

# Monthly Energy Review

**March 1975**



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# Feature Article

## ENERGY CONSUMPTION

This article represents an initial step in presenting current energy consumption information on a monthly basis. The reader is presented with some selected historical statistics designed to give an overall perspective of energy use in the United States. Estimated consumption data for the month of November 1974 are then presented. Finally, the major Federal energy conservation programs are described.

Our immediate aim is to create a comprehensive source of reference for monthly U.S. energy consumption data. Ultimately, we plan to provide a factual basis for assessing overall energy conservation and fuel conversion programs. While reducing energy consumption is the objective of energy conservation programs, consumption data alone are inadequate indicators of program effectiveness. Such data must be evaluated in the light of underlying causal variables, such as variations in climatic conditions, economic activity, and population levels.

This month's article focuses largely on consumption statistics and current Federal efforts to promote energy conservation. In the future, attention will be given to other relevant information, including "leading indicators" which may be helpful in predicting future trends in energy consumption. For example, FEA's Office of Energy Statistics plans to monitor the sales-weighted average fuel economy of new automobiles on a monthly basis.

Because development of detailed information on energy consumption on a monthly basis is a groundbreaking step, there are necessarily some areas that, at present, must be estimated, either because of the extreme time lags in reporting or because the desired data are not yet collected. For example, there presently is a 2-month lag between the publication of energy production statistics and sectoral energy consumption statistics for that same month. This lag will be eliminated as data collection methods become more refined. Both in substance and format, this section will be revised to accommodate improvements in data and suggestions from users. Comments from our readers are invited.

### U.S. Energy Consumption Statistics

The amount of energy that the United States consumes annually has more than doubled over the last 25 years—from 33.9 quadrillion Btu in 1948 to 75.7 quadrillion Btu in 1973.<sup>1</sup> During this period the average

annual growth rate was 3.3 percent, but in the years immediately prior to 1973 annual growth was higher, averaging about 4.8 percent. A preliminary estimate for 1974 is 74.2 quadrillion Btu, reflecting a decline of about 2.0 percent from the previous year.<sup>2</sup> Nonetheless, future consumption rates remain a topic of increasing concern.

### Consuming Economic Sectors

Other sections of the *Monthly Energy Review* present statistics on aggregate consumption of fossil fuels or other primary energy sources, such as hydroelectric power. The unique feature of this section is its end-use orientation. Energy consumption data are developed for each of four major economic sectors—Residential and Commercial, Industrial, Transportation, and the Electric Utilities. This classification, essentially the same as that used by the Bureau of Mines, is briefly described below.

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.

Electric utilities are not ultimate consumers of energy but rather are intermediaries in the process which delivers energy from primary sources to ultimate consumers. Nonetheless, separate consideration of this sector is necessary to fully understand the dynamics of the energy flow process.

U.S. energy consumption for 1971-73, by economic sector and primary energy source, is shown in Table 1. A distinction is made between "net" and "primary" energy consumed. The former is the energy consumed at the point of application by ultimate users, and includes both fuels and electricity. The latter only includes energy directly consumed from primary sources. In terms of net energy consumed, the three major sectors are relatively evenly balanced; however, the mix of primary energy sources utilized by the various sectors varies widely.

<sup>1</sup> Bureau of Mines data.

<sup>2</sup> U.S. submissions to the Standing Group on Long Term Cooperation of the International Energy Agency, December 1974.

**Table 1. Annual Energy Consumption by Economic Sector and Primary Source<sup>1</sup> - 1971, 1972, 1973 (Quadrillion (10<sup>15</sup>) Btu)**

Consuming sector	Primary energy source					Primary energy consumption (percent change from previous year)	Electricity distributed <sup>3</sup>	Net energy consumption <sup>4</sup> (percent change from previous year)	
	Coal <sup>2</sup>	Natural gas (dry)	Petroleum	Hydroelectric power	Nuclear power				
Residential and Commercial:									
1971 . . . . .	0.406	7.366	6.440	—	—	14.212 (1.6)	3.209	17.421 (2.5)	
1972 . . . . .	0.387	7.642	6.667	—	—	14.696 (3.4)	3.478	18.174 (4.3)	
1973 (preliminary) . . . . .	0.370	8.001	7.024	—	—	15.395 (4.8)	3.727	19.122 (5.2)	
Industrial:									
1971 . . . . .	4.303	10.570	5.094	0.034	—	20.001 (−1.3)	2.293	22.294 (−0.8)	
1972 . . . . .	4.267	10.591	5.668	0.035	—	20.561 (2.8)	2.493	23.054 (3.4)	
1973 (preliminary) . . . . .	4.454	10.825	6.043	0.035	—	21.357 (3.9)	2.671	24.028 (4.2)	
Transportation:									
1971 . . . . .	0.006	0.766	16.286	—	—	17.058 (3.6)	0.017	17.075 (3.6)	
1972 . . . . .	0.004	0.790	17.264	—	—	18.058 (5.9)	0.017	18.075 (5.9)	
1973 (preliminary) . . . . .	0.005	0.814	17.927	—	—	18.746 (3.8)	0.018	18.764 (3.8)	
Electricity Generation, Utilities:									
1971 . . . . .	7.330	4.117	2.543	2.828	0.404	17.222 (0.0)	—	—	
1972 . . . . .	7.837	4.102	3.134	2.911	0.576	18.560 (7.8)	—	—	
1973 (preliminary) . . . . .	8.691	3.918	3.435	2.906	0.853	19.803 (6.7)	—	—	
Miscellaneous and Unaccounted for:									
1971 . . . . .	—	—	0.207	—	—	0.207	—	0.207	
1972 . . . . .	—	—	0.233	—	—	0.233	—	0.233	
1973 (preliminary) . . . . .	—	—	0.260	—	—	0.260	—	0.260	
Totals:									
1971 . . . . .	12.045	22.819	30.570	2.862	0.404	68.700 (2.3)	5.519	56.997 (1.5)	
1972 . . . . .	12.495	23.125	32.966	2.946	0.576	72.108 (5.0)	5.988	59.536 (4.4)	
1973 (preliminary) . . . . .	13.520	23.558	34.689	2.941	0.853	75.561 (4.8)	6.416	62.174 (4.3)	

<sup>1</sup> Data are from U.S. Bureau of Mines.

<sup>2</sup> Includes anthracite and bituminous coal and lignite.

<sup>3</sup> Of the primary energy inputs to the electrical utilities sector, only about 32 percent is distributed to ultimate consumers as electricity. About 65 percent is lost as heat in the generation process and the remainder is consumed internally by the utilities or as transmission loss.

<sup>4</sup> Net energy is the total of primary energy directly consumed plus electricity received from electric utilities.

The Residential and Commercial sector is highly dependent on natural gas and petroleum, consuming about 80 percent of its net energy in these forms. Electricity provides almost all of the remainder, although small amounts of coal are directly consumed in coal-producing regions.

The Industrial sector is the largest consumer of natural gas, which fills about 45 percent of the energy needs of this sector. Together oil and coal provide about as much energy as natural gas does. Electricity provides the remainder, a small amount of which is generated at industrial hydroelectric sites.

The Transportation sector relies almost exclusively on petroleum-based fuels. Natural gas, however, does provide about 4 percent of the total, mostly in moving products through pipelines.

The Electric Utilities sector is heavily coal-dependent, deriving about 45 percent of its energy from this fuel. Natural gas and oil are next in importance and together provide about 35 percent of the total input. Hydroelectric and nuclear power provide the remaining energy inputs.

#### **Energy Consumption: November 1974**

In order to monitor energy consumption on a timely basis, and to allow the examination of its seasonal nature, monthly data will hereafter be presented in this publication. Estimates for the month of November 1974, the most recent data available, are shown in Table 2 using a format similar to Table 1. In addition, Table 2 allocates electrical generation and transmission losses to the three major consuming sectors. The November data are also summarized graphically in Figure 1.

The November Coal and Electrical sector figures are firm data based on actual monthly reports. Except for electric utilities consumption, the figures on natural gas and petroleum are estimates developed by distributing the aggregate monthly consumption of these fuels to each economic sector using the percentage shares which applied during 1972-73. A detailed breakdown of estimates for the Transportation sector is presented later in the discussion of Federal conservation programs. FEA intends to eventually base all monthly consumption statistics on firm data.

Partly due to the methodology used to develop Table 2, the sectoral energy consumption patterns are similar to those observed in Table 1, except for the electric utilities. In this sector, natural gas consumption has decreased from 20 percent in 1973 to 15 percent of total input in November 1974. This has been more than

offset by an increase in the consumption of coal and nuclear energy.

#### **Energy Consumption: January through November 1974**

In order to facilitate comparative analysis with the consumption patterns of the previous year, Table 3 shows sectoral energy consumption on a year-to-date basis. Table 4 summarizes the percentage changes from 1973 on both a year-to-date and a monthly basis.

Table 4 reveals that consumption of all petroleum products has declined by 4.3 percent for the 11-month period through November 1974. Residual oil consumption, however, dropped by 8.3 percent, about three-fourths of which was due to industry cutbacks. Most of the remainder was due to decreased usage by electric utilities. On the other hand, motor gasoline consumption dropped surprisingly little considering the large price increase which occurred early in the period.

The small drop in natural gas consumption in 1974 reflects both a decline in available supply during peak demand periods (forcing curtailments upon industrial customers) as well as energy conservation efforts in the Residential and Commercial sector.

Coal consumption was up slightly for the 11-month period, following the trend in recent years toward increased use of this fuel. Were it not for the UMWA strike, which induced sharp temporary curtailments in usage during October and November 1974, this trend would be more in evidence.

After years of growing at a 6- to 7-percent annual rate, electricity sales actually declined during the first 11 months of 1974. This overall decline was entirely due to reduced usage within the Residential and Commercial sector, which consumed 1.3 percent less. Over the same period average Industrial consumption was up 0.7 percent.

#### **Federal Energy Conservation Programs**

Important insights into conservation and fuel conversion opportunities are gained by examining energy consumption by functional end use, rather than by specific fuels, although the two are closely related. Figure 2 presents a generalized view of how net energy is directly consumed in the various functional end uses. In this breakdown, the thermal losses associated with electricity generation are excluded to most clearly reveal the pattern of final end use demand. An analysis of the functional end uses forms the basis of Federal energy conservation programs.

**Table 2. Energy Consumption by Economic Sector and Primary Source, November 1974 (Quadrillion (10<sup>15</sup>) Btu)**

Economic Sector	Primary Energy Source					Primary Energy Consumption	Electricity Distributed <sup>5</sup>	Net Energy Consumption	Electrical Energy Loss Distributed <sup>6</sup>	Ultimate Energy Disposition
	Coal <sup>1</sup>	Natural Gas (dry) <sup>2</sup>	Petroleum <sup>3</sup>	Hydroelectric <sup>4</sup>	Nuclear <sup>4</sup>					
Residential and Commercial	.027	0.684	0.586	—	—	1.297	0.263	1.560	0.665	2.225
Industrial	.300	0.958	0.500	0.003	—	1.761	0.196	1.957	0.496	2.453
Transportation	<sup>7</sup>	0.068	1.462	—	<sup>7</sup>	1.530	0.005	1.535	0.013	1.548
Electric Utilities	.763	0.248	0.282	0.232	0.113	1.638	—	—	—	—
Totals	1.090	1.958	2.830	0.235	0.113	6.226	0.464	5.052	1.174	6.226

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

<sup>2</sup> Aggregate data are from Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. The remainder is distributed to each economic sector using the following percentage shares, derived from 1972 to 1973 Bureau of Mines data on consumption: Residential and Commercial - 40%; Industrial - 56%; Transportation - 4%.

<sup>3</sup> Aggregate petroleum data are from the Federal Energy Administration. FPC provided data on oil consumed by electric utilities. Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline - 100%; naphtha jet fuel - 100%; kerosine jet fuel - 97%; distillate fuel oil - 30.3%; residual fuel oil - 11.2%; all other products - 4.7%. The remainder is distributed to economic sectors using the following percentage shares, derived from 1972 and 1973 Bureau of Mines data on consumption: Residential and Commercial - 54%; Industrial - 46%.

<sup>4</sup> Net imports of electricity from Canada, estimated at 0.12 quadrillion Btu/month, were assumed to be from hydroelectric power sources. Industrial hydropower was estimated to be one-twelfth of the Bureau of Mines annual figure for 1973.

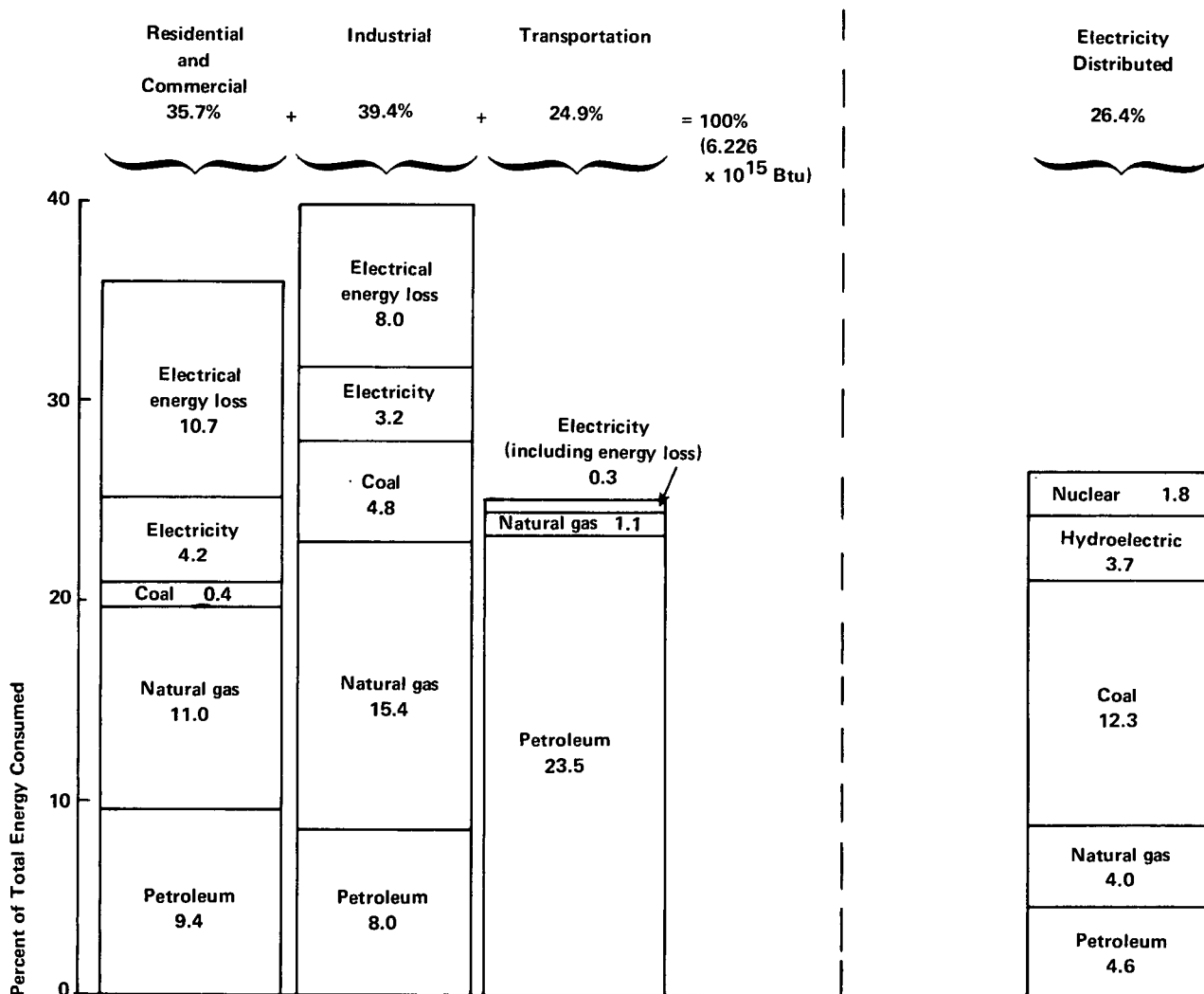
<sup>5</sup> Electricity was distributed using FPC and Edison Electric Institute data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation sector. Sales to all other public authorities, largely for use in government buildings, were distributed to the Residential and Commercial sector.

<sup>6</sup> In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs to the utility industry. In order to fully account for all energy consumed, both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end use sectors in proportion to their direct kilowatt-hour usage.

<sup>7</sup> Negligible.



Figure 1. Percentage Distribution of Energy Consumed  
by Economic Sectors during November 1974<sup>1</sup>



<sup>1</sup> A total of 6.226 quadrillion (10<sup>15</sup>) Btu were consumed as energy in the United States during November 1974. Of this total, 1.638 quadrillion Btu (26.4%) were expended to generate and transmit electricity, which is distributed as shown to the final consuming sectors on a direct kilowatt-hour basis. In the figure, the generation and transmission losses are allocated to the final consuming sectors in direct proportion to each sector's kilowatt-hour consumption. The sum of sectoral electricity purchases and associated losses are equal to the energy inputs to the electric utilities industry as shown.

**Table 3. Cumulative Economic Sector Energy Consumption by Energy Source, January 1974 through November 1974 (Quadrillion (10<sup>15</sup>) Btu)**

Economic Sector	Primary Energy Source					Primary Energy Consumption	Electricity Distributed <sup>5</sup>	Net Energy Consumption	Electrical Energy Loss Distributed <sup>6</sup>	Ultimate Energy Disposition
	Coal <sup>1</sup>	Natural Gas (dry) <sup>2</sup>	Petroleum <sup>3</sup>	Hydroelectric <sup>4</sup>	Nuclear <sup>4</sup>					
Residential and Commercial	0.250	6.735	6.307	—	—	13.292	3.130	16.422	7.703	24.125
Industrial	3.541	9.430	5.372	0.032	—	18.375	2.164	20.539	5.325	25.864
Transportation	<sup>7</sup>	.674	15.851	—	<sup>7</sup>	16.525	0.054	16.579	0.133	16.712
Electric Utilities	8.427	3.274	2.814	2.964	-1.030	18.509	—	—	—	—
Totals	12.218	20.113	30.344	2.996	1.030	66.701	5.348	53.540	13.161	66.701

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

<sup>2</sup> Aggregate data are from Bureau of Mines. FPC provided data on natural gas consumed by electric utilities. The remainder is distributed to each economic sector using the following percentage shares, derived from 1972 to 1973 Bureau of Mines data on consumption: Residential and Commercial - 40%; Industrial - 56%; Transportation - 4%.

<sup>3</sup> Aggregate petroleum data are from the Federal Energy Administration and 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%; naphtha jet fuel - 100%; kerosine jet fuel - 97%; distillate fuel oil - 30.3%; residual fuel oil - 11.2%; all other products - 4.7%. The remainder is distributed to economic sectors using the following percentage shares, derived from 1972 and 1973 Bureau of Mines data on consumption: Residential and Commercial - 54%; Industrial - 46%.

