May 1994

Short-Term
ENERGY OUTLOOK

QUARTERLY PROJECTIONS

1994 2nd Quarter

EIA Energy Information Administration

Short-Term Energy Outlook

Quarterly Projections

Second Quarter 1994

Contents

The *Short-Term Energy Outlook* is prepared by the Energy Information Administration (EIA), Office of Energy Markets and End Use (EMEU). General questions concerning the content of the report may be referred to W. Calvin Kilgore (202-586-1617), Director of EMEU; Arthur Andersen (202-586-1441), Director of Energy Markets and Contingency Information Division; or Derriel Cato (202-586-6574), Chief of the Short-Term Forecasting and Contingency Branch.

Detailed questions may be addressed to David Costello (202-586-1468) or the following analysts:

World Oil Prices/International Petroleum	Douglas MacIntyre (202-586-1831)
Macroeconomic	Kay A. Smith (202-586-1455)
Energy Product Prices	Neil Gamson (202-586-2418)
Petroleum Demands	Michael Morris (202-586-1199)
Petroleum Supply	Tancred Lidderdale (202-586-7321)
Natural Gas	Evelyn Amerchih (202-586-8760)
Coal	Elias Johnson (202-586-7277)
Electricity	Evelyn Amerchih (202-586-8760)

Domestic crude oil production figures are provided by the EIA Dallas Field Office, under the supervision of John H. Wood (214-767-2200). Nuclear electricity generation forecasts are provided by Kenneth Wade (202-254-5514); projections for hydroelectric generation, electricity imports, and utility electricity purchases from nonutilities are provided by Robin Reichenbach (202-254-5353); and coal production, imports, and exports are provided by Byung Doo Hong (202-254-5365)—all of the EIA Office of Coal, Nuclear, Electric and Alternate Fuels.

Preface

The Energy Information Administration (EIA) prepares quarterly, short-term energy supply, demand, and price projections for publication in February, May, August, and November in the *Short-Term Energy Outlook* (*Outlook*). An annual supplement analyzes the performance of previous forecasts, compares recent cases with those of other forecasting services, and discusses current topics related to the short-term energy markets. (See *Short-Term Energy Outlook Annual Supplement*, DOE/EIA-0202.)

The forecast period for this issue of the *Outlook* extends from the second quarter of 1994 through the fourth quarter of 1995. Values for the first quarter of 1994, however, are preliminary EIA estimates (for example, some monthly values for petroleum supply and disposition are derived in part from weekly data reported in the *Weekly Petroleum Status Report*) or are calculated from model simulations using the latest exogenous information available (for example, electricity sales and generation are simulated using actual weather data). The historical energy data, compiled into the second quarter 1994 version of the Short-Term Integrated Forecasting System (STIFS) database, are mostly EIA data regularly published in the *Monthly Energy Review*, *Petroleum Supply Monthly*, and other EIA publications. Minor discrepancies between the data in these publications and the historical data in this *Outlook* are due to independent rounding. The STIFS database is archived quarterly and is available from the National Technical Information Service.

The cases are produced using the Short-Term Integrated Forecasting System (STIFS). The STIFS model is driven principally by three sets of assumptions or inputs: estimates of key macroeconomic variables, world oil price assumptions, and assumptions about the severity of weather. Macroeconomic estimates are produced by DRI/McGraw-Hill but are adjusted by EIA to reflect EIA assumptions about the world price of crude oil, energy product prices, and other assumptions which may affect the macroeconomic outlook. The EIA model is available on computer tape from the National Technical Information Service.

Treatment of Petroleum Supply Monthly Reporting Change

The Energy Information Administration began reporting the series "Motor Gasoline Product Supplied" (equated in this report with gasoline demand) on a new basis for monthly data for January 1993 forward. These new-basis data are included in this issue of the *Outlook*. The reporting changes reflect data relating to fuel ethanol blended into gasoline as well as certain changes in product classification affecting reported motor gasoline quantities. Beginning with the fourth quarter 1993 edition of the *Outlook*, any references to data series affected by these changes are, for periods prior to 1993, strictly in terms of the new-basis definition. Thus, history for motor gasoline and miscellaneous product demands were restated so as to make comparisons as consistent as possible. Appendix B from the third quarter 1993 *Outlook* provides details on the significance of the data restatement.

Contents

Contents _____

Tables

Figures

Highlights

Low Oil Prices in 1994 Impact Gasoline Prices, But Not Diesel

World oil prices reached their lowest point since 1988 in the first quarter of 1994. The average cost of imported crude for U.S. refiners is expected to gradually rise from its current $13 per barrel to $17 per barrel by late 1995. An effect of the low import price in 1994 will be to weaken consumer prices for petroleum, with retail motor gasoline prices expected to average 2 cents per gallon less than in 1993. Diesel fuel oil prices are expected to increase in 1994, despite lower crude oil prices, because of increased taxes implemented at year-end 1993 and higher costs associated with the low-sulfur content requirements.

World Oil Demand to Show Substantial Growth in 1994, 1995

A total of 1.8 million barrels per day of world oil demand growth is projected for the period 1993 to 1995. The major reasons are: improved economic growth in the Organization of Economic Cooperation and Development (OECD) countries, continued growth in the developing countries, and a reduction in the decline rate of the economies of the former Soviet Union.

1994 U.S. Oil Demand Boosted by Severe Winter

U.S. petroleum demand is expected to increase in 1994 due to the combined effects of stronger economic growth, declining oil prices, and the severe winter weather experienced in January. First quarter 1994 distillate demand is estimated to have been more than 300,000 barrels per day higher than a year ago. Higher demand and lower domestic production will cause net imports to continue to rise. By 1995 imports will reach 46.2 percent of demand.

Natural Gas Market Remains Strong as Demand Heads for 20-Year High

Demand for natural gas is expected to grow more quickly in 1994 than it did in 1993. Despite low oil prices, healthy growth in gas demand is expected in the industrial sector in both forecast years. The overall strength of natural gas markets through 1995 is expected to carry total gas demand to levels not seen since the early 1970's.

Coal Production, Exports to Rise in Forecast

As coal producers and consumers replenish stocks drawn down during the recent strike (ended fourth quarter 1993) and consumption grows, coal production is expected to increase by 10.3 percent in 1994. U.S. coal exports are seen recovering along with the global economy in both 1994 and 1995, particularly in the latter year.

Electricity Demand Buoyed Again by Weather

Another year of above 3 percent growth in electricity demand looks likely in 1994, as first quarter demand rose sharply in the Eastern United States due to cold weather. Relatively strong economic growth also contributes to this increase in demand. However, prospects for lower output growth next year may pull electricity demand growth below 2 percent in 1995.

Note: The data referenced may be found in Table 1 or in the tables located in the back of this report.

Table 1. U.S. Energy Supply and Demand Summary

	Price Case [a]	Year 1992	Year 1993	Year 1994	Year 1995	Annual Percentage Change 1992-1993	Annual Percentage Change 1993-1994	Annual Percentage Change 1994-1995
Real Gross Domestic Product (GDP)								
(billion 1987 dollars)	Mid	4986	5133	5321	5419	2.9	3.7	1.9
Imported Crude Oil Price	Low			11.70	12.00		-27.5	2.6
(nominal dollars per barrel)	Mid	18.20	16.12	13.91	15.90	-11.4	-13.7	14.3
	High			15.98	18.52		-0.9	15.9
Petroleum Supply								
Crude Oil Production [b]	Low			6.47	6.12		-5.4	-5.5
(million barrels per day)	Mid	7.17	6.84	6.63	6.50	-4.6	-3.0	-2.0
	High			6.74	6.79		-1.5	0.8
Total Petroleum Net Imports (including SPR)	Low			8.22	8.79		9.3	6.9
(million barrels per day)	Mid	6.94	7.52	7.99	8.26	8.4	6.2	3.4
	High			7.82	7.86		3.9	0.5
Energy Demand								
World Petroleum								
(million barrels per day)	Mid	66.81	66.80	67.57	68.57	0.0	1.2	1.5
U.S. Petroleum	Low			17.76	18.00		3.3	1.4
(million barrels per day)	Mid	17.10	17.19	17.69	17.86	0.5	2.9	0.9
	High			17.62	17.74		2.5	0.7
Natural Gas	Low			20.88	21.33		3.8	2.1
(trillion cubic feet)	Mid	19.54	20.12	20.91	21.38	3.0	3.9	2.2
	High			20.93	21.40		4.0	2.2
Coal								
(million short tons)	Mid	892	928	951	964	4.0	2.5	1.3
Electricity [c]								
(billion kilowatthours)	Mid	2763	2865	2959	3012	3.7	3.3	1.8
Gross Energy [d]								
(quadrillion Btu)	Mid	82.2	83.9	86.2	87.4	2.1	2.7	1.4
Gross Energy Demand per Dollar of GDP								
(thousand Btu per 1987 Dollar)	Mid	16.48	16.34	16.20	16.13	-0.8	-0.9	-0.4

[a] Refers to the imported cost of crude oil to U.S. refiners assumed for the scenario depicted. In all cases on this table, the mid macroeconomic case and normal weather are used.

[b] Includes lease condensate.

[c] Refers to utility sales only. Total annual electricity sales for historical periods are derived from the sum of monthly sales figures based on submissions by electric utilities of Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions." These historical values differ from annual sales totals based on Form EIA-861, reported in several EIA publications, but match alternate annual totals reported in EIA's *Electric Power Monthly*, DOE/EIA-0226.

[d] The conversion from physical units to Btu is calculated using a subset of *Monthly Energy Review* (*MER*) conversion factors. Consequently, the historical data may not precisely match that published in the *MER*.

