

Monthly Energy Review

November 1976



Federal Energy
Administration

National Energy
Information Center

Washington
D.C. 20461

The *Monthly Energy Review* is prepared in the Office of Energy Information and Analysis under the general supervision of John D. Curtis, Office of Energy Systems Data.

Editor: Judy Gaynor

Publications Coordinator: Elizabeth A. Snyder

Editorial Review: Patricia M. Jacobus

Graphics Review: Office of Communications
and Public Affairs

Overview: Judy Gaynor

Crude Petroleum and Products: David A. Carleton,
Ginger Roccapriore

Natural Gas Liquids, Natural Gas: James W. McCarrick

Coal: Patricia Newman

Electric Utilities: Thomas Murphy

Degree-Days: John H. Roberts

Nuclear Power: Andrew W. Reynolds

Consumption: John H. Roberts

Petroleum Consumption Forecast: Timothy
F. Sutherland

Resource Development: Judy Gaynor

Price: Christopher B. Bordeaux, Les Byers, Brian
L. Connor, William Davis, William Gillespie,
Annie Whatley

International: Elizabeth Bauer

The cooperation of other government agencies and private establishments which provide much of the data appearing in this publication is gratefully acknowledged.

This periodical is available on a subscription basis from the following:

Subscriptions
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

For addresses inside the United States, the cost is \$36 per subscription (12 issues). For addresses outside the United States, the cost is \$50 per subscription.

Correspondence regarding editorial matters should be addressed to:

Editor, Monthly Energy Review
National Energy Information Center
Federal Energy Administration
Washington, D.C. 20461

Feature Articles appearing in previous issues:

Energy Consumption – March 1975

Nuclear Power – April 1975

The Price of Crude Oil – June 1975

U.S. Coal Resources and Reserves – July 1975

Propane, A National Energy Resource – September 1975

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

Curtailments of Natural Gas Service – January 1976

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

Trends in United States Petroleum Imports – September 1976

Contents

Part 1 – Overview	1
Part 2 – Crude Oil and Refined Products	5
Crude Oil	6
Total Refined Petroleum Products	8
Total Petroleum Imports	8
Motor Gasoline	10
Jet Fuel	12
Distillate Fuel Oil	14
Residual Fuel Oil	16
Natural Gas Liquids	18
U.S. Petroleum Supply and Demand – 1976	20
Part 3 – Natural Gas	21
Part 4 – Coal	25
Bituminous and Lignite	26
Anthracite	28
Part 5 – Electric Utilities	29
Cooling Degree-Days	34
Part 6 – Nuclear Power	37
Part 7 – Consumption	41
Energy Consumption	42
Petroleum Consumption and Forecast	47
Part 8 – Resource Development	49
Oil and Gas Exploration	50
Part 9 – Price	53
Motor Gasoline	54
Diesel Fuel	60
Heating Oil	62
Crude Oil	65
Natural Gas	70
Utility Fossil Fuels	72
Part 10 – International	75
Petroleum Consumption	76
Crude Oil Production	78
Definitions	79
Explanatory Notes	83
Units of Measure	86

Primary energy production in the United States averaged 164 trillion Btu per day (the equivalent of 28 million barrels per day of crude oil) during the first 9 months of 1976, down only 0.2 percent from the average output level during the corresponding months in 1975. This small decline represents a significant departure from the previous 2-year period when domestic energy output dropped at an average annual rate of 1.8 percent. Crude oil production declined 2.9 percent from the level for the first three quarters of last year, and natural gas production was 1.5 percent lower. These decreases were almost entirely offset by a 3.7-percent rise in average daily coal output and a 6.9-percent increase in nuclear electric power production.

In spite of the diminishing rate of decline in domestic energy production, the United States imported 15.7 percent more fossil fuels during the first three quarters of the year than during the comparable 1975 period. Average daily imports of crude oil and natural gas increased 27.1 percent and 2.6 percent, respectively, while refined petroleum product imports declined 3.7 percent.

Domestic consumption of energy averaged 200 trillion Btu per day (the equivalent of 34 million barrels per day of crude oil) during the first 8 months of 1976, an increase of 3.1 percent over the average consumption level for the same period in 1975. Forty-seven percent of this consumption was refined petroleum products, 19 percent was coal, and 27 percent was natural gas. The balance of primary domestic energy requirements was met by hydroelectric and nuclear electric power.

Cooler than normal weather prevailed during September, and as a consequence, the continental United States collected 11.6 percent fewer cooling degree-days than the average for the month. Total cooling degree-days for the entire 1976 air-conditioning season (May through September) were 7.2 percent below average and 10.4 percent below the total accumulated during the 1975 cooling season.

Electric utilities produced 5.4 percent more power during the first three quarters of 1976 than during the comparable 1975 period. The increase was needed mainly to meet the growth in industrial electricity requirements.

Sales of electric power to industrial customers rose 10.2 percent during the first 7 months of the year. Commercial sales were also higher (by 4.9 percent), while sales to residential users increased only 0.8 percent.

Retail gasoline prices appeared to be leveling off in September. The average price of regular gasoline sold at full service retail outlets advanced only 0.1 cent during the month to 60.2 cents per gallon. The average dealer margin increased 0.2 cent to 7.6 cents per gallon, the first change since May.

In resource development, the number of rotary rigs drilling for oil and gas posted a 15-year high during September and October. Well completions totaled 29,327 during the first three quarters of the year, up 14.3 percent from the level for the corresponding period in 1975. Completions are expected to exceed 41,000 by the end of the year.

Total world crude oil production rose 780,000 barrels per day in August to 57.2 million barrels per day, the highest level since September 1973. Crude oil liftings in the nations belonging to the Organization of Petroleum Exporting Countries (OPEC) averaged 30.5 million barrels per day during the month, 540,000 barrels per day more than during July. These production increases are attributed to increased purchases of crude oil in anticipation of a probable OPEC price hike in January.

		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy***
Quadrillion (10 ¹⁵) Btu				
1974	January	5.393	1.072	6.796
	February	4.979	0.945	6.205
	March	5.294	1.053	6.264
	April	5.199	1.142	5.759
	May	5.374	1.266	5.754
	June	4.945	1.197	5.535
	July	5.141	1.266	5.867
	August	5.157	1.237	5.900
	September	5.000	1.138	5.597
	October	5.264	1.210	6.066
	November	4.542	1.284	6.128
	December	4.849	1.305	6.732
		TOTAL	61.135	14.114
1975	January	R5.195	1.330	6.955
	February	4.805	1.093	6.108
	March	5.130	1.128	6.297
	April	4.998	0.970	5.704
	May	5.123	1.023	5.384
	June	5.016	1.028	5.344
	July	4.862	1.169	5.581
	August	4.954	1.213	5.655
	September	4.897	1.273	5.413
	October	5.155	1.226	5.825
	November	4.894	1.200	5.767
	December	5.067	1.219	6.819
		TOTAL	R60.095	13.870
1976	January	5.069	R1.296	R7.220
	February	4.850	R1.209	R6.167
	March	5.212	1.290	R6.389
	April	4.955	1.232	R5.733
	May	R5.050	R1.232	R5.674
	June	R5.052	R1.394	R5.739
	July	R4.767	R1.515	R††5.890
	August	R†5.020	R†1.364	††5.889
	September	†5.056	†1.345	NA
		TOTAL	45.031 (9 months)	11.876 (9 months)

*See Explanatory Note 1.

**See Explanatory Note 2.

***See Explanatory Note 3.

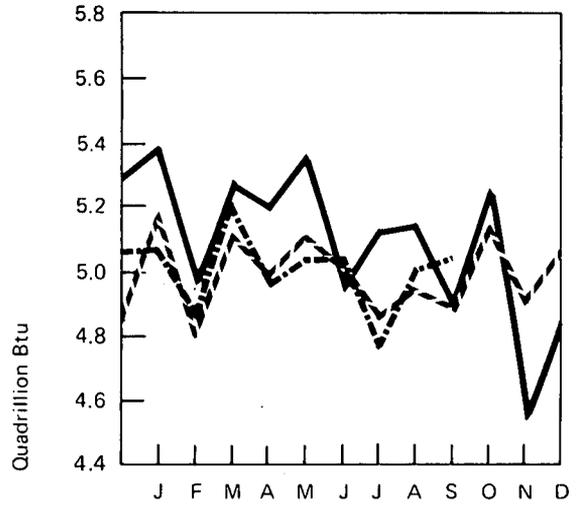
†Preliminary data.

††Partially estimated.

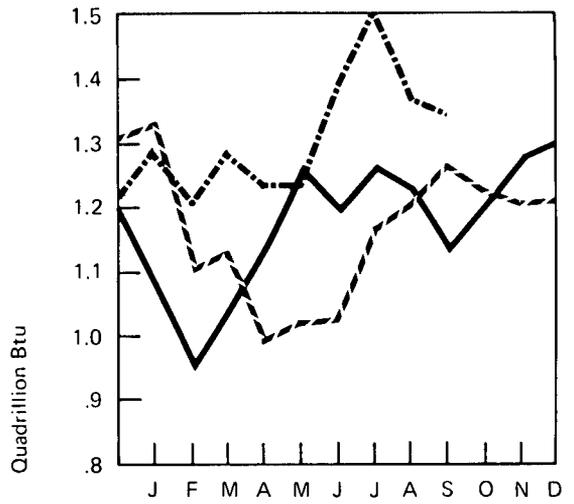
R=Revised data.

NA=Not available.

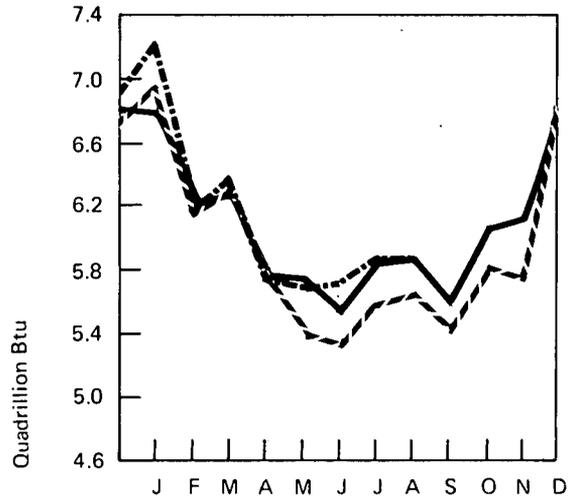
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



— 1974
 - - 1975
 - · - 1976

Part 2

Crude Oil and Refined Petroleum Products

Crude Oil and Refined Petroleum Products

Crude oil production during September amounted to 8.10 million barrels per day. The average for the first 9 months of 1976 was 8.15 million barrels per day, a decline of 0.24 million barrels per day (2.9 percent) from the level for the first 9 months of 1975.

Crude oil input to refineries remained high in September, averaging 13.53 million barrels per day. This was equivalent to 86 percent of operable capacity. The 9-month average was 13.16 million barrels per day, a 6.2 percent increase over the level for the first 9 months of 1975.

Crude oil imports during the first three quarters of 1976 averaged 5.05 million barrels per day, 1.08 million barrels per day more (27.1 percent) than during the similar period in 1975. According to Bureau of the Census data, Saudi Arabia and Nigeria were the major sources of crude oil imported in September, accounting for 23 percent and 17 percent of the total, respectively. Arab members of the Organization of Petroleum Exporting Countries (OPEC) provided 47 percent of the crude oil imported directly, and other OPEC members supplied 34 percent.

Crude oil inventories at the end of September were adequate for commercial purposes and were equal to 20.9 days of crude oil input to refineries.

Domestic demand averaged 16.94 million barrels per day during the first 9 months of 1976, exceeding demand for the same period in 1975 by 4.8 percent. The increase in demand during this period for selected major refined products was: residual fuel oil, 8.1 percent; motor gasoline, 4.1 percent; and distillate fuel oil, 3.7 percent.

Natural Gas Liquids

Domestic demand for natural gas liquids in June was 11.3 percent above June 1975 demand. Demand was 3.8 percent greater during the first 6 months of 1976 than it was during the same period of 1975.

Production of natural gas liquids during the first half of 1976 was approximately equal to production during the first half of 1975.

June imports of natural gas liquids were down 2.0 percent from the June 1975 level. However, imports for the period January through June were 11.9 percent higher than those for the same period of 1975.

Stocks of natural gas liquids at the end of June were 5.7 percent above June 1975 stocks.

Crude Oil

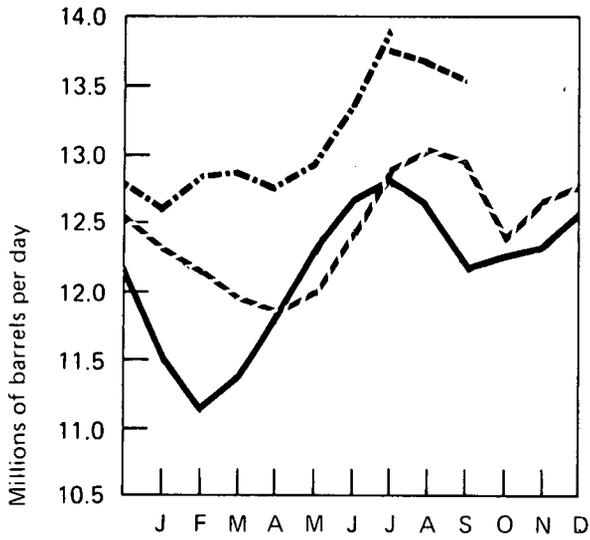
		Crude Input to Refineries		Domestic Production		Imports		Stocks	
		Thousands of barrels per day							
		BOM	API	BOM	API	BOM	API	BOM	API
1974	January	11,491		8,934		2,382		233,035	
	February	11,102		9,142		2,248		240,723	
	March	11,355		8,965		2,462		244,665	
	April	11,823		8,954		3,267		256,385	
	May	12,333		8,911		3,908		269,455	
	June	12,697		8,780		3,925		268,765	
	July	12,811		8,780		4,091		268,686	
	August	12,644		8,699		3,924		264,840	
	September	12,124		8,443		3,797		266,726	
	October	12,286		8,611		3,810		269,437	
	November	12,332		8,569		3,958		271,144	
	December	12,519		8,527		3,869		265,020	
	AVERAGE	12,133		8,774		3,477			
1975	January	12,297		8,439		4,029		270,462	
	February	12,135		8,575		3,828		276,755	
	March	11,905		8,476		3,656		279,989	
	April	11,803		8,440		3,378		284,990	
	May	11,983		8,371		3,486		276,110	
	June	12,417		8,409		3,905		276,132	
	July	12,915		8,327		4,193		264,157	
	August	13,046		8,237		4,581		256,616	
	September	12,945		8,266		4,689		259,446	
	October	12,365		8,310		4,389		269,584	
	November	12,689		8,271		4,623		270,950	
	December	12,779		8,239		4,476		271,354	
	AVERAGE	12,442		8,362		4,105			
1976	January	12,560		8,211		4,595		R289,296	
	February	12,834		8,196		4,208		277,414	
	March	12,877		8,175		4,738		283,112	
	April	12,727		8,080		4,790		286,628	
	May	12,920		8,168		4,669		283,982	
	June	13,351		8,144		5,621		281,715	
	July	13,901	13,788	8,104	R8,166	5,792	5,625	282,559	281,576
	August		R13,693		8,165		5,525		278,801
	September		13,529		8,095		5,488		282,893
	AVERAGE* (9 months)		13,156		8,149		5,051		

*Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

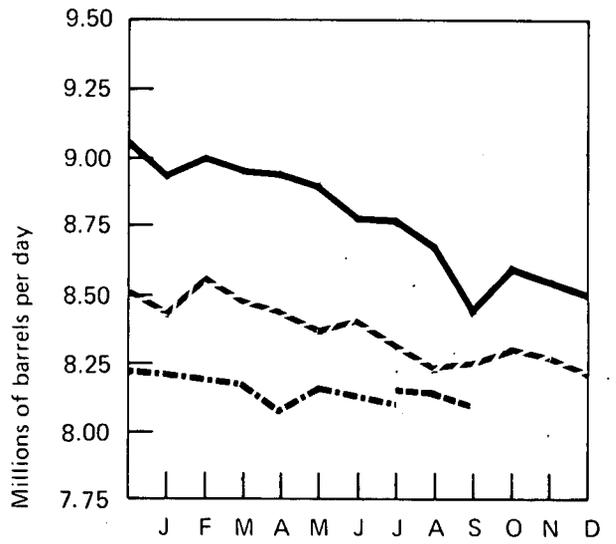
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

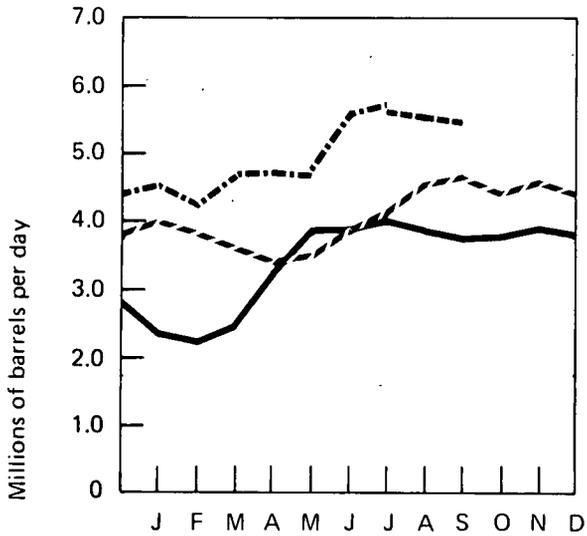
Crude Input to Refineries



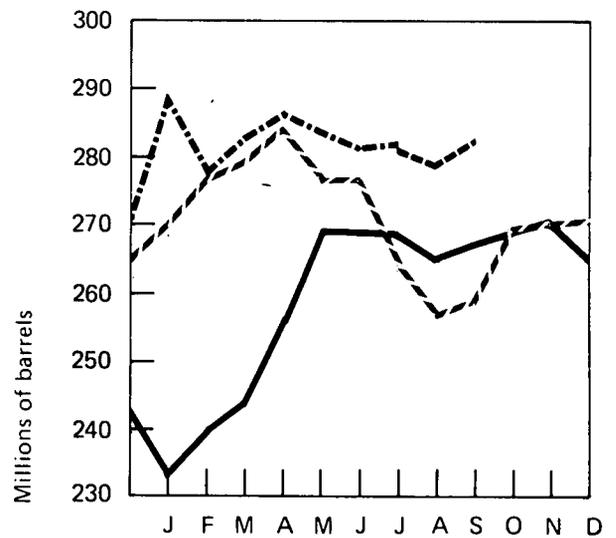
Domestic Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 - · - 1976 BOM
 - · - 1976 API

Total Refined Petroleum Products

Total Petroleum Imports

		Domestic Demand		Imports*			
		Thousands of barrels per day				Thousands of barrels per day	
		BOM	FEA**	BOM	FEA**	BOM	FEA**
1974	January	17,286		2,989		5,371	
	February	17,366		2,968		5,216	
	March	16,104		2,812		5,274	
	April	15,929		2,713		5,980	
	May	15,726		2,586		6,494	
	June	16,117		2,435		6,360	
	July	16,349		2,445		6,536	
	August	16,550		2,438		6,362	
	September	16,024		2,255		6,052	
	October	17,050		2,366		6,176	
	November	17,351		2,840		6,798	
	December	18,013		2,798		6,667	
	AVERAGE	16,653		2,635		6,112	
1975	January	17,983		2,811		6,840	
	February	17,248		2,348		6,176	
	March	16,316		2,074		5,730	
	April	16,041		1,655		5,033	
	May	15,118		1,690		5,176	
	June	15,611		1,502		5,407	
	July	15,762		1,789		5,982	
	August	15,767		1,681		6,262	
	September	15,769		2,116		6,805	
	October	16,344		1,907		6,296	
	November	15,721		1,739		6,362	
	December	17,987		1,751		6,227	
	AVERAGE	16,291		1,920		6,025	
1976	January	R18,599		R2,070		R6,665	
	February	R17,419		R2,414		R6,622	
	March	17,239		1,885		6,623	
	April	16,597		1,731		6,521	
	May	15,977		1,654		6,323	
	June	16,836		1,858		7,479	
	July	16,613	R16,386	2,098	R1,761	7,890	R7,386
	August		R16,441		R1,572		R7,097
	September		16,792		1,741		7,229
		AVERAGE*** (9 months)		16,944		1,889	

*See definitions.

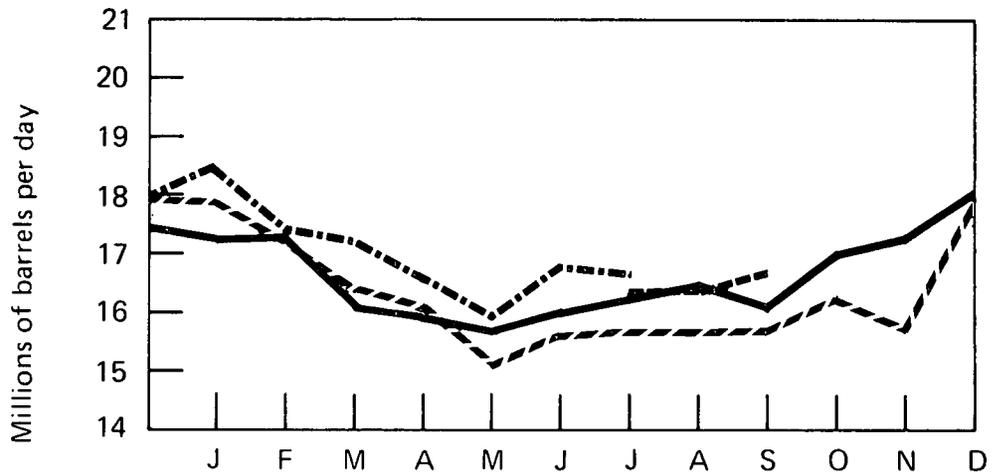
**Estimates.

***Nine-month average is based on Bureau of Mines data for January through July, and FEA estimates for August and September.

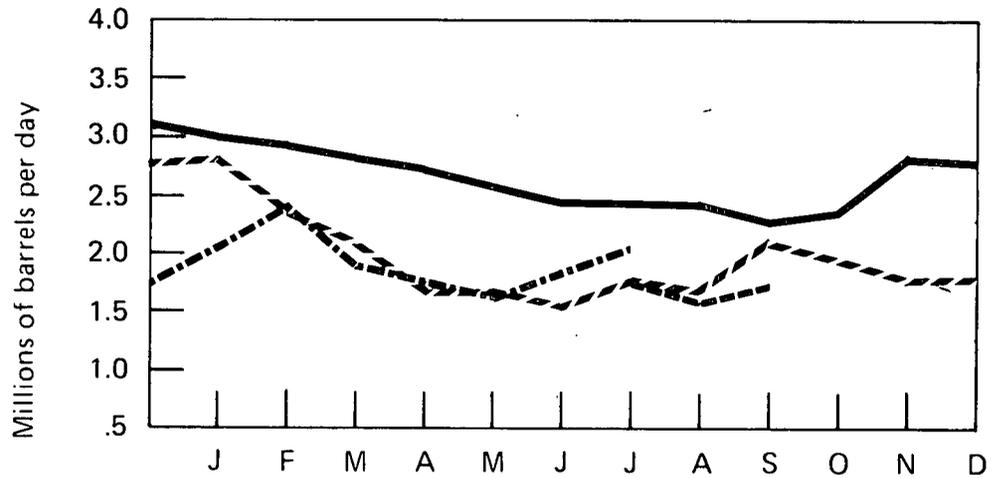
R=Revised data.

Sources: Bureau of Mines (BOM), American Petroleum Institute, and FEA.