<sup>4</sup> Net imports of electricity from Canada, estimated at 0.12 quadrillion Btu/month, were assumed to be from hydroelectric power sources. Industrial hydropower was estimated to be one-twelfth of the Bureau of Mines annual figure for 1973.

<sup>5</sup> Electricity was distributed using FPC and Edison Electric Institute data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation sector. Sales to all other public authorities, largely for use in government buildings, were distributed to the Residential and Commercial sector.

<sup>6</sup> In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs to the utility industry. In order to fully account for all energy consumed, both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end use sectors in proportion to their direct kilowatt-hour usage.

<sup>7</sup> Negligible.

**Table 4. Percent Changes in Energy Consumption for November 1974, by Source (Quadrillion Btu)**

	November 1974 Consumption	Percent Change from November 1973	Cumulative Percent Change from January-November 1973 to January-November 1974
Refined Petroleum			
Products:	2.830	— 7.1	—4.3
Motor Gasoline	1.048	— 2.4	—2.5
Jet Fuel	0.177	+ 4.1	—6.1
Distillate	0.534	—12.8	—6.3
Residual	0.496	—15.6	—8.3
Other Petroleum			
Products	0.575	— 4.4	—2.8
Natural Gas (Dry)	1.958 <sup>1</sup>	— 0.3	—1.8
Coal (Anthracite, bituminous, lignite)	1.090	— 2.9	+0.6
Total Fossil Fuels <sup>2</sup>	5.868	— 4.3	—2.6
Electricity	0.464 <sup>3</sup>	— 1.5	—0.5

<sup>1</sup> Estimated.<sup>2</sup> Includes usage by electric utilities.<sup>3</sup> FPC sales to ultimate consumers.

These programs are described next within the context of the three major consuming categories—residential and commercial, industrial, and transportation.

#### **Residential and Commercial**

Together these two sectors account for about 31 percent of the net energy consumed in the United States. Residential consumption of energy breaks down as follows: space heating, 71 percent; hot water heating, 16 percent; cooking, 4 percent; air-conditioning, 1 percent; and 8 percent for other uses. Within the commercial sector, 65 percent is consumed in space heating, 13 percent in lighting, 4 percent in air-conditioning, 4 percent in refrigeration, and 14 percent for miscellaneous uses.

The following Federal energy conservation programs, under the auspices of the Federal Energy Administration, are directed toward residential and/or commercial end uses.

- **Lighting and Thermal Operations Program.**

This program has been designed to educate and encourage owners, managers, and occupants of commercial, public, and industrial buildings to conserve energy by reducing excessive illumination and lowering thermostat settings. FEA has published guidelines recommending specific lighting levels for various types of work areas and tasks and is urging their adoption by businesses and State and local governments. The objective of the program is to achieve a 25-percent reduction in energy consumed for heating, air-conditioning, and lighting. The

estimated energy savings from this program for 1975 is 100,000 barrels per day of oil equivalent.

- **Residential Retrofit Program ("Operation Button-Up").**

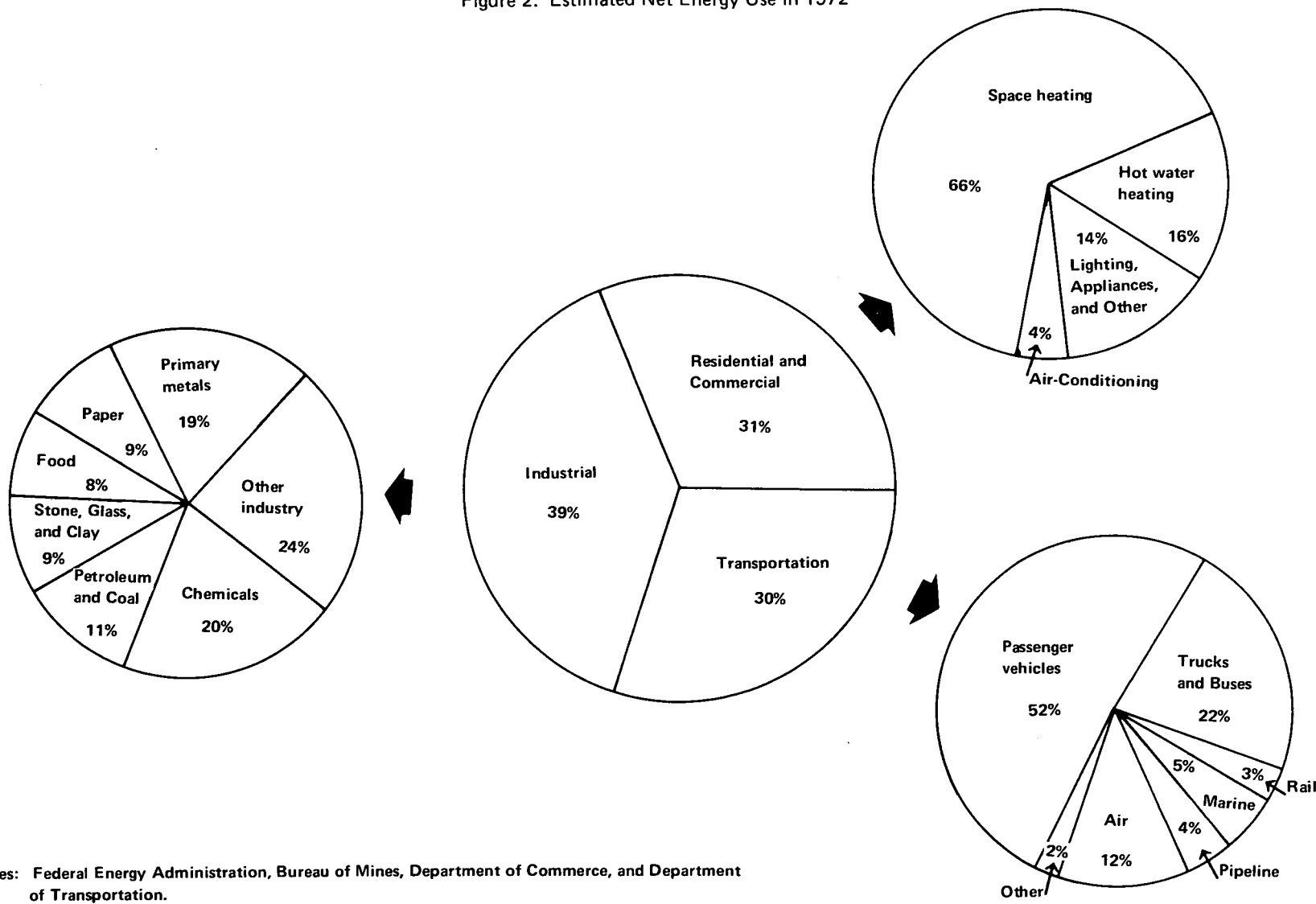
This cooperative program involving both public and private organizations is designed to encourage the addition of insulation, storm doors and windows, and caulking and weather stripping to 70,000 single-family residences in America which today do not meet minimum insulation standards.

The program is primarily a media campaign intended to educate homeowners on the economics of fuel savings. Local utility companies, businesses, civic organizations, trade associations, and building materials suppliers are being enlisted to support the program. Pilot efforts have begun in four major cities: Louisville, Indianapolis, Minneapolis, and Kansas City. It is anticipated that additional cities will be added to the program in the coming months. The estimated energy savings for 1975 are equivalent to 15,000 barrels per day of oil.

- **Low-Income Winterization Program.**

As part of his omnibus energy package, the President has proposed the Winterization Assistance Act of 1975. The purpose of this Act is to encourage the States to develop and implement programs to insulate the dwellings of low-income households, particularly those of the elderly. If passed, the Act would authorize FEA to provide grants to the States to be utilized for the procurement of

Figure 2. Estimated Net Energy Use in 1972



Sources: Federal Energy Administration, Bureau of Mines, Department of Commerce, and Department of Transportation.

winterization materials. The States would then be responsible for installation of these materials.

- **Minimum Thermal Standards for New Housing.**

On November 22, 1974, HUD published a policy statement setting forth new "Thermal Insulation Requirements." These requirements set minimum standards for insulation in Federally-insured (FHA, VA, and FmHA) new housing covering one- and two-family units. These new standards would result in annual savings in heating and air-conditioning costs which would more than cover the increase in mortgage payments required to cover the higher initial construction costs, even at today's high interest rates.

Overall annual oil equivalent savings are estimated to reach 13,000 barrels per day by 1977, 33,000 barrels per day by 1980, and 60,000 barrels per day by 1985.

- **Voluntary Appliance Efficiency Improvement Program.**

Appliances, such as refrigerators, freezers, ranges, televisions, room air-conditioners, clothes washers and dryers, dishwashers, and television receivers, account for about 8 percent of total primary U.S. energy consumption. In an effort to improve the efficiency of new appliances 20 percent by 1980, FEA is seeking the voluntary agreement of manufacturers to set minimum performance standards for their products. It is anticipated that within 6 months such agreements will be reached with manufacturers of water heaters, refrigerators, freezers, and room air-conditioners. By June 1976, similar agreements will cover other types of appliances. Initially, the resulting energy savings would be small due to the low turnover rate in existing stocks of appliances, but it should grow rapidly after 1977, as more efficient appliances replace older, less efficient ones. Energy savings in oil equivalent are estimated at 12,000 barrels per day by 1977, rising to 118,000 barrels per day by 1980.

- **Appliance Efficiency Labeling Program.**

Closely related to the Appliance Efficiency Improvement Program, the Federal Government and manufacturers of appliances are cooperating in a program to develop and display efficiency labels on major natural gas and electric appliances. In addition, the Administration has also proposed legislation which would establish a mandatory appliance labeling program requiring that information on the energy efficiency and estimated operating costs of appliances be provided to consumers at the time of purchase. The savings estimated for 1977 are 35,000 barrels per day oil equivalent.

- **"Don't Be Fuelish" Advertising Campaign.**

FEA now has underway a comprehensive public education program to encourage consumer energy savings, including a "Don't Be Fuelish" advertising campaign. This campaign makes widespread use of television, radio, and newspapers. Included are suggestions to set thermostats at 68°F during the day and 60°F at night during winter months. It also involves suggestions on ways to save energy at the workplace, and encourages the use of public transportation. The Department of Transportation has a carpooling program and the Department of Commerce has a business-press advertising effort as part of the same campaign.

- **Federal Energy Management Program.**

Since it is a large user of energy, the Federal Government has initiated its own conservation program, both to cut down on total energy use and to serve as an example to the private user. This program was developed and coordinated by FEA, which receives quarterly energy consumption reports from each agency.

The program originated in June 1973, when the President directed the Federal Government to reduce its own energy consumption by 7 percent during fiscal year 1974. The actual savings achieved were 24 percent below fiscal year 1973 consumption, or the equivalent of 250,000 barrels per day of oil.

The fiscal year 1975 program includes, at the President's direction, a study of the potential savings in a multi-year program of conservation investments to increase the energy efficiency of all Federal facilities and operations. The FY 75 goal is to achieve a level of energy consumption that will be 15 percent below the fiscal year 1973 consumption level, or the equivalent of 150,000 barrels per day of oil.

## **Industrial**

The largest energy consuming sector in the United States is industry, accounting for 39 percent of total net energy consumption. The distribution of energy consumption by specific industries is useful in identifying those which are primary targets for energy conservation efforts. As Figure 2 indicates, the manufacturing of chemicals, the processing of primary metals, and the refining of petroleum are the most energy-intensive activities, accounting for about half of all industrial consumption.

- **Voluntary Industrial Energy Conservation Program**

The Federal Energy Administration, in conjunction with the Department of Commerce, is working with repre-



sentatives of ten of the Nation's most energy-intensive industries in an attempt to reduce industrial energy consumption. This program is designed to establish specific energy efficiency targets within each of these industries and to monitor progress through reporting systems covering each industry as well as individual firms.

By monitoring energy consumption, the Federal Government can identify progress in voluntary energy conservation as well as areas of possible misuse. It can then suggest remedial actions, work to remove constraints on conservation, and provide information on alternative methods to reduce energy use. Such methods include material recycling, reducing the use of petroleum-based materials, and improving manufacturing processes through increased combustion efficiency, utilization of waste heat, and the redistribution of electric load to flatten the peak demand.

Statistics focusing on energy consumption per unit of product output are now being gathered from the aluminum, cement, chemicals, paper, petroleum refining, and steel industries, in order to establish baselines using 1972 as the reference year. These data, as well as 1974 consumption figures, should be available in April 1975. By September 1975, data on current consumption should also be available, enabling each industry to

further evaluate its own programs within the parameters of its stated savings goals. The first six industries have made energy conservation pledges of 10- to 15-percent per unit of output by 1980. Chief Executive Officer meetings with representatives of the baking, copper, glass, and meat packing industries will be held during April 1975, so their pledges are not yet known.

## Transportation

The transportation sector uses 30 percent of the net energy consumed in the United States, virtually all in the form of petroleum. Although its percentage share appears to have declined slightly in recent years, transportation still accounts for slightly more than half of the petroleum consumed annually in the United States.

Table 5 presents transportation energy consumption by major modal activity for November 1974. Data have been estimated by applying historical relationships, on the basis of 1972 and 1973 Bureau of Mines data, to the "apparent consumption" figures (defined as disappearance from primary supplies) for each fuel type as presented in *Energy Statistics*, August 1974, a Department of Transportation (DOT) publication. This methodology should yield reasonable estimates if the

**Table 5. Estimated November 1974 Transportation Fuel Consumption by Fuel Type and Mode**  
(Quadrillion ( $10^{15}$ ) Btu)

	Gasoline	Jet Fuel	Distillate	Residual	Natural Gas	Electricity	Miscellaneous	Total
Highway:								
Passenger car <sup>1</sup>	0.792							0.792
Trucks <sup>2</sup>	.239		0.097					.336
Buses <sup>3</sup>	.003		.009					.012
Street/Highway Lighting						0.004		.004
Aviation:								
Certified Carrier		.109						.109
General Aviation	.006	.003						.009
Military <sup>4</sup>		.057						.057
Rail:								
Heavy			.045					.045
Light (Mass transit)						.001		.001
Waterway	.008		.011	.056				.075
Pipeline					.068			.068
Miscellaneous							.027	.027
Total	1.048	.169	.162	.056	.068	.005	.027	1.535

<sup>1</sup> Includes taxis and motorcycles. Assumes that all passenger car, taxi, and motorcycle fuel is gasoline.

<sup>2</sup> Assumes that all single unit truck fuel is gasoline and that all combination truck fuel is diesel.

<sup>3</sup> Includes commercial, public, and school buses. Assumes that all school bus fuel is gasoline and that all commercial and public bus fuel is diesel.

<sup>4</sup> Assumes that all naphtha-based jet fuel, and all kerosine-based jet fuel not accounted for by certified or general aviation, is used by the military.

Source: FEA, Office of Conservation and Environment.

percentage of each fuel consumed by the various modes remained fairly constant over the past 3 years. For example, during the 1972-73 period, automobiles consumed about 77 percent of the motor gasoline sold for highway use, trucks about 23 percent, and buses about 0.3 percent; this relative distribution was used in the development of Table 5.

The figures in Table 5 clearly reveal that highway travel is by far the largest consumer of transportation energy, accounting for nearly 75 percent of the total. Most of this is used by automobiles and light trucks powered by gasoline. The next most important user is the certificated air carriers, consuming about 7 percent of total transportation energy, primarily in the form of kerosine-type jet fuel. The remaining 20 percent represents virtually all of the Nation's intercity freight traffic.

Transportation energy can be conserved in three basic ways:

- by reducing the demand for transportation
- by shifting activity to the more efficient modes
- by improving efficiency of the various modes

The second and third alternatives are further illuminated through examination of the energy efficiencies of the major transportation modes, as measured by passenger-miles per gallon or ton-miles per gallon, for passenger and freight transportation, respectively. From Figure 3, it is obvious that automobiles and trucks are among the less energy-efficient transportation modes, outperforming only the air mode. Even though air transportation is the least energy-efficient mode of transportation, it offers the advantage of providing high-speed delivery over long distances. In contrast, pipelines, waterways, and railroads trade flexibility of pickup and delivery for high energy efficiency in moving bulk commodities.

Because highway-related travel is the dominant consumer of transportation energy and consists of some of the least efficient modes, the Federal Government has initiated several major conservation programs aimed at this activity. They are described next.

#### ● 55 Mph Enforcement.

With support of the Administration, legislation has recently been enacted that establishes a permanent national maximum 55-mph speed limit for cars and trucks. States receiving Federal highway assistance will now be required to certify that the 55-mph limit is being enforced. The estimated savings during 1975, assuming strict compliance, is 100,000 barrels per day of oil.

#### ● Automobile Fuel Efficiency Labeling Program.

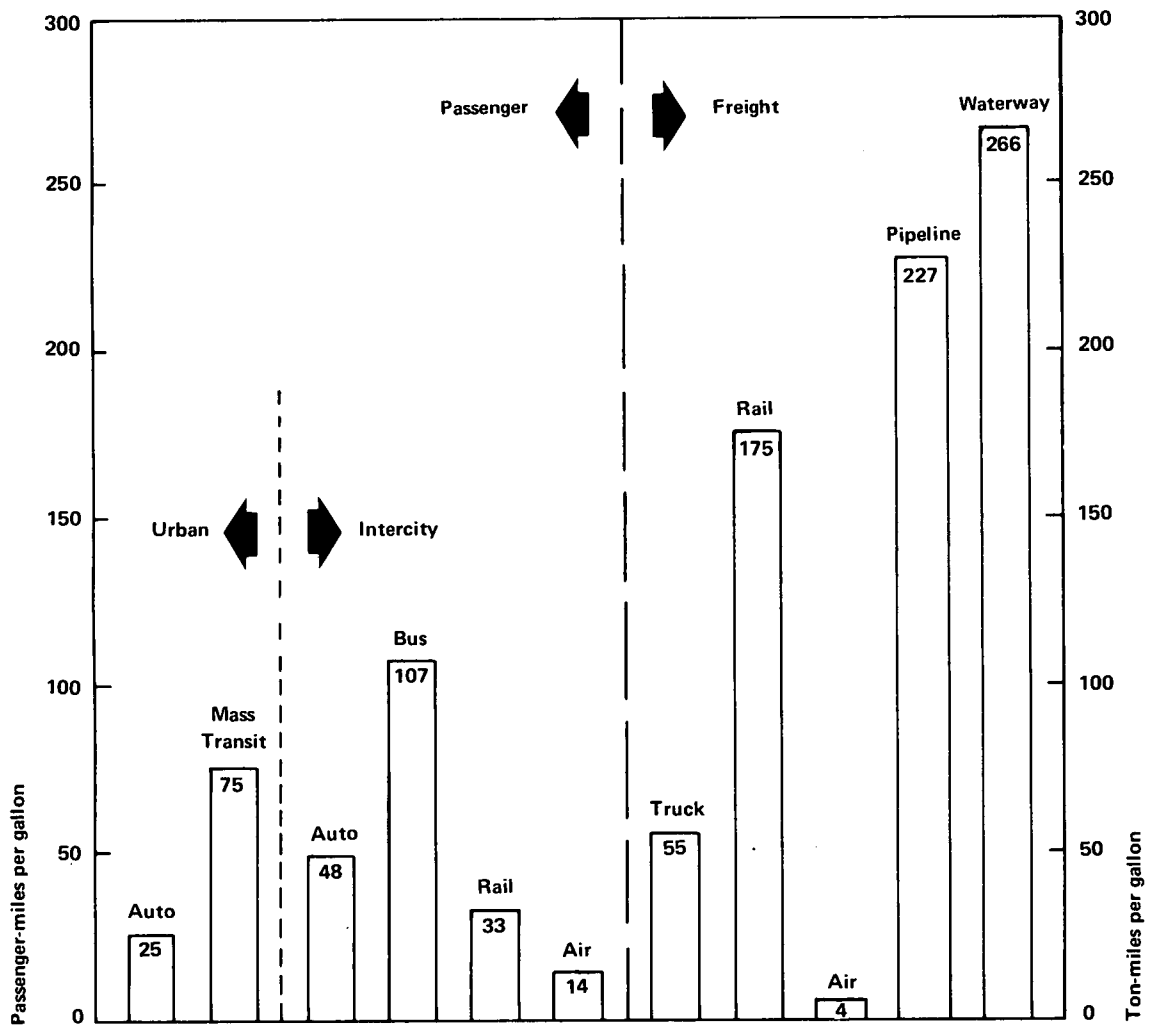
The President's Energy Message of April 1973 directed the Environmental Protection Agency (EPA) to test and report automobile fuel economy and develop a voluntary automobile efficiency labeling program. Thereafter, a voluntary program was initiated with model-year 1974 cars. Under the joint sponsorship of EPA and FEA, the voluntary program is being continued for 1975 model-year cars. In order to ensure more extensive participation and increased energy savings, the Administration has proposed legislation recommending that all domestic and foreign road vehicles be labeled by manufacturers with fuel economy information supplied by EPA.