SPR: Strategic Petroleum Reserve.

Notes: Minor discrepancies with other published EIA historical data are due to independent rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); *Petroleum Supply Monthly*, DOE/EIA-0190(94/03); *Petroleum Supply Annual 1993*, DOE/EIA-0340(93)/2; *Natural Gas Monthly*, DOE/EIA-0130(94/03); *Electric Power Monthly*, DOE/EIA-0226(94/02); and *Quarterly Coal Report*, DOE/EIA-0121(93/4Q). Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0294.

Feature Article

Summer Outlook for Motor Gasoline

by Michael Morris

For the 1994 peak summer driving season (May through August), motor gasoline demand is projected to average 7.86 million barrels per day, an increase of 142,000 barrels per day, or 1.8 percent, from that of the previous summer season (see Table FE1 below). Buoyed by increases in real personal disposable income, highway travel activity is projected to be 2.7 percent higher than last year. Fleet-wide fuel efficiencies are projected to be 0.9 percent higher than last summer, offsetting part of the effect of the increase in highway travel activity on consumption. The impact on motor gasoline prices--and, hence, on consumption--is expected to be slight. They are projected to average $1.17 per gallon, only slightly below that of the previous summer season's average of $1.18. In inflation-adjusted terms, however, that represents a decline of 3.3 percent, or 4.2 percent on a cost-per-mile basis. This lower cost is expected to add to motor gasoline demand.

It is possible that demand might be stronger than that projected by the Short-Term Energy Outlook base-line forecast. Economic growth might accelerate and retail prices might fall faster than projected in the base case. In fact, substantial increases in Atlantic Basin motor gasoline production would contribute to price weakness. Nonetheless, the three principal sources of motor gasoline--domestic refinery production, net imports, and inventories--would be able to sustain not only a higher demand growth path, but also temporary, unanticipated spikes in demand.

Table FE1 summarizes last year's and projected (base case) supply/demand balances, and contrasts the base case with estimates of summer system capabilities. It shows that refinery production is projected to be 7.38 million barrels per day for this summer, an increase of 132,000 barrels per day from last summer. In the base case, average refinery utilization rate and yield are projected to be 93.9 and 46.2 percent, respectively. But potential refinery output is larger than that. Based on recent refinery activity after several years of upgrading efforts, the utilization rates and yield have averaged 95.2 and 47.2 percent for up to three months, allowing for refinery output as high as 7.65 million barrels per day, or 264,000 barrels per day higher than the base case projection. That estimate is lower than the highest 4-week average (November 6, 1993 to December 3, 1993) of 7.8 million barrels per day.[1] During that interval, weekly output reached a high of 7.91 million barrels per day, indicating that refiners are flexible in meeting short term spikes in demand.

Net imports during the upcoming summer season are projected to average 203,000 barrels per day, up slightly from the 196,000 barrels per day average of the previous summer. This reverses the downward drift in imports observed since 1988. In 1988, summer net imports averaged a record of 420,000 barrels per day. A monthly record of 560,000 barrels per day was recorded in May 1990. Atlantic Basin refineries, especially those in the Caribbean, have added substantial catalytic cracking capacity since the last driving season, and European surplus production is currently being shipped to the United States, competing with Caribbean outlets.[2]

Primary inventories of finished motor gasoline are projected to supply an average 136,000 barrels per day during the upcoming summer season, slightly less than last year. Including blending components, stocks are projected to be 203 million barrels by the end of the season. That projection is slightly above the 200 million barrels at the end of August 1993, the most recent observable minimum. These figures, however, do not include oxygenate stocks, which are projected to climb

Feature Article

from 14 million barrels at the beginning of the season to 21 million barrels by the end of the season, similar to last summer. Although intended primarily as a blending component in oxygenated fuel for the winter, these stocks are also a potential source of supply to meet seasonal requirements in the unlikely event of substantial curtailments of U.S. refinery output or imports. A one-percent increase in summer demand (79,000 barrels per day) met entirely by stocks would raise the average draw to 215,000 barrels per day and, hence, lower total inventories (including oxygenates) by an additional 10 million barrels to 214 million barrels. That level is substantially higher than the traditional (finished plus blending component) National Petroleum Council estimate

of 205 million barrels required to avoid spot shortages, and allows for bottlenecks related to the blending of oxygenates into the rest of the motor gasoline pool.

However, 1995 will usher in new, reformulated gasoline specifications, which European refineries might be unable, or unwilling, to meet. But European sources accounted for less than 50,000 barrels per day of supplies in 1993, i.e., one sixth of gross imports. Any reduction of shipments from Europe will be more than offset by continued upgrading and expansion of Caribbean and U.S. refineries, as well as further expansions of domestic field production.

Table FE1 Summer Motor Gasoline Demand, Supply, and System Capability
(Million Barrels per Day)

	1993 Actual	1994 Base	Change	System Capability
Demand	7.721	7.863	+0.142	
Supply				
Field Production	0.129	0.140	+0.011	0.160
Refinery Production	7.253	7.385	+0.132	7.649
Net Imports	0.196	0.203	+0.007	0.420
Primary Inventories	0.143	0.136	-0.007	0.215
Total Supply	7.721	7.863	+0.142	8.444

Inventories (million barrels)	1993 Actual Begin/End	1994 Base Begin/End	1994 System Capability Begin/End
Finished	182.9/165.2	181.6/164.9	
Blending Components	39.5/35.2	39.0/38.1	
Subtotals	222.4/200.4	221.6/203.0	
Oxygenates	15.3/21.0	14.1/20.9	
Totals	237.7/221.4	235.7/223.9	235.7/214.0

Note: The base-case projections and estimates of system capability referenced in this article are based on simulations of the Short-Term Integrated Forecasting System.

Outlook Assumptions

Figure 1. U.S. Monthly Crude Oil Prices

Figure 2. U.S. Macroeconomic Indicators

World Oil Prices

- Significant price uncertainty surrounds the world oil market, even assuming no Iraqi exports. In the mid-price case, the world oil price, defined as the average cost of imported crude for U.S. refiners, is expected to gradually increase from $13 per barrel in early 1994, to $17 by late 1995 (Figure 1).

- The low-price scenario ($11 per barrel, rising to $12 per barrel by late 1994) assumes that world demand growth is minimal due to the continuation of a worldwide recession and oversupplied oil markets.

- The high-price scenario (world oil price increases to $19 per barrel by late 1995) assumes that world oil demand increases and/or supply decreases cause stocks to be drawn down substantially, placing the world oil market in a tight supply situation.

Economic Outlook

- Mid-price assumptions include an average economic growth rate of 2.5 percent between 1993 and 1995 for Organization for Economic Cooperation and Development (OECD) countries (Table 2).

- In the mid-price case, real gross domestic product (GDP) in the United States grows by 3.7 percent in 1994, and 1.9 percent in 1995 (Figure 2 and Table 2). Interest rate-sensitive sectors of the economy experience higher growth early in the forecast period in response to relatively low interest rates, but slow somewhat by 1995 as interest rates and inflation begin to increase.

- The main source of U.S. economic growth during the latter part of 1993 and 1994 is investment—primarily investment in producers' durable equipment and residential construction.

Weather Assumptions

- Heating degree-days and cooling degree-days are assumed to be normal in the alternative price projections featured in this *Outlook*. Despite January's severe weather, average 1994 heating degree-days are expected to be about the same as 1993.

International Oil Demand

- World oil demand is expected to rise by an average 890,000 barrels per day in 1994 and 1995, after registering almost no growth in 1993 from 1992 levels (Figure 3).

- Oil demand in countries belonging to the Organization for Economic Cooperation and Development (OECD) is expected to increase by about 630,000 barrels per day in 1994, mostly in the United States, and by about 410,000 barrels per day in 1995, mostly outside the United States, as economic performance for these countries improves. This follows a decrease of 30,000 barrels per day in 1993.

- By far the largest area of growth in oil demand is in the developing countries, denoted as Asia and Other in Figure 4. After rising by more than 1.1 million barrels per day in 1993, oil demand in the developing countries is expected to rise by about 540,000 barrels per day in 1994, and by over 700,000 barrels per day in 1995. Oil demand in these countries continues to increase substantially each year as their economies continue to grow (Figure 4).

- Oil demand in Asia is expected to increase about 4 percent in 1994 and roughly 5 percent in 1995. Oil demand is estimated to grow in Latin America and Africa at a slower, but substantial pace, by roughly 2.5 percent in 1994 and 3 percent in 1995.[3]

- After declining by almost 1.1 million barrels per day in 1993, oil demand in the former Soviet Union and Eastern Europe is expected to decline by nearly 600,000 barrels per day in 1994, and by roughly 330,000 barrels per day in 1995 (Table 4). As these countries attempt to move toward Western-style economies, oil demand should decline by a smaller amount each succeeding year in the forecast.

- Improved economic growth in the OECD and in the developing countries, along with a reduction in the decline rate of the economies in the former Soviet Union, are the major reasons for the 1.8 million barrels per day of world oil demand growth between 1993 and 1995 (Table 4).

Figure 3. World Oil Demand Changes by Region

Figure 4. World Petroleum Demand

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.

FSU = Former Soviet Union

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.

FSU = Former Soviet Union

International Oil Supply

Figure 5. World Oil Production

FSU = Former Soviet Union
Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.

Figure 6. OPEC Oil Production and Capacity

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.