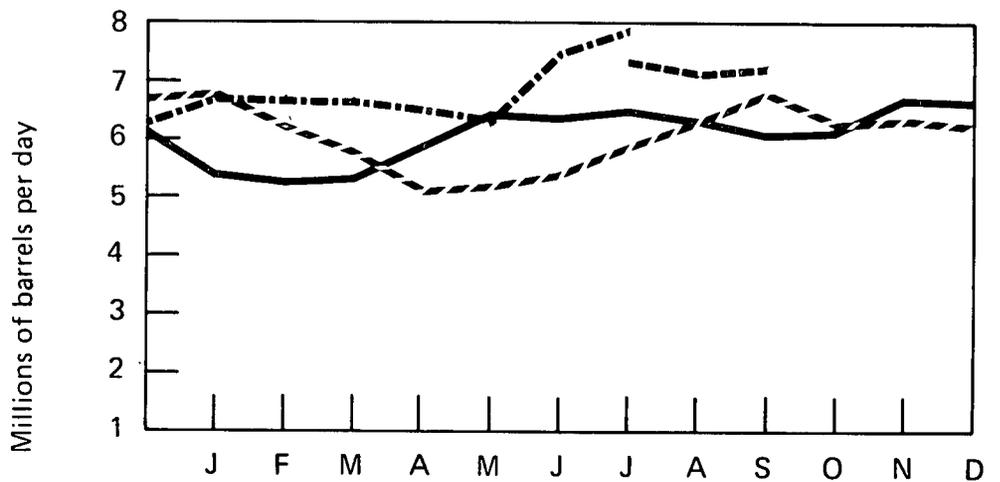
Total Refined Product Domestic Demand



Refined Product Imports



Total Petroleum Imports



— 1974 BOM
 - - 1975 BOM
 . . . 1976 BOM
 - . - . 1976 FEA

Motor Gasoline

		Domestic Demand		Production*		Imports		Stocks*	
		Thousands of barrels per day							
		BOM	API	BOM	API	BOM	API	BOM	API
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		6,329		250		218,670	
	June	6,919		6,663		211		217,381	
	July	6,959		6,793		212		218,838	
	August	7,061		6,815		253		218,951	
	September	6,388		6,453		202		227,031	
	October	6,712		6,336		171		220,748	
	November	6,547		6,292		174		218,385	
	December	6,558		6,419		141		224,719	
	AVERAGE	6,537		6,358		204			
1975	January	6,206		6,509		262		242,285	
	February	6,096		6,276		171		251,915	
	March	6,326		6,070		150		248,685	
	April	6,718		6,046		133		232,556	
	May	6,871		6,126		142		213,947	
	June	7,076		6,669		177		207,114	
	July	7,041		7,003		209		212,454	
	August	7,008		6,872		232		215,480	
	September	6,729		6,822		269		226,447	
	October	6,778		6,409		207		221,493	
	November	6,389		6,602		139		232,091	
	December	6,808		6,786		119		234,925	
	AVERAGE	6,674		6,518		184			
1976	January	6,398		6,483		92		240,464	
	February	6,263		6,472		84		248,854	
	March	6,890		6,455		123		239,049	
	April	7,159		6,562		99		223,965	
	May	6,853		6,774		112		225,037	
	June	7,482		7,303		188		225,365	
	July	7,354		7,218	R7,216	190	107	229,405	224,690
	August		7,226		7,115		104		229,187
	September		7,071		6,856		104		225,970
			7,064						
	AVERAGE** (9 months)		6,950		6,806		122		

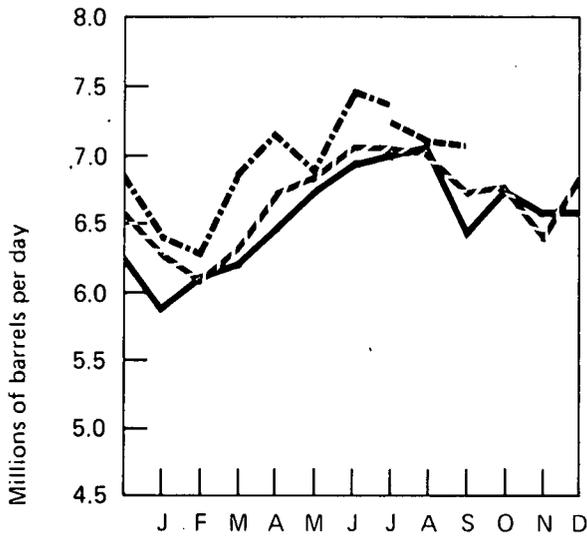
*See definitions.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

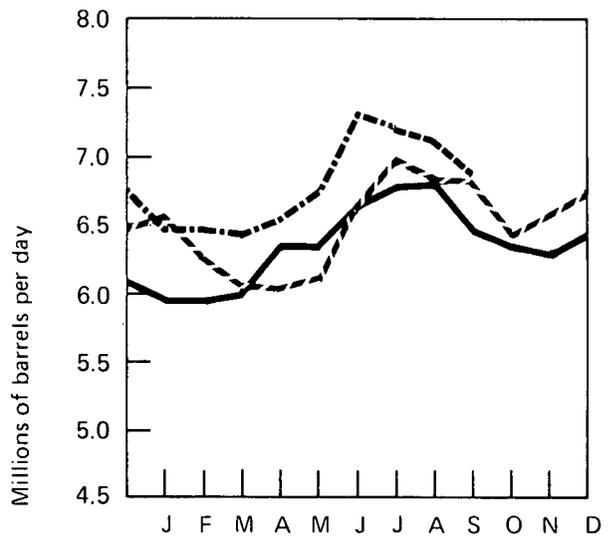
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

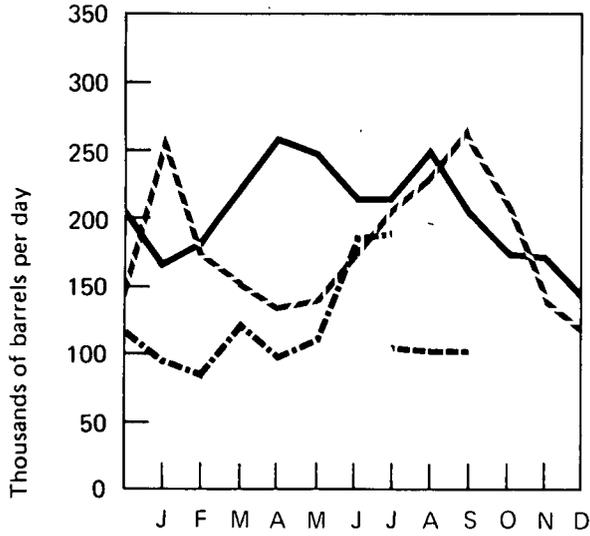
Domestic Demand



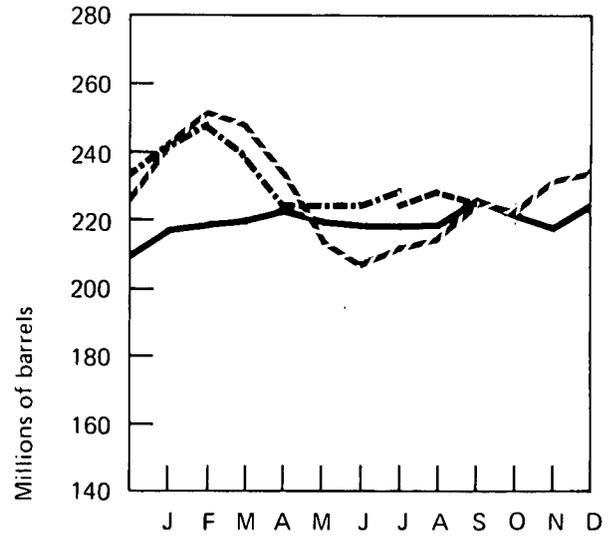
Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 ··· 1976 BOM
 - · 1976 API

Jet Fuel

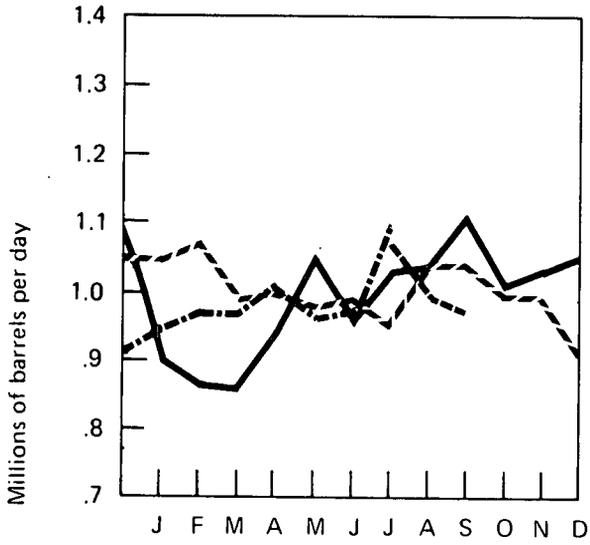
		Domestic Demand		Production		Imports		Stocks		
		Thousands of barrels per day								Thousands of barrels
		BOM	API	BOM	API	BOM	API	BOM	API	
1974	January	895		800		136		29,732		
	February	860		783		75		29,617		
	March	956		832		139		29,996		
	April	941		868		132		31,725		
	May	1,053		868		205		32,324		
	June	952		810		141		32,200		
	July	1,028		802		214		31,671		
	August	1,031		805		206		30,989		
	September	1,109		867		217		30,186		
	October	1,011		868		161		30,564		
	November	1,032		863		140		29,616		
	December	1,043		861		178		29,776		
		AVERAGE	993		836		163			
1975	January	1,041		831		229		30,321		
	February	1,075		835		200		29,133		
	March	982		896		130		30,456		
	April	1,006		864		138		30,263		
	May	977		861		133		30,719		
	June	989		839		106		29,337		
	July	954		883		88		29,798		
	August	1,046		958		132		31,103		
	September	1,040		907		140		31,291		
	October	997		863		106		30,410		
	November	999		864		89		28,977		
	December	911		849		109		30,380		
		AVERAGE	1,001		871		133			
1976	January	948		889		69		30,618		
	February	966		918		72		31,180		
	March	965		927		86		32,619		
	April	1,010		927		108		33,332		
	May	960		899		106		34,664		
	June	972		879		68		33,879		
	July	1,099	R1,071	933	953	130	78	32,732	31,118	
	August		990		948		59		31,500	
	September		970		932		48		31,751	
		AVERAGE*		987		917		83		
		(9 months)								

*Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

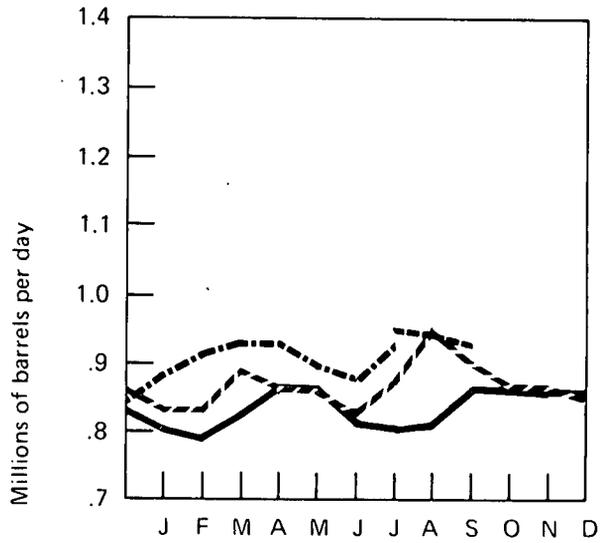
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

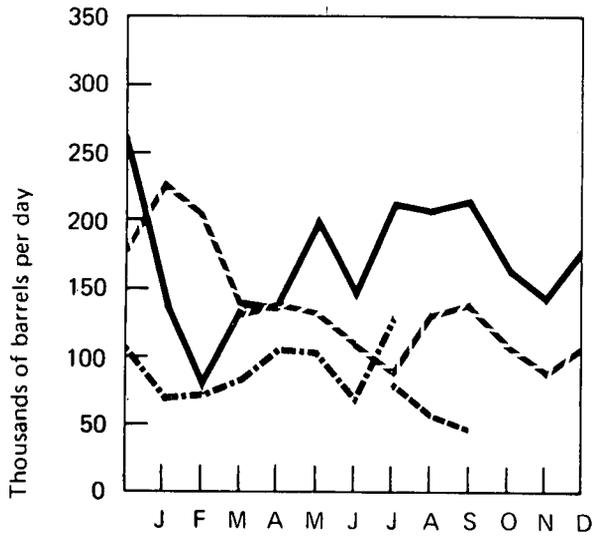
Domestic Demand



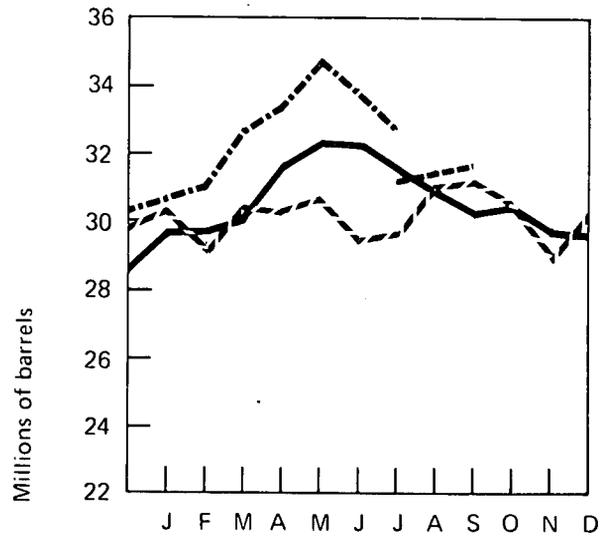
Production



Imports



Stocks



— 1974 BOM
 - - 1975 BOM
 . . . 1976 BOM
 - . - 1976 API

Distillate Fuel Oil

		Domestic Demand		Production*		Imports		Stocks*	
				Thousands of barrels per day				Thousands of barrels	
		BOM	API	BOM	API	BOM	API	BOM	API
1974	January	3,835		2,880		464		181,179	
	February	3,849		2,399		306		149,125	
	March	3,164		2,226		287		128,822	
	April	2,852		2,522		220		125,553	
	May	2,450		2,704		268		141,806	
	June	2,377		2,783		220		160,645	
	July	2,309		2,792		221		182,458	
	August	2,309		2,705		125		198,673	
	September	2,385		2,552		152		208,269	
	October	2,887		2,700		237		209,908	
	November	3,157		2,801		454		212,875	
	December	3,853		2,924		515		223,717	
		AVERAGE	2,948		2,668		289		
1975	January	3,953		2,852		324		199,715	
	February	3,967		2,679		302		176,696	
	March	3,293		2,531		256		161,111	
	April	3,094		2,486		110		146,214	
	May	2,382		2,431		136		152,027	
	June	2,266		2,574		68		163,306	
	July	2,112		2,589		106		181,472	
	August	2,173		2,592		92		197,323	
	September	2,163		2,812		129		220,732	
	October	2,675		2,744		103		226,113	
	November	2,544		2,767		96		235,749	
	December	3,778		2,783		124		208,787	
		AVERAGE	2,849		2,653		153		
1976	January	R4,298		2,734		R164		165,428	
	February	R3,687		2,961		R207		150,439	
	March	3,333		2,793		148		138,306	
	April	2,788		2,655		96		137,249	
	May	2,519		2,738		97		147,057	
	June	2,436		2,885		151		165,064	
	July	2,255	2,224	2,959	2,895	126	52	190,861	188,953
	August		2,354		2,900		58		207,757
	September		2,604		2,881		75		218,343
		AVERAGE** (9 months)		2,917		2,833		124	

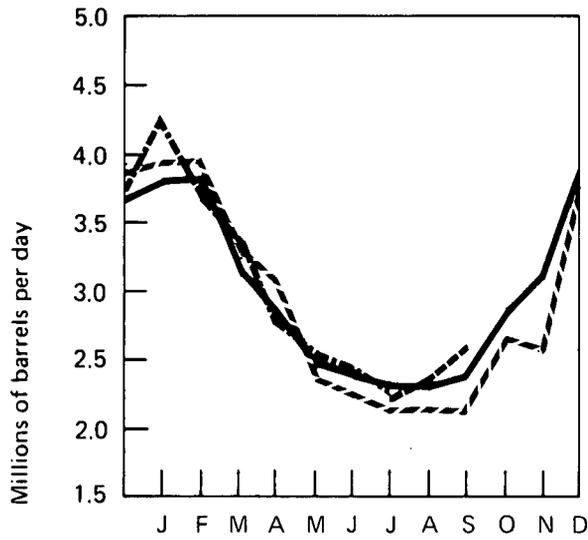
*See definitions.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data for August and September.

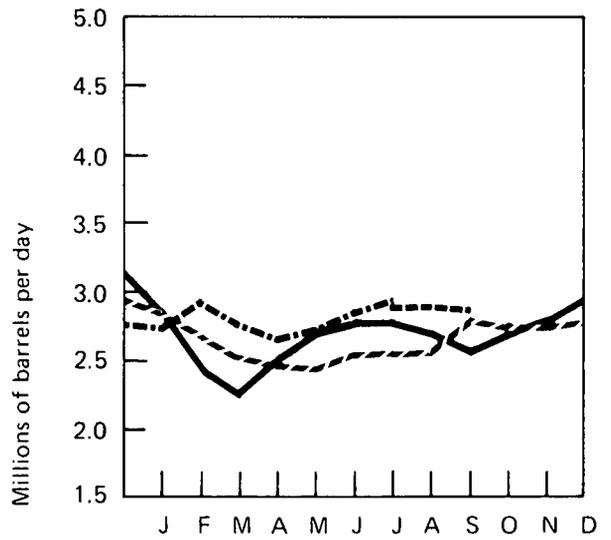
R=Revised data.

Sources: Bureau of Mines (BOM) and American Petroleum Institute (API) as indicated.

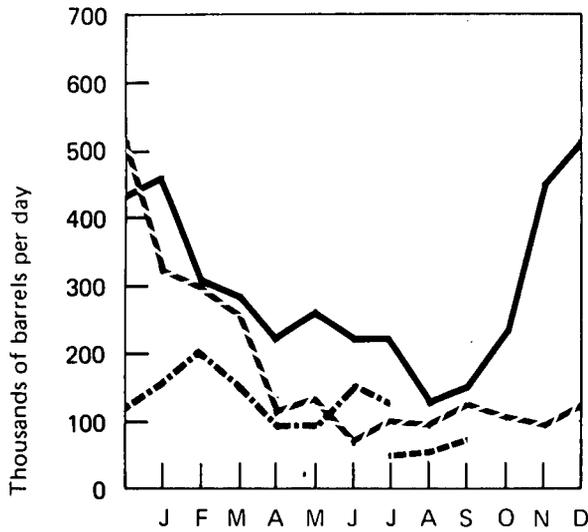
Domestic Demand



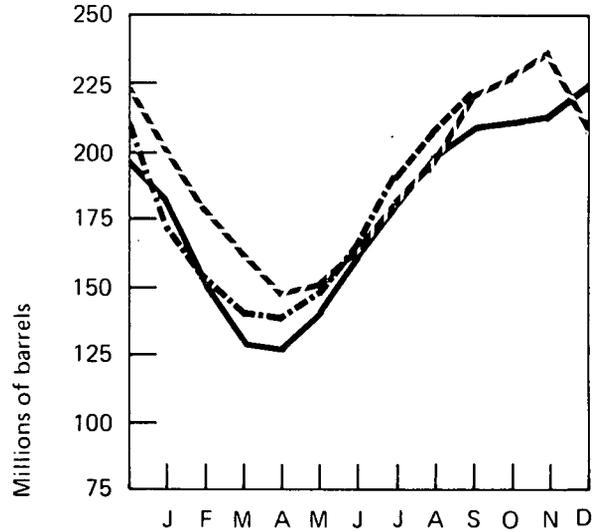
Production



Imports



Stocks



— 1974 BOM
- - 1975 BOM
... 1976 BOM
- - 1976 API

Residual Fuel Oil

		Domestic Demand		Production		Imports		Stocks	
		Thousands of barrels per day							
		BOM	FEA*	BOM	API	BOM	FEA*	BOM	API
1974	January	3,035		1,072		1,733		46,548	
	February	2,991		1,029		1,904		45,004	
	March	2,556		912		1,713		47,222	
	April	2,437		985		1,593		51,339	
	May	2,260		995		1,362		54,356	
	June	2,405		1,026		1,500		57,891	
	July	2,473		1,056		1,474		59,787	
	August	2,529		1,067		1,520		60,988	
	September	2,475		1,032		1,421		60,251	
	October	2,611		1,099		1,465		58,679	
	November	2,935		1,229		1,753		60,363	
	December	2,983		1,335		1,630		74,939	
		AVERAGE	2,639		1,070		1,587		
1975	January	3,242		1,415		1,647		60,233	
	February	2,849		1,354		1,402		66,495	
	March	2,668		1,299		1,292		64,148	
	April	2,225		1,245		1,047		66,340	
	May	2,049		1,151		1,123		73,498	
	June	2,179		1,152		904		69,660	
	July	2,239		1,155		1,144		71,526	
	August	2,118		1,146		982		71,857	
	September	2,329		1,183		1,312		76,938	
	October	2,238		1,165		1,221		81,858	
	November	2,349		1,214		1,169		83,131	
	December	2,728		1,354		1,099		74,126	
		AVERAGE	2,433		1,235		1,194		
1976	January	3,016		1,415		R1,406		66,592	
	February	2,929		1,394		R1,694		68,859	
	March	2,722		1,311		1,285		65,132	
	April	2,421		1,283		1,183		66,458	
	May	2,439		1,257		1,134		65,147	
	June	2,520		1,241		1,240		64,272	
	July	2,555	R2,499	1,266	1,229	1,460	R1,316	69,812	68,609
	August		R2,432		1,226		R1,169		67,111
	September		2,508		1,219		1,360		69,355
		AVERAGE** (9 months)		2,628		1,290		1,324	

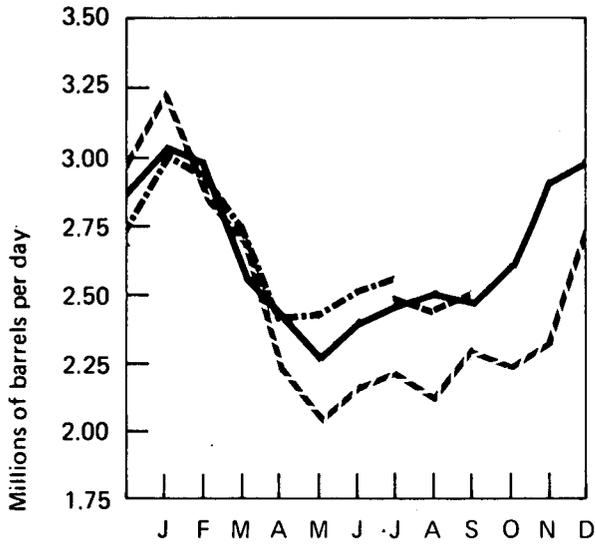
*Estimates.

**Nine-month average is based on Bureau of Mines data for January through July and American Petroleum Institute data (or FEA estimates) for August and September.

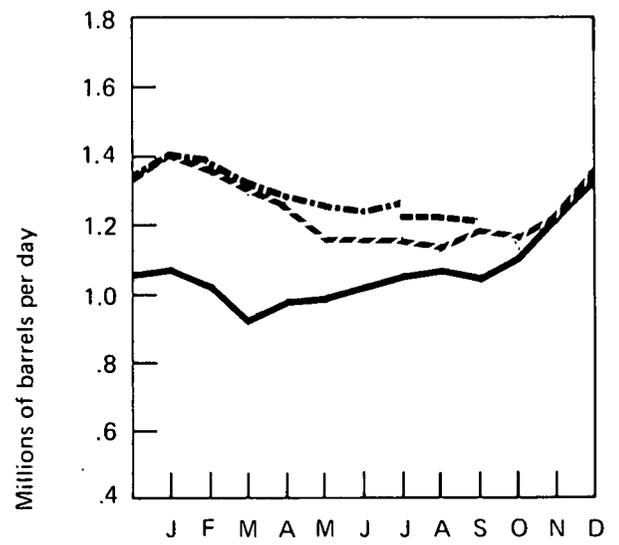
R=Revised data.

Sources: Bureau of Mines (BOM), American Petroleum Institute (API), and FEA.

