

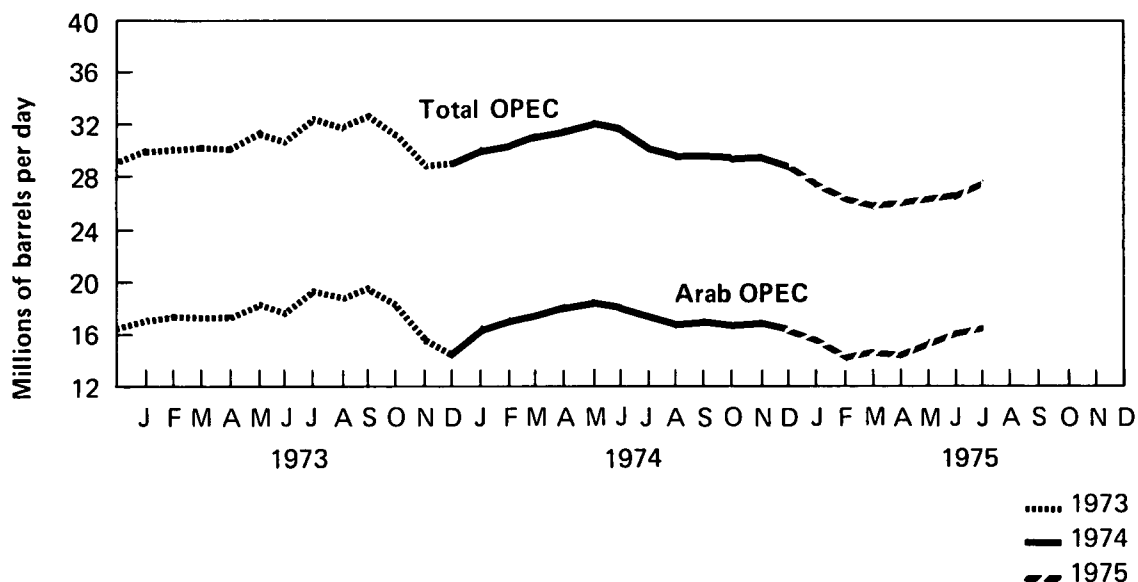
Crude Oil Production for Major Petroleum Exporting Countries—July 1975

Country	Production	Production Capacity	Production Shut-in
	In thousands of barrels per day		In percent
Algeria	900	1,000	10.0
Iraq	2,380	2,600	8.5
Kuwait*	2,110	3,500	39.7
Libya	2,100	3,000	30.0
Qatar	270	700	61.4
Saudi Arabia*	6,980	11,500	39.3
United Arab Emirates	2,070	2,400	12.7
Subtotal: Arab OPEC	16,810	24,700	31.9
Ecuador	190	240	20.8
Gabon	210	250	16.0
Indonesia	1,320	1,700	22.4
Iran	5,440	6,500	16.3
Nigeria	1,650	2,500	34.0
Venezuela	2,330	3,100	24.8
Subtotal: Non-Arab OPEC	11,140	14,290	22.0
Total: OPEC	27,950	38,990	28.3
Canada	1,510	1,980	23.7
Mexico	820	820	0
Total: OPEC, Canada, Mexico	30,280	41,790	27.5
Total World	54,180		

*Includes about one-half of Neutral Zone production which amounted to approximately 530,000 barrels per day in July.

Source: Central Intelligence Agency.

OPEC Countries Crude Oil Production



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.

Branded Independent Marketer

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

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 Uncontrolled 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 (NGL)

Products obtained from natural gasoline plants, cycling plants, and fractionators after processing the natural gas. Included are ethane, liquefied petroleum (LP) gases (propane, butane, and propane-butane mixtures), natural

gasoline, plant condensate, and minor quantities of finished products such as gasoline, special naphthas, jet fuel, 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.

Nonbranded Independent Marketer

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

Old Oil

Same as controlled crude oil.

Power Ascension Nuclear Powerplant

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

Primary Stocks of Refined Petroleum Products

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

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 pro-

duced 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 year.

Synthetic Natural Gas (SNG)

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

Total Refined Petroleum Products Imports

Imports of motor gasoline, naphtha-type jet fuel, kerosine-type jet fuel, liquefied petroleum gases, kerosine, distillate fuel oil, residual fuel oil, petro-chemical 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 FEA Office of Oil Imports.

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 June 1975 and FEA figures for July 1975 forward. FEA monthly data for May 1974 through March 1975 were based on the *Weekly Petroleum Statistics Report* which presented 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. In April 1975, the FEA weekly report was replaced by the *Monthly Petroleum Statistics Report* which presents essentially the same data on a monthly basis.

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 through June and FEA figures for July forward.

4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publi-

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

5. 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.

6. 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.

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

8. 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).

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

10. While FEA's forecasts of demand for the major products have proved to be reasonably good, the forecasts for "other" products have been consistently low which similarly affects the forecast for total refined products. When planned revisions to the forecasts are incorporated, it is expected that the forecast for total demand will be reduced by several hundred thousand barrels per day.

11. Monthly mileage estimates for 1974 and 1975 are based on the average number of miles traversed per crew day in 1974.

12. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected 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.

13. 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.

14. 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	<i>contains</i>	1.102 short tons
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Conversion Factors for Crude Oil

Average gravity

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

Conversion Factors for Uranium

1 short ton (U_3O_8)	<i>contains</i>	0.769 metric tons of uranium
1 short ton (UF_6)	<i>contains</i>	0.613 metric tons of uranium
1 metric ton (UF_6)	<i>contains</i>	0.676 metric tons of uranium

Approximate Heat Content of Various Fuels

Petroleum

Crude Oil	5.800 million Btu/barrel
Refined products	
Imports, average	6.000 million Btu/barrel
Consumption, average	5.517 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
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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
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Hydroelectric	10,389 Btu/kilowatt hour
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Electricity Consumption	3,412 Btu/kilowatt hour
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