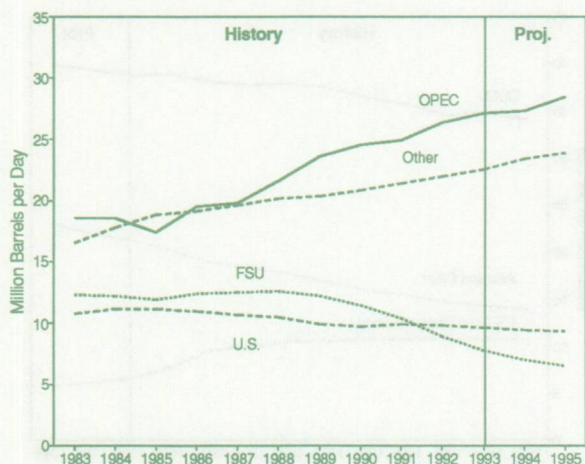- After decreasing by 30,000 barrels per day in 1993, world petroleum production is expected to increase by 100,000 barrels per day in 1994, and by 970,000 barrels per day in 1995 (Table 4 and Figure 5).

- By far, the bulk of this increase will come from the Organization of Petroleum Exporting Countries (OPEC). OPEC production is expected to increase by 200,000 barrels per day in 1994, and by over 1 million barrels per day in 1995 (Table 4).

- U.S. petroleum production is expected to continue its declining trend throughout the forecast period, falling by 340,000 barrels per day betweem 1993 and 1994 (Table 7).

- In the former Soviet Union (FSU), petroleum production is expected to continue to fall, albeit at a much reduced rate. Following a 1.1 million barrel per day decline in 1993, production is expected to decline by 740,000 barrels per day in 1994, and by a further 530,000 barrels per day in 1995 (Figure 5 and Table 4).

- Petroleum production in the North Sea is expected to increase by 500,000 barrels per day in 1994 and maintain that level in 1995. Production by non-OPEC developing countries is expected to rise by 300,000 barrels per day in 1994 and by 340,000 barrels per day in 1995.

- While OPEC production is projected to increase significantly in the forecast, rising OPEC production capacity is expected to more than offset increases in production through 1994 (Figure 6).

- OPEC excess production capacity was 2.4 million barrels per day in 1993. It is expected to increase to 3.5 million barrels per day in 1994, before declining slightly to 3.3 million barrels per day in 1995, as production rises. A large portion of the estimated increases in OPEC capacity is from Saudi Arabia (1.0 million barrels per day), Iran (over 230,000 barrels per day), Kuwait (over 260,000 barrels per day), and Venezuela (nearly 220,000 barrels per day).[4] Iraq could add nearly 2 million barrels per day by end-1995 to OPEC capacity if United Nations sanctions were dropped.

World Oil Stocks and Net Trade

- Although petroleum stock levels in the Market Economies (which exclude the former centrally planned economies) have increased each year since 1986, this *Outlook* projects that stock levels will decrease slightly in 1994 and 1995 (Figure 7).

- "Days of Supply" is the number of days of consumption that can be supplied by non-government stocks above the minimum operating level. Since consumption is expected to increase while stocks are expected to decline slightly, the "Days of Supply" measure declines in 1994 and 1995. However, this measure would remain at historically high levels.

- The United States contributed to world increases in stock levels with a 5.3 percent increase in (nonstrategic) stocks between year-end 1992 and year-end 1993.[5] With prices forecast to gradually increase over the next 2 years, there will be some incentive to draw down stocks from current levels.

- Petroleum production in the FSU is expected to continue declining throughout the forecast period. Oil demand in the FSU is expected to decline by almost as much as production. This implies that net exports from the FSU will decline gradually from 2.2 million barrels per day in 1993 to 2.1 million barrels per day in 1994 and 1.9 million barrels per day in 1995 (Figure 8).

- Since exports of petroleum are a major source of hard currency for the FSU, there is a strong incentive to maintain exports, even if that means some domestic shortages might occur.

- A change in this situation, such as would occur if consumption in the region stabilized or began to grow again, could add significantly to production requirements in OPEC. The situation in the FSU is one of the main wildcards in the world oil market over the next 2 years.

Figure 7. Market Economies' Commercial Oil Stocks
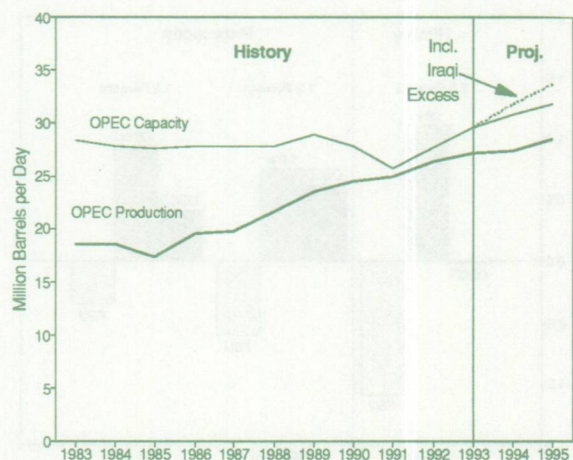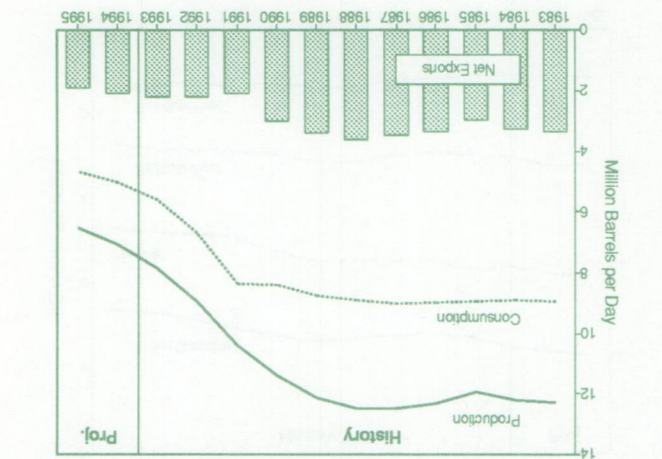

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.
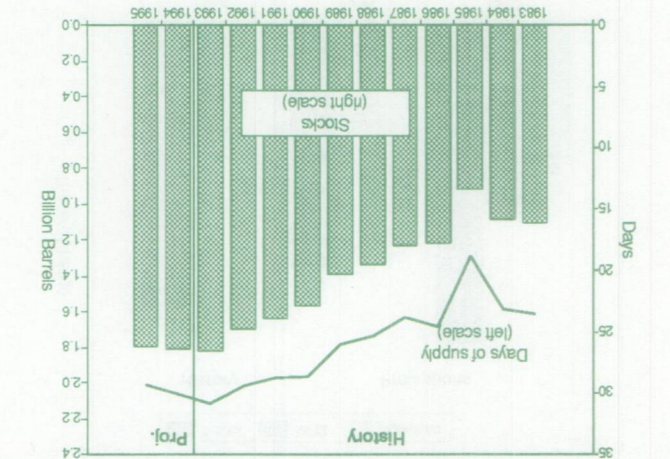
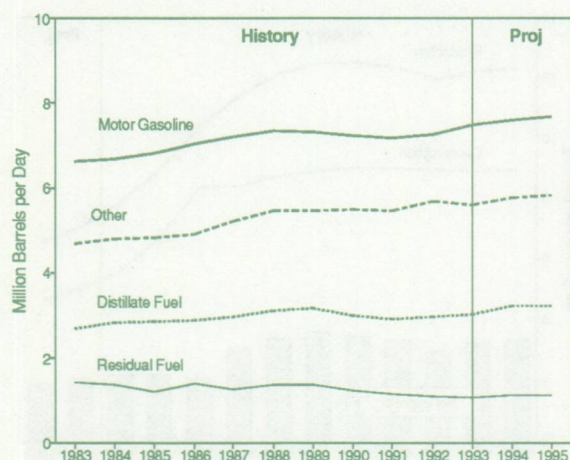**Figure 8. FSU Oil Output, Demand, and Net Exports**

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 20.

U.S. Oil Demand

Figure 9. U.S. Petroleum Demand

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

Figure 10. Gasoline Market Indicators

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

- The combined effects of robust economic growth, declining oil prices and severe winter weather are expected to boost total petroleum demand in 1994 by 500,000 barrels per day, or 2.9 percent (Figure 9 and Table 7). In 1995, slower economic growth, recovery in product prices and normal weather are expected to slow demand growth to 0.9 percent.

- Motor gasoline demand is projected to increase by 1.4 percent in 1994, and 1.3 percent in 1995. Continued economic growth, as well as an overall decline in the real cost per mile, are expected to boost highway travel by an average 2.6 percent during the forecast interval (Table 3). Fuel efficiency growth is expected to continue to increase at an average of 1.3 percent, reflecting lack of fuel efficiency growth in new automobiles as well as a decline in the retirement rate of older, less fuel-efficient vehicles (Figure 10 and Table 7).

- Jet fuel demand is projected to increase by an average 1.9 percent rate during the next two years. This reflects 3.9 percent and 3.5 percent average increases in capacity and revenue ton-miles, respectively (Table 3). Reversing the

hike in ticket prices in 1993, 1994 is expected to witness a resumption of ticket price declines averaging 5.8 percent decline in real terms, contributing to the substantial demand growth in 1994 (Table 3).

- First-quarter 1994 distillate demand is estimated to have been more than 300,000 barrels per day higher than a year ago. The 6.3 percent increase in distillate demand projected for 1994 reflects weather effects. Assuming normal weather, no growth is expected in 1995.

- Environmental constraints are expected to limit the effects of lower oil prices on residual fuel oil demand growth in 1994. Slower economic growth and firming prices are expected to result in little demand growth in 1995.

- The switch to oil-based feedstocks as well as growth in asphalt and road-oil demand due to severe weather and the recent boost in housing starts are major factors in the 2.9 percent growth in other oils in 1994.