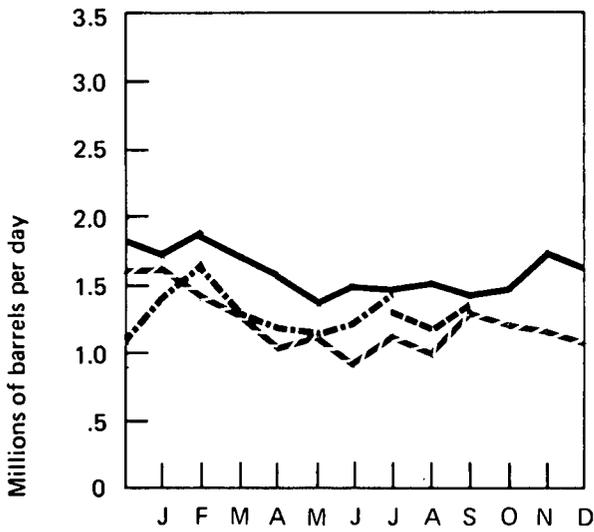
Domestic Demand



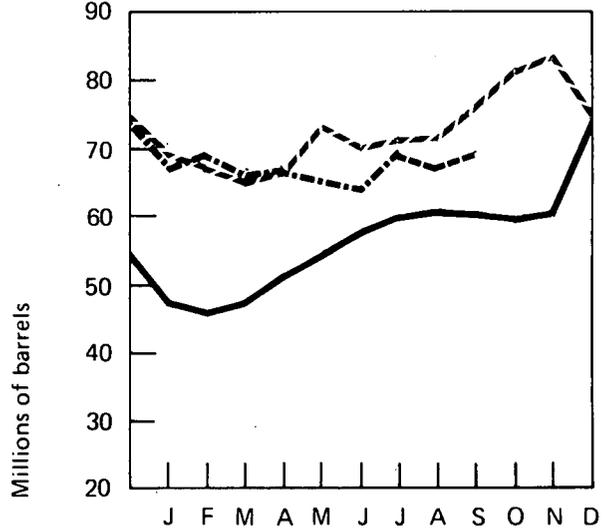
Production



Imports



Stocks



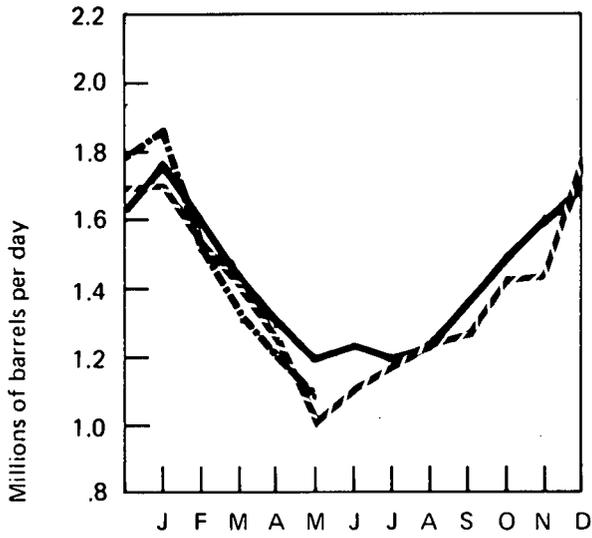
- 1974 BOM
- - 1975 BOM
- · - 1976 BOM
- - - 1976 API (or FEA)

Natural Gas Liquids

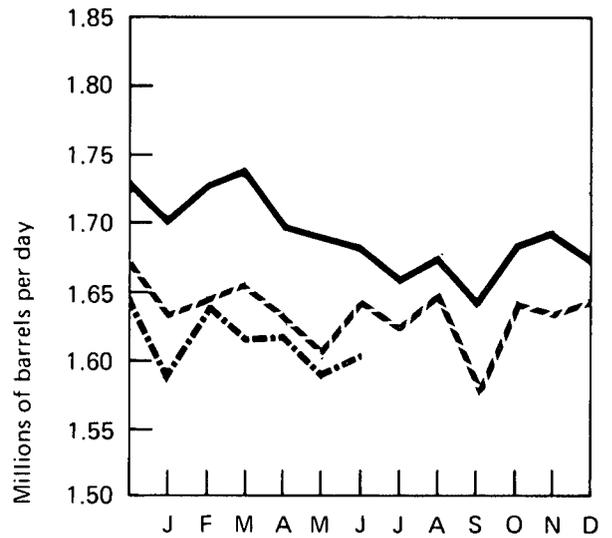
		Domestic Demand*	Production*		Used at Refineries*	Imports	Stocks*
			At processing plants	At refineries			
Thousands of barrels per day							
Thousands of barrels							
1974	January	1,778	1,699	327	794	304	91,210
	February	1,593	1,728	337	777	294	90,145
	March	1,408	1,741	341	720	224	94,817
	April	1,321	1,696	353	690	215	101,352
	May	1,180	1,690	340	678	182	110,881
	June	1,242	1,684	368	718	199	117,915
	July	1,187	1,657	364	723	163	125,427
	August	1,221	1,676	361	742	163	131,675
	September	1,360	1,638	348	738	166	133,215
	October	1,493	1,686	330	788	200	130,557
	November	1,604	1,694	301	795	208	124,447
	December	1,692	1,670	286	796	230	114,295
		AVERAGE	1,422	1,688	338	746	212
1975	January	1,708	1,630	307	756	257	105,400
	February	1,512	1,646	296	734	181	100,945
	March	1,404	1,658	280	731	178	99,168
	April	1,242	1,635	273	667	176	100,408
	May	1,002	1,607	299	628	97	112,737
	June	998	1,646	323	659	166	125,215
	July	1,191	1,621	336	701	173	131,359
	August	1,227	1,650	357	690	163	137,074
	September	1,278	1,577	326	703	209	140,278
	October	1,429	1,643	310	729	198	138,981
	November	1,444	1,635	309	759	196	135,976
	December	1,787	1,646	310	768	232	124,278
		AVERAGE	1,352	1,633	311	710	186
1976	January	1,885	1,585	305	728	240	109,450
	February	1,518	1,640	316	793	270	106,647
	March	1,303	1,615	333	674	194	111,483
	April	1,201	1,616	349	716	171	116,788
	May	1,074	1,588	376	695	144	124,369
	June	1,110	1,606	356	718	163	132,359
		AVERAGE (6 months)	1,360	1,608	339	716	197

*See Explanatory Note 4.
Source: Bureau of Mines.

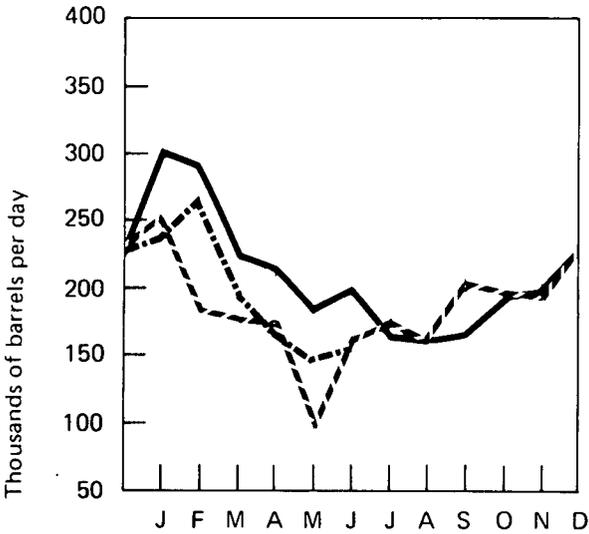
Domestic Demand



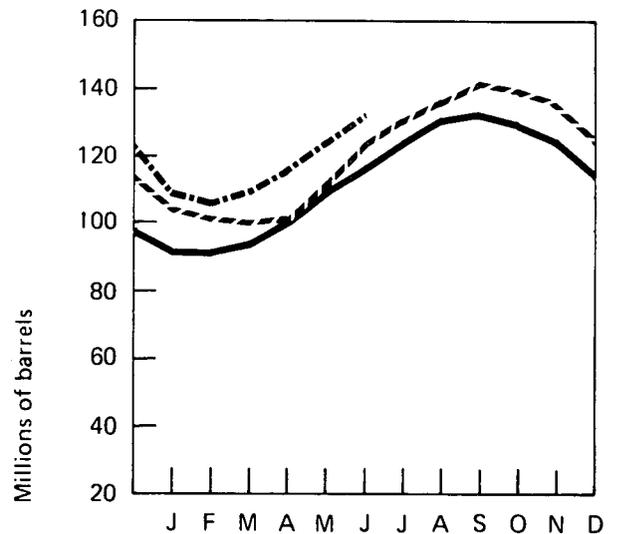
Production at Processing Plants



Imports



Stocks



— 1974
- - 1975
- · - 1976

U.S. Petroleum Supply and Demand—1976

	Actual*			Forecast**
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.
Thousands of barrels per day				
Supply				
Crude oil and lease condensate production	8,194	8,131	8,122	7,972
Natural gas plant liquids production	1,612	1,604	1,578	1,592
Other hydrocarbon supply	37	38	37	36
Crude oil imports	4,520	5,023	5,547	5,587
Refined products imports***	2,073	1,746	1,804	2,161
Total new supply	<u>16,436</u>	<u>16,542</u>	<u>17,088</u>	<u>17,348</u>
Processing gain	485	495	500	475
Stock change—all oils	-797	+363	+842	-395
Total net supply	<u>17,718</u>	<u>16,674</u>	<u>16,746</u>	<u>18,218</u>
Unaccounted for crude oil†	+203	+9	0	0
Demand				
Crude oil and refined products exports	192	204	200	195
Crude oil losses	14	14	14	13
Domestic demand for refined products††	<u>17,715</u>	<u>16,465</u>	<u>16,532</u>	<u>18,010</u>
Total demand	<u>17,921</u>	<u>16,683</u>	<u>16,746</u>	<u>18,218</u>

*Partially estimated.

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

***Includes plant condensate and unfinished oils.

†Balancing item resulting from statistical inconsistencies.

††Includes international bunkers.

Note: 2nd and 3rd Quarter figures have been revised.

Sources: 1st and 2nd Quarters—BOM; 3rd Quarter—BOM, API, FEA estimates; 4th Quarter—FEA forecast.

Natural Gas

Estimated marketed production of natural gas in September was approximately 0.4 percent above the volume produced in September 1975. Production for the first 9 months of 1976, however, was estimated to be 1.5 percent below production for the same period of 1975.

Estimated imports of natural gas in September were 1.4 percent above the September 1975 level. Imports for the first 9 months of 1976 were estimated to be 2.6 percent above the amount imported during the same period of 1975.

Domestic consumption of natural gas during the first three quarters of 1976 was estimated at about the same level as for the corresponding period of 1975.

At the end of August, 2,487 billion cubic feet of working gas were in underground natural gas storage reservoirs. Net storage injections during the month totaled 281 billion cubic feet.

Natural Gas

		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
Billion cubic feet					
1974	January	2,230	1,928	1,033	86
	February	2,054	1,759	941	79
	March	2,003	1,886	1,027	85
	April	1,691	1,793	987	83
	May	1,608	1,846	981	80
	June	1,439	1,740	928	74
	July	1,514	1,818	947	74
	August	1,510	1,790	932	76
	September	1,537	1,755	870	70
	October	1,706	1,767	936	83
	November	1,827	1,729	921	82
	December	2,104	1,790	959	87
	TOTAL	21,223	21,601	11,462	959
1975	January	2,248	1,778	950	81
	February	1,939	1,640	867	75
	March	1,903	1,740	948	83
	April	1,575	1,677	906	82
	May	1,331	1,689	898	80
	June	1,257	1,634	859	76
	July	1,313	1,677	873	80
	August	1,369	1,677	882	75
	September	1,370	1,603	836	74
	October	1,544	1,646	877	80
	November	1,640	1,618	853	81
	December	2,049	1,730	903	86
	TOTAL	19,538	20,109	10,652	953
1976	January	R2,297	1,745	894	83
	February	R1,823	1,641	850	79
	March	R1,822	1,709	894	85
	April	R1,504	1,633	849	85
	May	R1,434	R1,668	860	83
	June	R1,330	R**1,637	815	***80
	July	R1,330	R***1,650	NA	***81
	August	R1,350	R***1,650	NA	***76
	September	1,370	***1,610	NA	***75
		TOTAL (9 months)	14,260	14,943	5,162 (6 months)

*See Explanatory Note 6.

**Preliminary data.

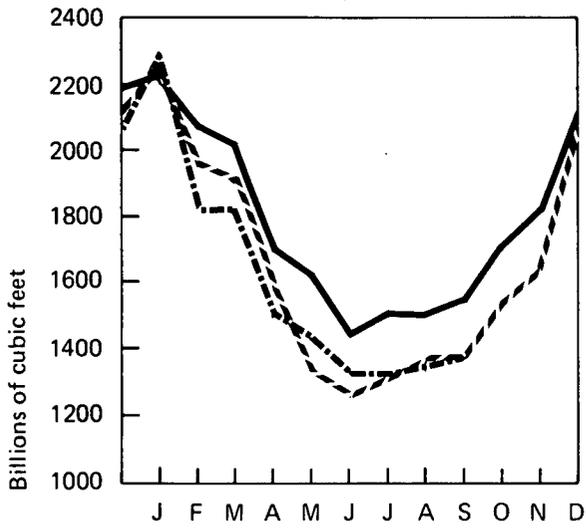
***Projected data.

R=Revised data. NA=Not available.

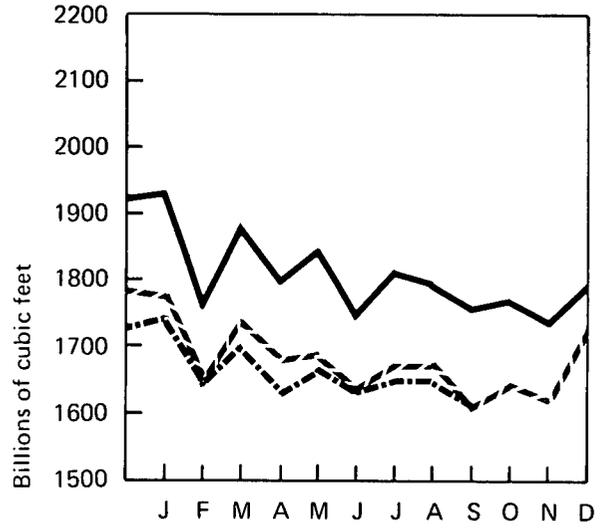
Note: All monthly Domestic Consumption data are estimated.

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

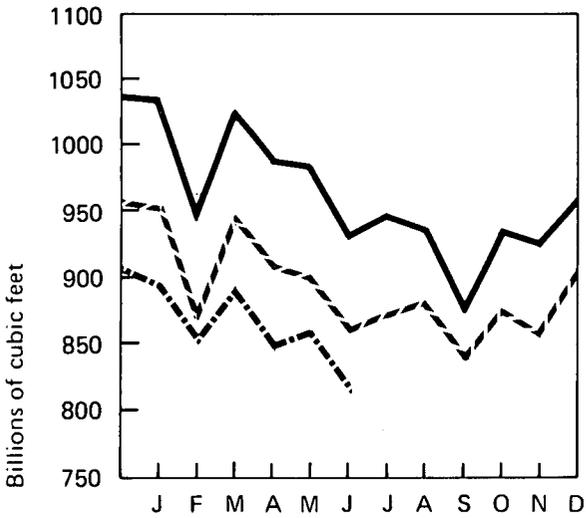
Domestic Consumption



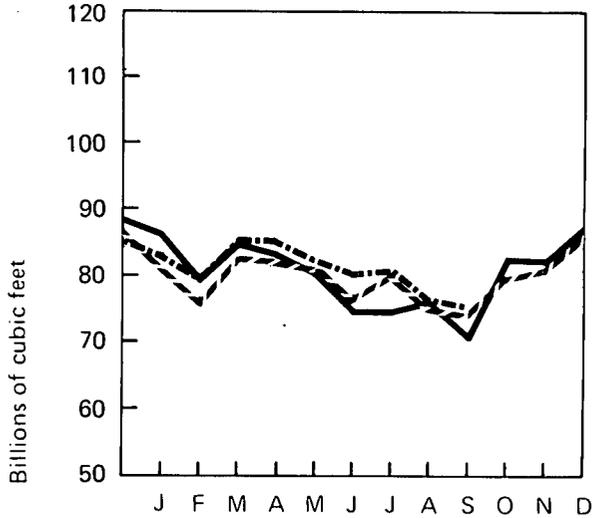
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



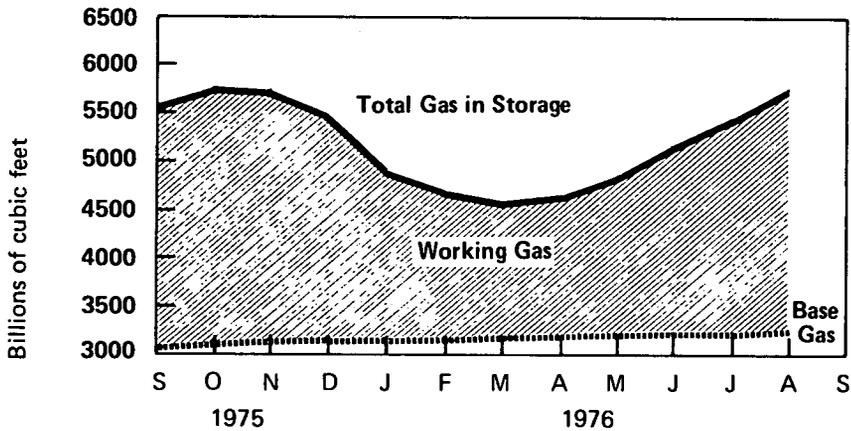
— 1974
- - 1975
- · - 1976

Natural Gas (Continued)

Natural Gas in Underground Storage*

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections
Billion cubic feet							
1974	October **	5,445	3,042	2,403	***	***	***
1975	September	5,558	3,084	2,474	232	38	194
	October	5,770	3,128	2,642	185	51	134
	November	5,760	3,172	2,588	99	150	-51
	December	5,423	3,173	2,250	41	394	-353
1976	January	4,868	3,194	1,674	19	630	-611
	February	4,660	3,197	1,463	73	292	-219
	March	4,543	3,195	1,348	85	217	-132
	April	4,650	3,208	1,443	181	68	113
	May	4,878	3,214	1,664	248	23	225
	June	5,163	3,220	1,943	308	19	289
	July	5,476	3,244	2,232	318	19	299
	August	5,759	3,272	2,487	296	15	281

Gas in Storage



*See Explanatory Note 7.

**Data reported as of November 1, 1974.

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

R=Revised data.

Sources: Federal Energy Administration and Federal Power Commission.

Coal

Production of bituminous coal and lignite during the first 9 months of 1976 totaled 493.4 million tons, an increase of 4.0 percent over the amount produced during the same period in 1975.

Domestic consumption of bituminous coal and lignite was 342.8 million tons during the first 7 months of 1976, up 6.8 percent from the level for the corresponding months in 1975. Electric utility consumption (253.8 million tons) increased 10.4 percent. Coal usage by the other consuming sectors declined 2.4 percent.

Coal exports during August 1976 were 4.2 million tons, 27.9 percent lower than exports during August 1975. Exports during the first 8 months of the year were down 15.0 percent from the level for the corresponding months in 1975.

Bituminous and Lignite

		Domestic Consumption*	Production*	Exports	Stocks	
Thousands of short tons						
1974	January	50,046	53,712	2,813	97,836	
	February	44,929	50,053	4,627	95,812	
	March	45,858	51,278	3,179	101,568	
	April	43,595	54,402	4,944	107,167	
	May	44,951	57,662	6,032	112,882	
	June	44,315	48,065	6,369	111,935	
	July	48,605	49,392	5,307	106,160	
	August	48,579	51,808	5,088	105,478	
	September	43,844	52,686	4,893	109,173	
	October	45,868	60,495	7,342	118,670	
	November	44,598	33,702	6,744	109,192	
	December	47,521	40,151	2,587	95,528	
		TOTAL**	552,709	603,406	59,926	
1975	January	49,841	54,885	4,254	95,512	
	February	45,699	51,135	4,470	97,028	
	March	47,202	51,910	5,653	97,832	
	April	43,537	53,135	6,159	102,663	
	May	42,658	55,370	7,011	109,666	
	June	44,698	55,730	6,269	114,857	
	July	47,454	45,560	4,691	109,133	
	August	49,190	51,160	5,859	108,522	
	September	44,032	55,560	4,529	111,922	
	October	44,929	61,000	4,647	120,344	
	November	45,946	53,035	7,593	125,808	
	December	51,036	51,520	4,534	127,115	
		TOTAL**	556,222	640,000	65,669	
1976	January	53,144	51,495	3,697	119,402	
	February	47,105	52,630	3,050	119,232	
	March	48,967	60,050	3,979	123,697	
	April	45,894	57,850	5,780	128,601	
	May	45,993	56,605	5,667	134,901	
	June	R***49,234	58,430	6,569	R***140,070	
	July	***52,442	43,250	R4,879	***130,814	
	August	NA	53,440	4,223	NA	
	September	NA	†59,675	NA	NA	
		TOTAL**	342,779 (7 months)	493,425 (9 months)	37,845 (8 months)	

*See Explanatory Note 8.

**Totals may not add due to rounding.

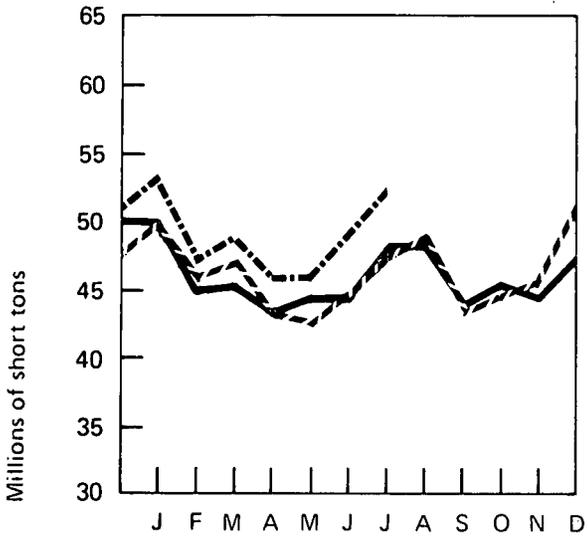
***FEA estimate based on data provided by Bureau of Mines and Federal Power Commission.

†Preliminary data.

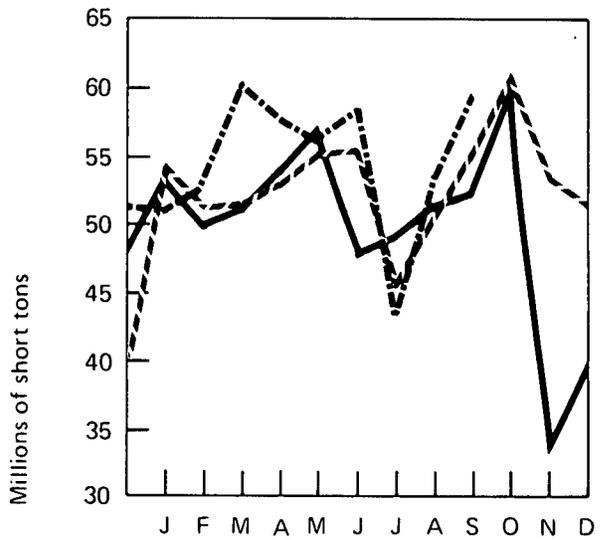
R=Revised data. NA=Not available.

Source: Bureau of Mines.

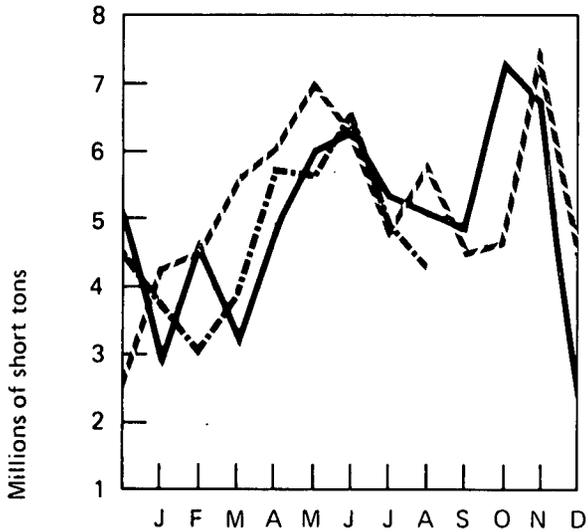
Domestic Consumption



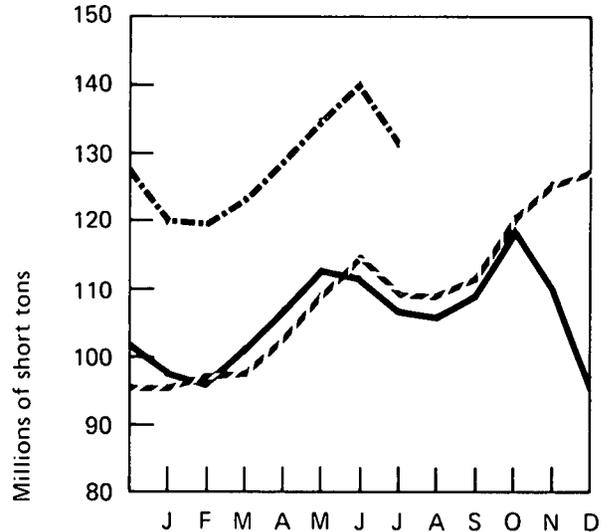
Production



Exports



Stocks

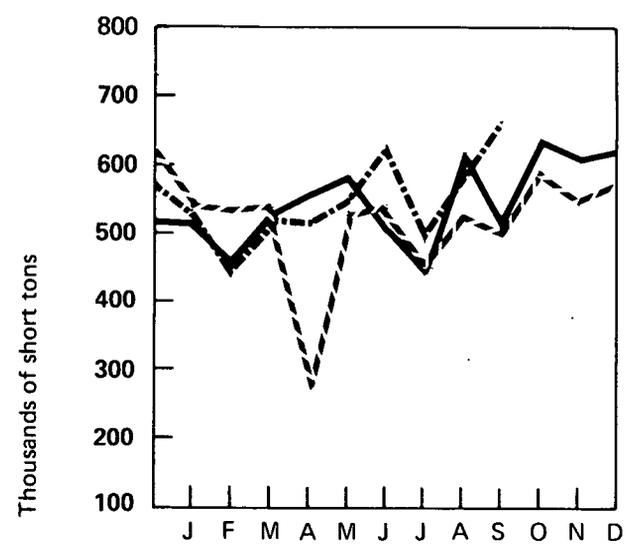


— 1974
 - - 1975
 ··· 1976

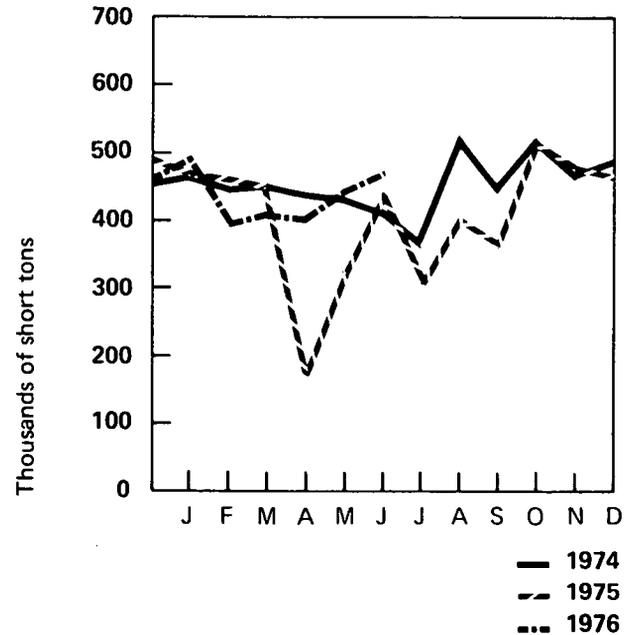
Anthracite

		Production	Apparent Domestic Consumption
		Thousands of short tons	
1974	January	516	466
	February	458	441
	March	531	457
	April	563	437
	May	589	435
	June	505	412
	July	443	360
	August	620	526
	September	516	441
	October	641	522
	November	610	463
	December	625	488
	TOTAL	6,617	5,488
1975	January	R540	R475
	February	R535	R466
	March	R544	R457
	April	270	164
	May	R535	R326
	June	R544	R450
	July	455	305
	August	535	414
	September	R500	R365
	October	595	513
	November	550	479
	December	575	461
	TOTAL	R6,178	R4,875
1976	January	530	493
	February	440	390
	March	525	416
	April	520	403
	May	555	452
	June	630	478
	July	490	NA
	August	R590	NA
	September	665	NA
	TOTAL	4,945 (9 months)	2,632 (6 months)

Production



Apparent Domestic Consumption



*Preliminary.