#### ● 40-Percent Auto Efficiency Improvement Program.

President Ford, in his October 8, 1974, economic address, called for a 40-percent improvement in new car fuel economy for 1980 model cars measured against the fuel economy of 1974 models. In January, the three major automobile manufacturers voluntarily agreed to the improvements requested by the President. Manufacturers may achieve the 40-percent goal through such actions as improving technology, reducing the weight of large cars, or shifting emphasis from large cars to smaller ones. Success is predicated on the assumption that statutory emission standards are relaxed to the interim levels proposed by the President.

DOT, in cooperation with FEA and EPA, will monitor this program. The energy savings estimated for 1980 are 600,000 barrels of gasoline per day. By 1985 these savings will grow to approximately 1.2 million barrels per day, as older, less fuel-efficient vehicles are replaced by newer ones.

Figure 3. Transportation Energy Efficiency<sup>1</sup>



<sup>1</sup> All efficiencies shown are expressed in terms of gasoline equivalent (125,000 Btu/gallon).

Sources: FEA Project Independence Final Task Force Report, 1974.

# Part 1

## Overview

For the second month in a row, production of energy in the United States in January was substantially higher than the preceding month. Most of the sharp 8.7-percent increase was attributed to a 42.5-percent rise in coal output during the month, as mining operations returned to normal after the 24-day strike in November and December. Crude oil production was also higher in January, rising 2.0 percent above December. Natural gas output was up about 0.5 percent. Compared with January 1974, however, total domestic energy output was down almost 1.0 percent.

After increasing 3.8 percent in December, imports of fossil fuels declined 2.2 percent during January. Increased domestic production and abnormally high inventory levels kept imports of crude oil and refined products down 0.4 percent and 5.8 percent, respectively, from their levels during December. Natural gas imports, however, registered a 1.2-percent gain.

Notwithstanding the 2.2-percent decline from December, January fossil fuel imports were still 19.5 percent greater than they were in January 1974, when the Arab oil embargo was in effect. A significant change has occurred in the mix of imported fuels since then. The portion accounted for by crude oil has climbed from 41.8 to 58.2 percent of the total. A corresponding decline has occurred in refined petroleum product imports, from 49.5 to 34.7 percent, while natural gas imports have dropped slightly relative to the total, from 8.7 to 7.1 percent.

Consumption of energy in the United States in 1974 was 1.7 percent below that for 1973. The most pronounced decline was in refined petroleum product consumption, which fell 3.9 percent in 1974, after rising more than 5.0 percent in 1973. Natural gas consumption decreased 2.0 percent during 1974, and coal consumption was also down, but only by 0.1 percent. On the other hand, hydroelectric and nuclear power consumption increased substantially during the year, up 8.8 percent and 31.5 percent, respectively, from their levels in 1973.

Although demand for distillate fuel oil in January was almost 7.0 percent higher than in January of 1974, the continental United States accumulated 3.4 percent less distillate oil heating degree-days (indicating comparatively warmer temperatures) than last year, and 13.8 percent less than the normal (1941-70 average) for the month. Since July 1, 1974, the Nation has averaged 5.5 percent more heating degree-days than during the 1973-74 heating season, but 5.3 percent less than normal.

Stocks of crude oil, which usually decline in January, showed a 2.0-percent increase during the month. Inventories of residual and distillate fuel oils, on the other

hand, exhibited the normal seasonal drawdown, declining 7.9 and 10.6 percent, respectively. Motor gasoline and jet fuel inventories also followed seasonal patterns, closing 7.5 percent and 0.8 percent above their levels for the previous month. In terms of days' supply, petroleum stocks at the end of January represented the following volumes: crude oil, 20.4 days; motor gasoline, 39.2 days; jet fuel, 31.2 days; distillate fuel oil, 50.0 days; and residual fuel oil, 22.0 days. End-of-December coal stocks were down 12.1 percent from November, reflecting the impact of both the winter heating season and the strike; they represented a 62.5-day supply, however.

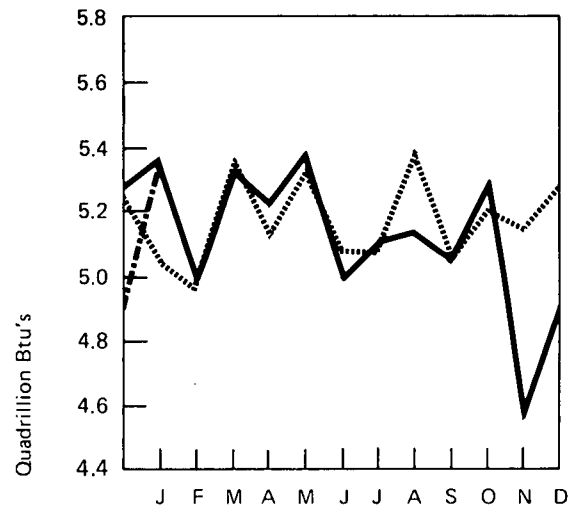
Total electricity output for 1974 was approximately the same as in 1973, a significant departure from the past 10 years when electric power production increased at an average annual rate of 7 percent. However, changes did occur in the percentages contributed by the various energy sources. Electric power generated from fossil fuels dropped from 80.8 percent of the total in 1973 to 78.4 percent in 1974, while output supplied by nuclear and hydroelectric power rose from 4.5 percent and 14.6 percent, respectively, in 1973, to 5.9 percent and 16.0 percent last year. Sales of electricity during the first 11 months of last year show a decline in residential and commercial usage of 0.1 percent and 2.0 percent, respectively. In contrast, sales to industrial users were up 0.7 percent during the period.

In January, for the first time in 6 months, the average national retail price of regular gasoline increased, but only by 0.4 cent per gallon. The price that retailers paid for gasoline advanced by a lesser amount of 0.1 cent per gallon, resulting in a 0.3-cent per gallon increase in the dealer margin, the first such increase in the past 3 months. Following a 2.3-cent per gallon advance in November, residential heating oil prices dropped 1.6 cents per gallon in December. A January survey of major oil companies indicated a possible further softening in retail heating oil prices during that month. The estimated refiner acquisition cost of imported crude oil posted a 29-cent per barrel increase in December. However, the estimated domestic and composite acquisition costs registered declines from their November levels of 5.0 and 13.0 cents per barrel, respectively.

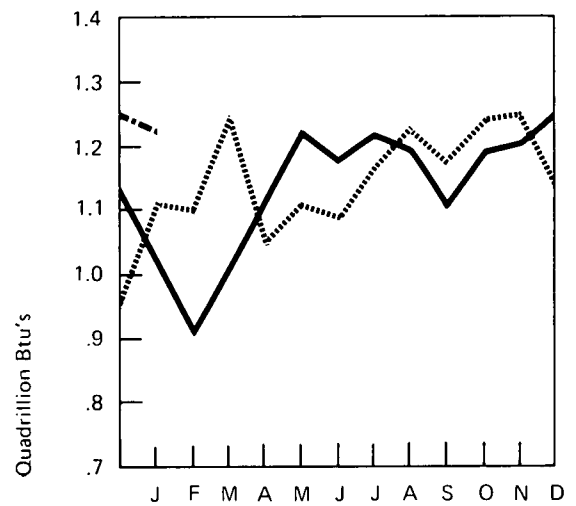
In resource development, the new year began with continued advances in oil and gas exploration activities. Crews engaged in seismic prospecting in January numbered 301, representing an increase of 2 marine crews and a decrease of 1 land crew from the December count. The average number of rotary drilling rigs in operation during the month was 18 percent higher than in January 1974, although there was a mid-winter seasonal decline of 28 rigs from the December level. Total wells drilled during January showed the most dramatic increase, up 40 percent from January a year ago.



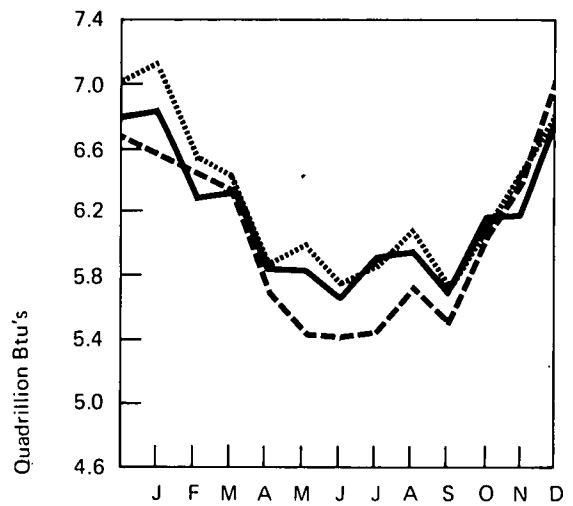
Domestic Production of Energy\*



Imports of Fossil Fuels



Domestic Consumption of Energy\*\*



\*See Explanatory Note 1.

\*\*See Explanatory Note 2.

--- 1972  
 ..... 1973  
 ——— 1974  
 - - - 1975

## CRUDE OIL

Crude oil production in January increased 172,000 barrels per day during the month.

Crude oil stocks increased in January at an average rate of 161,000 barrels per day, reflecting both increased production and declining demand.

Crude oil imports remained just under 4.0 million barrels per day for the fourth consecutive month.

Refinery input dropped a substantial 235,000 barrels per day.

## TOTAL REFINED PETROLEUM PRODUCTS

Domestic demand for refined petroleum products in January increased slightly to 17,609,000 barrels per day. However, it was still 10.6 percent less than that of January 1974.

The Caribbean area continued as the most important source of product imports, supplying over 80 percent of the total.

## OIL HEATING DEGREE-DAYS

During January 1975, the continental United States accumulated 3.4 percent less distillate oil heating degree-days than during January 1974 and 13.8 percent less than normal.

So far this heating season, the western third of the Nation has been warmer than during the same period a year ago and therefore has had less distillate oil heating degree-days. The rest of the country has had more degree-days than last year. The cumulative figure for the entire continental United States is 5.5 percent above last year, but 5.3 percent below normal.

## NATURAL GAS LIQUIDS

Production of natural gas liquids increased slightly during November 1974 to 1,694,000 barrels per day, but was still 80,000 barrels per day, or 4.5 percent, below the level for November 1973.

Cumulative production through November trailed 2.8 percent behind the pace set in 1973.

Stocks during November 1974 remained considerably higher than levels for the previous 2 years.

## NATURAL GAS

Marketed production was 3.4 percent lower during November 1974 than in November 1973. This was the fifteenth consecutive monthly decline in production.

Marketed production during the first 11 months of 1974 was 3.2 percent less than it was in 1973.

Domestic producer sales to major interstate pipelines dropped 4.8 percent in the first 11 months of 1974 compared with 1973.

## COAL

Production of bituminous coal and lignite in January 1975 was up 1.4 million tons, or 2.6 percent, from January 1974.

Consumption, stock, and export levels for December 1974 all reflected the impact of the strike:

Domestic consumption was down 2.7 million tons, or 5 percent, from December 1973.

Total stocks at the end of December declined 13.1 million tons from the end of November.

Exports were 62 percent lower than November and 47 percent lower than December 1973.

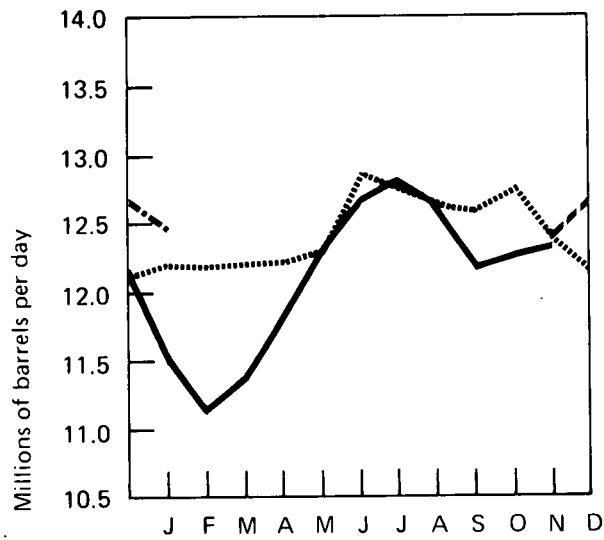
Consumption for the year 1974, at 556 million tons, showed no growth from 1973.

Exports for the year 1974 totaled 59.9 million tons, an increase of 7 million tons, or 13 percent, over 1973.

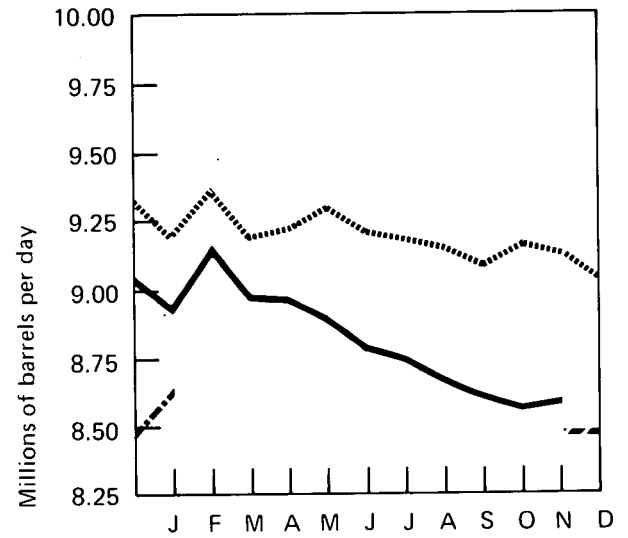
# Crude Oil

		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		9,373		2,873		221,893	
	March	12,201		9,175		3,162		230,696	
	April	12,208		9,233		3,049		235,383	
	May	12,281		9,303		3,215		244,777	
	June	12,862		9,209		3,220		235,846	
	July	12,750		9,195		3,501		230,750	
	August	12,636		9,161		3,593		235,660	
	September	12,560		9,077		3,471		228,280	
	October	12,758		9,172		3,740		233,520	
	November	12,374		9,144		3,452		237,001	
	December	12,150		9,041		2,891		229,504	
1974	January	11,491		8,907		2,382		220,261	
	February	11,102		9,156		2,248		228,004	
	March	11,355		8,950		2,462		231,705	
	April	11,823		8,952		3,267		243,687	
	May	12,333	12,777	8,903		3,908	3,748	256,726	252,270
	June	12,697	12,709	8,777		3,925	3,957	255,762	253,008
	July	12,811	12,905	8,754	8,698	4,091	4,167	255,936	252,399
	August	12,644	12,731	8,682	8,717	3,924	3,852	251,905	247,040
	September	12,124	12,253	8,621	8,622	3,797	3,758	253,623	249,476
	October	12,286	12,430	8,568	8,651	3,810	3,936	256,430	255,003
	November	12,332	12,402	8,596	8,458	3,958	3,997	258,123	256,271
	December		R12,671		8,471		R3,979		R248,808
1975	January	**12,436		**8,643		**3,964		**253,807	

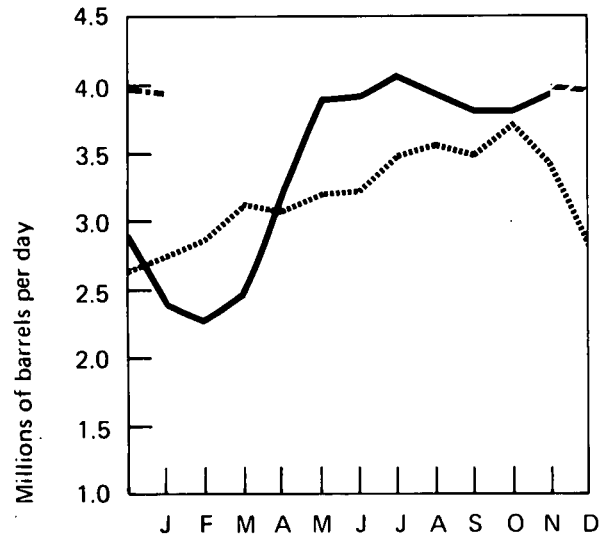
Crude Input to Refineries\*



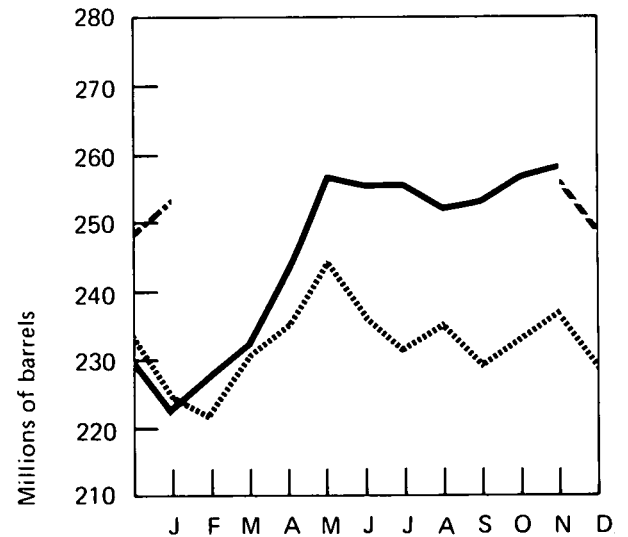
Domestic Production\*



Imports\*



Stocks\*



\*See Explanatory Note 3.