U.S. Oil Supply

- At mid-case prices, total U.S. domestic crude oil production is expected to decline by 210,000 barrels per day (3.0 percent) in 1994, and an additional 130,000 barrels per day (2.0 percent) in 1995 (Tables 1 and 7 and Figure 11).

- Oil production in the lower 48 States is expected to drop by 220,000 barrels per day in 1994, and by 90,000 barrels per day in 1995 (Table 7). Oil production from new projects in Federal offshore waters (the Santa Ynez unit in the Pacific, and the Augur project in the Gulf of Mexico) is expected to account for about 0.5 percent of total U.S. oil production by the end of 1994, if development goes as scheduled.[6] In addition, oil production from the Point Arguello field in the Pacific Federal Offshore is expected to be maintained at 70,000 barrels per day throughout the forecast period.[7]

- Oil production in Alaska is expected to increase slightly (0.3 percent) in 1994, and then decrease by 2.8 percent in 1995. Installation of additional gas-handling facilities in the Prudhoe Bay field, plus new production from the Point McIntyre and Niakuk fields, prevent 1994 production from falling (Table 7).

- Crude oil production could be as high as 6.77 million barrels per day by the end of 1995, given the high price case and production from new projects in the Federal Offshore, or as low as 6.00 million barrels per day under the low price scenario (Table 10).

- Declining oil production and rising demand in the United States means an increase in net imports of crude oil and products of 740 thousand barrels per day between 1993 and 1995. This would equal 46.2 percent of total petroleum demand in 1995 in the base case (Figure 12). The net import share of demand could range from 48.8 percent in the low price case to 44.3 percent in the high price case in 1995 (Tables 6 and 8).

- The Baker Hughes 1993 cumulative average drilling rig count was 754.[8] This is a slight improvement over 1992, but low by historical standards.[9] The oil rig count was 373 for 1993. The oil rig count for 1994 is expected to remain about the same as in 1993, but increase to 387 in 1995.[10]

Figure 11. U.S. Crude Oil Production

Sources: Second Quarter 1994 STIFS database and Energy Information Administration, Reserves and Natural Gas Division. Details provided in Figure References Section, p. 20.

Figure 12. U.S. Net Oil Imports' Share of Demand

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

U.S. Energy Prices

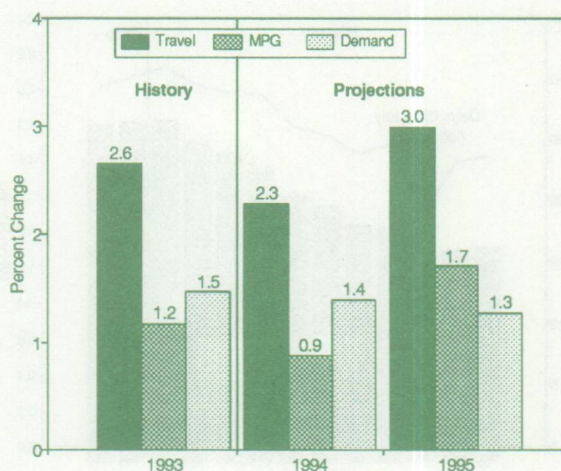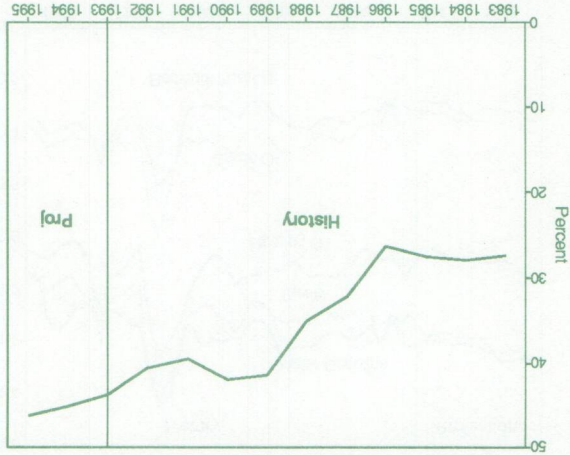## Figure 13. U.S. Petroleum Prices

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

Figure 14. U.S. Natural Gas Wellhead Prices

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

- Crude oil prices are assumed to range from $11 per barrel in the low price case to $19 per barrel in the high price case (Table 5). In the mid price case, the average refiner cost (RAC) of crude oil is expected to be $13.91 per barrel in 1994. In 1995, the RAC is expected to rise by about $2 to $15.90 per barrel (Figure 13).

- The low RAC should keep motor gasoline prices weak in the first half of 1994. In 1995, a higher RAC, increased refining costs for reformulated gasoline, and small increases in the average state and local taxes are expected to increase the price by 10 cents per gallon.

- The average diesel fuel oil price is expected to show an increase in 1994 despite lower crude oil costs because of weather-related price pressure in the first quarter and higher costs associated with the low-sulfur content requirements. In 1995, these prices should rise by an amount equal to the higher crude oil costs.

- Retail heating oil prices jumped about 5 to 6 cents per gallon in February 1994 from the previous month due to weather-related high demand. The low RAC and lower demand in the spring and summer should keep prices below 90 cents per gallon until the next winter.

- Residual fuel oil stocks fell and imports rose this winter as oil use increased sharply at electric utilities, particularly in January 1994, but also in December 1993. Low RAC prices should keep residual fuel oil prices low and residual fuel use an attractive alternative to gas where its use is not restricted due to environmental considerations.

- Cold weather earlier this year and continuing demand growth next year should result in natural gas wellhead prices growing an average 18 cents per thousand cubic feet per year in 1994 and 1995 (Table 5 and Figure 14).

- Residential natural gas prices are projected to increase by 69 cents per thousand cubic feet over the next two years, due to higher wellhead prices and the increased costs related to industry restructuring under FERC Order 636.

U.S. Oil Demand and Supply Sensitivities

- The petroleum demand and supply outlook for the mid-price case is based on normal temperatures and a particular set of macroeconomic assumptions. To enhance the usefulness of the mid-case forecast, ranges of possible outcomes for petroleum demand and supply, using alternative macroeconomic, price, and weather assumptions, are also derived (Table 9). Plausible macroeconomic and weather-related petroleum demand cases are illustrated in Figures 15 and 16.

- The petroleum price sensitivity assumes that nonpetroleum prices remain constant. The weather sensitivities assume deviations above and below normal that correspond to one-half of the largest quarterly deviations from normal in heating and cooling degree-days over the last 15 years.

- A 1-percent increase in real GDP raises petroleum demand by about 156,000 barrels per day. Actual impacts from shifts in economic growth may vary depending upon the distribution of incremental growth across energy intensive and non-energy-intensive sectors.

- A $1-per-barrel increase in crude oil prices, assuming no price response from non-petroleum energy sources, reduces demand by about 34,000 barrels per day.

- A $1-per-barrel increase in crude oil prices boosts domestic oil supply (crude oil and natural gas liquids production) by 87,000 barrels per day.

- A 1-percent increase in heating degree-days increases demand by about 40,000 barrels per day. The impact of heating degree-days deviations from normal is not likely to be symmetrical. Extremely cold weather could result in indirect effects on fuel oil markets due to potential natural gas supply constraints that have no counterparts in the case of mild weather (Figure 16).

- A 1-percent increase in cooling degree-days increases petroleum demand by about 12,000 barrels per day.

(See Appendix A for sensitivity calculation methodology.)

Figure 15. Total Petroleum Demand: Macro Cases

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

Figure 16. Total Petroleum Demand: Weather Cases

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

U.S. Natural Gas Demand

Figure 17. U.S. Natural Gas Demand Trends

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

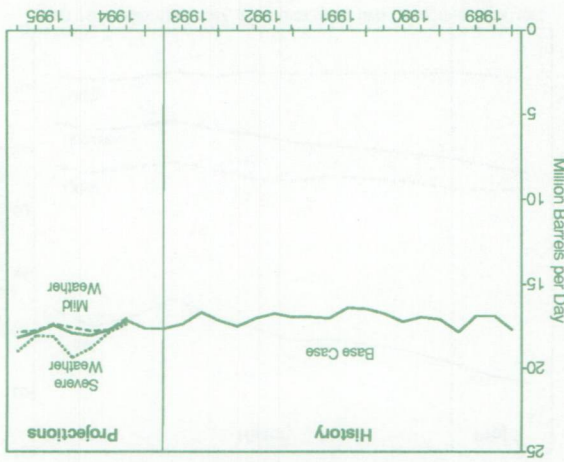### Figure 18. U.S. Natural Gas Demand by Sector

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

- Natural gas demand in 1994 is expected to grow more quickly than it did in 1993. This is because of the increased economic growth, particularly in manufacturing production. As the economy slows somewhat in 1995, so too does natural gas demand (Table 11).

- Natural gas demand in 1994 is expected to total 20.91 trillion cubic feet, reflecting a growth rate of 3.9 percent compared with 1993. Natural gas demand is projected to grow by 2.2 percent in 1995, to 21.38 trillion cubic feet (Figure 17 and Table 11).

- Despite low oil prices, healthy growth in gas demand is expected in the industrial sector in both forecast years. This is due to expanding use of natural by non-utility generators and environmental considerations necessitated by the Clean Air Act. Industrial demand for natural gas in 1994 is forecast to grow by 6.5 percent and 4.3 percent in 1994 and 1995, respectively (Figure 18).

- Utility gas demand has been rising since the second half of 1993 and is expected to continue to rise throughout the forecast period, due to increasing electricity demand. Environmental considerations necessitated by the Clean Air Act have counteracted the effect of lower residual fuel oil prices in this sector. In 1994, utility gas demand is expected to rise by 6.7 percent, and by an additional 5.2 percent in 1995.