NA=Not available.

Sources: Production data are from Bureau of Mines; consumption data are FEA estimates based on figures provided by Bureau of Mines.

Electric Utilities

September 1976 production of electricity by utilities was preliminarily estimated at 165.0 billion kilowatt hours, 6.4 percent above the level for September 1975. Estimated production during the first 9 months of the year totaled 1.52 trillion kilowatt hours, a 5.4-percent increase over the amount produced during the same period last year.

Electric utilities consumed 9.9 percent more coal, 4.7 percent more oil, and 0.2 percent more natural gas during the first 7 months of 1976 than during the same period in 1975.

Sales of electricity to residential and commercial customers during the first 7 months of the year totaled 584.2 billion kilowatt hours, an increase over sales during the corresponding period in 1975 of 0.8 percent for residential customers and 4.9 percent for commercial customers. Sales to industrial customers, at 421.4 billion kilowatt hours, were 10.2 percent higher.

Cooling Degree-Days

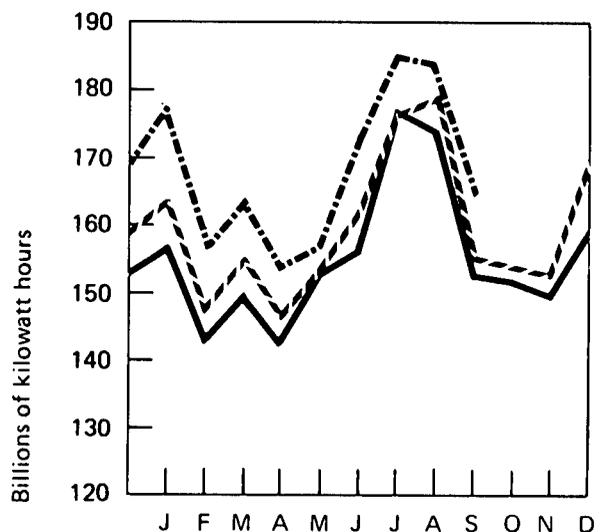
During September, the continental United States accumulated 11.6 percent fewer cooling degree-days than the normal for the month (reflecting cooler than average weather), but 6.5 percent more than last September (when temperatures averaged nearly 17.0 percent below normal).

Total cooling degree-days for the 1976 cooling season (May through September) were 7.2 percent below the normal for the period and 10.4 percent below the number accumulated during the 1975 cooling season.

Electric Utilities

		Total Net Production	Percentage Produced from Each Source					
		Millions of kilowatt hours	Coal	Oil	Gas	Nuclear	Hydro-electric	Other*
1974	January	157,235	46.9	16.6	13.2	4.8	18.4	0.1
	February	142,469	46.5	15.8	13.3	5.7	18.6	0.1
	March	150,036	45.2	14.7	15.7	5.9	18.4	0.1
	April	142,019	44.3	14.0	16.9	5.0	19.6	0.2
	May	153,501	44.2	14.7	18.5	4.3	18.2	0.1
	June	156,140	43.3	14.7	20.3	4.6	17.0	0.1
	July	177,925	43.0	15.5	20.9	5.7	14.8	0.1
	August	173,819	43.1	15.6	20.3	7.1	13.8	0.1
	September	152,170	42.9	16.4	19.3	7.2	14.0	0.2
	October	151,885	44.2	16.8	18.6	7.1	13.2	0.1
	November	149,749	44.9	18.4	15.2	7.3	14.1	0.1
	December	159,616	45.5	19.2	12.4	8.3	14.4	0.2
	TOTAL	1,866,564	AVG. 44.5	16.0	17.1	6.1	16.1	0.2
1975	January	164,228	45.6	18.6	12.0	8.5	15.2	0.1
	February	147,002	45.8	16.9	12.3	8.6	16.3	0.1
	March	155,430	44.5	14.9	12.9	9.5	18.0	0.2
	April	146,194	44.1	14.5	13.9	9.1	18.2	0.2
	May	153,183	42.3	13.7	16.8	8.9	18.1	0.2
	June	162,707	43.3	14.1	17.7	8.0	16.7	0.2
	July	176,791	43.2	14.2	19.3	8.7	14.4	0.2
	August	179,459	44.0	15.5	19.0	8.7	12.6	0.2
	September	155,150	44.2	13.8	19.4	9.2	13.2	0.2
	October	154,817	44.6	14.2	17.0	9.4	14.6	0.2
	November	152,751	46.1	14.2	14.3	9.2	16.0	0.2
	December	169,313	46.5	15.9	12.2	9.8	15.4	0.2
	TOTAL	1,917,025	AVG. 44.5	15.0	15.6	9.0	15.7	0.2
1976	January	178,140	47.0	18.1	11.1	8.9	14.7	0.2
	February	156,703	46.9	15.8	12.2	9.2	15.7	0.2
	March	164,159	46.6	15.5	13.0	8.5	16.2	0.2
	April	153,174	47.4	15.2	14.2	7.2	15.8	0.2
	May	157,216	46.1	13.8	16.1	7.5	16.3	0.2
	June	173,154	44.4	14.5	17.1	9.0	14.8	0.2
	July	185,928	44.7	14.5	17.1	9.5	14.0	0.2
	August	184,661	NA	NA	NA	9.9	NA	NA
	September	164,999	NA	NA	NA	10.5	NA	NA
TOTAL (9 months)	1,518,134							

Total Net Production



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

NA=Not available.

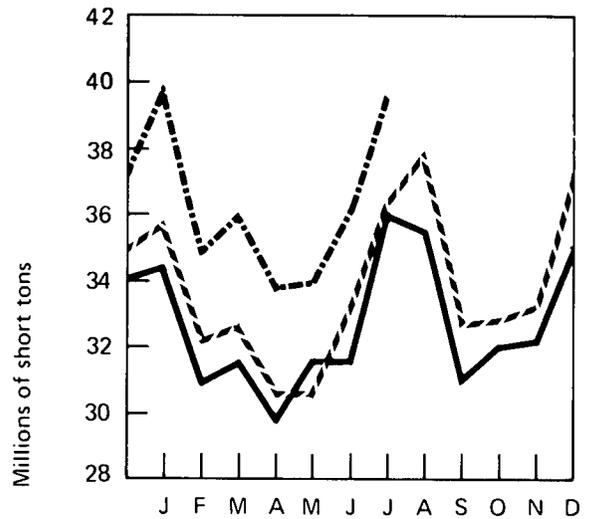
Sources: Federal Power Commission; data for latest 2 months are from Edison Electric Institute and U.S. Nuclear Regulatory Commission.

— 1974
 - - - 1975
 - · - · 1976

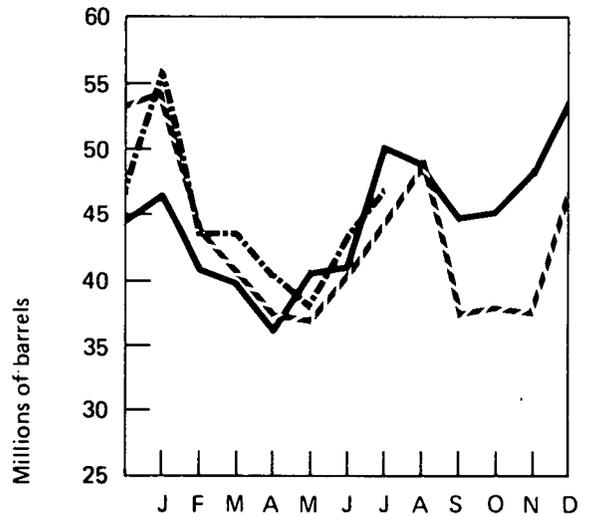
Fuel Consumption

		Coal	Oil	Gas
		Thousands of short tons	Thousands of barrels	Millions of cubic feet
1974	January	34,599	46,727	219,318
	February	30,857	40,657	201,611
	March	31,638	39,633	253,833
	April	29,680	35,953	359,308
	May	31,701	40,816	306,985
	June	31,720	41,233	346,617
	July	36,113	50,160	403,455
	August	35,552	48,981	380,651
	September	30,976	44,549	313,015
	October	32,124	45,260	298,327
	November	32,210	48,558	238,888
	December	35,177	53,644	207,070
	TOTAL	392,347	536,171	3,429,079
1975	January	35,835	54,174	204,591
	February	32,089	43,663	188,446
	March	32,785	40,536	210,202
	April	30,543	37,125	213,740
	May	30,571	37,067	273,920
	June	33,450	41,020	306,798
	July	36,560	44,440	360,534
	August	37,959	49,306	359,273
	September	32,605	37,112	315,122
	October	32,845	38,109	274,224
	November	33,326	37,619	227,101
	December	37,384	46,928	212,923
	TOTAL	405,952	507,099	3,146,874
1976	January	39,978	56,186	204,944
	February	34,958	43,230	198,117
	March	36,079	43,946	221,152
	April	33,799	40,262	226,433
	May	33,943	37,930	264,941
	June	36,374	43,532	310,186
	July	39,672	47,070	335,021
	TOTAL (7 months)	254,803	312,156	1,760,794

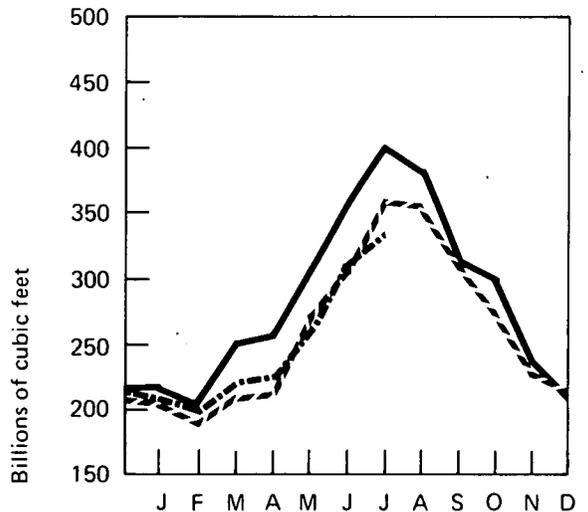
Coal Consumption



Oil Consumption



Gas Consumption



— 1974
 - - - 1975
 - · - · 1976

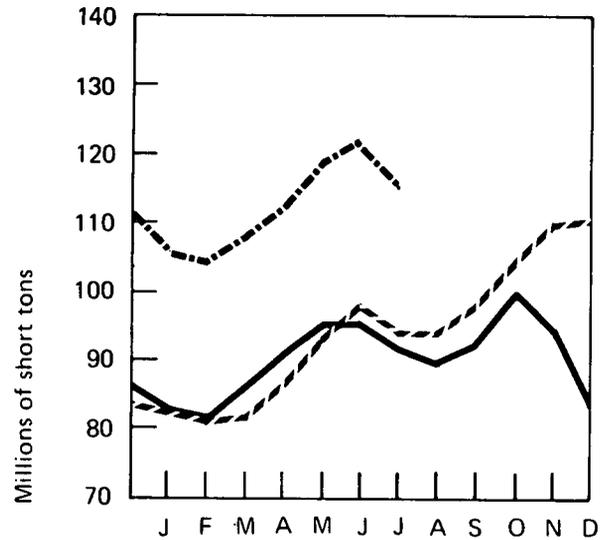
Source: Federal Power Commission.

Electric Utilities (Continued)

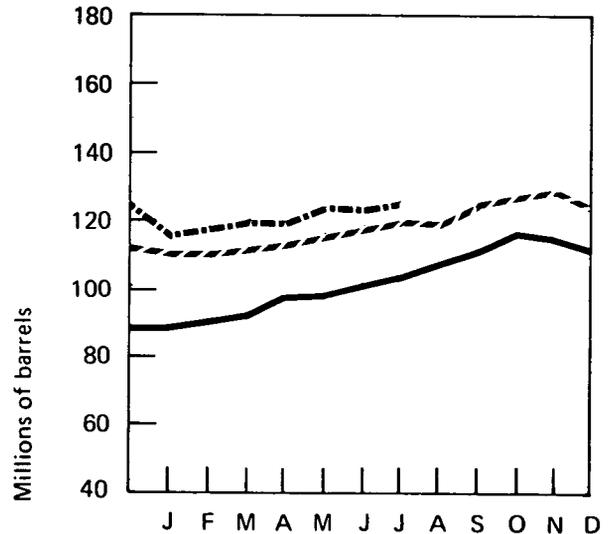
Stocks at End of Month

		Stocks at End of Month	
		Coal Thousands of short tons	Oil Thousands of barrels
1974	January	82,540	89,468
	February	81,720	91,652
	March	86,166	93,879
	April	91,018	98,051
	May	95,601	99,591
	June	95,895	102,395
	July	91,522	105,633
	August	89,474	109,674
	September	92,973	112,502
	October	100,506	118,027
	November	94,165	117,382
	December	83,527	112,894
1975	January	82,073	111,273
	February	80,957	111,478
	March	81,872	113,621
	April	86,811	114,276
	May	93,845	117,205
	June	98,007	118,915
	July	94,261	121,148
	August	94,199	120,595
	September	98,078	126,213
	October	105,397	128,756
	November	110,295	130,203
	December	110,734	125,022
1976	January	105,508	117,732
	February	104,862	118,646
	March	108,431	120,069
	April	112,841	120,158
	May	119,518	125,668
	June	122,875	125,482
	July	115,160	126,189

Coal Stocks



Oil Stocks

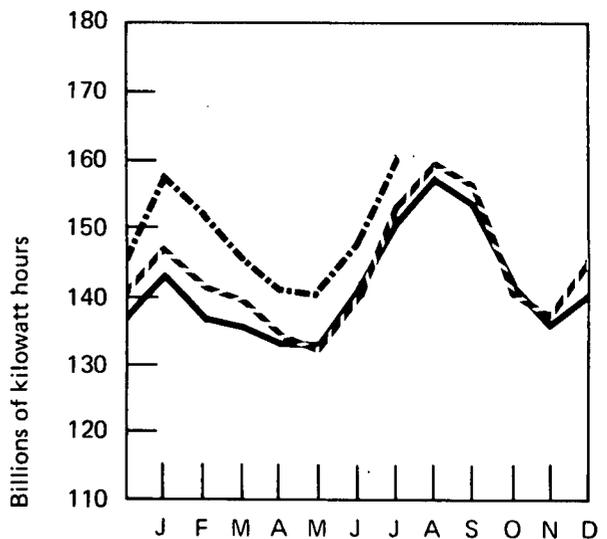


— 1974
 - - - 1975
 - · - 1976

Sales

		Residential	Commercial	Industrial	Other*	Total
Millions of kilowatt hours						
1974	January	52,878	30,647	55,457	5,004	143,986
	February	47,779	29,563	54,799	4,596	136,737
	March	46,096	29,345	55,814	4,697	135,952
	April	43,193	29,089	56,115	4,610	133,007
	May	41,105	30,061	57,226	4,685	133,077
	June	46,597	32,989	57,702	4,643	141,931
	July	53,541	35,498	57,503	4,969	151,511
	August	56,699	36,702	59,641	5,070	158,112
	September	52,948	35,801	59,893	4,977	153,619
	October	44,164	32,275	60,116	4,800	141,355
	November	42,671	30,986	57,157	4,952	135,784
	December	50,512	31,868	53,433	5,039	140,852
	TOTAL	578,183	384,824	684,874	58,042	1,705,923
1975	January	54,003	32,405	55,505	5,954	147,867
	February	50,219	31,459	54,328	5,544	141,550
	March	47,968	31,194	54,437	5,639	139,238
	April	44,762	30,473	53,910	5,269	134,414
	May	R41,077	R30,926	R54,767	R5,404	R132,174
	June	R45,766	R35,210	R55,369	R5,384	R141,729
	July	56,829	37,891	53,973	5,052	153,745
	August	59,979	38,768	56,067	5,223	160,037
	September	56,983	37,550	56,797	5,320	156,650
	October	45,142	3,329	56,486	5,194	140,151
	November	44,019	32,288	56,174	5,235	137,716
	December	51,900	33,183	55,532	5,357	145,972
	TOTAL	R598,647	R404,676	R663,345	R64,575	R1,731,243
1976	January	60,091	34,833	57,448	6,380	158,752
	February	54,264	33,583	58,228	5,874	151,949
	March	47,060	32,273	60,516	5,990	145,839
	April	43,551	31,598	60,106	5,407	140,662
	May	41,036	32,347	61,271	5,478	140,132
	June	R44,157	R35,707	R62,419	R5,344	R147,627
	July	53,312	40,415	61,417	5,871	161,015
	TOTAL (7 months)	343,471	240,756	421,405	40,344	1,045,976

Total Sales



*Includes street lighting and trolley cars.

Source: Federal Power Commission; data for latest month are from Edison Electric Institute.

— 1974
 - - - 1975
 ... 1976

Cooling Degree-Days*

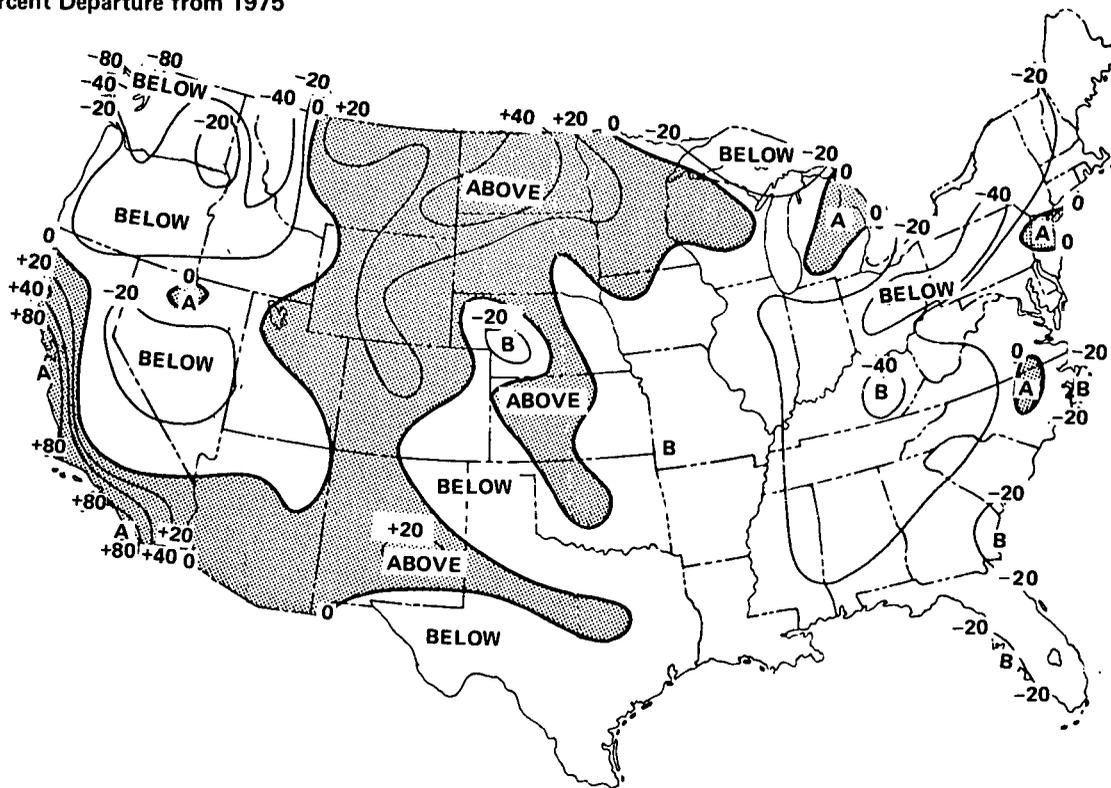
Petroleum Administration for Defense (PAD) Districts	SEPTEMBER (August 30 - September 26)				Cumulative Since May 3		
	1976	1975**	(%)	Normal (1941-70)**	1976	1975**	Normal (1941-70)**
PAD District I	123.5	124.0	(-0.4)	154.9 (-20.3)	1,054.4	1,172.7 (-10.1)	1,103.9 (-4.5)
New England Conn., Maine, Mass., N.H., R.I., Vt.	43.1	30.7	(40.1)	51.3 (-16.1)	696.0	753.9 (-7.7)	569.0 (22.3)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	83.3	46.8	(78.1)	103.5 (-19.4)	871.5	910.9 (-4.3)	883.8 (-1.4)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W.Va.	219.1	281.1	(-22.0)	277.8 (-21.1)	1,486.8	1,750.4 (-15.1)	1,669.3 (-10.9)
PAD District II	88.0	67.6	(30.1)	101.3 (-13.1)	839.0	1,010.9 (-17.0)	920.1 (-8.8)
Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.							
PAD District III	302.9	278.3	(8.9)	338.8 (-10.6)	1,738.1	1,933.1 (-10.1)	2,067.7 (-15.9)
Ala., Ark., La., Miss., N. Mex., Tex.							
PAD District IV	68.3	59.3	(15.2)	65.4 (4.5)	659.3	633.6 (4.1)	662.7 (-0.5)
Colo., Idaho, Mont., Utah, Wyo.							
PAD District V	163.2	171.6	(-4.9)	142.9 (14.2)	762.5	716.6 (6.4)	717.2 (6.3)
Ariz., Calif., Nev., Oreg., Wash.							
U.S. TOTAL	137.5	129.1	(6.5)	155.4 (-11.6)	1,014.8	1,132.7 (-10.4)	1,093.3 (-7.2)

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

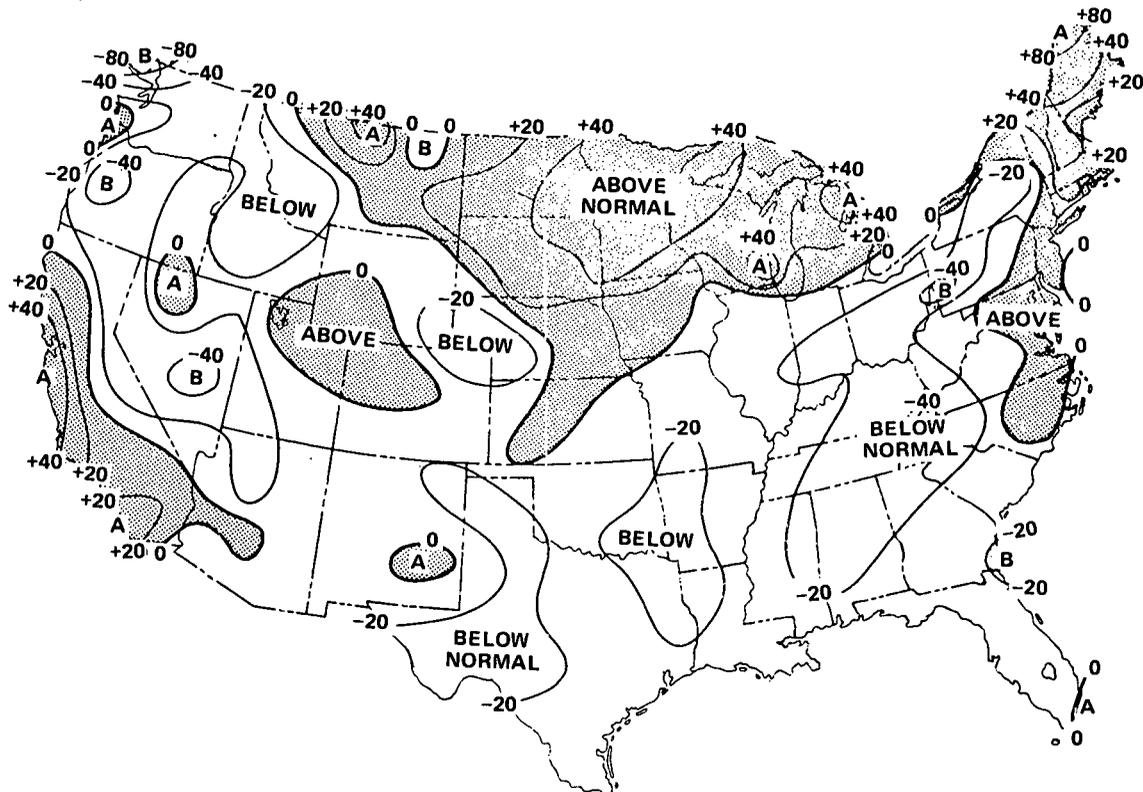
**Percentage change in parentheses.