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

## Total Refined Petroleum Products

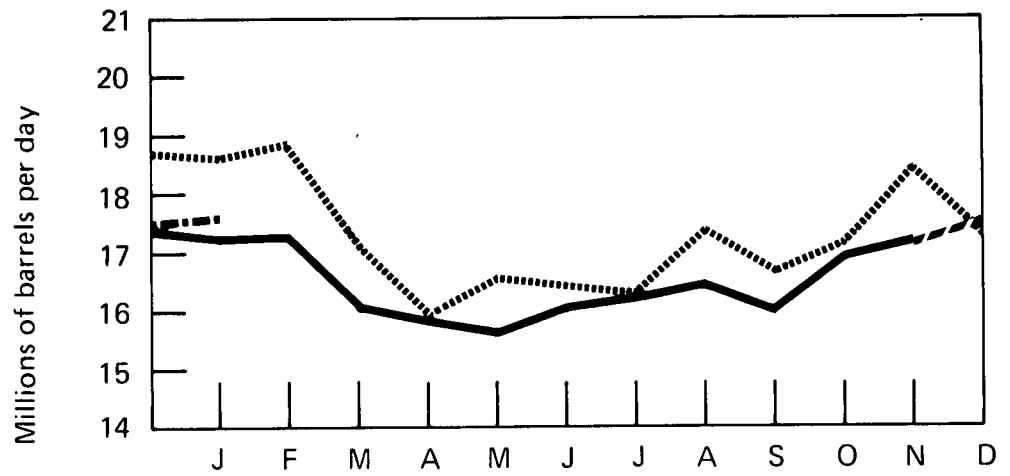
		Domestic Demand		Imports*	
		In thousands of barrels per day			
		BOM	FEA	BOM	FEA
1972	January	16,735		2,721	
	February	17,861		2,764	
	March	16,870		2,730	
	April	15,529		2,298	
	May	14,801		2,208	
	June	15,615		2,382	
	July	14,821		2,215	
	August	15,936		2,344	
	September	15,489		2,342	
	October	16,455		2,607	
	November	17,610		2,653	
	December	18,738		3,039	
1973	January	18,667		3,079	
	February	18,941		3,501	
	March	17,193		3,413	
	April	15,924		2,540	
	May	16,603		2,603	
	June	16,471		2,659	
	July	16,387		2,671	
	August	17,414		2,913	
	September	16,620		2,903	
	October	17,095		2,785	
	November	18,434		3,412	
	December	17,429		3,055	
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	17,215	17,129	2,704	2,581
	December		17,588		R2,638
1975	January		** 17,609		** 2,486

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

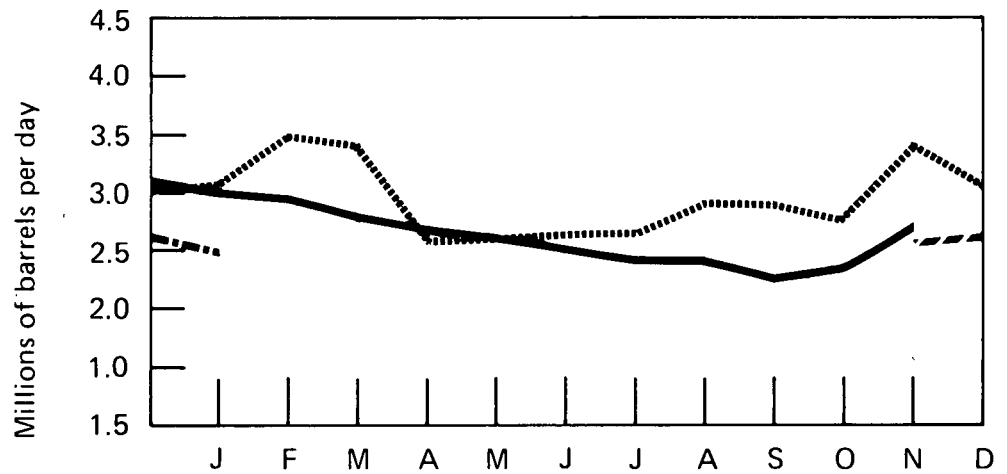
Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.



# Domestic Demand\*



# Imports\*



\*See Explanatory Note 3.

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

# 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		6,141		95		216,367	
	March	6,513		6,150		71		207,581	
	April	6,541		6,377		63		204,708	
	May	6,907		6,714		102		202,081	
	June	6,964		6,993		174		208,374	
	July	7,023		6,986		133		211,488	
	August	7,249		6,880		157		205,122	
	September	6,581		6,620		127		210,278	
	October	6,677		6,621		194		214,525	
	November	6,823		6,375		216		207,343	
	December	6,223		6,099		188		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		R6,551		R6,451		170		227,363
1975	January		**6,228		**6,571		**203		**244,425

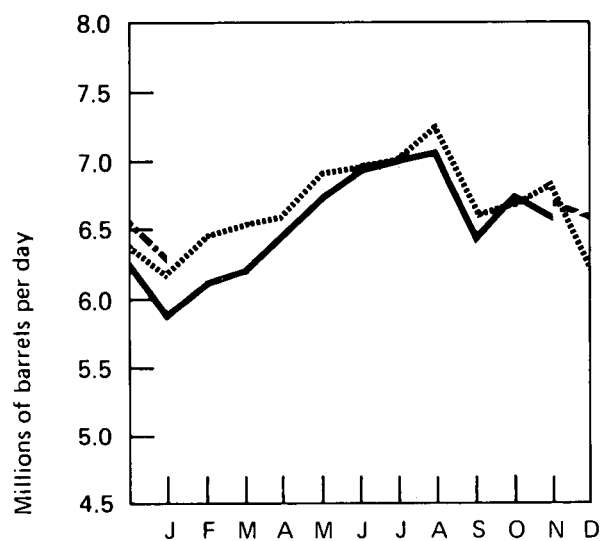
\*See definitions.

\*\*Preliminary data.

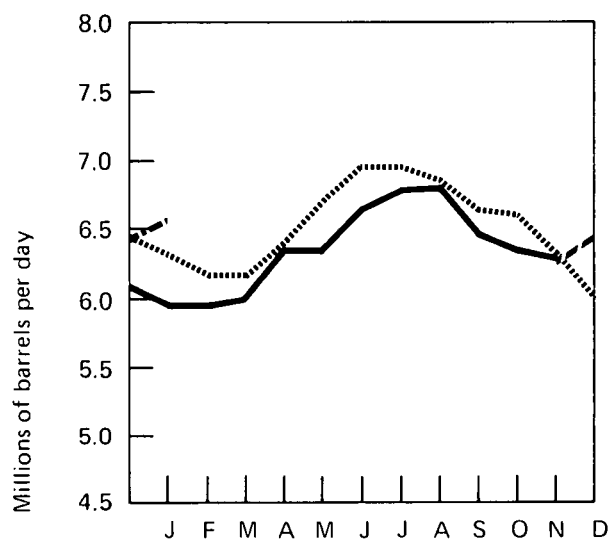
R=Revised data.

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

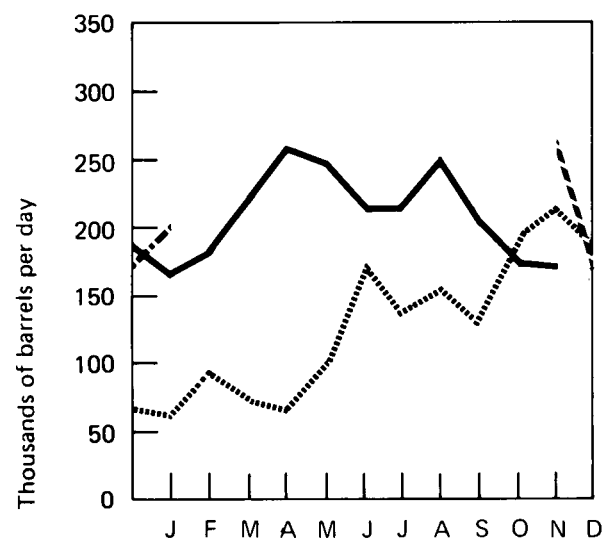
**Domestic Demand\***



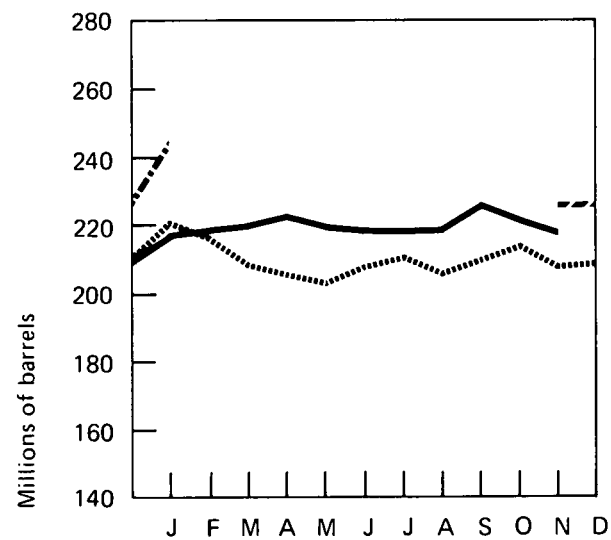
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

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

# Jet Fuel

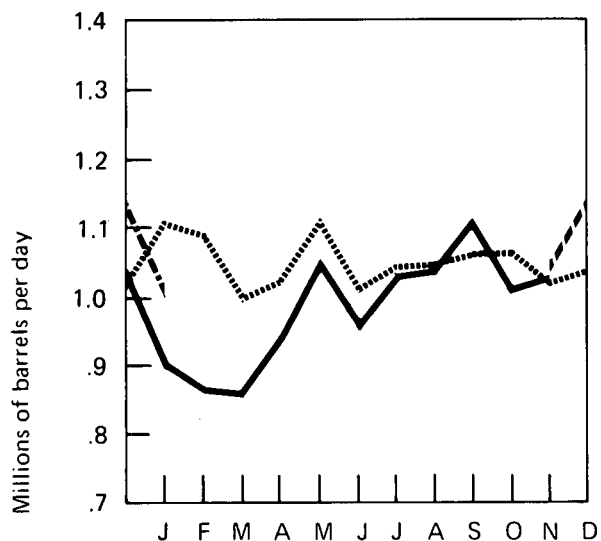
		Domestic Demand		Production		Imports		Stocks	
				In thousands of barrels per day				In thousands of barrels	
		BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
1972	January	1,021		784		179		25,857	
	February	1,141		900		220		25,230	
	March	1,008		906		167		27,147	
	April	986		877		124		27,568	
	May	999		887		159		28,885	
	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	993		917		152		27,585	
	April	1,015		887		145		27,881	
	May	1,113		840		211		25,825	
	June	1,007		836		163		25,447	
	July	1,045		825		231		25,661	
	August	1,049		844		180		24,851	
	September	1,065		847		229		25,149	
	October	1,066		875		208		25,577	
	November	1,013		852		263		28,539	
	December	1,038		830		210		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		R1,138		R908		219		R30,957
1975	January		*1,001		*847		*163		*31,221

\*Preliminary data.

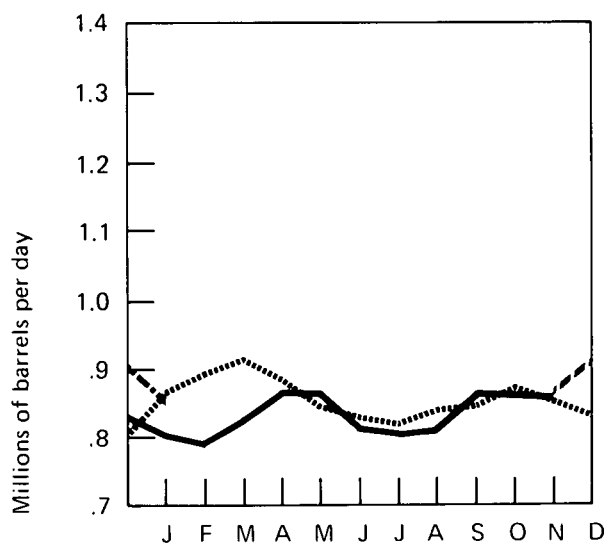
R=Revised data.

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

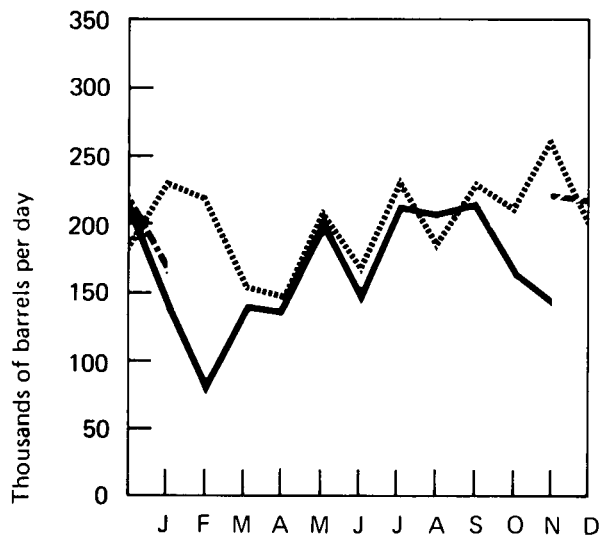
**Domestic Demand\***



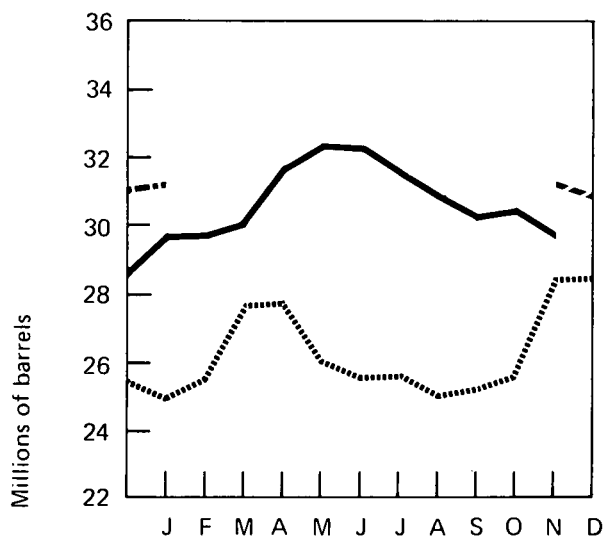
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

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

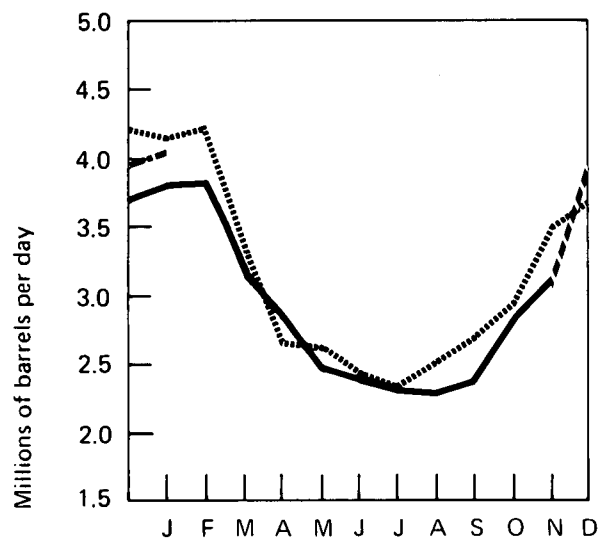


# Distillate Fuel Oil

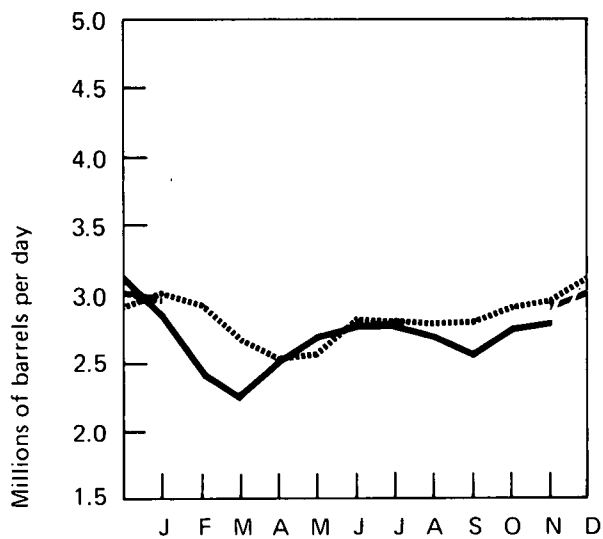
	Domestic Demand		Production*		Imports		Stocks*	
							In thousands of barrels	
	In thousands of barrels per day							
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA
<b>1972</b> January	3,723		2,538		197		160,027	.
February	4,164		2,653		204		122,154	
March	3,482		2,564		257		101,728	
April	2,778		2,476		189		98,288	
May	2,250		2,585		132		112,892	
June	2,194		2,623		96		128,739	
July	1,765		2,529		97		155,557	
August	2,064		2,582		92		174,674	
September	2,205		2,624		99		190,250	
October	2,759		2,722		203		195,530	
November	3,383		2,719		227		182,581	
December	4,232		2,938		382		154,284	
<b>1973</b> January	4,134		3,028		360		130,958	
February	4,243		2,937		672		113,276	
March	3,314		2,667		579		111,270	
April	2,635		2,510		240		114,698	
May	2,652		2,544		247		119,104	
June	2,412		2,825		215		137,844	
July	2,329		2,752		319		160,869	
August	2,554		2,801		286		177,271	
September	2,660		2,813		298		190,171	
October	2,916		2,911		436		202,965	
November	3,508		2,922		493		200,182	
December	3,685		3,136		434		196,421	
<b>1974</b> January	3,820		2,880		449		181,179	
February	3,835		2,399		293		149,125	
March	3,145		2,226		267		128,822	
April	2,848		2,522		216		125,553	
May	2,453	2,616	2,704	2,741	271	288	141,806	151,345
June	2,386	2,249	2,783	2,818	228	175	160,645	173,639
July	2,302	2,251	2,792	2,881	214	168	182,458	198,374
August	2,295	2,271	2,704	2,779	111	112	198,673	217,632
September	2,377	2,473	2,551	2,655	144	143	208,269	227,069
October	2,863	2,816	2,770	2,787	213	264	209,908	234,257
November	3,145	3,058	2,801	2,883	443	403	212,875	241,125
December		R3,923		R3,028		466		R227,877
<b>1975</b> January		**4,080		**2,954		**349		**203,815

\*See definitions.      \*\*Preliminary data.      R=Revised data.  
 Sources: Bureau of Mines (BOM) and Federal Energy Administration (FEA) as indicated.