- Residential sector demand in 1994 is expected to be up by 3.0 percent. This increased demand primarily reflects the continued addition of new natural gas customers, but also the severe winter weather experienced in the first quarter of 1994 (Table 11 and Figure 18).

- The year 1993 brought the highest annual natural gas demand total (20.12 trillion cubic feet) since 1979[11]. If the current mid-price case projections hold, domestic natural gas demand in 1995 (a projected 21.38 trillion cubic feet) will reach the highest level since 1973, when demand totaled 22.05 trillion cubic feet. A general expansion in natural gas sales, particularly in the industrial sector, has steadily proceeded in the wake of gas deregulation in the mid 1980's.

U.S. Natural Gas Supply

Figure 19. U.S. Dry Gas Production and Net Imports

Sources: Second Quarter 1994 STIFS database and Energy Information Administration, Reserves and Natural Gas Division. Details provided in Figure References Section, p. 20.

Figure 20. Total Gas in Underground Storage

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

- Despite relatively weak crude oil prices this year, natural gas wellhead prices are expected to strengthen along with demand at an average rate of 8.5 percent per year from 1993 through 1995, or about 18 cents per thousand cubic feet per year (Table 5).

- In 1994, dry gas production is expected to increase by 3.5 percent compared with 1993, and a further 1.5 percent in 1995 (Figure 19 and Table 11). New and higher estimates for 1993 production (and a corresponding revision in the demand and supply balancing item) have translated into significantly higher production levels for this *Outlook* compared to last issue.

- Although oil and gas drilling has been declining since the beginning of the year, most of the drilling decline has been concentrated in gas. The estimated number of gas wells drilled in February 1994 was 555, 42 percent lower than in February 1993.[12]

- Canadian natural gas imports are expected to continue to rise steadily throughout the forecast period. U.S. natural gas net imports, 96 percent of which come from Canada, are forecast to rise by 5.7 percent in 1994, and by a further 11.3 percent in 1995, reflecting rising U.S demand and continuing increases in Canada's export pipeline capacity. Canada currently exports more than 50 percent of its total gas production to the United States.[13]

- The 1994 winter provided graphic proof of the increasingly important roles, especially during peak demand periods, of Canadian imports and domestic gas storage. During the months of January and February, net gas imports averaged 6.1 billion cubic feet per day, 18 percent over the 1993 level for the same month. Storage withdrawals averaged 20 billion cubic feet per day, 5 percent above the 1993 level.[14]

- Total gas storage levels are expected to end the winter heating season at 5.20 trillion cubic feet, less than 1 percent below the 1993 end-March level, due to the high drawdowns in January and February (Figure 20 and Table 11).

U.S. Coal Demand and Supply

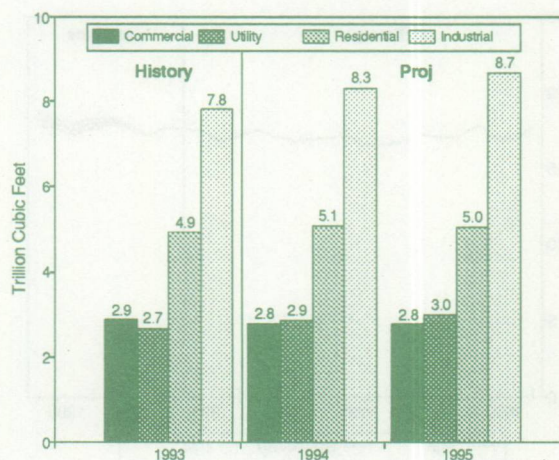### Figure 21. U.S. Coal Demand Trends

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.

Figure 22. Components of U.S. Coal Supply

Sources: Second Quarter 1994 STIFS database and Energy Information Administration, Office of Coal, Nuclear, Electric, and Alternative Fuels. Details provided in Figure References Section, p. 20.

- Coal production is expected to grow by 10.3 percent in 1994, as coal producers and consumers replenish stocks drawn down during the strike (which ended in fourth quarter 1993), coal consumption increases, and coal exports recover (Figure 22).

- Total coal consumption grew by an estimated 4.0 percent in 1993. In 1994 and 1995, increases of 2.5 and 1.3 percent, respectively, are forecast (Table 12). Growing electricity demand will be the primary spur to growth in coal demand over the next 2 years (Figure 21).

- Utility coal demand is expected to increase by 2.9 percent in 1994 and 1.6 percent in 1995 (Table 12).

- Demand for coal at coke plants is expected to decline in 1994 and 1995, despite increased raw steel production. Imports of coal coke,

production of steel by electric arc furnaces, and capacity limits at domestic coking plants are expected to constrain future domestic coal demand growth in steel production.

- Coal demand by the retail and industrial sectors will grow somewhat in 1994 as industrial output rises, but at a slower rate than it did in 1993. Demand from these sectors begins to shrink as coal is displaced to meet environmental regulations, a trend that will continue through 1995 and beyond.

- U.S. coal exports declined in 1993 due to the continuing weakness of the European economy, the stiff competition from other coal exporting countries, and the U.S. coal strike in 1993. Exports are seen recovering along with the global economy, growing by 3 million short tons in 1994 and 9 million short tons in 1995 (Table 12).

U.S. Electricity Demand and Supply

- In 1994, electricity demand is expected to rise by over 3 percent due to the fact that heating degree days in first quarter 1994 were 3.3 percent above normal (Tables 2 and 13). Weather factors are not expected to influence demand in 1995 due to the assumption of normal weather (Figure 23).

- Growth in residential demand for electricity in 1994 is projected at 2.9 percent, due mainly to high first quarter demand during the cold snap. Commercial sector demand growth is projected at 4.0 percent in both 1994 and 1995, due primarily to expanding employment, which requires added office and commercial lighting/computers.

- Industrial demand growth in 1994 is expected to rise by 3.3 percent above the 1993 level, reflecting the rise in manufacturing production. In 1995, industrial demand slows to 1.2 percent as the economic growth rate slows somewhat (Table 13).

- Coal, oil, and natural gas generation are expected to meet the increased demand for electricity in 1994 (Figure 24). Oil generation is rising fastest due to low oil prices (although growth is from a low starting point).

- Coal generation in 1994 and 1995 will not be growing as rapidly as in 1993 due to compliance with the Clean Air Act. In 1994 nuclear generation is expected to grow by 1.1 percent due to a full year's generation from Comanche Peak 2, which became commercial in August 1993. The 1994 hydropower forecast reflects the continuing effects of currently below-normal water conditions in several areas of the Nation. However, hydropower growth of 5.1 percent in 1995 is due to assumptions of normal precipitation during the forecast period (Table 13).

- U.S. utilities are expected to generate about 3.0 and 1.5 percent more electricity in 1994 and 1995, respectively. Non-utility generation is expected to increase at even faster rates of 9.4 and 3.9 percent in 1994 and 1995, respectively, due to planned capacity additions.

- Net imports of electricity from Canada are expected to resume their steady rise in 1994. Gross electricity imports from Ontario Hydro during January were almost 10 times more than the previous January due to the severe weather in the Northeast.[15]

Figure 23. Electricity Demand Changes by Sector

Sources: Second Quarter 1994 STIFS database. Details provided in Figure References Section, p. 20.
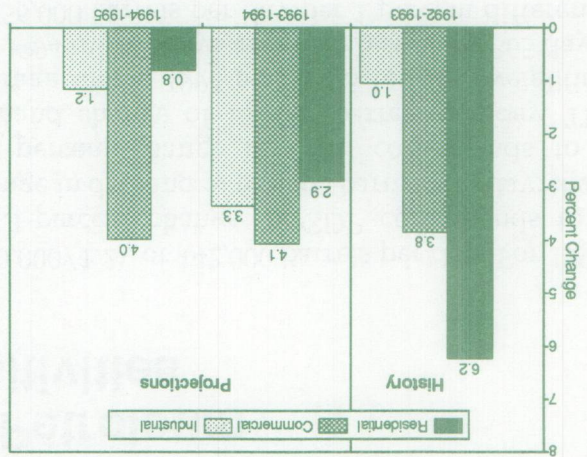
Figure 24. U.S. Electricity Supply Trends

Sources: Second Quarter 1994 STIFS database and Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels. Details provided in Figure References Section, p. 20.

Computation of Petroleum Demand Sensitivities

Table 9 summarizes the response of forecasts for U.S. total petroleum demand to changes in assumptions for economic growth, world crude oil prices, and weather. The values in this table are computed using the Short-Term Integrated Forecasting Model (STIFS). The STIFS model is documented in EIA's *Short-Term Integrated Forecasting System: 1993 Model Documentation Report* (DOE/EIA-M041, May 1993). The purpose of the model is to generate forecasts of U.S. energy supply, demand, and prices. Key inputs include assumptions for the imported price of crude oil, the rate of U.S. economic growth, and weather (cooling and heating degree-days). Forecasts are generated for production, imports, exports, demand, and prices for refined petroleum products, natural gas, coal, and electricity.