Cooling Degree-Days Accumulated from January 1, 1976 through September 26, 1976

Percent Departure from 1975



Percent Departure from Normal (1941-70)



Note: Above normal cooling degree-days correspond to above normal temperatures.

Source: Department of Commerce-NOAA.

Nuclear Power

The 54 domestic reactors in commercial operation, with a total maximum dependable capacity of 36,029 megawatts, performed at 66 percent of capacity during September, down slightly from 69 percent in August. Twenty-one reactors (totaling 14,961 megawatts) operated at better than 80 percent of capacity during the month.

Brunswick Unit 1, an 821-megawatt boiling water reactor owned by the Carolina Power and Light Company, was issued a license to load fuel on September 18. Brunswick Unit 2 entered commercial operation in November 1975. The facility is located on the Cape Fear River, 20 miles south of Wilmington, North Carolina.

The final edition of the Generic Environmental Statement on Mixed Oxide Fuel (GESMO) was released in late August by the Nuclear Regulatory Commission. The report presents cost-benefit analyses for health, safety, and environmental aspects of widespread recycling of plutonium recovered from spent reactor fuel. Currently there are no commercial recycling facilities. NRC concludes that the safety of reactors and fuel cycle facilities, public health, and waste management operations would not be significantly impaired by a widespread recycling program. A supplement to the GESMO report, scheduled for release in December, will detail the problems of safeguarding plutonium against theft and will summarize the cost-benefit analyses of the recycle option.

Recent studies prepared for the Energy Research and Development Administration continue to indicate that costs of post-reactor services for commercial nuclear powerplants have been underestimated. One report reiterates that high-level nuclear wastes (the long-lived radioactive products chemically separated from spent reactor fuel) must be solidified, encased in stainless steel, and placed in deep geologic structures away from the biotic environment. Existing commercial wastes, totaling 600,000 gallons, would amount to 10,000 cubic feet and cost an estimated \$400 million to solidify. In addition, some 2,000 metric tons of commercial spent fuel are now being stored at reactors and other facilities awaiting commercial reprocessing. Each year, a 1,000-

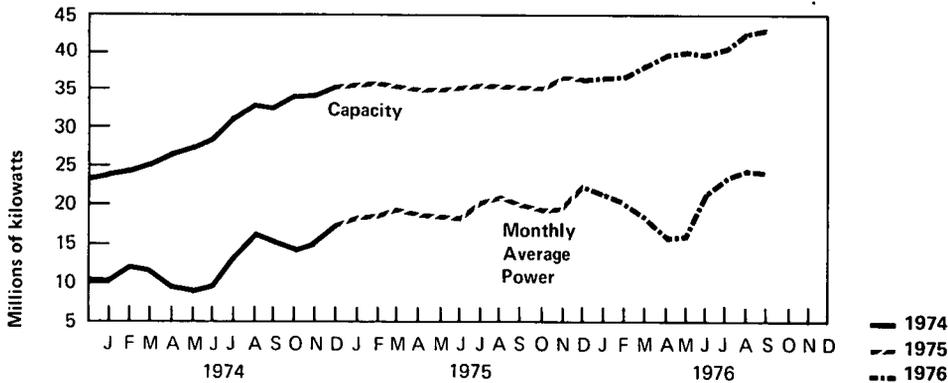
megawatt reactor discharges about 30 tons of spent fuel which when reprocessed will generate between 3,000 and 6,000 gallons of high-level wastes. Solidification of these wastes could cost between 0.17 and 0.35 mills* per kilowatt hour of electricity generated. Reprocessing and/or disposal of solid wastes could cost an additional 1.26 mills per kilowatt hour. Total costs of post-reactor services, therefore, would range between 1.43 and 1.71 mills, over three times the cost projected by the Atomic Energy Commission in 1974. (All costs are expressed in 1975 dollars.)

*A mill is equal to one-tenth of 1 cent.

U.S. Nuclear Powerplant Operations*

		Maximum Dependable Capacity	Average Power	Percent of Total Domestic Electricity Generation
Thousands of net kilowatts				
1974	January	24,006	10,222	4.8
	February	24,776	12,106	5.7
	March	25,305	11,819	5.9
	April	26,862	9,914	5.0
	May	27,670	8,832	4.3
	June	28,748	9,844	4.6
	July	31,374	13,672	5.7
	August	33,045	16,547	7.1
	September	32,609	15,258	7.2
	October	34,464	14,504	7.1
	November	34,480	15,193	7.3
	December	35,317	17,733	8.3
	AVERAGE	29,921	12,982	6.1
1975	January	35,691	18,641	8.5
	February	35,899	18,869	8.6
	March	35,686	19,926	9.5
	April	35,017	18,444	9.1
	May	35,017	18,442	8.9
	June	35,322	18,065	8.0
	July	35,596	20,661	8.7
	August	35,589	21,047	8.7
	September	35,540	19,890	9.2
	October	35,540	19,464	9.4
	November	36,752	19,586	9.2
	December	36,424	22,321	9.8
	AVERAGE	35,671	19,626	9.0
1976	January	36,750	21,315	8.9
	February	36,879	20,605	9.2
	March	38,072	18,816	8.5
	April	39,763	15,238	7.2
	May	39,902	15,899	7.5
	June	39,781	21,799	9.0
	July	40,168	R23,662	9.5
	August	42,067	**24,661	**9.9
	September	**42,896	**24,138	**10.5
	AVERAGE (9 months)	39,804	20,682	9.0

U.S. Nuclear Powerplants



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

**Preliminary data.

R=Revised data.

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

Status of Nuclear Powerplants – September 30, 1976

Status	Number of Plants					Design Capacity
	Boiling Water Reactors	High Temperature Gas Reactors	Pressurized Water Reactors	Other*	Total	Net Electrical Megawatts
Licensed to operate	24	1	37	0	62	45,000
Construction permit granted	20	0	52	0	72	76,000
Construction permit pending	22	0	41	5	68	75,000
Orders placed for plant	3	0	13	0	16	18,000
Publicly announced	—	—	—	19	19	23,000
TOTAL	69	1	143	24	237	237,000

*Includes 1 Liquid Metal Fast Breeder Reactor and 23 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Nuclear Regulatory Commission.

U.S. Uranium Enrichment – September 1976

	Domestic Customers	Foreign Customers	Total
Separative Work Performed (in metric tons of separative work units)	642.621	442.548	1,085.169
Cost (in millions of dollars)	42.058	28.054	70.112
Product Quantity (in metric tons of uranium)	210.570	143.640	354.210
Feed Requirement (in metric tons of uranium)	1,029.594	622.597	1,652.191

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

Nuclear Power Generation by Major Non-Communist Countries – September 1976

Country	Number of Reactors*	Capacity	Generation of Electricity			
			Generation September	Percent of Design Capacity		
				September	1974	1975
		Thousands of gross electrical kilowatts	Millions of gross kilowatt hours			
Canada	5	2,380	1,342	78	74	64
Federal Republic of Germany	10	6,410	1,936	42	57	72
France	10	3,070	922	42	57	68
Great Britain	30	6,900	**3,346	**67	61	57
India	3	620	194	43	55	46
Italy	3	630	322	71	61	69
Japan	12	6,600	3,182	67	61	36
Spain	3	1,120	423	53	75	77
Sweden	5	3,310	994	42	20	44
Switzerland	3	1,050	713	94	76	84
United States	59	43,200	18,277	59	57	60
TOTAL	143	75,290	31,651	58	58	58

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

**Figures are for 5-week operating period.

Source: *Nucleonics Week*.

Summary of Monthly Nuclear Fuel Cycle – August 1976

Fuel Cycle Activity	Product	Processed Material*	Percent Utilization of Industry Capacity	Energy Content of Processed Material**	Energy Consumed in Fuel Cycle Activity***	Cost Contribution to Electric Power†
		MTU except where noted			Billion Btu	Mills per kilowatt hour
Milling	Yellowcake (U ₃ O ₈) Deliveries	778	69	268,000	438	1.04
Conversion	Uranium Hexafluoride (UF ₆) Deliveries	415	29	144,000	89	0.07
Enrichment	Enriched UF ₆ Deliveries	202 (746 MT-SWU)	††	506,000	5,900	0.86
Fabrication	Finished Fuel Assemblies Shipped	196	82	36,600	28	0.46
Powerplant Operation	Electricity Generated	19,331 (million kWhe)	66	205,000	891 (million kWhe)	9.82
	Spent Fuel Discharged	NA	–	–	–	} †††0.97
Reprocessing	Spent Fuel Received	14	–	–	–	
	Spent Fuel Reprocessed	0	–	–	–	

*Units of measure are discussed in Explanatory Notes 10 and 11.

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

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

†Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWh reactor operating at 80 percent capacity factor, given in U.S.A.E.C. Report No. WASH 1117-74. Because of the long lead time required for nuclear fuel processing, the sum of numbers in this column does not necessarily reflect the fuel cost of current electricity production.

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

†††Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste deposition.

NA=Not available.

Source: ERDA.

Energy Consumption

Domestic energy consumption in August 1976 totaled 5.889 quadrillion Btu, up 4.1 percent from the August 1975 level and about equal to consumption in August 1974. No sectoral breakdown is available for the month as yet.

The revised consumption total for July was 5.890 quadrillion Btu. Of the total, 2.015 quadrillion Btu was consumed by the combined residential and commercial sector, up 1.1 percent from the July 1975 level, and up 1.9 percent from July 1974. Direct consumption of primary fuels amounted to 40.3 percent of the combined sector's consumption total (coal was 0.7 percent, dry natural gas was 14.7 percent, and petroleum products were 24.9 percent). Consumption of electricity accounted for the remaining 59.7 percent.

The industrial sector consumed 2.234 quadrillion Btu in July 1976, 9.7 percent more than in July 1975, but 3.6 percent less than in July 1974. Coal accounted for 15.1 percent of the total, 30.7 percent was dry natural gas, 20.5 percent was petroleum products, and 33.7 percent was electricity.

Consumption in the transportation sector was 1.641 quadrillion Btu in July, 5.9 percent more than in July 1975 and 4.4 percent more than in July 1974. Petroleum products comprised 96.7 percent of the total. Natural gas used for pipeline transportation, and electricity used by railroads and for street and highway lighting accounted for the balance.

Petroleum Consumption and Forecast

Total demand for petroleum products during September 1976 was 16.79 million barrels per day, 2.0 percent more than the forecast level and 6.5 percent more than the level for last September.

Domestic demand for motor gasoline in September was 7.06 million barrels per day, which was 2.3 percent above the forecast. Demand was also 5.0 percent above the level for September 1975.

Domestic demand for distillate fuel oil was 2.60 million barrels per day in September. This was 5.8 percent above the forecast level and 20.4 percent above the level for the same month in 1975.

Domestic demand for residual fuel oil during September was 2.51 million barrels per day, which was 11.7 percent greater than the forecast level and 7.6 percent greater than demand during September 1975.

Energy Consumption by Economic Sector and Primary Source – July 1976 [Quadrillion (10¹⁵) Btu]

Sector ¹	Primary Energy Source					Primary Energy Consumption	Electricity Distributed ⁷	Net Energy Consumption	Electrical Energy Loss Distributed ⁸	Ultimate Energy Disposition
	Coal ²	Natural Gas (dry) ³	Petroleum ⁴	Hydroelectric ⁵	Nuclear ⁶					
Residential and Commercial	0.013	0.297	0.502	–	–	0.812	0.335	1.148	0.867	2.015
Industrial	0.336	0.685	0.458	0.003	–	1.482	0.210	1.692	0.542	2.234
Transportation	0.001	0.035	1.587	–	(⁹)	1.624	0.005	1.628	0.012	1.641
Electric Utilities	0.871	0.334	0.288	0.281	0.188	1.971	–	–	–	–
TOTAL	1.220	1.362	2.836	0.284	0.188	5.890	0.549	4.468	1.422	5.890

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

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

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

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

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

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

⁶ FPC nuclear power production.

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

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

⁹ Negligible.

Percent Changes in Energy Consumption for July 1976 by Sources and Economic Sectors

	July 1976 Consumption	Percent Change from July 1975	Cumulative Percent Change from 1975 (January through July) *
	Quadrillion Btu		
Refined Petroleum Products	2.841	+5.4	+4.6
Motor Gasoline	1.196	+4.4	+4.4
Jet Fuel	0.191	+15.2	-1.4
Distillate	0.407	+6.8	+1.5
Residual	0.498	+14.1	+7.3
Other Petroleum Products	0.549	-1.9	+7.7
Natural Gas (Dry)	1.362	+1.3	-0.1
Coal (Anthracite, bituminous, and lignite)	1.220	+10.7	+6.3
Electricity (Sales)	0.549	+4.7	+5.1
TOTAL ENERGY USE	5.890	+5.5	+3.0
Economic Sector Consumption			
Residential and Commercial	2.015	+1.0	+0.4
Industrial	2.234	+9.7	+5.6
Transportation	1.641	+5.8	+3.4

*Calculated on daily average basis.

Energy Consumption (Continued)

Energy Consumption by the Residential and Commercial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ²	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
		Quadrillion (10 ¹⁵) Btu						
1974	January	0.040	1.158	0.662	0.297	0.700	2.856	2.856
	February	0.034	1.027	0.590	0.274	0.601	2.526	5.381
	March	0.027	0.902	0.569	0.268	0.644	2.411	7.792
	April	0.019	0.754	0.530	0.258	0.598	2.158	9.950
	May	0.016	0.499	0.497	0.254	0.655	1.921	11.871
	June	0.015	0.357	0.503	0.283	0.687	1.845	13.717
	July	0.014	0.293	0.507	0.316	0.847	1.977	15.694
	August	0.021	0.265	0.519	0.331	0.809	1.945	17.639
	September	0.025	0.278	0.513	0.315	0.655	1.786	19.424
	October	0.027	0.395	0.589	0.272	0.636	1.920	21.345
	November	0.027	0.569	0.583	0.263	0.638	2.079	23.424
	December	0.031	0.930	0.628	0.293	0.742	2.624	26.048
		TOTAL	0.297	7.427	6.688	3.424	8.212	26.048
1975	January	R0.036	1.124	0.648	0.310	0.758	2.875	2.875
	February	0.023	1.105	0.553	0.292	0.646	2.619	5.495
	March	0.023	1.018	0.565	0.284	0.693	2.583	8.078
	April	0.011	0.905	0.506	0.270	0.632	2.323	10.401
	May	0.011	0.522	0.457	0.267	0.680	1.936	12.337
	June	0.014	0.338	0.451	0.297	0.758	1.858	14.194
	July	0.016	R0.299	0.481	0.336	0.868	R1.994	R16.189
	August	0.016	0.264	0.460	0.350	0.879	1.969	R18.158
	September	0.020	0.281	0.501	0.336	0.693	1.831	R19.989
	October	0.025	0.353	0.555	0.280	0.677	1.890	R21.878
	November	0.025	0.523	0.517	0.273	0.659	1.997	R23.875
	December	0.034	0.910	0.642	0.303	0.780	2.669	R26.544
		TOTAL	0.253	R7.636	6.337	3.596	8.721	R26.544
1976	January	0.032	1.229	R0.679	0.340	0.841	R3.120	R3.120
	February	0.019	1.106	R0.595	0.314	0.687	R2.721	R5.842
	March	0.018	0.858	0.587	0.286	0.703	2.452	R8.294
	April	0.014	0.704	0.513	0.270	0.629	2.130	R10.424
	May	0.012	0.510	R0.524	0.267	0.646	R1.960	R12.383
	June	0.014	0.369	R0.507	R0.286	R0.751	R1.927	R14.311
	July	0.013	0.297	0.502	0.335	0.867	2.015	16.326
		TOTAL	0.123	5.073	3.908	2.098	5.124	16.326

(See footnotes on page 46)

Energy Consumption by the Industrial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ³	Hydroelectric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu									
1974	January	0.378	0.830	0.603	0.003	0.189	0.447	2.450	2.450
	February	0.354	0.804	0.538	0.003	0.187	0.409	2.295	4.745
	March	0.358	0.827	0.519	0.003	0.190	0.457	2.354	7.099
	April	0.352	0.662	0.483	0.003	0.191	0.444	2.137	9.236
	May	0.342	0.788	0.453	0.003	0.195	0.503	2.284	11.520
	June	0.326	0.724	0.458	0.003	0.197	0.478	2.186	13.706
	July	0.325	0.806	0.462	0.003	0.196	0.526	2.318	16.024
	August	0.335	0.853	0.473	0.003	0.203	0.497	2.365	18.389
	September	0.325	0.933	0.468	0.003	0.204	0.425	2.358	20.747
	October	0.347	0.997	0.537	0.003	0.205	0.480	2.569	23.316
	November	0.312	1.001	0.531	0.003	0.195	0.473	2.516	25.832
	December	0.309	0.945	0.573	0.003	0.182	0.462	2.474	28.307
		TOTAL	4.062	10.170	6.100	0.036	2.337	5.602	28.307
1975	January	0.344	0.897	0.591	0.003	0.189	0.464	2.488	2.488
	February	0.344	0.626	0.505	0.003	0.185	0.410	2.074	4.562
	March	0.365	0.656	0.515	0.003	0.186	0.453	2.178	6.740
	April	0.340	0.440	0.461	0.003	0.184	0.431	1.859	8.599
	May	0.322	0.524	0.417	0.003	0.182	0.464	1.912	R10.512
	June	0.300	0.600	0.411	0.003	0.185	0.470	1.969	R12.481
	July	0.287	R0.647	0.439	0.003	0.184	0.476	R2.036	R14.517
	August	0.294	0.733	0.420	0.003	0.191	0.481	2.122	R16.639
	September	0.294	0.761	0.457	0.003	0.194	0.400	2.109	R18.748
	October	0.307	0.902	0.506	0.003	0.193	0.465	2.376	R21.124
	November	0.319	0.872	0.471	0.003	0.192	0.463	2.320	R23.444
	December	0.338	0.904	0.585	0.003	0.189	0.488	2.507	R25.951
		TOTAL	3.854	R8.562	5.780	0.036	2.254	5.465	25.951
1976	January	0.329	R0.838	R0.620	0.003	0.196	0.485	R2.471	R2.471
	February	0.312	R0.499	R0.542	0.003	0.199	0.434	R1.989	R4.461
	March	0.332	R0.723	0.536	0.003	0.206	0.508	R2.309	R6.769
	April	0.314	R0.558	0.468	0.003	0.205	0.478	R2.025	R8.794
	May	0.321	R0.645	R0.478	0.003	0.209	0.505	R2.161	R10.955
	June	R0.336	R0.638	R0.463	0.003	R0.213	0.542	R2.212	R13.167
	July	0.336	0.685	0.458	0.003	0.210	0.542	2.234	15.401
		TOTAL	2.280	4.587	3.564	0.021	1.438	3.512	15.401

(See footnotes on page 46)

Energy Consumption (Continued)

Energy Consumption by the Transportation Economic Sector¹

		Coal	Natural Gas (dry) ⁴	Petroleum	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu								
1974	January	0.001	0.072	1.399	0.005	0.013	1.490	1.490
	February	0.001	0.066	1.300	0.005	0.011	1.384	2.874
	March	0.001	0.063	1.417	0.005	0.012	1.498	4.372
	April	0.001	0.051	1.397	0.005	0.011	1.465	5.837
	May	0.001	0.047	1.484	0.005	0.012	1.547	7.384
	June	0.001	0.039	1.448	0.005	0.011	1.503	8.887
	July	0.001	0.040	1.514	0.005	0.012	1.572	10.458
	August	0.001	0.041	1.533	0.005	0.012	1.590	12.049
	September	0.001	0.044	1.393	0.005	0.010	1.453	13.501
	October	0.001	0.051	1.507	0.005	0.012	1.576	15.077
	November	0.001	0.057	1.455	0.005	0.013	1.532	16.609
	December	0.001	0.068	1.546	0.006	0.014	1.634	18.243
	TOTAL	0.009	0.638	17.392	0.060	0.144	18.243	
1975	January	0.001	0.073	1.498	0.006	0.014	1.592	1.592
	February	0.001	0.063	1.334	0.005	0.012	1.415	3.006
	March	0.001	0.061	1.456	0.005	0.013	1.536	4.542
	April	0.001	0.049	1.455	0.005	0.012	1.522	6.064
	May	0.001	0.038	1.480	0.005	0.012	1.536	7.600
	June	0.001	0.034	1.466	0.005	0.012	1.517	9.116
	July	0.001	0.034	1.498	0.005	0.013	1.550	10.666
	August	0.001	0.036	1.509	0.005	0.012	1.563	12.229
	September	0.001	0.038	1.420	0.005	0.010	1.473	13.703
	October	0.001	0.045	1.495	0.005	0.013	1.559	15.262
	November	0.001	0.051	1.379	0.006	0.013	1.449	16.711
	December	0.001	0.066	1.556	0.006	0.015	1.643	18.354
	TOTAL	0.008	0.587	17.547	0.062	0.150	18.354	
1976	January	0.001	0.075	R1.532	0.006	0.015	R1.628	R1.628
	February	0.001	0.058	R1.380	0.006	0.012	R1.456	R3.084
	March	0.001	R0.057	1.551	0.005	0.013	R1.627	R4.712
	April	0.001	0.046	1.515	0.005	0.012	R1.578	R6.290
	May	0.001	R0.042	R1.493	0.005	0.012	R1.553	R7.843
	June	0.001	R0.037	R1.545	0.005	0.012	R1.599	R9.442
	July	0.001	0.036	1.587	0.005	0.012	1.641	
		TOTAL	0.004	0.350	10.603	0.036	0.088	11.083

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

² The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 52.3 percent for 1974, 1975, and 1976.

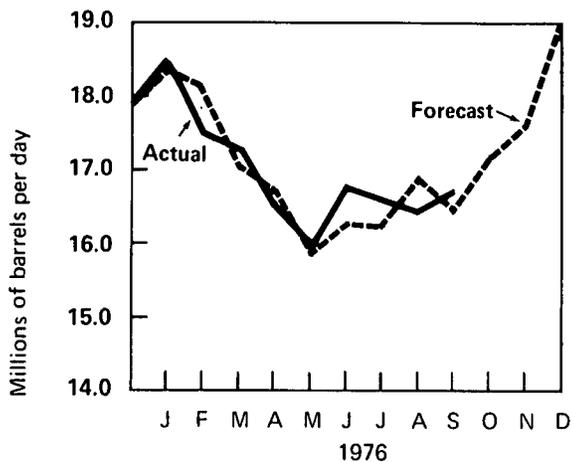
³ The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 47.7 percent for 1974, 1975, and 1976.

⁴ The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.5 percent for 1974, 1975, and 1976.

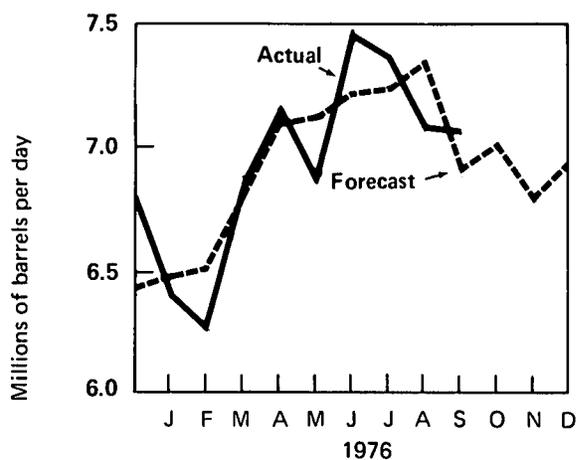
R=Revised data.