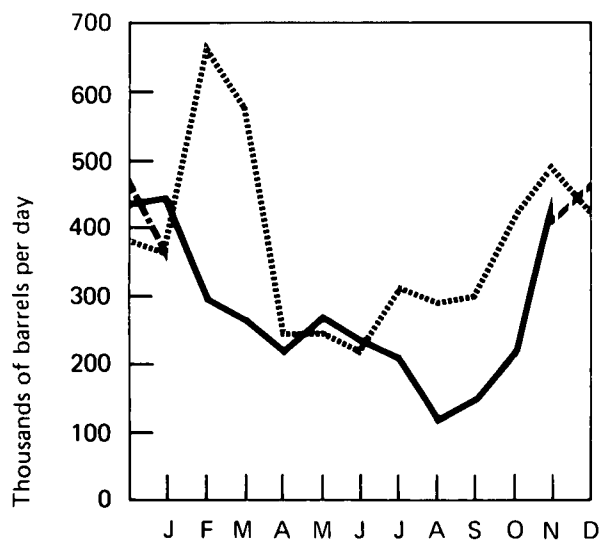
**Domestic Demand\***



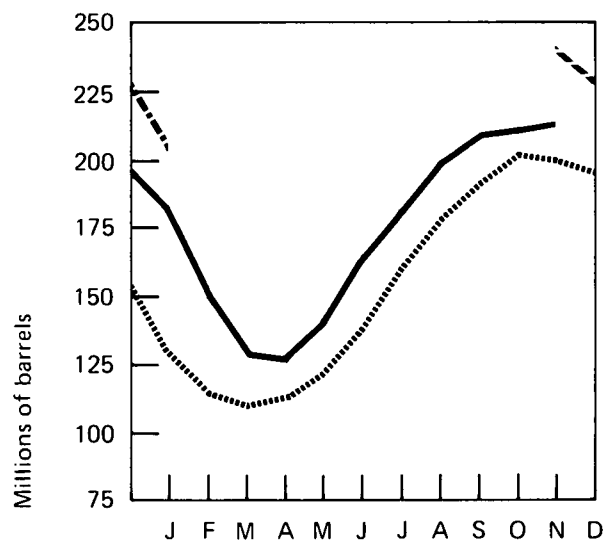
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

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

# Oil Heating Degree - Days

## OIL HEATING DEGREE-DAYS\*

Petroleum Administration for Defense (PAD) Districts	January (December 30 - February 2)			Cumulative Since July 1, 1974		
	1975	1974**	Normal (1941-70)**	1974- 75	1973-74**	Normal (1941-70)**
PAD District I	906.3	914.9 (- 0.9)	1,078.2 (- 15.9)	2,565.4	2,395.7 (+ 7.1)	2,729.9 (- 6.0)
New England	1,149.8	1,243.3 (- 7.5)	1,337.0 (- 14.0)	3,319.2	3,148.3 (+ 5.4)	3,457.7 (- 4.0)
Conn., Maine, Mass., N.H., R.I., Vt.						
Middle Atlantic	1,040.5	1,081.5 (- 3.8)	1,218.5 (- 14.6)	2,888.0	2,754.3 (+ 4.9)	3,080.2 (- 6.2)
Del., Md., N.J., N.Y., Pa.						
Lower Atlantic	409.1	274.3 (+49.2)	554.6 (- 26.2)	1,217.5	975.0 (+24.9)	1,348.7 (- 9.7)
Fla., Ga., N.C., S.C., Va., W. Va.						
PAD District II	1,302.4	1,415.2 (- 8.0)	1,444.0 (- 9.8)	3,661.7	3,546.4 (+ 3.2)	3,770.0 (- 2.9)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wis.						
PAD District III	486.5	510.6 (- 4.7)	647.1 (- 24.8)	1,347.2	1,209.3 (+11.4)	1,486.5 (- 9.4)
Ala., Ark., La., Miss., N. Mex., Tex.						
PAD District IV	1,346.8	1,410.4 (- 4.5)	1,352.2 (- 0.4)	3,670.3	3,742.9 (- 1.9)	3,832.7 (- 4.2)
Colo., Idaho, Mont., Utah, Wyo.						
PAD District V	797.6	830.0 (- 3.9)	843.8 (- 5.5)	2,246.4	2,350.2 (- 4.4)	2,498.0 (- 10.1)
Ariz., Calif., Nev., Oreg., Wash.						
U.S. Total	978.7	1,013.0 (- 3.4)	1,135.8 (- 13.8)	2,761.7	2,620.6 (+ 5.4)	2,916.6 (- 5.3)

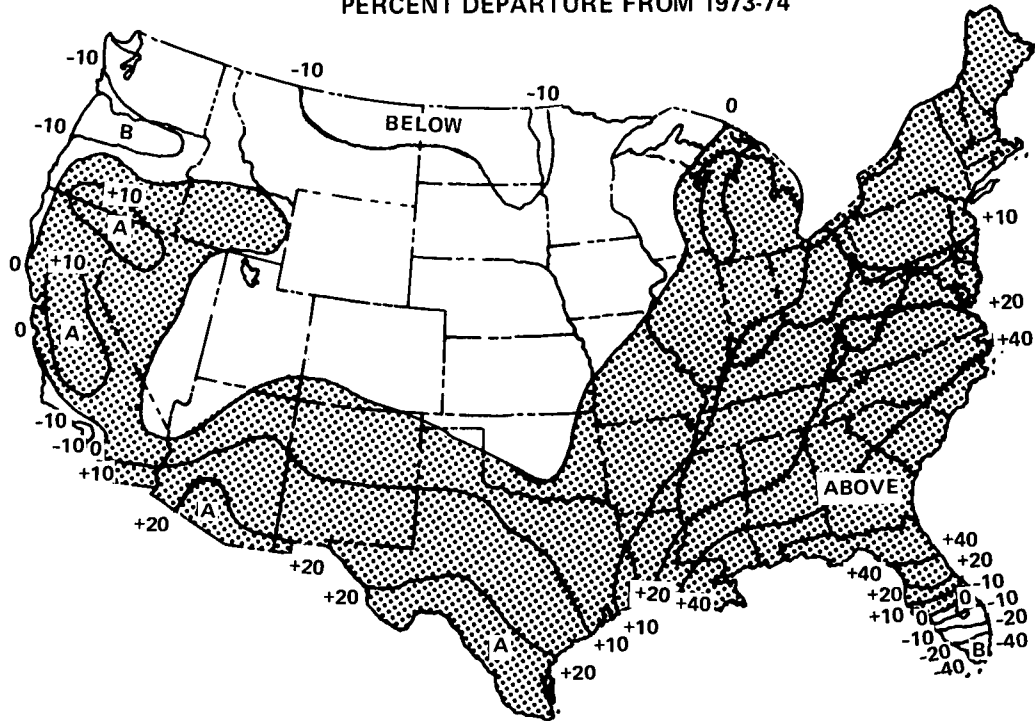
\*See Explanatory Note 4 for explanation of oil heating degree-days.

\*\*Percentage change in parenthesis.

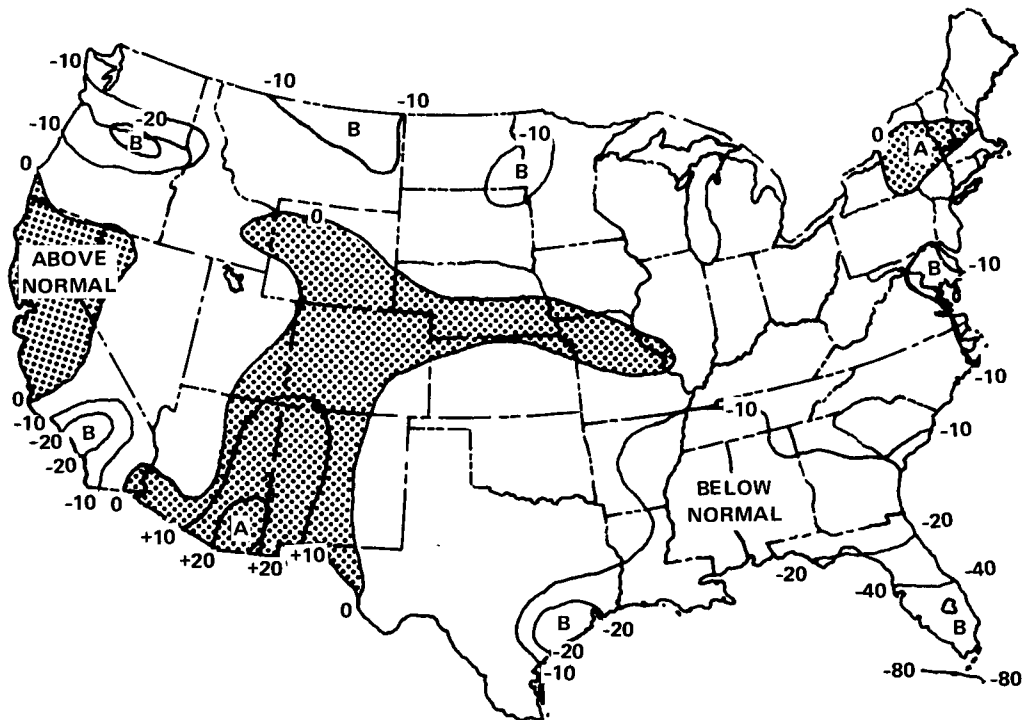
# HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1974

FEBRUARY 2, 1975

## PERCENT DEPARTURE FROM 1973-74



## PERCENT DEPARTURE FROM NORMAL (1941-70)



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

Source: Department of Commerce—NOAA.

Based on preliminary telegraphic reports.

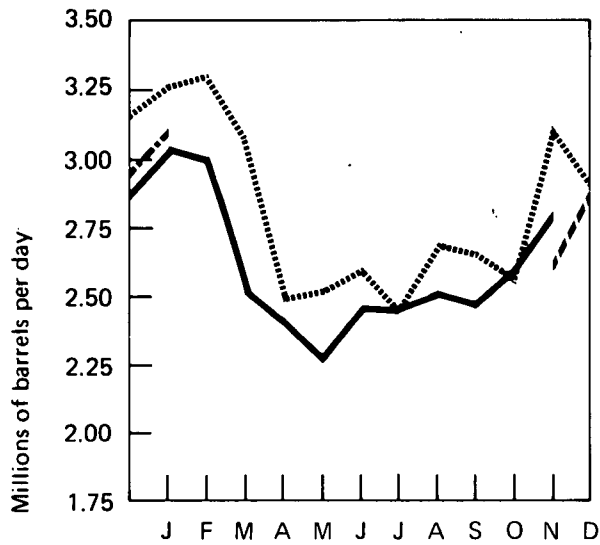
# Residual Fuel Oil

	Domestic Demand	Production				Imports		Stocks	
		In thousands of barrels per day					In thousands of barrels		
	BOM	FEA	BOM	FEA	BOM	FEA	BOM	FEA	
1972	January	2,815		924		1,892		59,440	
	February	3,171		963		1,923		50,891	
	March	2,682		828		1,926		51,566	
	April	2,444		739		1,676		49,425	
	May	2,111		664		1,573		53,035	
	June	2,196		661		1,649		56,109	
	July	2,107		673		1,594		60,230	
	August	2,257		674		1,653		61,399	
	September	2,239		710		1,625		63,692	
	October	2,362		745		1,655		63,758	
	November	2,843		890		1,769		57,702	
	December	3,151		1,124		1,968		55,216	
1973	January	3,262		1,112		1,977		49,154	
	February	3,305		1,038		2,072		43,058	
	March	3,071		955		2,185		44,711	
	April	2,472		877		1,703		47,044	
	May	2,518		948		1,666		49,207	
	June	2,602		915		1,757		51,811	
	July	2,430		882		1,597		53,363	
	August	2,690		851		1,850		53,586	
	September	2,667		878		1,842		55,091	
	October	2,547		984		1,556		54,964	
	November	3,118		1,061		1,942		51,985	
	December	2,910		1,158		1,793		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		R2,881		R1,350		1,561		R74,521
1975	January	*3,113		*1,409		*1,514		*68,628	

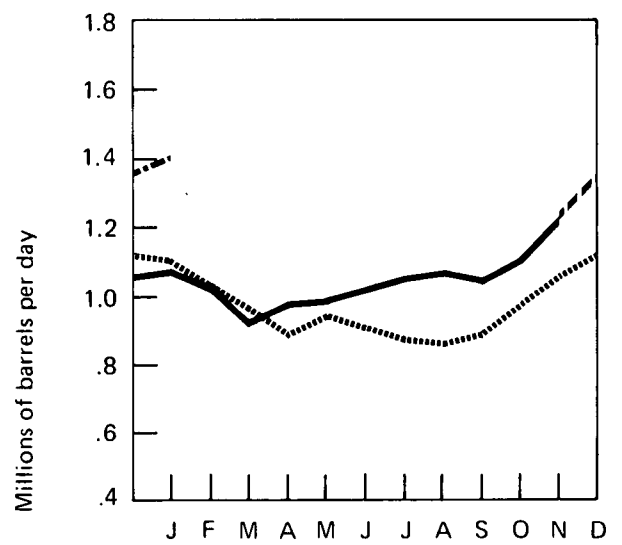
\*Preliminary data. R = Revised data.

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

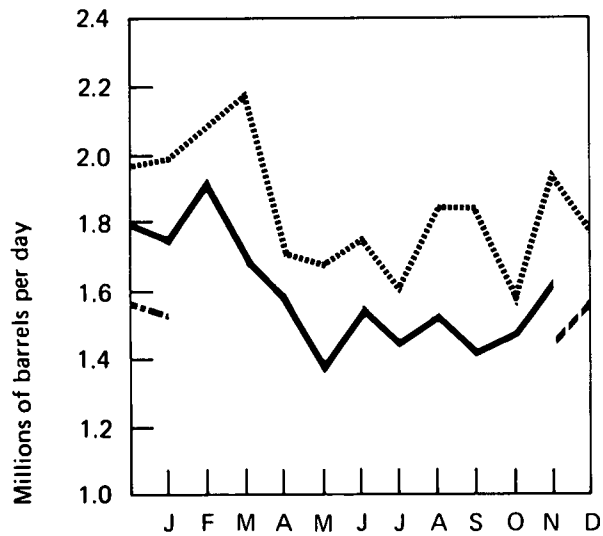
**Domestic Demand\***



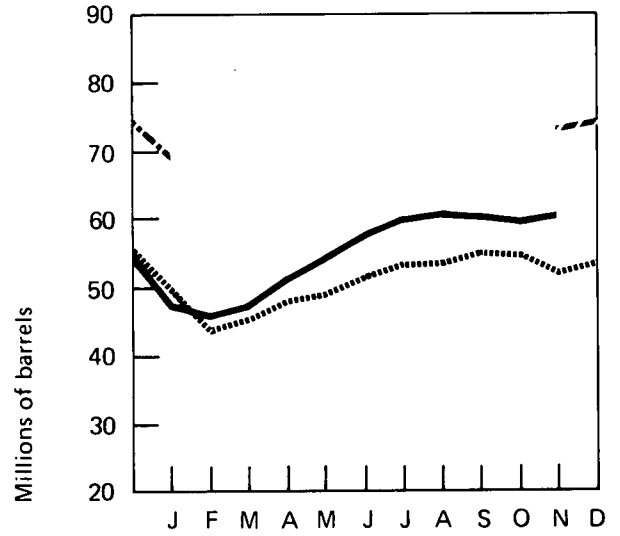
**Production\***



**Imports\***



**Stocks\***



\*See Explanatory Note 3.

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

## Natural Gas Liquids

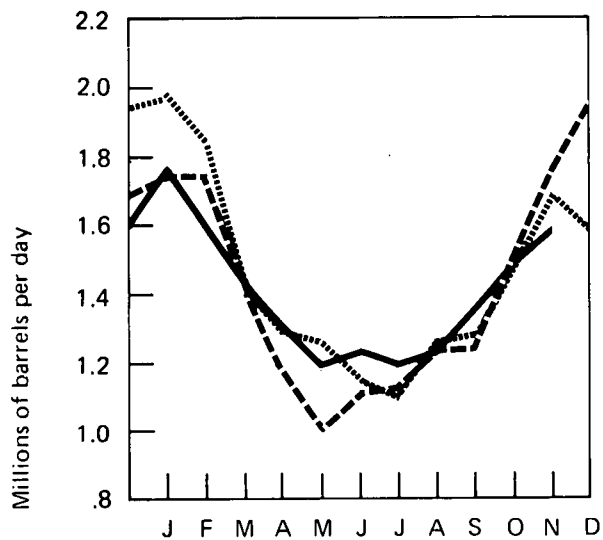
		Domestic Demand*	Production*	Imports	Stocks*
		In thousands of barrels per day			In thousands of barrels
1972	January	1,746	1,705	196	76,704
	February	1,752	1,747	182	68,232
	March	1,417	1,768	186	68,777
	April	1,181	1,769	118	75,101
	May	995	1,737	147	84,984
	June	1,114	1,734	134	92,831
	July	1,121	1,731	141	100,363
	August	1,243	1,739	164	104,397
	September	1,244	1,751	168	108,853
	October	1,525	1,769	202	105,098
	November	1,768	1,757	221	94,673
	December	1,946	1,721	231	79,238
1973	January	1,994	1,680	313	64,343
	February	1,857	1,745	312	55,997
	March	1,406	1,734	258	58,471
	April	1,297	1,749	199	65,297
	May	1,268	1,739	215	73,942
	June	1,149	1,727	163	83,057
	July	1,104	1,737	193	93,362
	August	1,268	1,748	226	98,996
	September	1,288	1,741	197	103,907
	October	1,485	1,756	235	104,215
	November	1,693	1,774	276	98,320
	December	1,598	1,729	223	94,106
1974	January	1,779	1,699	305	85,820
	February	1,593	1,728	294	84,734
	March	1,408	1,741	224	89,362
	April	1,321	1,696	215	95,707
	May	1,181	1,689	182	104,739
	June	1,242	1,684	200	111,356
	July	1,187	1,657	163	118,804
	August	1,221	1,676	163	125,120
	September	1,359	1,638	167	126,454
	October	1,493	1,686	200	123,634
	November	**1,596	**1,694	**199	**118,026

\*See Explanatory Note 5.

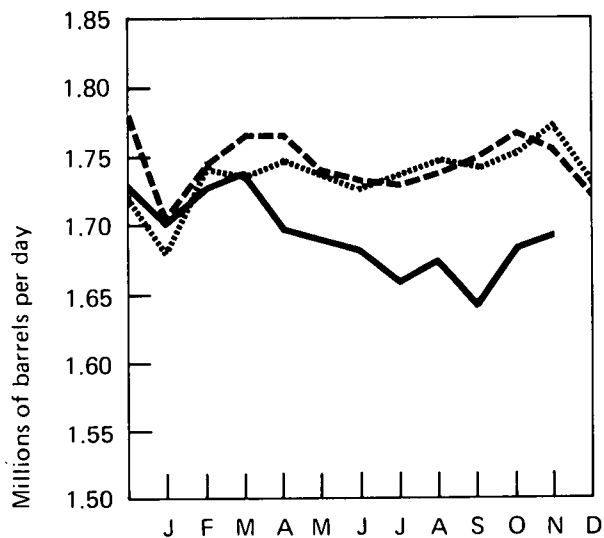
\*\*Preliminary data.