A key relationship shown in Table 9 is that between petroleum demand and economic activity. Gross domestic product (GDP) is varied from low to high for each of the two projection years, and the resulting change in petroleum demand is calculated. For each of the 2 years, the percentage difference in GDP is computed as the difference between the low and high case levels shown in Table 2, divided by the midpoint of this range. Thus, the percentage difference in GDP for 1994 is as follows: (5353 - 5288) / ((5353 + 5288) / 2), or 1.2 percent. For each period, the petroleum demand difference (in million barrels per day) is divided by the percentage difference in GDP. For 1994, the average petroleum demand difference is 170,000 barrels per day; thus, a 1-percent change in GDP corresponds to a change in demand of (170,000/1.2), or 142,000 barrels per day. For 1995, a 4.1-percent change in GDP corresponds to a change in demand of 685,000 barrels per day; thus, a 1-percent change in GDP corresponds to a demand change of 167,000 barrels per day. The average of the 1994 and 1995 results (weighting the 1994 by 275 days and 1995 results by 365 days) is 156,000 barrels per day per 1 percent difference in GDP. Table 9 also shows the differences in petroleum demand due to changes in energy prices caused by varying the world crude oil price. The change in petroleum demand (in million barrels per day) is divided by the change in the crude oil price (in dollars per barrel), and the result is averaged over the two projection years to get an estimate of the change in petroleum demand per dollar of change in the crude oil price.

The influence of weather on petroleum demand is also calculated, using the mid-case values for economic activity and imported crude oil prices. The percentage changes in heating or cooling degree-days are computed and divided by the changes in petroleum demand, and the result is averaged over the two projection periods to get an estimate of the change in petroleum demand per 1-percent change in heating and cooling degree-days. The changes in demand due to changes in heating degree-days apply only to the heating season, roughly the first and fourth quarters of the year, while the changes in demand due to changes in cooling degree-days apply only to the cooling season, roughly the second and third quarters of the year.

Text References and Notes

Summer Outlook for Motor Gasoline

[1]Energy Information Administration, *Weekly Petroleum Status Report*, various issues.
[2]*Petroleum Intelligence Weekly*, March 14, 1994, and March 28, 1994.
[3]Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

International Oil Supply

[4]Excess capacity data by country provided by Energy Information Administration, Energy Markets and Contingency Information Division.

World Oil Stocks and Net Trade

[5]Based on comparison of stocks data for ending 1992 in Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340(92/1) and estimates for 1993 ending stocks given in Table 7.

U.S. Oil Supply

[6]Estimate provided by the Energy Information Administration, Reserves and Natural Gas Division.
[7]Estimate provided by the Energy Information Administration, Reserves and Natural Gas Division.
[8]*Oil and Gas Journal*, "Baker Hughes Rig Count," January 10, 1994, p. 66.
[9]The 1993 average rig rate was the second lowest annual average since at least 1949. See Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/02)(Washington, DC, February 1994), and Energy Information Administration, *Annual Energy Review*, DOE/EIA-0384(92)(Washington, DC, June 1993) Table 4.30.
[10]Projection provided by the Energy Information Administration, Reserves and Natural Gas Division.

U.S. Natural Gas Demand

[11]See Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/02), Table 4.4.

U.S. Natural Gas Supply

[12]Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/02), Table 5.2.
[13]Natural Resources Canada, International Natural Gas Division.
[14]Energy Information Administration, Office of Energy Markets and End Use.

U.S. Electricity Demand and Supply

[15]Estimates prepared by Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels, with verbal information from Ontario Hydro.

Figure References

The following is a list of references for the figures appearing in this issue of the *Short-Term Energy Outlook*. Except where noted, all data for figures are taken from datasets containing monthly values of each variable depicted, aggregated to quarterly or annual values as required using appropriate weights. The datasets are created by particular runs of the Short-Term Integrated Forecasting System (STIFS) Model, depending on the scenario or set of scenarios depicted. Also, except when noted, all figures refer to the base or "BBB" case. Other cases referred to are: the high world oil price "BHB"; low world oil price "BLB"; severe weather "BBS"; mild weather "BBL"; strong economic growth "HBB"; weak economic growth "LBB"; weak economic growth with high world oil prices "WHB"; and strong economic growth with low world oil prices "PLB."

1. **History:** Import cost: Compiled from monthly data for the refiner acquisition cost of imported crude oil used in publication of Energy Information Administration, *Petroleum Marketing Annual 1991*, DOE/EIA-0487(91) and *Petroleum Marketing Annual 1992*, DOE/EIA-0487(92), Table 1 for historical series; for recent values, *Petroleum Marketing Monthly*, DOE/EIA-0380, Table 1; West Texas Intermediate spot price, *Oil and Gas Journal* Database, April 5, 1994. **Projections:** Second quarter 1994 STIFS database, BBB, BLB, and BHB cases; and Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

2. **History:** Manufacturing Production: Federal Reserve System, Statistical Release G 17; GDP: U.S. Department of Commerce Bureau of Economic Analysis, *National Income and Product Accounts of the U.S.* **Projections:** DRI/McGraw-Hill Forecast CONTROL0294, modified by EIA's Office of Integrated Analysis and Forecasting with STIFS energy price forecasts.

3. **History:** Compiled from annual data used in publication of Energy Information Administration, *International Energy Annual*, DOE/EIA-0219, Table 8 for historical series; for recent values, *International Petroleum Statistics Report*, DOE/EIA-0520, Table 2.4; Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Administration. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

4. **History:** Compiled from annual data used in publication of Energy Information Administration, *International Energy Annual*, DOE/EIA-0219(92), Table 8 for historical series; for recent values, *International Petroleum Statistics Report*, DOE/EIA-0520, Table 2.4; and Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Administration. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

5. **History:** Compiled from annual data used in publication of Energy Information Administration, *International Petroleum Statistics Report*, DOE/EIA-0520, Table 4.1 for historical series and recent data; and Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

6. **History:** Compiled from annual data used in publication of Energy Information Administration, *International Petroleum Statistics Report*, DOE/EIA-0520, Table 4.2 for historical series and recent data;

Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Administration. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

7. **History:** Compiled from annual data used in publication of Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035, Table 10.3 for historical series and recent data. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

8. **History:** Compiled from annual data used in publication of Energy Information Administration, *International Energy Annual*, DOE/EIA-0219(92), Table 1; Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division. **Projections:** Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division.

9. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340/1, Tables S4 through S10; *Petroleum Supply Monthly*, DOE/EIA-0109, Tables S4 through S10, adjusted in years prior to 1993 for new (1993) reporting basis for fuel ethanol blended into motor gasoline (See *Short-Term Energy Outlook*, DOE/EIA-0202(93/3Q), Appendix B). **Projections:** Second quarter 1994 STIFS database, case "BBB."

10. **History:** Travel: Compiled from monthly data used in the Federal Highway Administration publication, *Traffic Volume Trends*; Demand: Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340/1, Table S4 for historical series, adjusted for 1993 reporting basis (see note 9 above); for recent values, *Petroleum Supply Monthly*, DOE/EIA-0109, Table S4; MPG is calculated as Travel (in miles)/Demand (in gallons). **Projections:** Second quarter 1994 STIFS database, case "BBB."

11. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340/1, Table S1 for historical series; for recent values, *Petroleum Supply Monthly*, DOE/EIA-0109, Table S1. **Projections:** Second quarter 1994 STIFS database, cases "BBB," "WHB," and "PLB;" and EIA's Reserves and Natural Gas Division.

12. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340/1, Table S1 for historical series; for recent values, *Petroleum Supply Monthly*, DOE/EIA-0109, Table S1. **Projections:** Second quarter 1994 STIFS database, case "BBB." The imports share variable is calculated as the ratio of total net petroleum imports divided by total petroleum demand.

13. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Marketing Annual*, DOE/EIA-0487, Tables 2, 4, and, 15, for historical series; for recent values, *Petroleum Marketing Monthly*, DOE/EIA-0380, Tables 2, 4 and 15. **Projections:** Second quarter 1994 STIFS database.

14. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Monthly*, DOE/EIA-0130, Table 4. **Projections:** Second quarter 1994 STIFS database, cases "BBB," "BLB," and "BHB" cases.

Figure References

15. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1,* DOE/EIA-0340/1, Table S1 for historical series adjusted for 1993 reporting basis (see note 9 above); for recent values, *Petroleum Supply Monthly,* DOE/EIA-0109, Table S1. **Projections:** Second quarter 1994 STIFS database, cases "BBB," "BBS," and "BBL."

16. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Petroleum Supply Annual, Volume 1,* DOE/EIA-0340/1, Table S1 for historical series adjusted for 1993 reporting basis (see note 9 above); for recent values, *Petroleum Supply Monthly,* DOE/EIA-0109, Table S1. **Projections:** Second quarter STIFS database, cases "BBB," "HBB," and "LBB."

17. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Annual, Volume 2,* DOE/EIA-0131, Table 3 for historical series; for recent values, Energy Information Administration, *Natural Gas Monthly,* DOE/EIA-0130. **Projections:** Second quarter 1994 database, case "BBB."

18. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Annual, Volume 2,* DOE/EIA-0131, Table 3 for historical series; for recent values, Energy Information Administration, *Natural Gas Monthly,* DOE/EIA-0130. **Projections:** Second quarter 1994 STIFS database, case "BBB."

19. **History:** Productive capacity compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Productive Capacity for the Lower 48 States,* DOE/EIA-0542(92); Production: *Natural Gas Annual, Volume 2,* DOE/EIA-0131/2, Table 2 for historical series; for recent production data, *Natural Gas Monthly,* DOE/EIA-0130. **Projections:** Second quarter 1994 STIFS database, case "BBB"; and Energy Information Administration, Reserves and Natural Gas Division.

20. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Annual, Volume 2,* DOE/EIA-0131, Table 3 for historical series; for recent values, Energy Information Administration, *Natural Gas Monthly,* DOE/EIA-0130. **Projections:** Second quarter 1994 STIFS database, case "BBB."

21. **History:** Compiled from quarterly data used in publication of Energy Information Administration, *Quarterly Coal Report,* DOE/EIA-0121, Table 45. **Projections:** Second quarter 1994 STIFS database, case "BBB."