Petroleum Consumption and Forecast

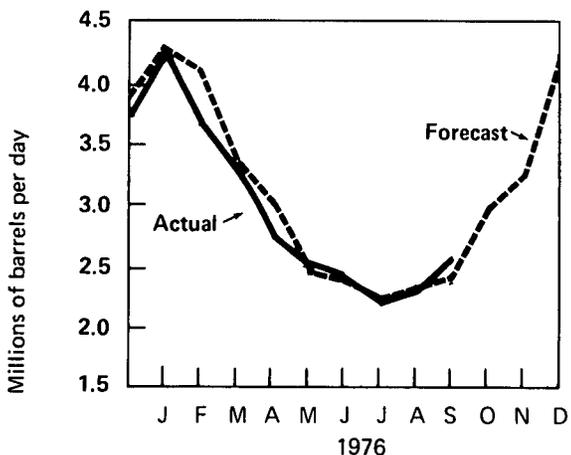
Total Domestic Demand for Petroleum Products



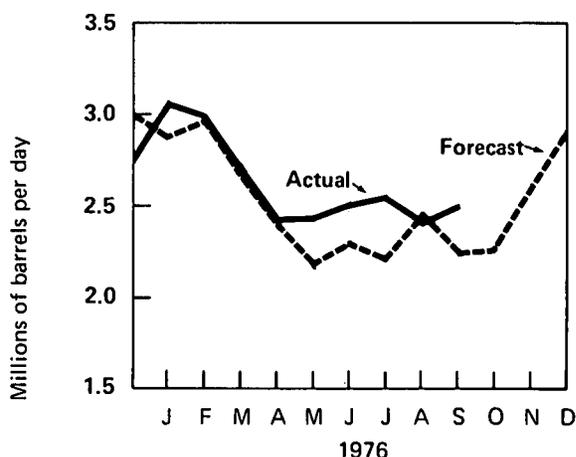
Domestic Demand for Motor Gasoline



Domestic Demand for Distillate Fuel Oil



Domestic Demand for Residual Fuel Oil



Notes:

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

Actuals — Based on BOM data for January through July and API data and FEA estimates for August and September.

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

Resource Development

Oil and gas drilling activity reached a 15-year high during September and October. The number of rotary drilling rigs in operation climbed from 1,691 during August to 1,744 in September and 1,794 in October. This was the highest October rig count since 1961 and represented an increase of 4.5 percent over the count for the corresponding month in 1975.

During September, 3,582 wells were completed, an increase of 2.3 percent over the September 1975 level and 23.9 percent over the level for the same month in 1974.

Seismic exploration activity dropped in September following a 4-month seasonal rise. There were 268 seismic crews (240 land, 28 marine) at work in the United States and its territorial waters, 2 land crews and 5 marine crews less than during the previous month. Last September, 274 crews (234 land, 40 marine) were active.

The recently imposed Tax Reform Act of 1976 contains several provisions which may have an adverse impact on the level of funds available for petroleum exploration programs. One measure calls for the addition of a portion of intangible drilling costs to the list of preference items subject to minimum tax. This portion is calculated as the amount of intangible drilling costs deductions declared on ordinary taxes which are in excess of the amount allowed if these costs were capitalized and amortized over a 10-year period. (Intangible drilling costs are deducted in the year of incurrence on ordinary taxes.) Another provision of the Act is the elimination of "excess" foreign tax credits, which are U.S. tax credits given to companies operating overseas and that pay foreign taxes in excess of the comparable U.S. tax rate. Formerly, these payments could be booked for later use of offset U.S. tax obligations.

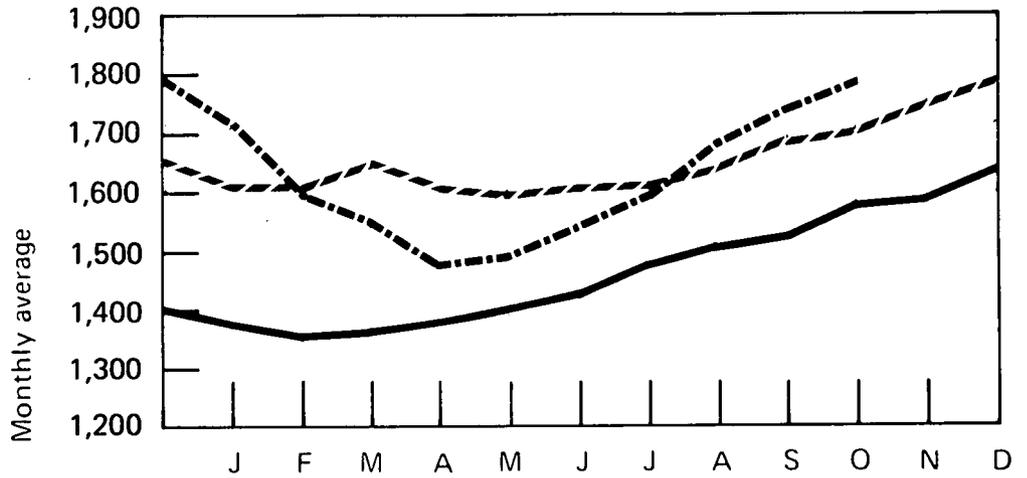
Oil and Gas Exploration

		Rotary Rigs in Operation	Wells Drilled				Total Footage of Wells Drilled
		Monthly average	Oil	Gas	Dry	Total	Thousands of feet
1974	January	1,372	763	577	803	2,143	10,392
	February	1,355	901	600	816	2,317	12,160
	March	1,367	936	638	1,003	2,577	12,844
	April	1,381	947	700	945	2,592	13,349
	May	1,412	957	520	870	2,347	11,460
	June	1,432	1,238	586	982	2,806	12,976
	July	1,480	1,008	461	884	2,353	11,802
	August	1,518	1,210	555	968	2,733	12,410
	September	1,527	1,200	600	1,091	2,891	12,676
	October	1,584	1,131	551	1,241	2,923	14,081
	November	1,596	1,008	626	1,053	2,767	11,795
	December	1,643	1,339	791	1,274	3,404	15,707
		AVERAGE	1,475	TOTAL* 12,784	7,240	11,674	31,698
1975	January	1,615	1,299	655	1,040	2,994	13,189
	February	1,611	1,097	458	933	2,488	12,071
	March	1,651	1,341	658	1,091	3,090	15,472
	April	1,604	1,181	506	1,071	2,758	13,545
	May	1,592	1,100	451	891	2,442	12,054
	June	1,613	1,246	509	1,022	2,777	13,540
	July	1,616	1,229	557	920	2,706	12,545
	August	1,645	1,272	587	1,122	2,981	14,221
	September	1,699	1,504	831	1,165	3,500	15,636
	October	1,716	1,633	682	1,310	3,625	16,689
	November	1,757	1,619	776	1,270	3,665	15,788
	December	1,793	1,817	832	1,424	4,073	17,556
		AVERAGE	1,660	TOTAL* 16,408	7,580	13,247	37,235
1976	January	1,710	1,465	772	1,055	3,292	14,517
	February	1,594	1,341	652	1,159	3,152	14,888
	March	1,540	1,726	821	1,301	3,848	18,126
	April	1,480	1,237	672	994	2,903	13,765
	May	1,496	1,501	658	1,104	3,263	14,196
	June	1,546	1,500	709	1,123	3,332	14,780
	July	1,597	1,312	730	916	2,958	13,716
	August	1,691	1,265	711	1,140	3,116	14,697
	September	1,744	1,474	909	1,199	3,582	16,777
	October	1,794					
		AVERAGE (10 months)	1,616	TOTAL* 12,801 (9 months)	6,668	9,928	29,397

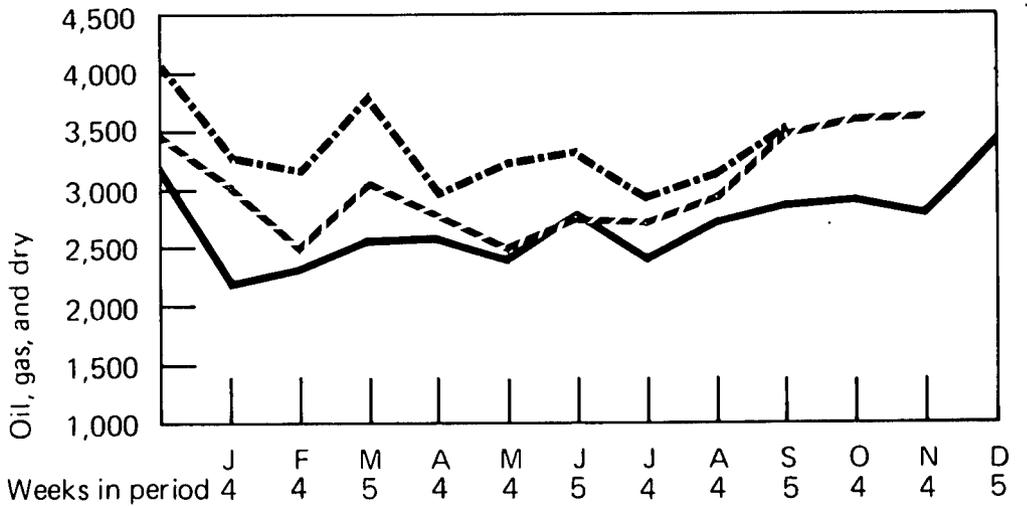
*Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.

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

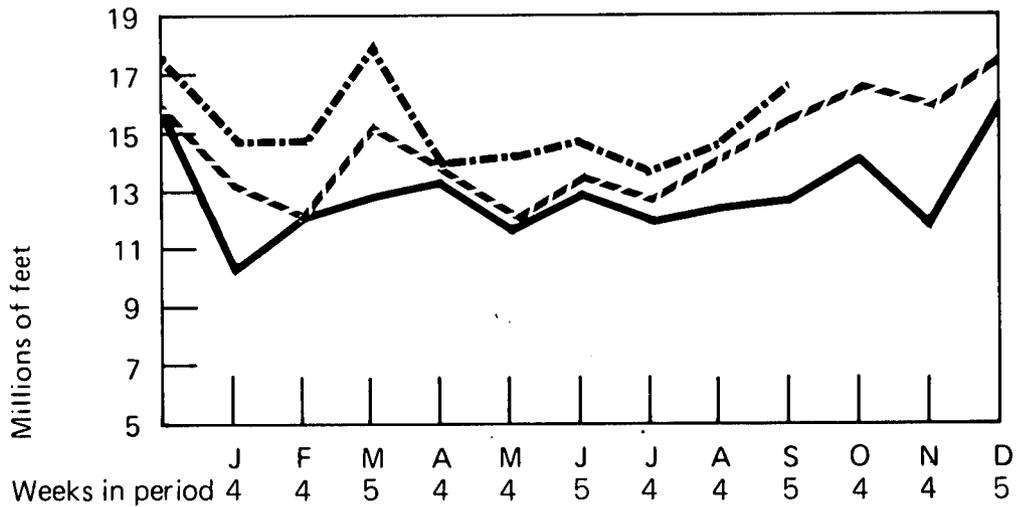
Rotary Rigs in Operation



Total Wells Drilled



Total Footage of Wells Drilled

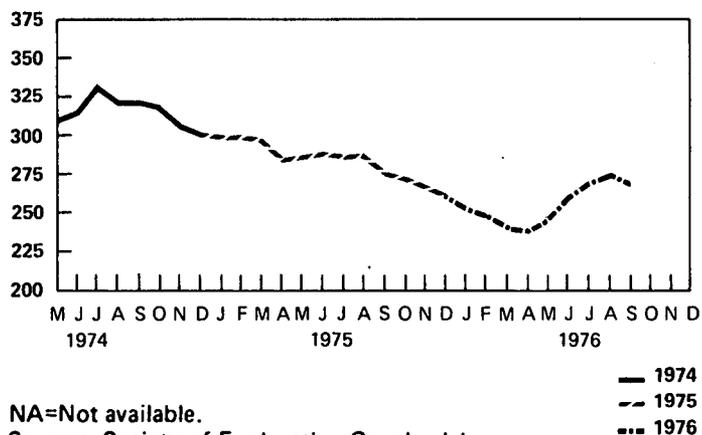


— 1974
 - - 1975
 - · - 1976

Oil and Gas Exploration (Continued)

		Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore	Onshore	Total
		Monthly average			Monthly average		
1973	Year	23	227	250	21,579	10,597	32,175
1974	Year	31	274	305	28,482	13,219	41,701
1975	Year	30	254	284	25,773	12,558	38,331
1974	January-April	NA	NA	NA			
	May	35	278	313			
	June	38	279	317			
	July	35	299	334			
	August	34	287	321			
	September	34	287	321			
	October	32	288	320			
	November	30	276	306			
	December	25	275	300			
1975	January	27	274	301			
	February	24	278	302			
	March	23	276	299			
	April	23	260	283			
	May	32	254	286			
	June	38	251	289			
	July	37	249	286			
	August	40	249	289			
	September	40	234	274			
	October	29	241	270			
	November	27	238	265			
	December	26	233	259			
1976	January	20	232	252			
	February	17	232	249			
	March	18	222	240			
	April	17	221	238			
	May	21	226	247			
	June	29	229	258			
	July	30	240	270			
	August	33	242	275			
	September	28	240	268			
	AVERAGE (9 months)	24	231	255			

Total Seismic Crews



NA=Not available.

Source: Society of Exploration Geophysicists.

Gasoline

The national average selling price for regular gasoline at full service retail outlets rose 0.1 cent in September to 60.2 cents per gallon. The average price that retailers paid for regular gasoline declined 0.1 cent, resulting in a net increase in the dealer margin of 0.2 cent to 7.6 cents per gallon. This was the first change in the dealer margin since May.

figure is 17.5 cents per million Btu lower than the figure for May 1975.

The average cost of natural gas delivered to utilities rose 3.4 cents during the month to 100.8 cents per million Btu. Utility gas costs have increased nearly 40 percent during the past 12 months.

Crude Oil

The preliminary average "upper tier" crude oil price during August was \$11.62 per barrel, 3 cents above the revised July figure.

The preliminary "lower tier" crude oil price in August was \$5.18 per barrel, 1 cent below the price in July.

The preliminary average domestic crude oil price during August was \$8.03, down 1 cent from its level in July.

The preliminary refiner acquisition cost of domestic crude oil during August was \$8.68 per barrel, up 1 cent from the cost in July.

The preliminary refiner acquisition cost of imported crude increased 17 cents in August to \$13.67 per barrel.

The preliminary estimate of the composite cost of crude petroleum purchased by refiners during August was \$10.80, down 10 cents from the level in July. This decrease can be attributed to a decline in purchases of high-priced foreign crude.

Utility Fossil Fuels

During May, the national average cost of fossil fuels delivered to utilities remained relatively stable, decreasing only 0.6 cent to 105.8 cents per million Btu.

The national average cost of coal delivered to utilities in May rose 0.9 cent to 84.6 cents per million Btu.

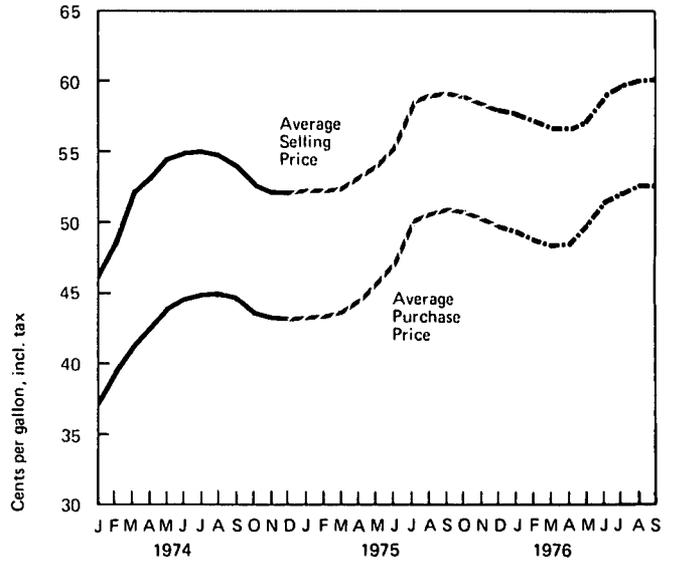
The average cost of residual fuel delivered to utilities declined by 8.6 cents in May to 188.1 cents per million Btu. Utility residual fuel oil costs have been running somewhat lower this year than last. The May 1976

Motor Gasoline

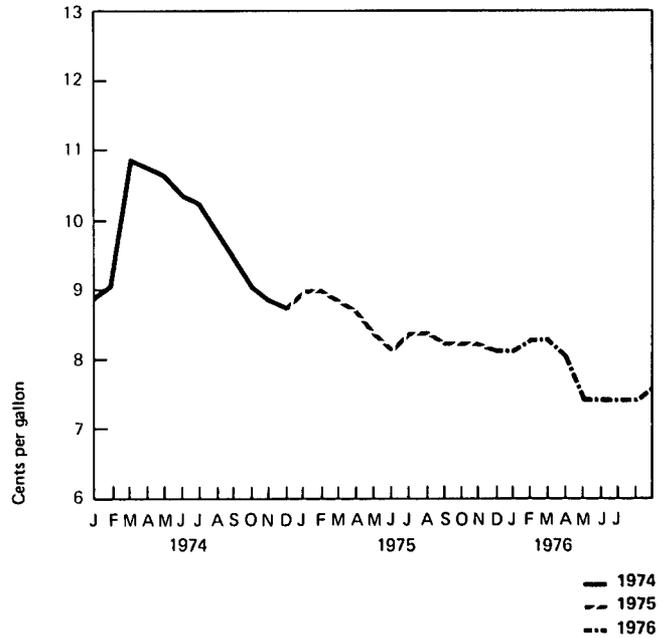
Regular Gasoline at Full Service Retail Outlets

		Average Selling Price	Average Purchase Price	Average Dealer Margin
Cents per gallon, including tax*				
1974	January	46.3	37.4	8.9
	February	48.8	39.7	9.1
	March	52.3	41.4	10.9
	April	53.4	42.7	10.7
	May	54.7	44.1	10.6
	June	55.1	44.8	10.3
	July	55.2	45.0	10.2
	August	54.9	45.1	9.8
	September	54.2	44.8	9.4
	October	52.4	43.4	9.0
	November	52.0	43.2	8.8
	December	52.0	43.3	8.7
AVERAGE		52.8	43.1	
1975	January	52.4	43.4	9.0
	February	52.5	43.5	9.0
	March	52.6	43.8	8.8
	April	53.5	44.9	8.6
	May	54.3	46.0	8.3
	June	55.6	47.5	8.1
	July	58.7	50.3	8.4
	August	59.2	50.8	8.4
	September	59.3	51.1	8.2
	October	58.9	50.7	8.2
	November	58.4	50.2	8.2
	December	58.0	49.9	8.1
AVERAGE		56.2	47.8	
1976	January	57.7	49.6	8.1
	February	57.1	48.8	8.3
	March	56.6	48.3	8.3
	April	56.6	48.6	8.0
	May	57.4	50.0	7.4
	June	59.0	51.6	7.4
	July	59.6	52.2	7.4
	August	60.1	52.7	7.4
	September	60.2	52.6	7.6

Average Retail Prices For Regular



Average Margins For Regular



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

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

Regular Gasoline at Self Service Retail Outlets

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

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

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

		Premium	Unleaded (Regular)
Cents per gallon, including tax			
1974	January	50.1	48.8
	February	52.6	50.8
	March	56.0	53.6
	April	57.2	55.1
	May	58.5	57.1
	June	58.5	57.4
	July	59.0	57.2
	August	58.0	56.8
	September	58.2	55.8
	October	56.6	54.1
	November	56.3	53.9
	December	56.3	53.9
1975	January	57.1	NA
	February	57.3	56.1
	March	57.5	56.2
	April	58.2	57.1
	May	59.0	57.9
	June	60.3	58.8
	July	63.1	61.5
	August	63.6	62.0
	September	63.8	62.1
	October	63.4	62.1
	November	63.2	62.0
	December	62.9	61.4
1976	January	62.7	61.2
	February	62.1	60.6
	March	61.6	60.1
	April	61.6	60.4
	May	62.4	61.1
	June	63.9	62.9
	July	64.6	63.2
	August	65.2	63.9
	September	65.3	64.0

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

Average Selling Prices and Margins for Major and Independent Retail Dealers – September 1976

(Cents per gallon, including tax)

Regular Gasoline—Full Service

	Selling Price	Margin
Major	61.0	7.9
Independent	55.7	5.9
National Average	60.2	7.6

Regular Gasoline—Self Service

	Selling Price	Margin
Major	57.4	4.3
Independent	54.2	4.2
National Average	56.5	4.3

Premium Gasoline—Selling Prices

	Full Service	Self Service
Major	66.0	63.1
Independent	60.1	58.7
National Average	65.3	61.9

Unleaded Gasoline—Full Service Selling Prices

	Regular	Premium
Major	64.5	68.9
Independent	59.0	65.9
National Average	64.0	68.9

Source: Lundberg Survey, Inc.

Average Regional Selling Prices and Dealer Margins for Regular Gasoline at Full Service Retail Outlets – September 1976

Region	Selling Price	Margin
	Cents per gallon, including tax	
1A New England	59.1	7.0
1B Mid Atlantic	61.2	6.9
1C Lower Atlantic	61.0	8.4
2 Mid Continent	59.8	6.7
3 Gulf Coast	57.8	8.9
4 Rocky Mountain	61.8	9.6
5 West Coast	62.0	8.1
National Average	60.2	7.6

Source: Lundberg Survey, Inc.

Motor Gasoline (Continued)

Retail Gasoline Price Changes for 21 Leading Refiners During September 1976
and Entitlement Position* During August 1976

Company	Effective Date of Change	Amount of Change Cents per gallon	Entitlement Position (August)
Amerada Hess		None	Seller
American Petrofina		None	Seller
Ashland	September 7	0.25 (St. Paul, Minn.)	Seller
Atlantic Richfield	September 10	-0.80 (PAD I)	Buyer
B.P.	September 17	-0.50 (PAD I)	Seller
Cities Service	September 21	-0.80 (PAD I, III)	Buyer
Champlin		None	Buyer
Continental		None	Buyer
Exxon		None	Buyer
Getty	September 22	-1.00	Buyer
Gulf		None	Buyer
Kerr-McGee		None	Buyer
Mobil	September 11	-0.80 (PAD I, III)	Buyer
Phillips	September 16	1.00 (PAD IV, V)	Buyer
Shell	September 8	-0.80 (PAD I, II, III)	Buyer
Standard Oil of California	September 22	-0.80 (PAD I)	Seller
Standard Oil of Indiana	September 17	-0.80	Buyer
Standard Oil of Ohio	September 17	-0.50 (PAD I)	Seller
Sun	September 17	-0.70 (PAD I)	Buyer
Texaco	September 17	-1.00 (PAD I, II, III) Consumers only	Buyer
		-0.80 (PAD I, III) All classes	Buyer
Union Oil of California	September 16	1.00 (PAD IV)	

*See definitions.

Source: FEA.

Jobber Prices for Regular Gasoline Sold by 21 Leading Refiners

		Northeast	Mid-Atlantic	Southeast	Central	Western	Southwest	Pacific	National Average
Cents per gallon, excluding tax									
1974	January	21.4	21.4	21.1	21.3	22.2	20.1	21.0	21.2
	February	23.7	23.6	22.5	23.9	23.5	22.5	22.6	23.2
	March	25.4	25.2	24.1	25.3	24.5	24.2	25.2	24.8
	April	26.7	26.1	24.8	26.0	25.6	24.7	25.0	25.6
	May	28.5	28.4	26.8	28.2	27.7	26.3	26.3	27.5
	June	29.8	29.4	28.0	29.3	29.3	27.1	27.2	28.6
	July	29.9	29.3	28.0	29.4	28.9	27.8	28.0	28.8
	August	29.7	29.4	28.6	29.6	29.1	28.1	28.6	29.0
	September	29.3	28.9	28.0	28.8	28.7	27.4	27.8	28.4
	October	28.0	27.2	26.6	27.5	27.0	26.2	26.6	27.0
	November	27.8	27.3	26.6	27.5	27.5	26.3	27.3	27.2
	December	27.7	27.6	26.9	27.7	27.9	26.7	27.3	27.4
	AVERAGE								
1975	January	27.8	27.8	27.4	28.2	28.5	27.2	27.8	27.8
	February	28.4	28.2	27.8	28.7	28.3	27.6	27.5	28.1
	March	28.9	28.8	28.4	29.1	29.0	27.8	28.0	28.6
	April	29.6	29.9	29.4	30.4	29.8	29.2	29.8	29.7
	May	30.9	31.0	30.5	31.6	31.2	30.4	31.0	30.9
	June	32.4	32.5	32.0	33.1	32.6	31.6	32.6	32.4
	July	34.4	34.6	33.9	34.9	34.5	33.4	33.7	34.2
	August	35.3	35.1	34.6	35.6	35.2	34.1	34.5	34.9
	September	35.2	35.1	34.5	35.4	35.0	34.1	34.5	34.8
	October	34.3	34.6	34.0	34.9	34.3	33.8	34.2	34.3
	November	34.1	34.3	33.9	34.6	34.3	33.6	34.0	34.1
	December	33.7	34.1	33.6	34.3	33.8	33.3	33.7	33.8
	AVERAGE								
1976	January	33.3	33.9	33.2	34.0	33.2	33.1	33.5	33.5
	February	33.0	33.4	32.6	33.8	32.6	32.9	33.5	33.1
	March	32.4	33.0	31.8	33.4	32.5	32.6	33.2	32.7
	April	33.0	33.5	32.3	33.9	33.2	33.2	33.2	33.2
	May	34.4	34.9	33.6	35.3	34.8	34.8	34.7	34.6
	June	35.7	35.9	34.8	36.5	36.1	35.9	35.5	35.8
	July	36.1	36.3	35.4	36.8	36.3	36.3	36.3	36.2
	August	36.5	36.6	35.7	37.3	36.4	36.5	36.7	36.5
	September	35.8	36.1	35.3	36.9	35.9	36.6	36.5	36.2

Source: FEA.