Source: Bureau of Mines.

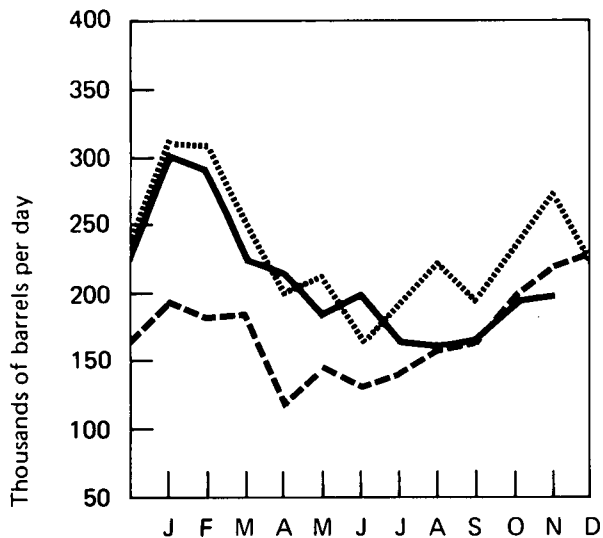
**Domestic Demand**



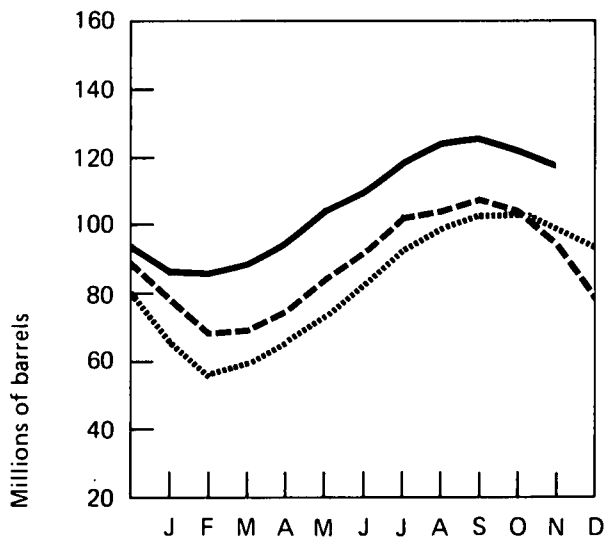
**Production**



**Imports**



**Stocks**



--- 1972  
 ..... 1973  
 — 1974



# 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	1,036	89
1974	January	1,944	1,033	86
	February	1,773	941	79
	March	1,907	1,027	85
	April	1,812	987	83
	May	1,853	981	80
	June	1,777	928	74
	July	1,827	947	74
	August	1,797	932	76
	September	1,761	871	70
	October	R1,807	936	83
	November	R*1,799	921	82
	December	R**1,880		**84
1975	January	**1,890		**85

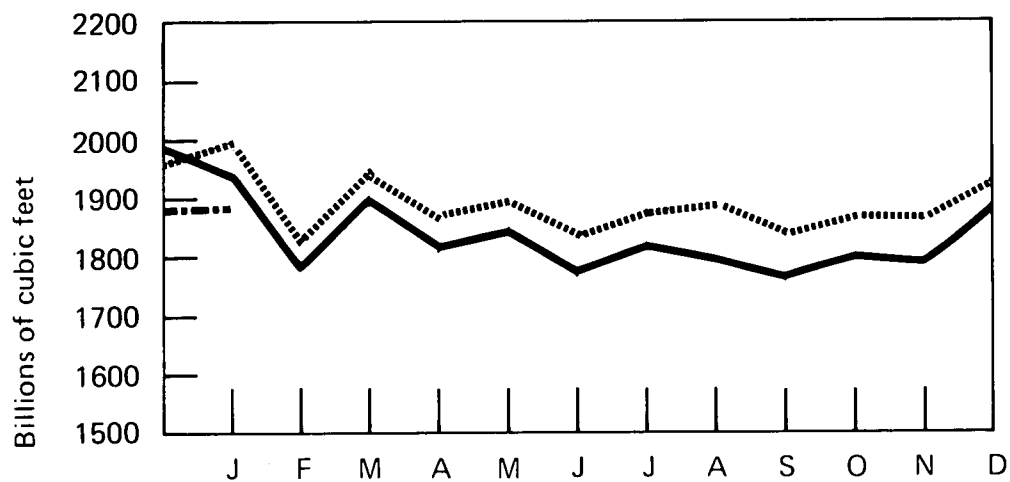
\*Preliminary data.

\*\*Projected data.

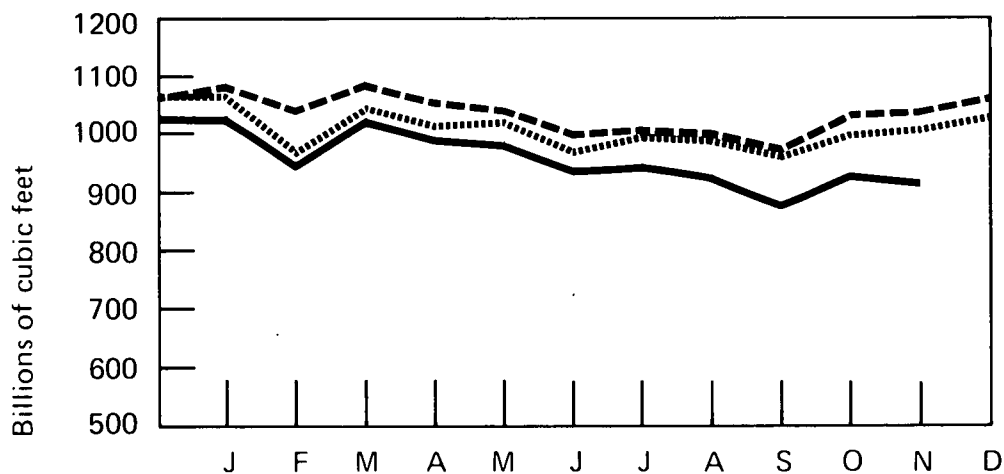
R=Revised data.

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

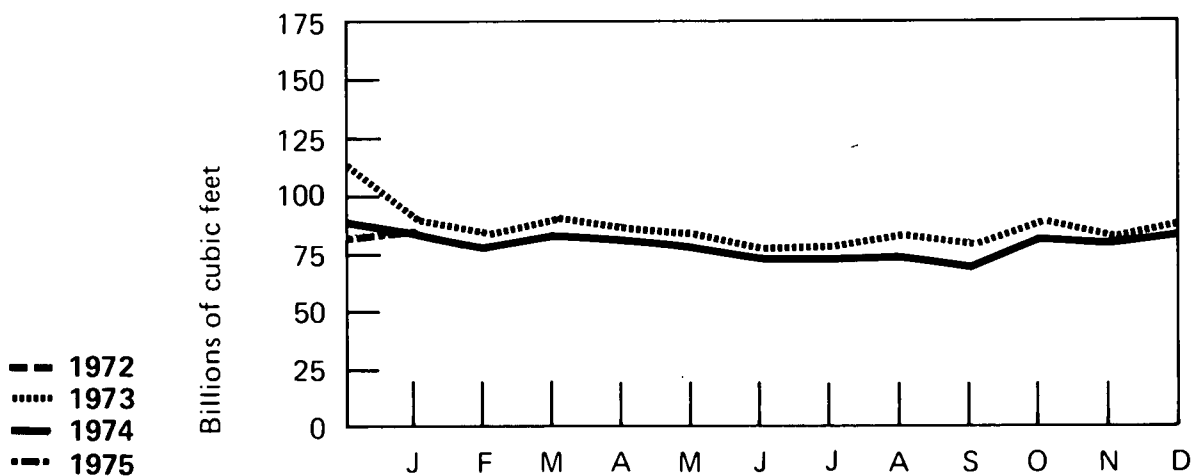
### Marketed Production



### Domestic Producer Sales to Major Interstate Pipelines



### Imports



--- 1972  
 ..... 1973  
 ——— 1974  
 -.-.- 1975

# Coal

## Bituminous and Lignite

		Domestic Consumption*	Production**	Exports	Stocks
			In thousands of short tons		
1972	January	43,951	49,680	3,660	91,178
	February	43,178	49,112	3,630	92,183
	March	43,773	54,438	4,624	96,795
	April	40,158	49,814	4,915	102,981
	May	40,588	52,879	5,416	110,577
	June	40,505	50,083	4,882	115,723
	July	43,071	40,964	3,627	111,353
	August	44,698	52,169	6,337	114,665
	September	42,002	49,374	4,923	116,196
	October	43,050	51,671	5,210	120,135
	November	44,104	50,297	5,380	121,401
	December	47,698	44,904	3,392	117,442
1973	January	49,838	49,379	2,954	111,120
	February	44,652	45,893	2,669	108,870
	March	44,814	50,547	3,377	111,490
	April	42,689	46,999	5,063	112,585
	May	43,628	51,420	5,140	116,890
	June	45,115	46,613	4,969	109,960
	July	47,715	43,801	4,188	107,390
	August	48,840	55,874	5,133	106,910
	September	45,471	48,338	3,424	106,230
	October	46,427	54,382	5,882	107,490
	November	46,703	49,826	5,214	R107,169
	December	50,130	48,666	4,889	102,200
1974	January	50,415	53,470	2,813	99,275
	February	45,122	49,010	4,627	96,940
	March	46,402	51,455	3,179	99,895
	April	44,065	53,820	4,944	106,972
	May	45,712	57,135	6,032	110,018
	June	44,631	47,635	6,369	110,965
	July	48,547	47,855	5,307	106,091
	August	48,753	50,285	5,088	105,810
	September	44,506	52,460	4,893	109,205
	October	R45,670	58,705	7,342	R116,514
	November	R44,589	30,865	6,744	R108,710
	December	47,436	38,290	2,587	95,572
1975	January		***54,885		

\*See Explanatory Note 6.

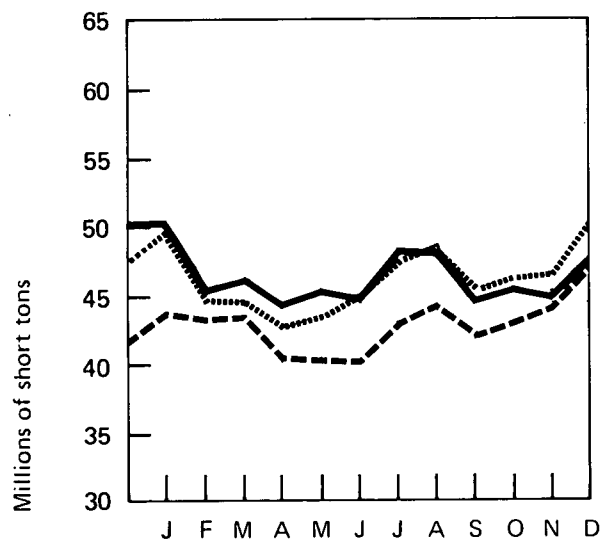
\*\*See Explanatory Note 7.

\*\*\*Preliminary data.

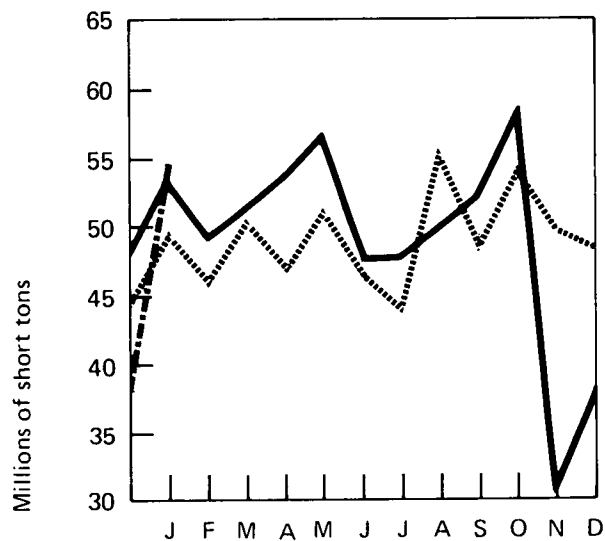
R=Revised data.

Source: Bureau of Mines.

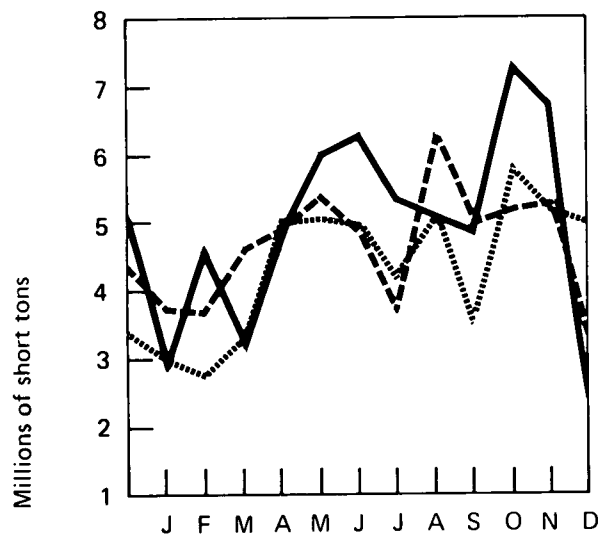
**Domestic Consumption**



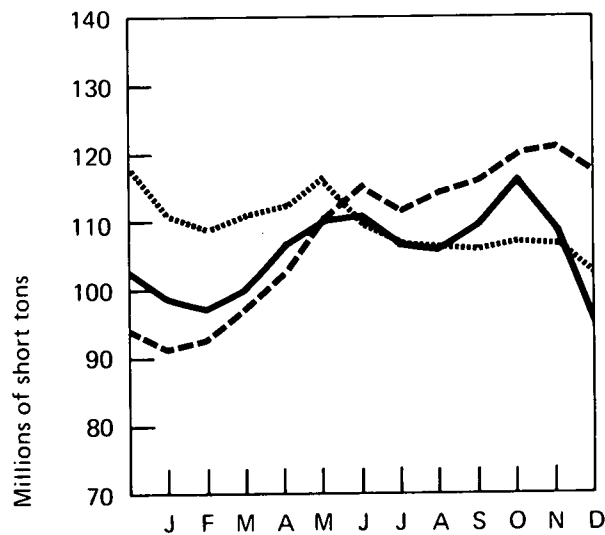
**Production**



**Exports**



**Stocks**



--- 1972  
 ..... 1973  
 — 1974  
 - - - 1975

## ELECTRIC UTILITIES

Total production of electricity by utilities for the month of January was 161,950,000 kilowatt hours, an increase of 1.9 percent over December.

Total generation of electric power in 1974 was approximately the same as in 1973.

During 1974, electric power generated from fossil fuels decreased 3.3 percent from 1973. Production from natural gas showed the sharpest decline, down 5.8 percent; production from coal and oil were off 2.1 and 3.8 percent, respectively.

Nuclear power supplied 5.9 percent and hydroelectric 16.0 percent of total electricity production in 1974, compared to 4.5 percent and 14.6 percent, respectively, in 1973.

Fuel stock piles at powerplants changed little during 1974, representing a 74-day supply for coal and a 65-day supply for oil at the end of the year. This compares with an 80-day coal supply and a 61-day oil supply at the end of 1973.

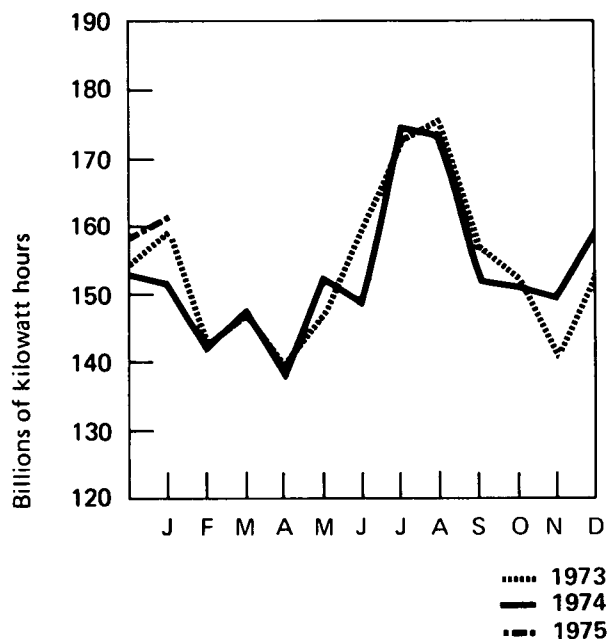
Kilowatt-hour sales in November 1974 to all three major types of customers declined from the preceding month. Residential and commercial sales were down about 3.5 percent, while industrial sales declined 4.5 percent.

Cumulative 1974 kilowatt-hour sales through November indicate that residential and commercial usage was down 0.1 percent and 2.0 percent, respectively, while industrial sales increased slightly by 0.7 percent.

# Electric Utilities

		Total Production	Percentage Produced from Each Source					
		In millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro-electric	Other *
1972	January	144,575	45.4	17.9	16.6	2.9	16.9	0.3
	February	137,301	45.7	17.3	18.0	2.6	16.1	0.3
	March	140,056	44.3	15.2	20.0	3.0	17.2	0.3
	April	132,138	43.6	13.4	22.3	2.7	17.7	0.3
	May	137,745	43.3	12.7	24.0	2.1	17.6	0.3
	June	145,523	42.3	13.3	25.5	2.6	15.9	0.4
	July	157,846	42.1	14.1	25.7	2.9	14.9	0.3
	August	162,822	42.8	13.7	25.7	3.5	13.9	0.4
	September	147,358	43.4	14.7	25.5	3.2	12.9	0.3
	October	143,742	44.3	14.1	25.2	3.2	13.0	0.2
	November	143,867	45.7	18.3	17.2	3.7	14.8	0.3
	December	154,350	45.9	19.5	14.4	3.9	16.0	0.3
1973	January	159,320	47.2	19.3	13.1	3.9	15.8	0.7
	February	143,109	47.4	18.1	14.0	4.1	16.0	0.4
	March	147,754	45.6	16.2	16.2	4.5	17.2	0.3
	April	139,273	46.0	14.4	17.9	4.2	17.2	0.3
	May	147,021	44.2	14.6	20.2	3.8	16.8	0.4
	June	160,962	43.5	16.0	21.6	4.2	14.5	0.2
	July	172,539	44.1	16.5	22.5	4.0	12.7	0.2
	August	175,928	44.5	17.2	21.6	4.4	11.9	0.4
	September	156,304	45.6	17.2	21.0	4.9	11.0	0.3
	October	153,888	45.6	17.6	19.8	4.8	11.8	0.4
	November	140,785	47.3	16.6	16.5	5.7	13.5	0.4
	December	153,276	47.9	16.3	13.2	5.1	17.1	0.4
1974	January	152,226	48.2	17.1	13.5	4.9	15.9	0.4
	February	141,723	46.7	15.7	13.3	5.5	18.4	0.4
	March	148,046	45.3	14.7	15.6	5.5	18.5	0.4
	April	137,586	45.0	14.1	17.4	4.3	19.0	0.2
	May	153,076	44.3	14.7	18.4	4.0	18.3	0.3
	June	148,119	44.6	14.6	20.0	4.1	16.5	0.2
	July	175,057	43.0	15.4	21.1	5.5	14.6	0.4
	August	174,021	43.0	15.6	20.3	7.3	13.4	0.4
	September	151,963	43.5	16.1	19.1	7.1	14.0	0.2
	October	151,768	44.0	16.6	18.4	7.0	13.8	0.2
	November	149,504	45.0	18.4	15.2	7.1	14.2	0.1
	December	R 158,867	45.7	19.3	12.4	8.0	14.5	0.1
1975	January	161,950						

Total Production



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

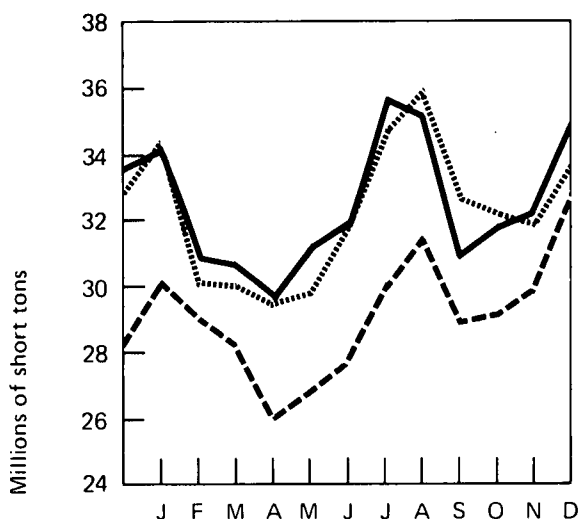
Sources: Federal Power Commission.