22. **History:** Compiled from quarterly data used in publication of Energy Information Administration, *Quarterly Coal Report,* DOE/EIA-0121, Table 1. **Projections:** Second quarter 1994 STIFS database, case "BBB"; and Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.

23. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Electric Power Monthly ,* DOE/EIA-0226, Table 51. **Projections:** Second quarter 1994 STIFS database, case "BBB."

24. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Electric Power Monthly ,* DOE/EIA-0226, Table 3 and Form EIA-759. **Projections:** Second quarter 1994 STIFS database, case "BBB"; and Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels for hydroelectric and nuclear power forecasts.

Table 2. U.S. Macroeconomic and Weather Assumptions

	Macro Case	1993 1st	1993 2nd	1993 3rd	1993 4th	1994 1st	1994 2nd	1994 3rd	1994 4th	1995 1st	1995 2nd	1995 3rd	1995 4th	Year 1993	Year 1994	Year 1995
Macroeconomic [a]																
Real Gross Domestic Product	High						5322	5383	5449	5507	5527	5536	5554		5353	5531
(billion 1987 dollars)	Mid	5078	5102	5138	5212	5257	5310	5340	5373	5401	5414	5422	5440	5133	5321	5419
	Low						5298	5298	5298	5294	5300	5309	5326		5288	5307
	High						4.3	4.8	4.5	4.7	3.8	2.8	1.9		4.3	3.3
Percentage Change from Prior Year . . .	Mid	3.2	2.9	2.8	2.8	3.5	4.1	3.9	3.1	2.7	1.9	1.5	1.2	2.9	3.7	1.9
	Low						3.8	3.1	1.7	0.7	0.0	0.2	0.5		3.0	0.4
Annualized Percent Change	High						5.0	4.6	4.9	4.3	1.5	0.7	1.3			
from Prior Quarter	Mid	0.8	1.9	2.8	5.8	3.5	4.0	2.3	2.5	2.0	1.0	0.7	1.3			
	Low						3.1	0.0	0.0	-0.3	0.4	0.7	1.3			
GDP Implicit Price Deflator	High						1.267	1.272	1.277	1.284	1.291	1.299	1.308		1.269	1.296
(Index, 1987=1.000)	Mid	1.233	1.240	1.245	1.249	1.259	1.268	1.275	1.283	1.292	1.300	1.308	1.317	1.242	1.271	1.304
	Low						1.269	1.278	1.289	1.300	1.309	1.317	1.326		1.274	1.313
	High						2.2	2.2	2.2	2.0	1.9	2.1	2.5		2.2	2.1
Percentage Change from Prior Year . . .	Mid	2.8	2.5	2.7	2.2	2.1	2.2	2.5	2.7	2.6	2.6	2.6	2.7	2.5	2.4	2.6
	Low						2.3	2.7	3.2	3.3	3.2	3.0	2.9		2.6	3.1
Real Disposable Personal Income	High						3815	3866	3915	3963	3985	3996	4003		3845	3987
(billion 1987 Dollars)	Mid	3643	3694	3708	3756	3783	3805	3834	3858	3883	3899	3910	3917	3701	3820	3902
	Low						3796	3802	3802	3803	3813	3823	3830		3796	3817
	High						3.3	4.3	4.2	4.8	4.5	3.4	2.3		3.9	3.7
Percentage Change from Prior Year . . .	Mid	1.7	2.4	2.3	1.0	3.8	3.0	3.4	2.7	2.6	2.4	2.0	1.5	1.9	3.2	2.1
	Low						2.8	2.5	1.2	0.5	0.4	0.6	0.8		2.6	0.6
Manufacturing Production	High						1.185	1.212	1.239	1.262	1.267	1.266	1.266		1.200	1.265
(Index, 1987=1.000)	Mid	1.103	1.112	1.118	1.141	1.164	1.179	1.191	1.201	1.209	1.210	1.209	1.209	1.118	1.184	1.209
	Low						1.173	1.169	1.164	1.155	1.153	1.152	1.152		1.167	1.153
	High						6.6	8.4	8.6	8.5	6.9	4.5	2.2		7.3	5.4
Percentage Change from Prior Year . . .	Mid	4.8	4.1	4.5	5.0	5.5	6.0	6.5	5.3	3.9	2.7	1.5	0.7	4.6	5.8	2.2
	Low						5.5	4.6	2.0	-0.7	-1.6	-1.5	-1.0		4.4	-1.2
OECD Economic Growth (percent) [b] . . .														1.4	2.5	2.5
Weather [c]																
Heating Degree-Days																
U.S.		2351	538	118	1647	2404	524	89	1636	2327	524	89	1636	4654	4653	4576
New England		3413	855	194	2257	3516	915	171	2269	3267	915	171	2269	6719	6870	6621
Middle Atlantic		3049	680	134	2006	3229	716	105	2026	2993	715	105	2026	5869	6076	5839
U.S. Gas-Weighted		2367	539	115	1733	2552	539	81	1686	2426	539	81	1686	4754	4858	4732
Cooling Degree-Days (U.S.)		29	317	828	59	28	334	758	72	30	334	758	72	1233	1191	1193

[a] Macroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case. These mid-case macroeconomic projections are then modified by the low and high world oil price cases (as shown in Table 5) and by various explicit economic assumptions, with the low world oil price case applied to the high macroeconomic case, and the high world oil price case applied to the low macroeconomic case.

[b] OECD: Organization for Economic Cooperation and Development.

[c] Population-weighted degree days. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 1980 population. Normal is used for the forecast period and is defined as the average number of degree days between 1951 and 1980 for a given period.

Note: Historical data are printed in bold, forecasts are in italic.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12); U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, March 1994; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Monthly State, Regional, and National Heating/Cooling Degree Days Weighted by Population*; Federal Reserve System, *Statistical Release G.17(419)*, March 1994. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1293.

Table 3.   U.S. Energy Indicators: Mid World Oil Price Case

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Macroeconomic [a]															
Real Fixed Investment															
(billion 1987 dollars)	774	791	807	851	873	899	919	936	950	956	959	965	806	906	957
Real Exchange Rate															
(index)	1.183	1.150	1.171	1.189	1.206	1.209	1.198	1.193	1.189	1.180	1.171	1.165	1.173	1.202	1.176
Business Inventory Change															
(billion 1987 dollars)	-0.8	5.0	3.1	1.2	4.2	10.2	11.4	12.1	14.0	13.8	12.6	9.0	2.1	9.5	12.4
Wholesale Price Index															
(index, 1980-1984=1.000)	1.185	1.197	1.188	1.185	1.191	1.197	1.203	1.211	1.221	1.226	1.231	1.240	1.189	1.201	1.230
Consumer Price Index															
(index, 1980-1984=1.000)	1.431	1.442	1.449	1.460	1.468	1.481	1.493	1.505	1.519	1.531	1.542	1.557	1.446	1.487	1.537
Petroleum Product Price Index															
(index, 1980-1984=1.000)	0.627	0.654	0.611	0.592	0.539	0.563	0.541	0.545	0.598	0.621	0.599	0.597	0.621	0.547	0.604
Non-Farm Employment															
(millions)	109.45	109.99	110.38	110.87	111.35	112.14	112.83	113.46	114.07	114.58	115.01	115.41	110.17	112.45	114.77
Commercial Employment															
(millions)	72.13	72.76	73.20	73.63	74.00	74.68	75.31	75.92	76.51	77.03	77.48	77.90	72.93	74.97	77.23
Total Industrial Production															
(index, 1987=1.000)	1.097	1.103	1.111	1.129	1.152	1.163	1.174	1.183	1.189	1.191	1.190	1.191	1.110	1.168	1.190
Housing Stock															
(millions)	106.19	106.49	106.78	107.10	107.40	107.80	108.10	108.47	108.80	109.10	109.50	109.80	106.64	107.94	109.30
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1987=1.000)	1.093	1.103	1.109	1.121	1.130	1.147	1.155	1.163	1.167	1.167	1.164	1.164	1.106	1.149	1.166
Vehicle Miles Traveled															
(million miles per day)	5705	6508	6714	6190	5784	6690	6885	6331	6091	6868	7039	6463	6282	6425	6617
Vehicle Fuel Efficiency															
(miles per gallon)	19.16	20.55	20.60	19.57	19.27	20.78	20.83	19.68	19.71	21.09	21.15	20.00	19.99	20.16	20.51
Real Vehicle Fuel Cost															
(cents per mile)	4.27	4.01	3.90	4.09	3.93	3.77	3.77	3.98	3.97	3.88	3.90	4.07	4.06	3.86	3.95
Air Travel Capacity															
(available ton-miles)	334.5	340.7	357.7	342.0	341.5	355.7	376.5	362.0	356.7	367.1	387.9	372.1	343.8	359.1	371.0
Aircraft Utilization															
(revenue ton-miles)	174.8	189.4	204.3	189.0	181.6	198.2	216.8	194.1	187.2	203.8	222.2	198.5	189.4	197.8	203.0
Aircraft Yield															
(cents per ton-mile)	14.47	13.64	12.92	13.88	14.34	13.38	12.23	13.21	13.93	13.13	12.08	13.14	13.70	13.24	13.03
Residential Natural Gas Customers															
(millions)	52.35	51.73	51.34	51.73	52.47	52.22	51.84	52.32	53.09	52.81	52.61	53.04	51.79	52.21	52.89
Commercial Natural Gas Customers															
(millions)	4.50	4.40	4.31	4.38	4.50	4.44	4.36	4.45	4.58	4.51	4.44	4.54	4.40	4.44	4.52
Raw Steel Production															
(millions)	23.62	24.14	23.94	24.20	23.77	24.96	25.12	25.77	25.54	26.00	25.54	25.75	95.91	99.62	102.82

[a] Macroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case. These mid-case macroeconomic projections are then modified by the low and high world price cases (as shown in Table 5) and by various explicit economic assumptions, with low world oil price case applied to the high macroeconomic case, and high world oil price case applied to the low macroeconomic case.