Diesel Fuel

Average Selling Prices and Margins for Diesel Fuel*

(Cents per gallon, including tax)

	Selling Prices		Margins	
	Truck Stops	Service Stations	Truck Stops	Service Stations
1974				
January	NA	46.0	NA	6.7
February	NA	45.9	NA	6.6
March	NA	46.8	NA	7.2
April	NA	48.3	NA	7.2
May	NA	48.4	NA	7.2
June	NA	49.3	NA	7.7
July	NA	49.7	NA	7.3
August	NA	49.9	NA	7.3
September	NA	49.6	NA	7.4
October	NA	49.3	NA	7.5
November	NA	49.3	NA	7.2
December	NA	49.2	NA	7.5
1975				
January	NA	50.6	NA	6.8
February	49.7	50.2	7.0	7.3
March	50.1	50.2	7.5	7.4
April	50.5	50.6	7.4	7.5
May	50.3	51.0	7.0	7.7
June	51.4	51.4	7.5	7.9
July	51.2	52.4	7.3	8.2
August	52.1	52.6	8.1	8.9
September	52.1	52.7	7.4	8.7
October	51.8	53.0	6.2	7.7
November	52.0	53.0	5.3	6.5
December	51.7	52.4	5.3	6.7
1976				
January	52.0	52.5	5.6	7.2
February	52.1	52.0	6.0	7.3
March	51.4	52.4	5.6	7.1
April	51.1	52.8	5.8	7.8
May	51.4	R52.9	6.9	7.8
June	52.0	53.3	7.0	7.7
July	52.1	53.1	6.4	7.1
August	52.3	53.2	6.0	7.0
September	52.2	53.1	5.7	6.8

*See Explanatory Note 13.

Note: Selling prices at truck stops and service stations for the months of January 1976 through June 1976 were not printed under the proper column headings in the October issue. These prices have been corrected to appear in the proper columns in this issue.

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

Average Selling Prices and Margins for Major and Independent Retail Dealers – September 1976

(Cents per gallon, including tax)

Truck Stops

	Selling Price	Margin
Major	53.3	5.5
Independent	50.7	6.7
National Average	52.2	5.7

Service Stations

	Selling Price	Margin
Major	55.4	7.0
Independent	51.2	6.8
National Average	53.1	6.8

Source: Lundberg Survey, Inc.

Heating Oil *

Residential Heating Oil Prices

		Average Selling Price	Average Purchase Price	Average Dealer Margin
Cents per gallon				
1974	January	31.1	23.4	7.7
	February	32.8	25.4	7.4
	March	33.8	25.9	7.9
	April	34.0	25.9	8.1
	May	35.1	26.8	8.3
	June	35.3	27.5	7.8
	July	35.2	28.1	7.1
	August	35.8	28.1	7.7
	September	36.3	28.7	7.6
	October	35.6	28.9	6.7
	November	37.9	29.1	8.8
	December	36.9	28.5	8.4
		AVERAGE	34.7	26.9
1975	January	37.4	29.1	8.3
	February	37.0	28.7	8.3
	March	36.6	28.4	8.2
	April	36.1	29.3	6.8
	May	36.7	30.0	6.7
	June	37.1	30.3	6.8
	July	37.2	30.6	6.6
	August	38.0	31.2	6.8
	September	38.4	31.0	7.4
	October	39.3	31.8	7.5
	November	39.4	32.1	7.3
	December	40.1	32.4	7.7
		AVERAGE	37.7	31.2
1976	January	40.1	32.4	7.7
	February	40.1	32.4	7.7

*Authorization for this data series expired in February 1976. A new data series is currently being developed and will be incorporated herein when it becomes available.

Source: FEA.

Residential Heating Oil Prices by Region

		New England	Mid Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast
		Cents per gallon								
1974	January	31.9	31.6	30.8	30.3	29.8	31.3	NA	30.4	30.5
	February	33.8	33.5	32.8	30.9	32.0	32.9	NA	37.2	32.8
	March	31.9	33.7	33.9	34.2	30.6	34.5	NA	NA	NA
	April	34.3	34.8	32.5	33.5	33.7	30.1	NA	34.2	32.6
	May	34.8	35.6	36.2	34.2	34.4	32.6	NA	34.8	37.8
	June	35.9	36.2	35.8	34.9	31.1	33.6	NA	35.9	39.1
	July	35.2	35.5	35.6	34.4	30.2	34.9	NA	36.1	36.3
	August	36.3	36.1	37.8	35.1	33.7	35.2	NA	NA	35.9
	September	37.2	36.5	36.1	35.0	33.6	35.8	NA	32.3	35.1
	October	36.7	35.9	36.9	33.3	34.1	33.8	NA	35.6	36.3
	November	39.0	38.7	37.4	36.4	35.3	35.6	NA	37.3	36.4
	December	38.3	38.7	36.8	34.2	34.7	33.5	NA	35.8	33.9
1975	January	40.2	38.9	36.5	33.2	34.7	34.0	NA	37.5	38.0
	February	39.2	38.4	36.8	33.4	34.7	33.3	NA	36.6	37.7
	March	38.0	37.8	36.4	34.2	33.2	34.3	NA	NA	36.8
	April	37.4	36.8	36.8	33.2	33.7	34.5	NA	38.9	36.8
	May	37.6	36.9	36.4	35.1	34.7	35.4	NA	37.0	37.8
	June	37.7	37.7	36.4	35.8	NA	35.9	NA	37.6	37.6
	July	37.9	36.9	36.9	36.4	34.7	36.8	NA	NA	38.8
	August	38.8	38.2	37.9	36.3	35.7	36.3	NA	41.3	39.3
	September	39.4	38.7	37.6	36.5	35.7	36.8	NA	38.9	40.1
	October	40.3	39.9	38.3	37.4	36.6	37.9	NA	39.0	41.0
	November	41.0	39.6	38.7	37.9	NA	38.1	NA	40.2	41.3
	December	41.0	41.1	39.0	38.5	34.1	38.0	NA	44.8	40.9
1976	January	41.3	40.6	39.9	38.6	NA	39.0	NA	40.2	42.0
	February	41.1	41.6	39.2	38.5	37.2	38.9	NA	NA	40.8

NA=Not available.
Source: FEA.

Average Distributor Purchase Prices for Heating Oil by Region

		New England	Mid Atlantic	Southeast	East North Central	East South Central	West North Central	West South Central	Mountain	West Coast	
		Cents per gallon									
1974	January	22.3	23.4	23.3	23.8	23.5	24.0	NA	22.5	23.0	
	February	24.9	25.5	25.3	24.8	25.2	26.4	NA	29.7	25.3	
	March	24.9	25.0	26.3	25.6	24.0	27.0	NA	NA	NA	
	April	25.7	26.0	26.0	27.1	26.3	24.0	NA	26.8	26.0	
	May	26.3	27.0	27.5	27.3	27.4	25.8	NA	27.1	26.2	
	June	27.5	27.6	27.8	29.0	25.4	27.4	NA	27.3	28.0	
	July	28.1	28.2	28.3	27.5	25.2	28.5	NA	28.2	29.1	
	August	28.1	28.2	27.9	27.5	29.3	28.8	NA	NA	28.2	
	September	29.2	28.9	28.5	27.8	28.2	28.4	NA	29.3	28.8	
	October	29.9	29.4	28.8	27.7	28.3	27.4	NA	29.9	29.2	
	November	29.8	29.7	28.8	27.8	29.1	27.6	NA	27.9	29.8	
	December	29.3	29.4	28.4	27.4	28.8	26.7	NA	29.3	27.0	
1975	January	30.3	29.7	28.5	27.2	28.8	27.5	NA	28.5	29.7	
	February	29.6	29.3	28.6	27.2	28.8	27.3	NA	29.4	28.5	
	March	29.5	29.3	29.1	28.1	26.8	28.1	NA	NA	27.6	
	April	29.4	29.5	29.7	28.3	27.8	29.5	NA	29.0	28.5	
	May	30.5	30.0	30.0	30.0	28.8	29.4	NA	30.9	28.7	
	June	30.4	30.2	30.6	30.5	NA	30.7	NA	31.8	29.0	
	July	30.7	30.1	29.9	31.6	28.8	31.4	NA	NA	30.4	
	August	31.6	30.8	30.9	31.2	29.8	30.2	NA	31.6	32.8	
	September	31.4	30.9	30.7	30.6	29.8	30.6	NA	31.9	31.4	
	October	32.0	31.9	31.3	31.5	31.1	31.4	NA	34.4	32.5	
	November	32.5	31.7	32.0	32.1	NA	32.0	NA	34.1	32.3	
	December	32.9	32.7	31.8	32.0	29.4	31.4	NA	33.9	32.8	
1976	January	32.5	32.5	31.9	32.3	NA	32.3	NA	33.6	32.9	
	February	32.8	32.9	31.6	31.9	31.3	32.1	NA	NA	31.1	

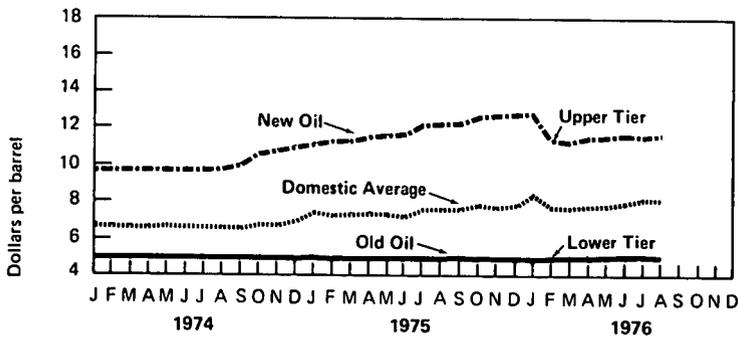
NA=Not available.
Source: FEA.

Crude Oil

Domestic Crude Petroleum Prices at the Wellhead*

	Old	New	Domestic Average
Dollars per barrel			
1974			
January	5.03	9.82	6.95
February	5.03	9.87	6.87
March	5.03	9.88	6.77
April	5.03	9.88	6.77
May	5.03	9.88	6.87
June	5.03	9.95	6.85
July	5.03	9.95	6.80
August	5.03	9.98	6.71
September	5.03	10.10	6.70
October	5.03	10.74	6.97
November	5.03	10.90	6.97
December	5.03	11.08	7.09
AVG.	5.03	10.13	6.87
1975			
January	5.05	11.28	7.61
February	5.03	11.39	7.47
March	5.03	11.47	7.57
April	5.03	11.64	7.55
May	5.03	11.69	7.52
June	5.03	11.73	7.49
July	5.03	12.30	7.75
August	5.03	12.38	7.73
September	5.04	12.46	7.75
October	5.03	12.73	7.83
November	5.03	12.89	7.80
December	5.03	12.95	7.93
AVG.	5.03	12.03	7.67
1976			
January	5.02	12.99	8.63
	Lower Tier**	Upper Tier**	
February	5.06	11.47	7.87
March	5.07	11.39	7.79
April	5.07	11.52	7.86
May	5.13	11.55	7.89
June	5.15	11.60	7.99
July	5.19	R11.59	8.04
August	***5.18	***11.62	***8.03

Crude Oil Wellhead Price



*See Explanatory Note 14. **See definitions. ***Preliminary figure based on early reports. R=Revised data.
 Sources: January 1974 through January 1976—FEA Crude Petroleum Production Monthly Report; February 1976 forward—FEA Domestic Crude Oil Purchasers Report.

Crude Oil (Continued)

Percentages of Domestic Production Sold at the Wellhead

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

*Totals do not add to 100 due to rounding.

**Preliminary.

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

Entitlement Prices*

		Dollars
1974	November	5.00
	December	5.00
1975	January	6.00
	February	6.75
	March	7.31
	April	7.29
	May	7.39
	June	7.82
	July	8.13
	August	8.31
	September	8.31
	October	8.62
	November	8.94
	December	8.55
1976	January	8.09
	February	7.85
	March	7.89
	April	7.85
	May	7.82
	June	7.91
	July	7.80
	August	8.02

*See definitions

Source: FEA.

Refiner Acquisition Cost of Crude Petroleum

	Domestic *	Imported**	Composite
Dollars per barrel			
1974			
January	6.72	9.59	7.46
February	7.08	12.45	8.57
March	7.05	12.73	8.68
April	7.21	12.72	9.13
May	7.26	13.02	9.44
June	7.20	13.06	9.45
July	7.19	12.75	9.30
August	7.20	12.68	9.17
September	7.18	12.53	9.13
October	7.26	12.44	9.22
November	7.46	12.53	9.41
December	7.39	12.82	9.28
AVERAGE	7.18	12.52	9.07
1975			
January	7.78	12.77	9.48
February	8.29	13.05	10.09
March	8.38	13.28	9.91
April	8.23	13.26	9.83
May	8.33	13.27	9.79
June	8.33	14.15	10.33
July	8.37	14.03	10.57
August	8.48	14.25	10.81
September	8.49	14.04	10.79
October	8.68	14.66	10.85
November	8.67	15.04	11.05
December	8.66	14.81	10.98
AVERAGE	8.39	13.93	10.38
1976			
January	9.14	13.27	10.76
February	8.67	13.26	10.54
March	8.48	13.51	10.44
April	8.66	13.39	10.63
May	R8.62	R13.41	R10.66
June	R8.60	R13.48	10.88
July	8.67	13.50	10.90
August	***8.68	***13.67	***10.80

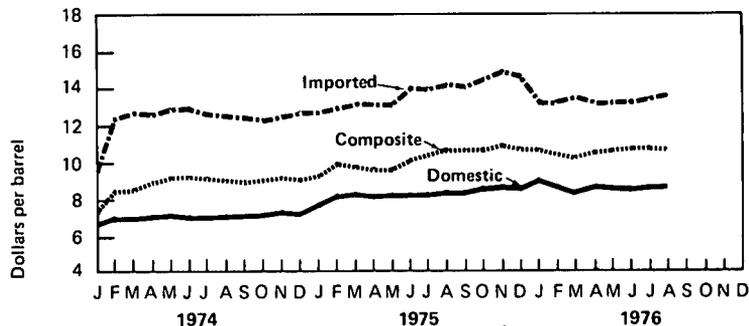
*See Explanatory Note 14.

**See Explanatory Note 15.

***Preliminary data.

Source: FEA.

Crude Oil Refiner Acquisition Cost



Crude Oil (Continued)

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

		Algeria	Canada	Indonesia	Iran	Nigeria	Saudi Arabia	U.A. Emirates	Venezuela
		Dollars per barrel							
1974	January	NA	6.70	NA	8.53	12.13	NA	NA	10.28
	February	NA	10.90	NA	12.11	12.74	NA	NA	11.31
	March	NA	11.14	12.13	13.02	13.26	NA	NA	11.78
	April	13.63	11.02	12.49	12.83	13.67	11.59	NA	11.38
	May	14.67	11.47	12.95	13.84	13.83	11.53	NA	11.28
	June	14.43	12.56	13.21	13.44	13.03	11.32	13.06	10.39
	July	13.65	12.65	13.77	13.02	12.75	11.97	12.34	10.64
	August	13.96	12.49	14.38	12.31	12.70	12.16	12.69	11.20
	September	13.83	12.51	13.42	11.87	12.28	11.45	NA	11.01
	October	13.20	12.53	14.24	12.07	12.12	11.51	12.84	10.95
	November	13.43	12.33	13.45	12.15	12.83	12.15	13.54	11.15
	December	13.08	12.15	14.15	11.63	12.88	11.75	14.59	11.37
1975	January	12.72	12.43	13.30	12.11	12.07	12.07	13.14	11.37
	February	12.11	12.15	13.52	11.86	12.18	11.94	12.67	11.56
	March	12.46	12.79	13.94	12.08	12.56	11.78	13.40	11.66
	April	12.36	12.95	13.71	12.34	12.46	12.16	12.55	11.61
	May	12.41	12.08	13.71	11.93	12.34	12.27	13.29	11.54
	June	12.37	11.90	13.73	12.51	12.49	11.93	12.48	11.51
	July	12.69	12.15	13.98	11.83	12.37	12.08	12.78	11.46
	August	12.68	12.27	13.85	12.17	12.32	12.10	12.60	11.44
	September	12.52	12.63	13.75	11.97	12.42	12.17	12.49	11.42
	October	13.45	13.02	14.00	12.27	13.18	12.64	12.85	12.08
	November	13.28	14.00	13.81	12.47	13.37	12.58	13.23	12.38
	December	13.46	13.96	13.92	13.01	13.57	12.93	13.21	12.31
1976	January	13.56	12.95	13.89	13.01	13.61	13.18	13.50	11.60
	February	13.57	13.24	13.94	12.87	13.52	13.21	13.36	12.09
	March	13.83	13.30	13.94	12.77	13.62	13.18	13.37	11.71
	April	13.73	13.61	13.78	12.91	13.60	13.11	13.18	11.95
	May	13.47	13.62	13.84	12.82	13.62	13.05	13.39	11.61
	June	13.75	14.19	13.84	13.00	13.78	13.14	13.09	11.55
	July	13.77	13.79	13.80	12.76	13.81	13.02	13.45	11.44
	August	13.91	13.78	13.78	13.09	13.87	13.03	13.23	11.77

*See Explanatory Note 15.

Source: FEA.

Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate *	Motor Gasoline	Aviation Jet Fuel**	Other Products	Total
Millions of dollars						
1974	January	116	91		43	250
	February	184	87		175	446
	March	198	85		237	520
	April	223	215		346	783
	May	261	255		446	963
	June	326	394		630	1,350
	July	355	325		648	1,327
	August	392	349		665	1,405
	September	409	431		650	1,490
	October	295	424		531	1,250
	November	245	475		595	1,315
	December	209	413		492	1,114
1975	January	254	431		672	1,357
	February	300	418		790	1,508
	March	282	452		966	1,700
	April	302	485		807	1,594
	May	292	370		771	1,433
	June	284	266		785	1,334
	July	233	219		624	1,075
	August	280	344		583	1,208
	September	347	335		661	1,342
	October	338	245		673	1,255
	November	426	275		796	1,497
	December	446	211		826	1,483
1976	January	336	242	131	515	1,224
	February	279	336	145	456	1,216
	March	263	316	163	456	1,198
	April	237	398	180	524	1,339
	May	264	632	161	446	1,503
	June	—	628	135	349	1,112
	July	—	***576	***126	***365	***1,067

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

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

***Preliminary data.

R=Revised data.

Source: FEA.

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES		
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
Cents per thousand cubic feet							
1974	January	24.3	42.7	25.7	48.1	55.0	55.1
	February	25.4	43.2	26.8	49.8	56.4	56.4
	March	25.7	43.2	27.0	50.8	56.9	56.9
	April	25.8	46.4	27.4	49.3	57.6	57.4
	May	25.7	49.3	27.5	49.9	58.6	57.9
	June	26.0	47.7	27.5	50.8	59.4	58.5
	July	26.3	58.7	28.6	52.5	62.0	61.1
	August	26.1	57.5	28.4	55.2	64.4	63.5
	September	27.3	58.8	29.5	54.7	65.2	64.3
	October	27.5	58.9	29.9	56.3	64.4	64.0
	November	28.5	70.9	31.7	58.7	66.8	66.6
	December	32.6	74.5	35.8	60.3	67.2	67.4
1975	January	29.8	104.0	35.2	67.6	71.1	71.4
	February	29.5	105.8	35.2	70.1	74.1	74.4
	March	31.6	102.5	37.0	70.4	77.8	77.9
	April	32.9	102.8	38.3	71.1	82.3	81.9
	May	34.7	100.6	39.8	71.1	83.7	82.8
	June	35.3	98.3	40.2	72.2	85.2	84.0
	July	36.9	101.1	41.8	73.9	84.7	83.6
	August	35.5	141.0	43.3	73.4	85.6	84.3
	September	36.5	141.2	44.5	72.8	85.9	84.6
	October	36.1	140.1	44.3	77.2	86.1	85.6
	November	36.5	162.5	46.7	77.8	86.9	86.6
	December	35.9	161.8	46.0	81.1	79.6	80.1
1976	January	38.6	164.0	48.6	87.5	88.7	89.2
	February	39.5	165.3	49.5	87.7	92.3	92.7
	March	39.5	164.5	49.7	86.4	89.8	90.2
	April	40.6	164.3	51.2	88.6	100.2	99.7
	May	42.4	165.1	52.5	86.9	98.3	97.6

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

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

Source: Federal Power Commission.

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

		Price
		Cents per thousand cubic feet
1974	January	113.3
	February	115.2
	March	116.9
	April	118.2
	May	119.9
	June	120.3
	July	122.0
	August	124.2
	September	125.6
	October	127.4
	November	131.4
	December	134.2
1975	January	137.9
	February	141.3
	March	142.7
	April	147.1
	May	150.1
	June	152.1
	July	151.1
	August	151.8
	September	155.7
	October	156.3
	November	162.3
	December	166.2
1976	January	167.4
	February	171.1
	March	172.9
	April	174.2
	May	176.6
	June	178.9
	July	180.2
	August	181.5
	September	186.7

Source: Bureau of Labor Statistics.

Utility Fossil Fuels

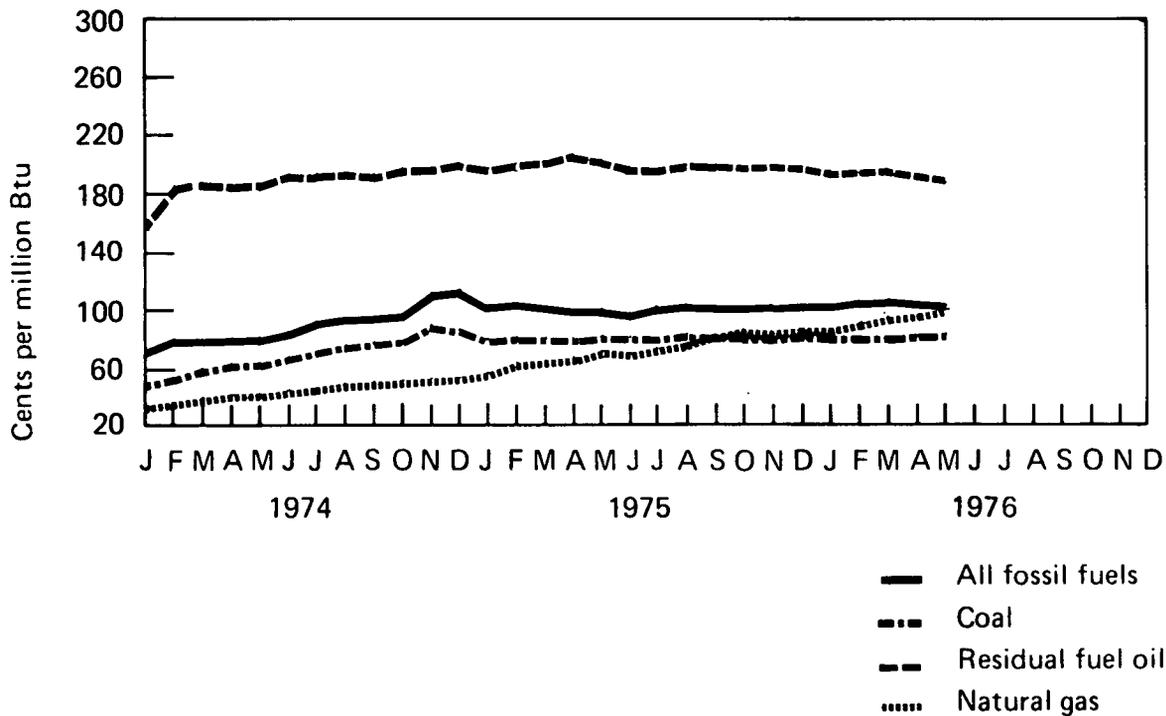
COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

All Fossil Fuels*

Region	Cents per million Btu												
	1975						1976						
	MAY	JUNE	JULY	AUG	SEPT,	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	190.5	192.7	189.5	188.0	182.9	182.3	181.2	177.6	181.3	184.6	182.3	184.3	174.6
Middle Atlantic	138.5	140.4	154.5	144.5	132.7	133.7	140.8	140.8	143.6	142.2	136.8	136.9	136.6
East North Central	87.4	87.5	89.2	90.1	88.2	87.0	89.5	92.6	89.9	90.0	88.3	91.3	92.1
West North Central	60.3	62.8	63.0	62.7	63.9	62.6	62.5	65.7	72.7	67.4	67.5	67.2	68.9
South Atlantic	120.1	122.5	126.8	125.2	124.4	118.4	117.0	121.3	122.0	122.7	118.3	119.2	120.0
East South Central	84.8	85.3	86.2	84.5	85.2	83.8	84.5	85.5	88.5	88.0	87.4	90.4	90.9
West South Central	72.9	71.2	76.0	77.5	79.1	79.6	77.0	82.8	88.0	88.2	91.7	93.5	94.6
Mountain	52.1	50.9	51.8	50.4	55.0	50.1	52.3	55.6	50.4	48.3	58.4	56.1	50.1
Pacific	187.3	154.5	147.1	171.3	174.5	177.2	206.6	222.7	214.0	206.5	211.3	196.2	180.3
NATIONAL AVG.	101.0	99.3	102.5	103.8	103.7	101.2	102.4	106.9	107.3	107.6	107.8	106.4	105.8

*See Explanatory Note 16.