Production data for latest month are from Edison Electric Institute.

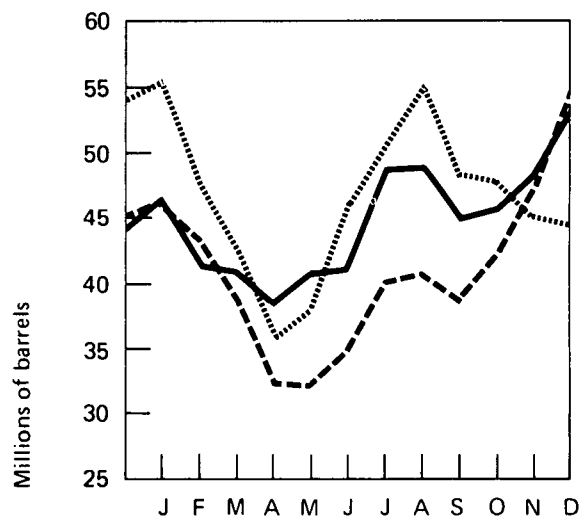
		Fuel Consumption		
		Coal	Oil	Gas
		In thousands of short tons	In thousands of barrels	In millions of cubic feet
<b>1972</b>	January	30,231	46,555	251,029
	February	28,946	43,325	258,859
	March	28,472	38,809	294,804
	April	26,093	32,325	312,229
	May	26,823	32,106	351,543
	June	27,749	35,098	394,585
	July	30,214	40,646	433,533
	August	31,651	41,073	448,594
	September	28,988	38,723	398,799
	October	29,133	42,876	337,567
	November	29,926	47,914	262,447
	December	32,817	54,479	234,683
<b>1973</b>	January	34,591	55,773	219,270
	February	30,921	46,978	212,983
	March	30,746	42,701	255,314
	April	29,209	35,845	267,151
	May	29,683	38,097	316,989
	June	31,953	46,669	363,239
	July	34,833	50,956	414,408
	August	36,065	55,166	482,053
	September	32,723	47,937	418,776
	October	32,398	48,033	327,010
	November	31,856	45,158	247,038
	December	33,704	44,696	217,049
<b>1974</b>	January	34,468	46,700	222,080
	February	30,062	41,186	185,468
	March	31,135	40,007	244,288
	April	29,452	38,124	238,272
	May	31,341	41,046	304,166
	June	31,892	41,084	341,067
	July	35,809	48,909	399,259
	August	35,365	49,084	380,979
	September	30,965	44,791	320,978
	October	31,968	45,767	300,317
	November	32,208	48,542	240,471
	December	35,009	53,635	207,113

Source: Federal Power Commission.

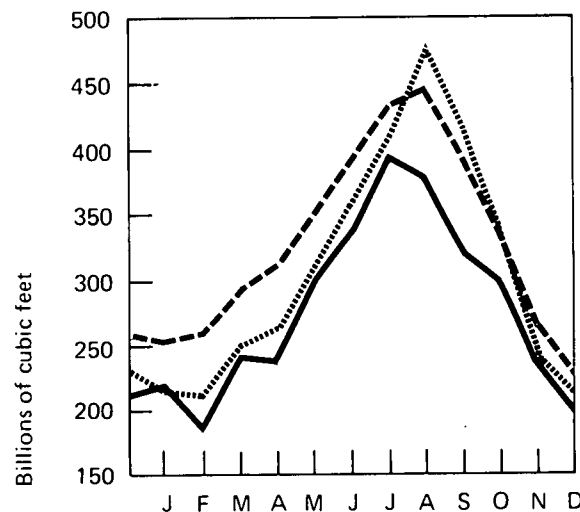
Coal Consumption



Oil Consumption



Gas Consumption



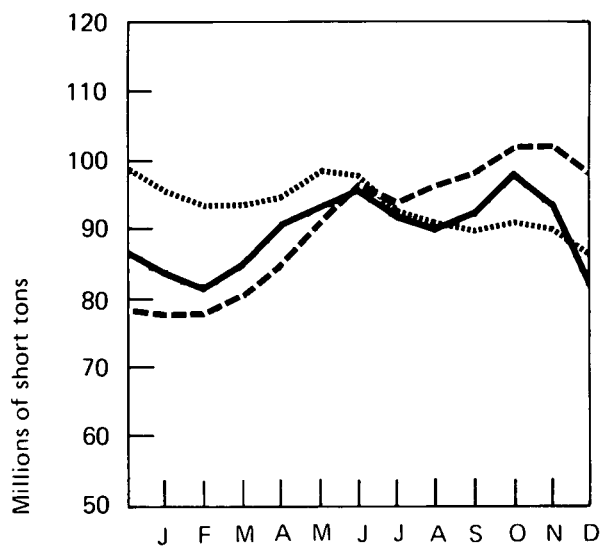
-- 1972  
 ..... 1973  
 — 1974

## Electric Utilities (Continued)

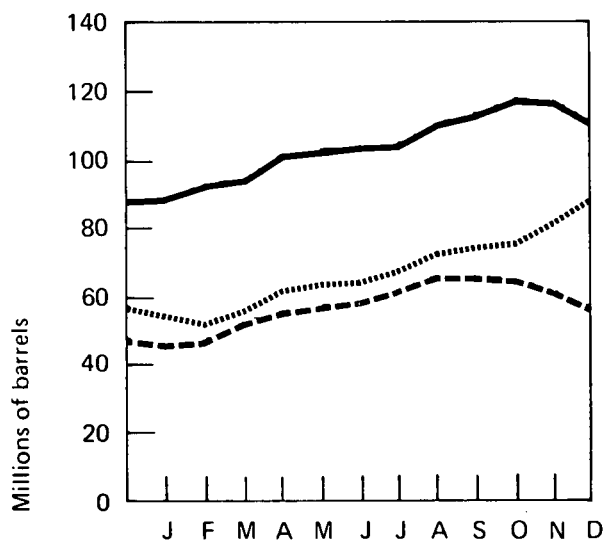
		Stocks at End of Month	
		Coal	Oil
		In thousands of short tons	In thousands of barrels
1972	January	76,876	46,055
	February	77,138	47,111
	March	80,296	52,213
	April	84,984	55,730
	May	91,778	57,399
	June	96,553	58,815
	July	93,760	60,786
	August	96,611	66,024
	September	98,396	66,004
	October	102,205	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

Source: Federal Power Commission.

Coal Stocks



Oil Stocks



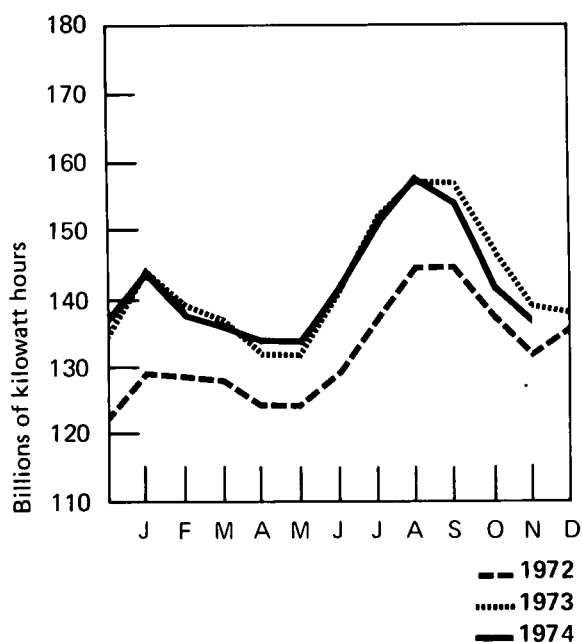
-- 1972  
..... 1973  
— 1974



# Sales

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

Total Sales



\*Includes street lighting and trolley cars.

Source: Federal Power Commission.

## OIL AND GAS EXPLORATION

The average number of rotary rigs engaged in drilling for oil and gas during January 1975 was 1,615, an increase of 18 percent over January 1974.

There were 2,994 wells drilled during January 1975, a substantial increase of 40 percent over well completions reported for January 1974. Total footage for January (13.2 million feet) was up 27 percent from the same month last year.

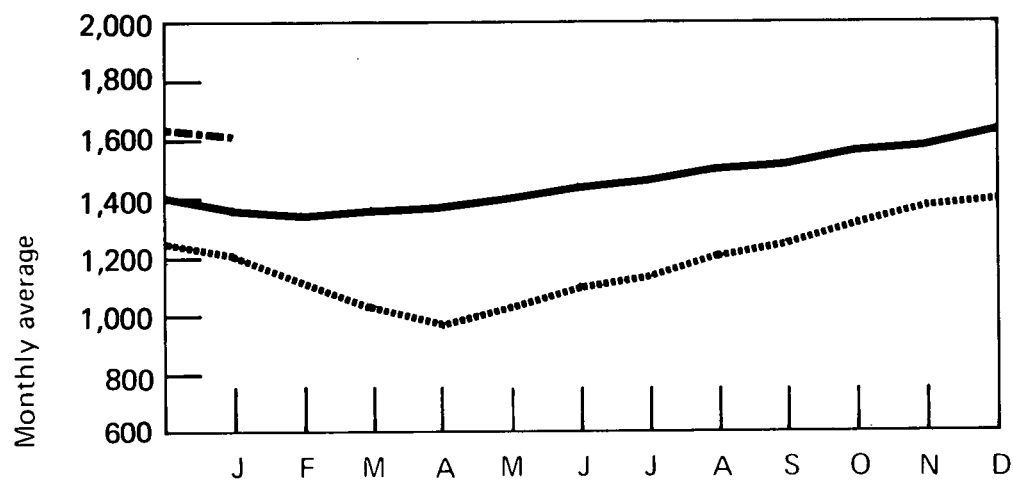
During January 1975, there were 301 seismic crews (274 land and 27 marine) engaged in prospecting for oil and gas which was an increase of 2 offshore crews and a decrease of 1 onshore crew from the December 1974 count.

# Oil and Gas Exploration

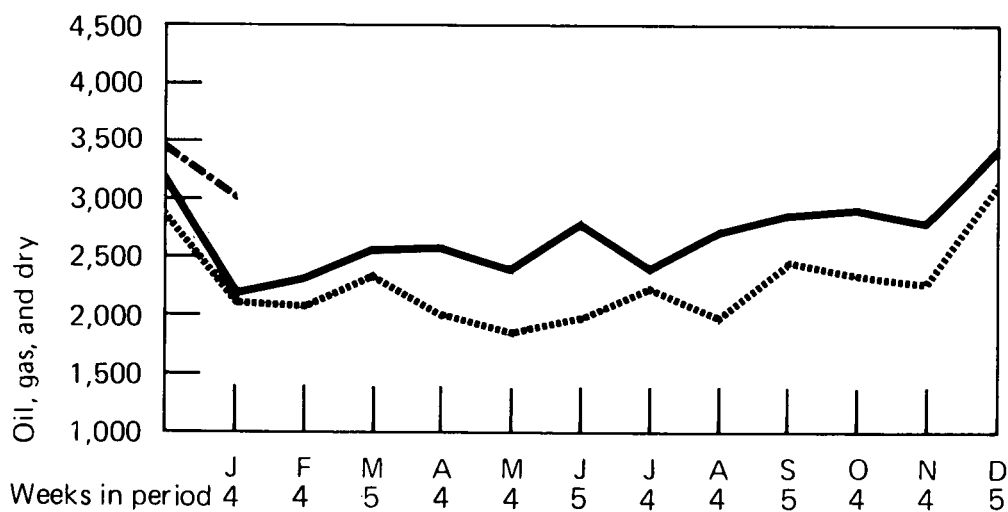
		Rotary Rigs in Operation	Wells Drilled				Total Footage of Wells Drilled
		Monthly average	Oil	Gas	Dry	Total	
1972	January	1,147	807	281	851	1,939	9,441,238
	February	1,071	965	350	955	2,270	12,381,669
	March	1,034	1,210	394	889	2,493	12,406,433
	April	1,002	923	355	788	2,066	9,902,253
	May	1,005	920	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

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

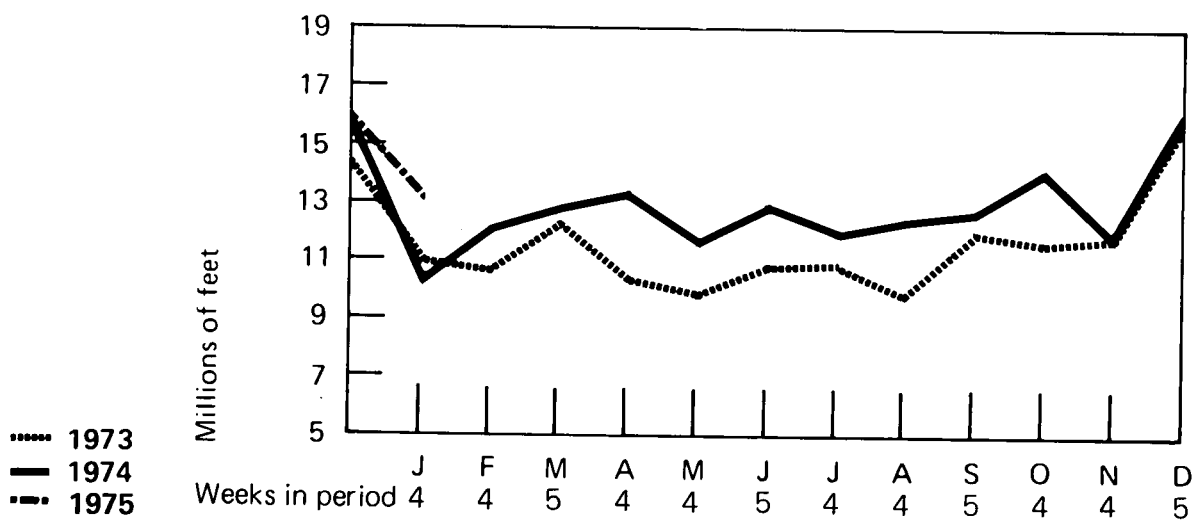
### Rotary Rigs in Operation



### Total Wells Drilled



### Total Footage of Wells Drilled

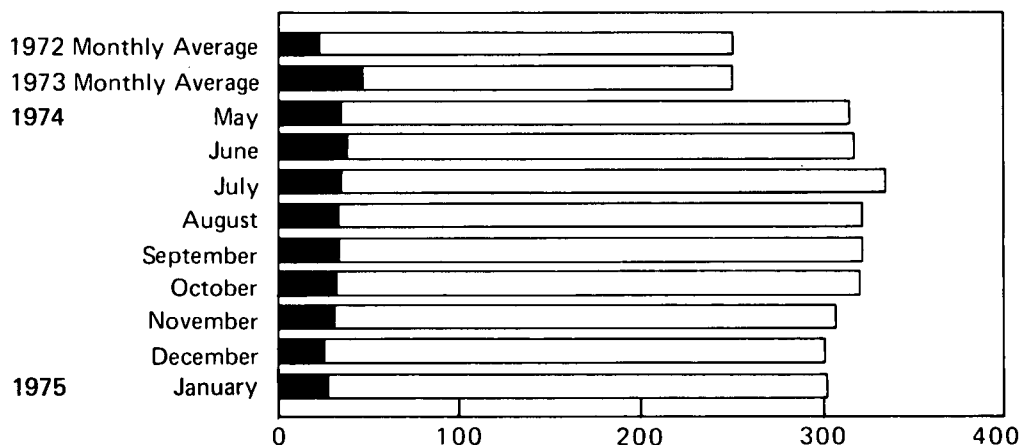


### Crews Engaged in Seismic Exploration

### Line Miles of Seismic Exploration

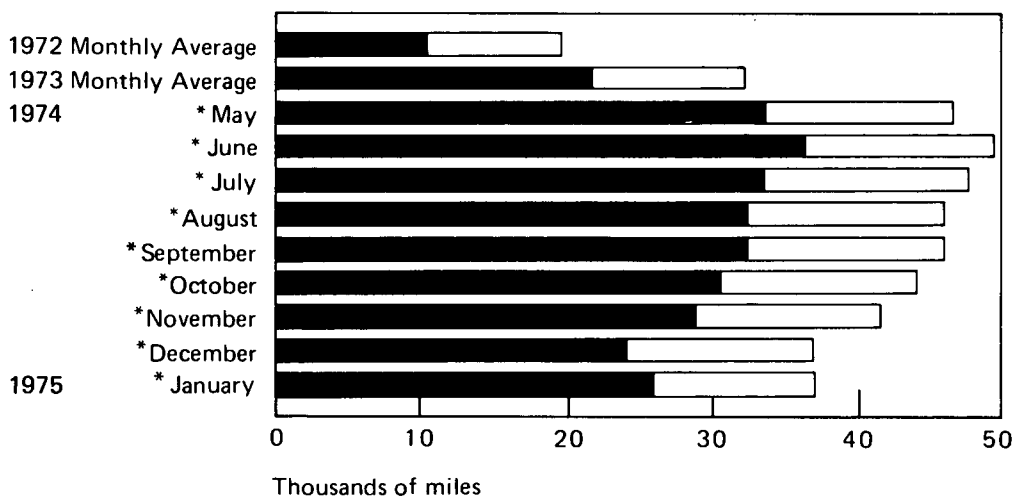
	Offshore	Onshore	Total	Offshore	Onshore	Total
1972 Monthly Average	12	239	251	10,306	9,333	19,639
1973 Monthly Average	23	227	250	21,579	10,597	32,175
1974					Estimates*	
May	35	278	313	33,320	13,066	46,386
June	38	279	317	36,176	13,113	49,289
July	35	299	334	33,320	14,053	47,373
August	34	287	321	32,368	13,489	45,857
September	34	287	321	32,368	13,489	45,857
October	32	288	320	30,464	13,586	44,000
November	30	276	306	28,564	12,972	41,532
December	25	275	300	23,800	12,925	36,725
1975						
January	27	274	301	25,704	12,878	38,582

### Crews Engaged in Seismic Exploration



### Line Miles of Seismic Exploration

■ Offshore  
 □ Onshore



\*See Explanatory Note 8. Source: Society of Exploration Geophysicists.