National Average



Coal

Cents per million Btu Region	1975								1976				
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	125.7	116.5	119.2	127.3	120.4	128.7	127.6	120.8	124.2	122.7	119.4	124.8	127.0
Middle Atlantic	101.7	101.6	105.5	103.8	98.6	101.8	106.1	104.0	102.8	103.4	101.7	100.2	101.7
East North Central	82.0	82.4	82.3	84.3	83.4	82.1	83.8	85.7	83.1	83.1	82.7	85.0	86.8
West North Central	57.7	58.9	60.8	60.7	61.3	61.2	60.6	58.2	59.2	60.2	62.3	64.1	65.8
South Atlantic	98.8	98.4	101.6	101.4	102.4	98.6	98.5	100.1	98.3	99.2	99.7	100.8	100.8
East South Central	81.5	80.5	79.5	79.1	80.8	80.7	82.3	81.9	83.9	83.5	82.6	83.4	85.1
West South Central	21.0	21.0	24.0	24.0	24.0	24.0	24.0	24.0	26.4	26.4	26.4	26.4	26.4
Mountain	31.1	31.0	33.1	32.2	32.8	31.7	33.5	36.1	34.1	33.0	42.4	34.6	32.2
Pacific	57.0	58.4	58.2	58.8	58.9	58.4	59.5	58.9	72.7	76.0	74.5	75.5	75.7
NATIONAL AVG.	81.8	81.4	80.8	82.1	82.1	81.5	81.7	82.2	80.2	81.4	83.3	83.7	84.6

Residual Fuel Oil*

Cents per million Btu Region	1975								1976				
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	200.1	201.7	196.3	192.6	187.9	184.1	184.8	181.0	182.5	185.4	183.5	185.7	170.0
Middle Atlantic	200.1	201.5	200.4	199.3	191.2	192.2	191.5	191.6	191.3	179.9	191.8	197.1	190.3
East North Central	157.0	168.3	185.2	191.7	205.9	189.7	211.4	192.4	197.0	193.4	200.9	198.4	202.8
West North Central	163.9	165.5	161.1	157.5	150.3	153.5	161.6	157.1	173.1	162.2	153.4	153.0	145.6
South Atlantic	187.7	189.3	185.4	183.8	181.5	180.7	179.8	173.0	174.6	177.5	178.6	179.6	171.3
East South Central	161.0	165.5	167.8	175.0	174.4	175.5	180.4	171.4	172.8	173.7	174.3	176.0	170.9
West South Central	177.7	182.0	186.2	185.2	174.4	168.4	189.2	187.9	195.3	190.7	183.0	187.4	182.0
Mountain	198.0	199.0	209.1	221.3	223.7	210.3	195.8	202.3	206.8	203.5	205.0	220.8	206.4
Pacific	260.6	245.6	253.8	258.1	257.9	255.5	261.9	259.7	246.6	240.7	240.3	232.7	229.2
NATIONAL AVG.	205.6	200.0	198.9	200.8	200.5	197.0	200.5	198.1	194.1	195.4	197.7	196.7	188.1

Natural Gas**

Cents per million Btu Region	1975								1976				
	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
New England	110.8	121.7	122.1	154.1	137.7	135.6	133.8	157.7	166.1	166.1	151.6	134.5	144.0
Middle Atlantic	98.3	92.7	91.2	87.6	87.6	90.5	103.1	105.0	107.8	195.8	106.3	150.3	111.5
East North Central	120.8	111.6	103.4	104.6	114.0	120.2	128.3	136.8	126.8	124.4	125.0	127.7	135.3
West North Central	58.6	58.1	59.2	56.9	57.8	55.4	55.8	55.9	56.1	61.6	61.5	68.0	73.4
South Atlantic	71.2	72.2	68.9	69.7	76.4	79.6	78.5	80.8	75.1	82.0	75.5	78.2	84.0
East South Central	76.4	77.0	91.0	95.9	110.3	105.5	120.2	146.6	156.6	157.4	147.5	148.0	128.6
West South Central	71.3	69.2	72.7	75.7	77.9	79.7	77.6	80.3	83.5	87.3	90.8	92.3	94.0
Mountain	68.1	69.6	71.8	71.1	78.6	82.0	86.2	90.4	86.2	85.5	87.4	90.4	87.4
Pacific	82.4	84.1	89.7	111.1	115.2	122.4	136.9	151.1	141.2	151.6	149.5	152.6	147.3
NATIONAL AVG.	72.6	71.3	74.8	79.1	83.8	85.5	83.5	86.1	86.5	92.1	94.9	97.4	100.8

*See Explanatory Note 16.

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

Source: Federal Power Commission.

Utility Fossil Fuels (Continued)

U.S. Average Delivered Prices of Coal at Utilities

		Contract	Spot
		In dollars per short ton	
1974	January	9.83	17.02
	February	10.40	20.57
	March	10.63	22.54
	April	11.28	23.70
	May	11.80	24.21
	June	11.87	25.84
	July	12.05	27.99
	August	12.50	28.87
	September	12.89	30.64
	October	13.30	30.67
	November	14.16	31.95
	December	14.20	31.05
1975	January	14.57	28.12
	February	15.71	25.93
	March	15.68	25.02
	April	15.88	24.52
	May	16.45	23.78
	June	16.40	23.36
	July	16.06	22.35
	August	16.65	22.39
	September	16.76	22.46
	October	16.72	22.52
	November	16.79	22.50
	December	16.90	22.40
1976	January	16.53	21.75
	February	17.04	21.23
	March	17.65	21.36
	April	17.76	21.43
	May	18.12	21.17

Source: Federal Power Commission.

Petroleum Consumption

Total petroleum consumption during the first half of 1976 by the nations belonging to the International Energy Agency (IEA) increased 2.8 percent over the consumption level for the comparable period in 1975. The increase occurred mostly in the larger, more industrialized nations. (The "other IEA" figure shows a decrease of 6.7 percent.) Japan used 6.8 percent more petroleum between January and July than during the same period a year ago, and West Germany used 8.5 percent more. Between January and August, France* consumed 10.1 percent more petroleum than in the same months of 1975.

Crude Oil Production

Total world crude oil production in August 1976 was 57.2 million barrels per day, 1.4 percent higher than in July, and 3.4 percent greater than in August 1975. The largest production increases during the month were in Iraq (where liftings rose by 250,000 barrels per day) and Iran (where production was 240,000 barrels per day higher). Saudi Arabia, on the other hand, reduced production by 220,000 barrels per day. Member nations of the Organization of Petroleum Exporting Countries accounted for 53.2 percent of total world production during August and 67.7 percent of free world production.

*Not a member of IEA.

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

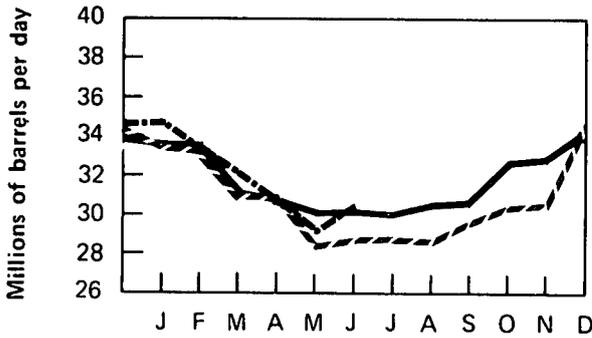
		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
Thousands of barrels per day									
1974	Jan	33,700	4,273	2,556	2,523	2,045	1,823	1,755	R3,962
	Feb	33,700	4,709	1,969	2,389	2,127	1,863	1,760	R3,906
	Mar	31,200	4,508	2,173	2,249	2,133	1,659	1,579	R3,044
	Apr	30,600	3,805	2,539	1,970	1,899	1,560	1,421	R3,448
	May	30,000	3,718	2,403	1,915	1,704	1,577	1,349	R3,523
	June	30,100	3,710	2,414	2,103	1,545	1,455	1,314	R3,545
	July	30,000	3,574	2,548	1,703	1,531	1,534	1,368	R3,096
	Aug	30,600	3,787	2,476	1,506	1,513	1,463	1,287	R3,524
	Sept	30,700	3,868	2,473	1,996	1,663	1,415	1,527	R3,730
	Oct	32,800	3,843	2,613	2,045	2,049	1,680	1,569	R3,996
	Nov	33,000	R4,076	2,432	2,260	2,108	1,714	1,580	R3,739
	Dec	34,300	4,401	2,261	2,492	1,983	1,831	1,753	R4,058
	AVG.	31,775	4,019	2,408	2,094	1,857	1,630	1,521	R3,687
1975	Jan	33,600	3,850	2,183	2,190	1,981	1,691	1,792	R4,120
	Feb	33,600	4,242	2,455	2,243	1,906	1,872	1,767	R4,274
	Mar	31,000	3,978	2,234	1,952	1,731	1,558	1,558	R3,625
	Apr	30,800	3,448	2,431	2,202	1,826	1,592	1,530	R3,932
	May	28,200	3,296	2,253	1,640	1,482	1,474	1,174	R3,403
	June	28,800	3,325	2,106	1,642	1,414	1,550	1,289	R3,505
	July	28,900	3,437	2,319	1,491	1,322	1,537	1,234	R3,289
	Aug	28,700	3,397	2,360	1,300	1,208	1,444	1,105	R3,419
	Sept	29,800	3,569	2,309	1,785	1,502	1,474	1,465	R3,712
	Oct	30,500	3,584	2,328	1,914	1,704	R1,555	1,679	R3,306
	Nov	30,600	3,940	2,361	2,074	1,723	1,577	1,448	R3,830
	Dec	34,600	4,519	2,502	2,653	1,821	1,855	1,600	R4,316
	AVG.	30,745	3,712	2,319	1,921	1,613	1,593	1,468	R3,749
1976	Jan	34,700	4,143	2,459	R2,432	R1,680	1,748	1,748	R4,378
	Feb	33,400	4,382	2,490	R2,492	R1,866	1,730	1,713	R3,879
	Mar	32,300	4,286	2,742	R2,372	R1,879	1,788	1,621	R2,745
	Apr	30,900	R3,806	2,332	R2,117	R1,661	1,512	1,409	3,583
	May	29,200	R3,440	2,314	R1,796	R1,418	1,532	1,238	3,261
	June	30,500	3,635	2,388	R1,604	1,420	1,550	1,208	3,463
	July	NA	3,607	2,588	1,624	1,338	1,551	1,289	NA
	Aug	NA	NA	NA	1,669	NA	NA	1,247	NA
		AVG. (Year to date)	31,829	3,897	2,474	2,011	1,607	1,630	1,433

Note: All recent figures are estimates.

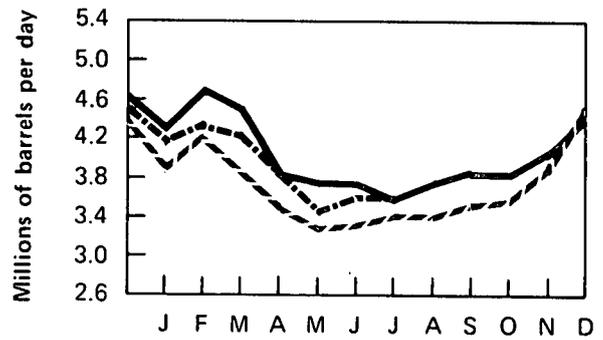
*The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United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

Excludes liquefied petroleum gases and condensates. *Not a member of IEA. †Principal products only. ††Excludes the United States. NA=Not available. R=Revised data. Source: Central Intelligence Agency.

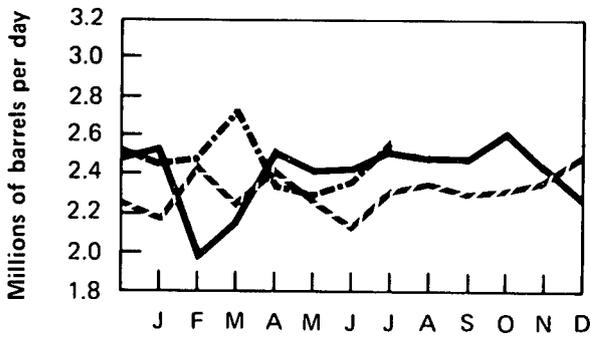
Total IEA



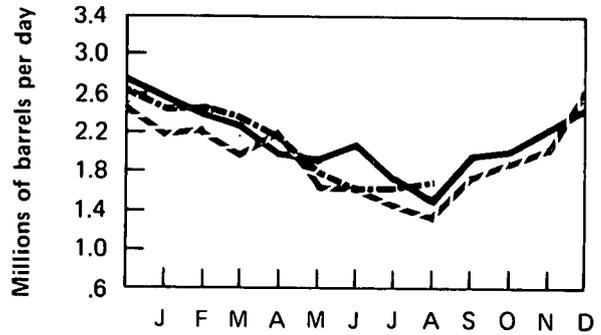
Japan*



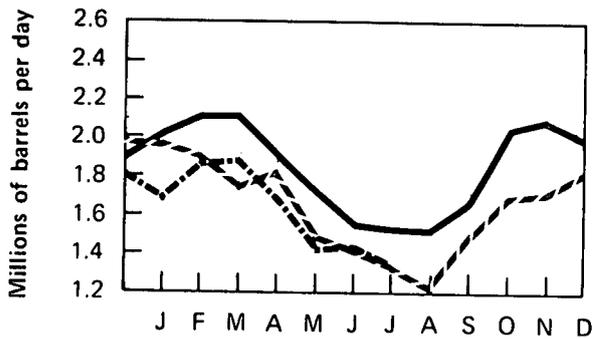
West Germany



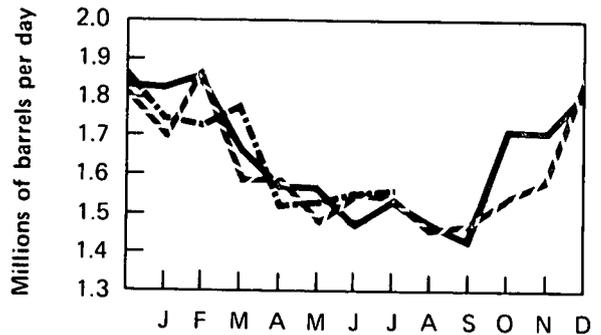
France**



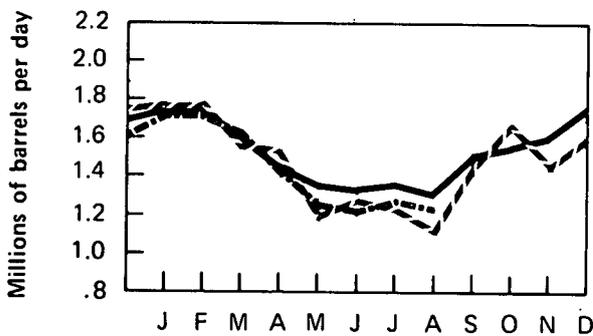
United Kingdom



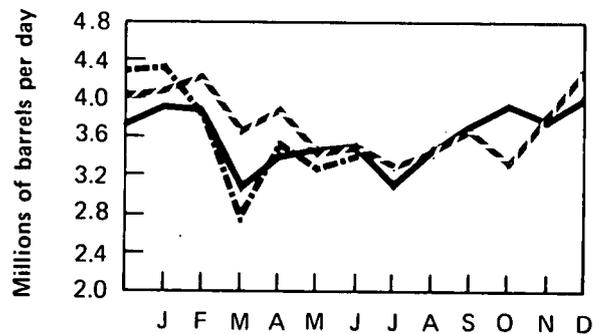
Canada



Italy***



Other IEA†



* Excludes liquefied petroleum gases and condensates.

** Not a member of IEA.

*** Principal products only.

† Excludes the United States.

— 1974
 - - - 1975
 ··· 1976

Crude Oil Production

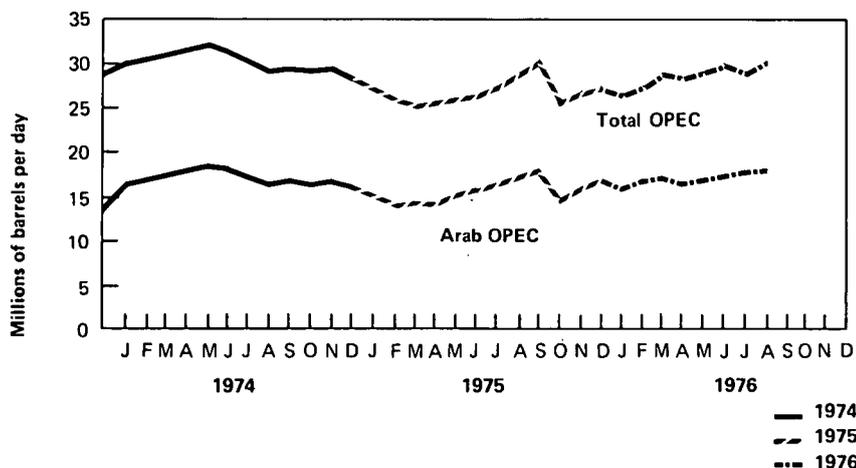
Crude Oil Production for Major Petroleum Exporting Countries – August 1976

Country	Production				Production Capacity	Production Shut in
	1973	1974	1975	1976 August**	August	August
Thousands of barrels per day						
Algeria	1,070	960	930	1,000	1,000	0
Iraq	2,015	1,975	2,250	2,050	3,000	31.7
Kuwait*	3,020	2,545	2,100	1,920	3,500	45.1
Libya	2,175	1,520	1,520	2,060	2,500	17.6
Qatar	570	520	440	520	700	25.7
Saudi Arabia*	7,600	8,480	7,080	8,760	11,500	23.8
United Arab Emirates	1,530	1,680	1,700	1,970	2,380	17.2
Subtotal: Arab OPEC	17,980	17,680	16,020	18,280	24,580	25.6
Ecuador	210	175	160	200	200	0
Gabon	150	200	220	220	250	12.0
Indonesia	1,340	1,375	1,310	1,510	1,700	11.2
Iran	5,860	6,020	5,350	5,820	6,500	10.5
Nigeria	2,055	2,255	1,790	2,000	2,500	20.0
Venezuela	3,365	2,975	2,350	2,440	2,700	9.6
Subtotal: Non-Arab OPEC	12,980	13,000	11,180	12,190	13,850	12.0
Total: OPEC	30,960	30,680	27,200	30,470	38,430	20.7
Canada	1,800	1,695	1,470	1,235	1,800	31.3
Mexico	465	580	720	850	850	0
Total: OPEC, Canada Mexico	33,225	32,955	29,390	32,555	41,080	20.7
Total World	55,740	55,885	53,160	57,220		

*Includes about one-half of Neutral Zone production which amounted to approximately 460,000 barrels per day in August. **Estimate.

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

OPEC Countries Crude Oil Production



Definitions

Base Production Control Level

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

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

Branded Independent Marketer

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

Ceiling Price

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

Controlled Crude Oil

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

Crude Oil Domestic Production

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.

Cumulative Deficiency

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

Dealer Tankwagon (DTW) Price

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

Distillate Fuel Oil

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

Domestic Demand for Refined Petroleum Products

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

Electricity Production

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

Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month.

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

Entitlement Price

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

Firm Natural Gas Service

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

Interruptible Natural Gas Service

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

Jet Fuel

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

Jobber

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

Jobber Margin

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

Jobber Price

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

Landed Cost

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

Limited Work Authorization

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

Line Miles of Seismic Exploration

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

Lower Tier Crude Oil

Old crude oil.

Lower Tier Ceiling Price Determination

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; and (2) \$1.35 per barrel.

Major Brand

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 20 or more States.

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 Liquids (NGL)

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

New Crude Oil

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

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

Nonbranded Independent Marketer

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

Old Crude Oil

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

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

Power Ascension Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but which is in the initial testing phase during which production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer, and

places it in "commercial operation" status. A request is then submitted to the appropriate utility rate commission to include the powerplant in the rate base calculation.

Primary Stocks of Refined Petroleum Products

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

Property

Property means the right to produce domestic crude oil, which arises from a lease or from a fee interest.

Refined Petroleum Products Imports

Imports (into the 50 States and the District of Columbia) of motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, waxes, asphalt, natural gas, plant condensate, and unfinished oils. Included are imports of fuels into bonded storage and receipts from U.S. territories.

Refiner Acquisition Cost

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

Released Crude Oil

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

Residual Fuel Oil

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

Rotary Rig

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

Separative Work Unit (SWU)

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

Stripper Well Lease

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

Synthetic Natural Gas (SNG)

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

Uncontrolled Crude Oil

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

Unrecouped Costs

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

Upper Tier Crude Oil

New crude oil and crude oil produced from a stripper well lease.

Upper Tier Ceiling Price Determination

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

Well

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

Explanatory Notes

1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear powerplants and industrial hydroelectric power production. The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.
2. U.S. imports of fossil fuels include imports of crude oil, refined petroleum products, and natural gas (dry).
3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and net imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1975 and 1976 electricity imports were estimated on the basis of imports levels during 1974.
4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries. NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The NGL stock series shown in this volume includes liquids held as stocks at both natural gas processing plants and at refineries.
5. The petroleum short-term demand forecasting model uses historical consumption data to construct a regression equation for each of eight major petroleum products. Each equation attempts to capture the relationship between final demand for that product and the factors influencing that demand. The explanatory factors used in predicting product demand include (1) macroeconomic variables such as disposable personal income and gross national product (GNP), (2) real product prices, (3) variables representing the effects of weather and other seasonal variations on demand, and (4) other factors relevant to a particular product.

The assumptions underlying the current short-term forecast are:

- 1. Normal weather.
2. Real GNP growth rate of 6.5 percent for 1976.
3. Implementation of the Energy Policy and Conservation Act and the Energy Conservation and Production Act; specifically, the composite price of domestic crude oil is set at \$7.66 per barrel beginning February 1976. This price ceiling is permitted to rise at 10 percent per year. Furthermore, stripper oil and tertiary oil is not controlled.
4. Elimination of the \$2-per barrel crude oil import fee beginning in January 1976.
5. The price of imported oil is assumed to be \$13.40, \$13.98, and \$14.73 for the years 1976, 1977, and 1978, respectively.

The short-term projections are periodically revised to incorporate observed weather conditions and actual values of macroeconomic and other explanatory variables as they become available. This "revised forecast" is termed the "backcast." On page 47 in this issue of the *Monthly Energy Review*, the backcast is solved for December 1975.

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

6. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated.

Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted.

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

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all

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

8. Bituminous coal and lignite consumption as reported by the Bureau of Mines are derived 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.

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

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

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

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

as MTU; conversion factors to other units are given in the section on Units of Measure.

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

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

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

12. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments.

The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately and publicly-owned establishments which generate electricity primarily for resale.

13. 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. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.

14. The domestic crude petroleum wellhead price represents the first sale price for crude oil and lease conden-

sates. The refiner acquisition cost of domestic crude petroleum is the price paid by refiners for domestic crude petroleum, unfinished oils, and natural gas liquids and includes transportation costs from the wellhead to the refinery.

15. The refiner acquisition cost of imported crude petroleum is the average landed cost of imported crude petroleum to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other cost incurred in purchasing and shipping crude oil to the United States.

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

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

Units of Measure

Weight

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

Conversion Factors for Crude Oil

Average gravity

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

Conversion Factors for Uranium

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

Approximate Heat Content of Various Fuels

Petroleum

Crude Oil	5.800 million Btu/barrel
Refined products	
Imports, average	6.000 million Btu/barrel
Consumption, average	5.5061 million Btu/barrel
Gasoline	5.248 million Btu/barrel
Jet Fuel, average	5.600 million Btu/barrel
Naphtha-type	5.355 million Btu/barrel
Kerosene-type	5.670 million Btu/barrel
Distillate fuel oil	5.825 million Btu/barrel
Residual fuel oil	6.287 million Btu/barrel

Natural gas liquids 4.024 million Btu/barrel

Natural gas

Wet	1,097 Btu/cubic foot
Dry	1,024 Btu/cubic foot

Coal

Bituminous and lignite	
Production	23.73 million Btu/short ton
Consumption	23.07 million Btu/short ton
Anthracite	25.40 million Btu/short ton

Electricity Conversion Heat Rates

Fossil fuel steam-electric

Coal	10,176 Btu/kilowatt hour
Gas	10,733 Btu/kilowatt hour
Oil	10,826 Btu/kilowatt hour

Nuclear steam-electric 10,660 Btu/kilowatt hour

Hydroelectric 10,389 Btu/kilowatt hour

Electricity Consumption 3,412 Btu/kilowatt hour

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
Springfield, Va 22161

OFFICIAL BUSINESS
PRINTED MATTER

An Equal Opportunity Employer

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-211



Federal Energy Administration
Monthly Energy Review

FEA/B-76/462