## GASOLINE

Beginning with this issue, selling prices for gasoline appearing in the following section *include* taxes. In previous issues, selling prices were shown excluding taxes.

Reflecting price increases by some of the Nation's largest sellers of gasoline, the average nationwide retail price of regular gasoline increased slightly in January by about 0.4 cent per gallon. The average price that retailers paid for regular gasoline increased for the second consecutive month, but only by 0.1 cent per gallon.

During January, the average nationwide selling price of regular gasoline by major retail gasoline dealers was 4.5 cents per gallon greater than that for independents. In December, the difference was 4.4 cents per gallon.

The difference between margins of major brand and independent gasoline retailers continued to be greater than it was during October 1973 (1.9 cents per gallon versus 0.7 cent per gallon).

The mid-Atlantic and the West Coast regions had the highest selling prices during January.

A survey during January of 21 major oil companies indicated that eight of the Nation's largest marketers of gasoline increased prices. Only one decreased prices.

For these 21 companies the average DTW price to branded retail outlets increased 0.59 cent per gallon over its December level. The average price paid by branded jobbers rose 0.36 cent per gallon. Their margins increased an average of 0.23 cent per gallon.

## HEATING OIL

Heating oil distributors decreased prices of heating oil sold to residential customers by 1.6 cents per gallon in December.

A January survey of 21 major oil companies indicated that heating oil prices softened slightly: 5 companies decreased prices, 2 increased prices, and 14 did not change prices.

## CRUDE OIL

The estimated percentages of total production accounted for by new and released oil in November were 13 and 8 percent, respectively. Total production of controlled oil increased 1 percent over its October level.

The cost of imported crude petroleum to refiners increased 29.0 cents per barrel in December, reflecting tax and royalty increases in several OPEC countries.

The average domestic refiner acquisition cost during December was \$7.39 per barrel, a decrease of 5.0 cents from the November level.

The composite cost to refiners of domestic plus imported crude during December was \$9.28 per barrel, a decrease of 13.0 cents from its November level.

## UTILITY FOSSIL FUELS

The National average cost of fossil fuels delivered to utilities in October 1974 rose moderately by 1.9 percent over the September level. Two regions, the East South Central and the Pacific, exhibited the largest increase, both at 5.5 cents per million Btu.

The National average cost for coal remained relatively unchanged from its September level, advancing 1.8 cents per million Btu. No significant regional fluctuations occurred.

Residual fuel prices showed the most substantial October increase (3.9 cents per million Btu) on a National level. The Middle Atlantic Region and the West South Central Region posted the greatest gains (4.7 cents and 5.2 cents per million Btu, respectively).

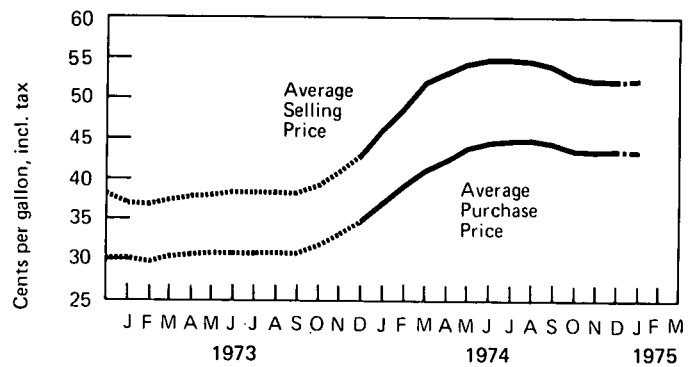
The National average natural gas price advanced again during October, continuing the gradual upward trend begun in January 1974. However, one region (Middle Atlantic) showed a substantial decrease of 15.7 cents per million Btu during October.

# Motor Gasoline

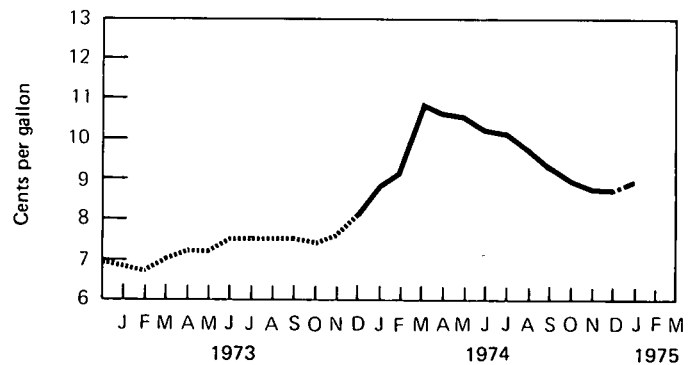
## Regular Gasoline at Retail Outlets

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

Average Retail Prices For Regular



Average Margins For Regular



..... 1973  
 — 1974  
 - - - 1975

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

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—January 24, 1975**

Cents per gallon, including tax

Regular Gasoline	
Major	53.2
Independent	48.7
National Average	52.4
Premium Gasoline	
Major	57.6
Independent	52.8
National Average	57.1
Diesel Fuel*	
Major	51.4
Independent	49.4
National Average	50.6

\*See Explanatory Note 9.

Source: Lundberg Survey, Inc.

**Average Margins for Major and Independent Retail Dealers**

Cents per gallon, including tax

Regular Gasoline	
Major	9.4
Independent	7.5
National Average	9.0
Diesel Fuel*	
Major	6.6
Independent	7.1
National Average	6.8

\*See Explanatory Note 9.

Source: Lundberg Survey, Inc.

**Average Regional Retail Selling Prices and Dealer Margins for Regular Gasoline—January 24, 1975**

FEA Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	52.6	9.4
1B Mid Atlantic	54.3	9.4
1C Lower Atlantic	52.6	9.1
2 Mid Continent	52.0	8.5
3 Gulf Coast	50.2	10.0
4 Rocky Mountain	52.0	9.2
5 West Coast	54.1	9.3
National Average	52.4	9.0

Source: Lundberg Survey, Inc.



## Motor Gasoline (Continued)

### Retail Gasoline Price Changes During January 1975

Company	Effective Date	Amount of Change
		Cents per gallon
Amerada Hess		None
American Petrofina		None
Ashland		None
Atlantic Richfield		None
B.P.		None
Cities Service		None
Champlin	January 8	1.0
Continental	January 18	1.0
Exxon	January 16	1.0
Getty		None
Gulf	January 31	0.8
Kerr-McGee		None
Mobil	January 9	0.5
Phillips	January 25	1.0
Shell	January 17	-0.8
Standard Oil of California	January 6	1.0
Standard Oil of Indiana		None
Standard Oil of Ohio		None
Sun		None
Texaco	January 17	1.0
Union Oil of California		None

Source: FEA Survey.

### Major Brand Regular Gasoline, January 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		
Northeast	32.28	0.35	27.77	0.03	4.51	0.32
Mid Atlantic	31.64	0.39	27.75	0.14	3.89	0.25
Southeast	31.17	0.70	27.35	0.45	3.82	0.25
Central	32.12	0.58	28.17	0.45	3.95	0.13
Western	32.20	0.56	28.46	0.54	3.74	0.02
Southwest	31.14	0.98	27.17	0.44	3.97	0.54
Pacific	31.54	0.54	27.79	0.41	3.75	0.07
Average	31.73	0.59	27.78	0.36	3.95	0.23

Source: FEA Survey.

# Heating Oil

## Average Prices for December 1974

	Average Purchase Price	Residential		Institutional and Utility		Industrial	
		Selling Price	Margin	Selling Price	Margin	Selling Price	Margin
		Cents per gallon					
New England	29.9	37.4	7.5	36.4	6.5	36.0	6.1
Mid Atlantic	29.5	37.8	8.3	37.1	7.6	36.2	6.7
Southeast	29.1	35.5	6.4	35.3	6.2	35.0	5.9
East North Central	28.1	33.8	5.7	33.5	5.4	33.1	5.0
West North Central	27.3	33.3	6.0	32.2	4.9	32.5	5.2
East South Central	28.9	32.7	3.8	NA	NA	NA	NA
Mountain	29.3	35.8	6.5	32.7	3.4	32.7	3.4
West Coast	28.4	36.0	7.6	32.3	3.9	35.2	6.8
National Average	29.1	36.3	7.2	35.7	6.6	35.3	6.2

NA = Not available.

Source: FEA.

## Price Changes During January 1975

Company	Effective Date	Amount of Change
Cents per gallon		
Amerada Hess	January 1	1.0
American Petrofina		None
Ashland	January 3	- 2.5
Atlantic Richfield		None
B.P.		None
Cities Service		None
Champlin		None
Continental		None
Exxon		None
Getty		None
Gulf	January 7	-0.5
Kerr—McGee		None
Mobil		None
Phillips		None
Shell	January 1, 17	-1.8, -2.0
Standard Oil of California		None
Standard Oil of Indiana	January 3	-0.5
Standard Oil of Ohio		None
Sun	January 1	-2.0
Texaco		None
Union Oil of California	January 1	1.5

Source: FEA Survey.

# Crude Oil

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

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

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	R*10.90
	December	5.25	*11.08

\*Preliminary estimate.

R = Revised data.

Source: FEA.

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

		Domestic	Imported	Composite
		Dollars per barrel		
<b>1974</b>	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

\*\*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							
<b>1973</b>	December	NA	6.32	6.42	6.37	8.54	5.49	NA	6.70
<b>1974</b>	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	12.09	12.15	12.54	11.15

NA = Not available.

Source: FEA.

\*See Explanatory Note 10.

# Utility Fossil Fuels

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

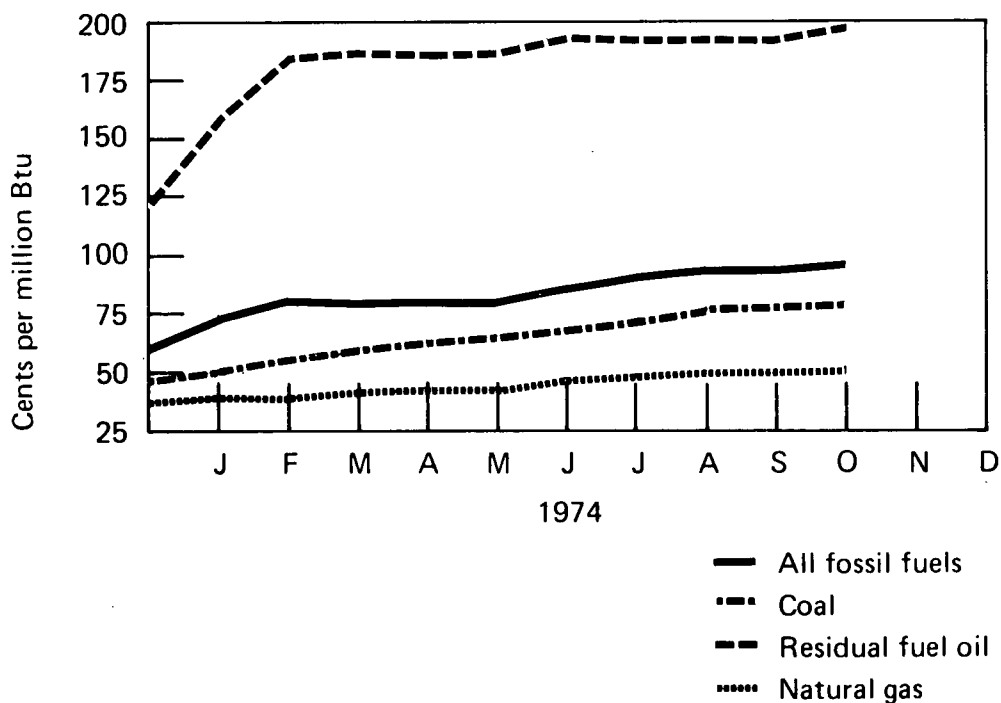
### All Fossil Fuels\*

Cents per million Btu

Region	1974	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
New England		147.7	175.7	192.7	186.8	180.0	184.7	186.2	191.4	191.6	192.6
Middle Atlantic		111.6	129.0	123.9	124.9	124.2	137.6	144.7	147.8	137.5	139.1
East North Central		52.5	57.0	62.3	63.7	68.9	76.9	79.1	82.7	82.5	84.6
West North Central		47.8	40.5	36.5	42.4	43.9	47.2	45.3	50.3	51.0	50.0
South Atlantic		88.5	100.6	102.8	105.9	109.8	119.0	123.7	128.2	132.3	128.4
East South Central		46.0	52.4	54.1	54.4	58.3	62.5	65.7	68.2	69.7	75.2
West South Central		48.9	46.2	48.0	44.1	47.3	50.0	59.4	57.1	52.1	53.7
Mountain		43.7	48.1	42.7	43.1	36.3	40.3	45.0	46.8	45.0	47.8
Pacific		119.7	160.3	114.1	117.8	122.4	117.9	118.9	118.8	127.3	132.8
National Average		74.4	81.6	80.9	81.1	81.2	87.7	92.2	95.4	95.9	97.7

\*See Explanatory Note 11.

### National Average



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

### Coal

Cents per million Btu

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

### Residual Fuel Oil\*

Cents per million Btu

Region	1974	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
New England		156.6	190.5	208.1	199.4	193.1	201.1	199.2	201.8	199.8	202.0
Middle Atlantic		186.5	208.1	212.2	196.0	208.6	207.7	208.6	204.5	200.7	205.4
East North Central		110.3	127.2	158.3	183.6	138.7	198.2	182.7	164.4	161.5	161.3
West North Central		160.0	154.8	169.1	178.2	160.9	179.3	152.7	178.1	182.6	179.5
South Atlantic		140.6	167.3	172.7	172.8	174.9	181.5	178.7	178.9	179.3	183.3
East South Central		112.5	132.2	136.0	153.0	164.9	171.5	169.6	172.6	173.9	171.8
West South Central		107.5	126.8	144.6	159.4	152.1	161.1	187.5	179.3	180.8	186.0
Mountain		159.2	174.9	172.1	174.1	194.4	199.2	176.2	179.0	186.7	185.0
Pacific		155.5	191.2	161.8	180.8	188.7	202.5	204.9	220.3	222.3	223.8
National Average		158.2	185.9	188.0	186.5	188.1	194.9	194.2	194.6	194.3	198.2

### Natural Gas\*\*

Cents per million Btu

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

NA = Not available.

\*See Explanatory Note 11.

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

Source: Federal Power Commission.

# Definitions

## Base Production Control Level

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

## Ceiling Price

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

## Controlled Crude Oil

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

## Crude Oil Domestic Production

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

## Crude Oil Imports

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

## Crude Oil Input to Refineries

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

## Crude Oil Stocks

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

## Dealer Tankwagon (DTW) Price

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

## Distillate Fuel Oil

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

## Domestic Non-controlled Crude Oil

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

## Electricity Production

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

## Firm Natural Gas Service

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

## Interruptible Natural Gas Service

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

## Jet Fuel

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

## Jobber

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

## Jobber Margin

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

## Jobber Price

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

## Landed Cost

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

**Line Miles of Seismic Exploration**

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

**Motor Gasoline Production**

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

**Motor Gasoline Stocks**

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

**Natural Gas Imports**

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

**Natural Gas Liquids**

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

**Natural Gas Marketed Production**

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

**New Oil**

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

**Old Oil**

Same as controlled crude oil.

**Primary Stocks of Refined 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.

**Refined Products Domestic Demand**

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.

**Refined Products Imports**

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

**Refiner Acquisition Cost**

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

**Released Oil**

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

**Residual Fuel Oil**

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

**Rotary Rig**

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

**Stripper Well Lease**

A property of which the average daily production of crude petroleum and petroleum condensates, inclu-



ding natural gas liquids, per well did not exceed 10 barrels per day during the preceding calendar month.

**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. 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, 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. 1974 and 1975 electricity imports were estimated on the basis of imports levels during 1973.

3. Graphic presentations of petroleum volumetric data show Bureau of Mines (BOM) figures for 1973 through November 1974 and FEA figures for November 1974 forward. FEA monthly data are based on the *Weekly Petroleum Statistics Report* which presents volumetric data on domestic petroleum receipts and imports for all refiners and bulk terminal operators, as well as production and stock levels for each major petroleum product.

Conceptually, the major difference between FEA and BOM data occurs in the "Stocks" series. Stock levels reported by FEA for the major petroleum products are higher than those reported by BOM, because the FEA series includes stocks of independent terminal operators not counted by BOM.

In the current issue, cumulative 1972 and 1973 petroleum data presented in the text are based on BOM figures. Discussions of cumulative 1974 data are based on BOM figures for the first 10 months and FEA figures for the last 2 months of the year.

4. Oil heating degree-days relate demand for distillate heating fuel to outdoor air temperature. Heating degree-days are defined as deviations of the mean daily temperature at a sampling station below a base temperature equal to 65°F by convention. Numerous studies have shown that when the outside temperature is 65°, most buildings can maintain an indoor air temperature of 70° without the use of heating fuels.

Mean daily temperature information is forwarded to the National Oceanic and Atmospheric Administration,

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

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

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

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

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

9. 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. Con-

sequently, December 1974 and January 1975 figures for diesel fuel are not exactly comparable.

10. 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.

11. The weighted average utility fuel cost for the total United States includes distillate fuel oil consumed by 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)
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1 metric ton	<i>contains</i>	7.33 barrels
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1 short ton	<i>contains</i>	6.65 barrels
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### Approximate Heat Content of Various Energy Sources

#### Petroleum

Crude oil	5.800 million Btu/barrel
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Refined products, average	5.508 million Btu/barrel
---------------------------	--------------------------

Gasoline	5.248 million Btu/barrel
----------	--------------------------

Jet fuel, average	5.604 million Btu/barrel
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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	3.99 million Btu/barrel
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#### Natural gas

Wet	1,101 Btu/cubic foot
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Dry	1,031 Btu/cubic foot
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#### Coal

##### Bituminous and lignite

Production	24.05 million Btu/short ton
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Consumption	23.75 million Btu/short ton
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Anthracite	25.40 million Btu/short ton
------------	-----------------------------

Hydroelectric power	10,379 Btu/kilowatt hour
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Nuclear power	10,660 Btu/kilowatt hour
---------------	--------------------------

Electricity Consumption	3,412 Btu/kilowatt hour
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