Note: Historical data are printed in bold, forecasts are in italic.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, March 1994; U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Monthly State, Regional, and National Heating/Cooling Degree Days Weighted by Population*; Federal Reserve System, *Statistical Release G.17(419)*, March 1994. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0294.

Table 4. International Petroleum Supply and Demand: Mid World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Demand [a]															
OECD															
U.S. (50 States)	17.13	16.68	17.36	17.60	17.65	17.33	17.74	18.03	17.93	17.48	17.85	18.16	17.19	17.69	17.86
U.S. Territories	0.22	0.24	0.22	0.23	0.23	0.23	0.22	0.23	0.23	0.23	0.22	0.23	0.23	0.22	0.23
Canada	1.67	1.65	1.75	1.68	1.70	1.67	1.78	1.71	1.72	1.70	1.80	1.73	1.69	1.71	1.74
Europe [b]	13.63	12.96	13.61	13.90	13.69	13.02	13.67	13.97	13.84	13.16	13.82	14.12	13.52	13.59	13.74
Japan	6.15	5.05	4.82	5.28	6.13	5.04	4.92	5.38	6.04	5.11	5.02	5.49	5.32	5.36	5.41
Australia and New Zealand	0.85	0.86	0.84	0.88	0.84	0.86	0.85	0.87	0.85	0.88	0.87	0.89	0.86	0.85	0.87
Total OECD	39.64	37.44	38.60	39.58	40.23	38.15	39.18	40.19	40.62	38.56	39.59	40.62	38.81	39.44	39.85
Non-OECD															
Former Soviet Union	6.33	5.60	5.15	5.35	5.38	5.04	4.69	4.92	4.95	4.69	4.36	4.63	5.60	5.00	4.65
China	2.73	2.78	2.83	2.88	2.92	2.97	3.03	3.08	3.13	3.18	3.24	3.30	2.81	3.00	3.21
Europe	1.22	1.10	1.03	1.12	1.23	1.11	1.04	1.13	1.25	1.13	1.06	1.15	1.12	1.13	1.15
Other Non-OECD	18.42	18.17	18.30	18.95	18.96	18.69	18.84	19.50	19.67	19.39	19.54	20.24	18.46	19.00	19.71
Total Non-OECD	28.70	27.64	27.32	28.30	28.49	27.82	27.59	28.64	29.00	28.39	28.20	29.31	27.99	28.13	28.73
Total World Demand	68.33	65.08	65.92	67.87	68.72	65.96	66.77	68.82	69.62	66.96	67.79	69.94	66.80	67.57	68.57
Supply [c]															
OECD															
U.S. (50 States)	9.85	9.53	9.42	9.55	9.46	9.38	9.33	9.43	9.41	9.31	9.27	9.31	9.59	9.40	9.32
Canada	2.09	2.16	2.30	2.20	2.20	2.18	2.22	2.25	2.24	2.20	2.25	2.28	2.19	2.21	2.24
North Sea [d]	4.35	4.28	4.58	5.10	5.25	4.75	4.95	5.35	5.20	4.80	5.00	5.30	4.58	5.08	5.08
Other OECD	1.42	1.42	1.42	1.40	1.43	1.45	1.47	1.48	1.50	1.49	1.49	1.52	1.42	1.46	1.50
Total OECD	17.71	17.40	17.73	18.25	18.34	17.75	17.97	18.51	18.35	17.80	18.01	18.40	17.77	18.15	18.14
Non-OECD															
OPEC	27.42	26.66	27.30	27.18	27.12	27.03	27.34	27.85	28.15	28.25	28.55	29.05	27.14	27.34	28.50
Former Soviet Union	8.28	8.04	7.55	7.43	7.45	7.24	6.87	6.76	6.86	6.66	6.39	6.29	7.82	7.08	6.55
China	2.88	2.93	2.89	2.96	2.90	2.91	2.92	2.93	2.94	2.95	2.96	2.97	2.91	2.92	2.96
Mexico	3.10	3.15	3.15	3.17	3.15	3.15	3.15	3.15	3.20	3.20	3.20	3.20	3.14	3.15	3.20
Other Non-OECD	8.24	8.22	8.33	8.46	8.51	8.50	8.60	8.73	8.76	8.75	8.85	8.99	8.31	8.59	8.84
Total Non-OECD	49.92	49.01	49.22	49.20	49.13	48.83	48.88	49.43	49.90	49.81	49.95	50.50	49.34	49.07	50.04
Total World Supply	67.63	66.41	66.95	67.45	67.47	66.59	66.86	67.94	68.25	67.60	67.95	68.90	67.11	67.21	68.18
Stock Changes and Statistical Discrepancy															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	0.09	-0.84	-0.01	0.17	0.72	-0.59	-0.28	0.11	0.41	-0.38	-0.18	0.14	-0.15	-0.01	0.00
Other	0.56	-0.15	-1.27	-0.01	0.07	-0.35	-0.13	0.46	0.61	-0.63	-0.35	0.53	-0.22	0.01	0.04
Total Stock Withdrawals	0.65	-0.99	-1.28	0.16	0.79	-0.94	-0.40	0.57	1.02	-1.01	-0.53	0.67	-0.37	0.00	0.03
Statistical Discrepancy	0.06	-0.34	0.25	0.27	0.46	0.31	0.32	0.32	0.36	0.36	0.37	0.37	0.06	0.35	0.36
Closing Stocks (billion barrels) [e]	5.60	5.69	5.82	5.82	5.75	5.83	5.87	5.82	5.72	5.82	5.86	5.80	5.82	5.82	5.80
Non-OPEC Supply	40.20	39.75	39.65	40.27	40.35	39.55	39.51	40.09	40.10	39.36	39.40	39.85	39.97	39.88	39.68
Net Exports from Former Soviet Union	1.95	2.44	2.40	2.08	2.07	2.20	2.18	1.84	1.91	1.97	2.03	1.66	2.22	2.07	1.89

[a] Demand for petroleum by the OECD countries is synonymous with "petroleum product supplied" which is defined in the glossary of the EIA *Petroleum Supply Monthly*, DOE/EIA-0109. Demand for petroleum by the non-OECD countries is "apparent consumption" which includes internal consumption, refinery fuel and loss, and bunkering.

[b] OECD Europe includes eastern Germany.

[c] Includes production of crude oil (including lease condensates), natural gas plant liquids, other hydrogen and hydrocarbons for refinery feedstocks, refinery gains, alcohol, and liquids produced from coal and other sources.

[d] Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

[e] Excludes stocks held in the Former CPEs.

OECD: Organization for Economic Cooperation and Development
OPEC: Organization of Petroleum Exporting Countries
SPR: Strategic Petroleum Reserve
Former CPEs: Albania, Bulgaria, Cambodia, China, Cuba, the Czech and Slovak Federal Republic, Hungary, Laos, Mongolia, North Korea, Poland, Romania, the Former Soviet Union, Vietnam, and Former Yugoslavia

Notes: Minor discrepancies with other published EIA historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Energy Information Administration, *International Petroleum Statistics Report*, DOE/EIA-0520(94/03); and *International Energy Annual 1992*, DOE/EIA-0219(92); Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database through March 1994.

Table 5. U.S. Energy Prices
(Nominal Dollars)

	Price Case	1993 1st	1993 2nd	1993 3rd	1993 4th	1994 1st	1994 2nd	1994 3rd	1994 4th	1995 1st	1995 2nd	1995 3rd	1995 4th	Year 1993	Year 1994	Year 1995
Imported Crude Oil [a]	Low						11.00	11.00	12.00	12.00	12.00	12.00	12.00		11.70	12.00
(dollars per barrel)	Mid	**17.34**	**17.66**	**15.60**	**14.09**	13.00	13.50	14.00	15.00	15.00	15.50	16.00	17.00	**16.12**	13.91	15.90
	High						15.51	17.00	18.00	18.00	18.00	19.00	19.00		15.98	18.52
Natural Gas Wellhead	Low						1.76	1.83	2.08	2.10	1.82	2.00	2.23		1.97	2.04
(dollars per thousand cubic feet)	Mid	**1.86**	**2.07**	**2.01**	**2.03**	2.22	2.01	2.08	2.40	2.41	2.10	2.28	2.58	**1.99**	2.18	2.35
	High						2.18	2.30	2.68	2.69	2.39	2.60	2.94		2.35	2.66
Petroleum Products																
Gasoline Retail [b]	Low						1.11	1.10	1.11	1.12	1.17	1.18	1.15		1.11	1.15
(dollars per gallon)	Mid	**1.17**	**1.19**	**1.16**	**1.17**	1.11	1.16	1.17	1.18	1.19	1.25	1.27	1.27	**1.17**	1.15	1.25
	High						1.19	1.24	1.25	1.26	1.32	1.34	1.32		1.20	1.31
No. 2 Diesel Oil, Retail	Low						1.15	1.13	1.15	1.16	1.16	1.15	1.16		1.16	1.16
(dollars per gallon)	Mid	**1.10**	**1.10**	**1.08**	**1.17**	1.20	1.21	1.20	1.21	1.23	1.24	1.25	1.27	**1.11**	1.21	1.25
	High						1.25	1.27	1.28	1.30	1.30	1.32	1.31		1.25	1.31
No. 2 Heating Oil, Wholesale	Low						0.40	0.40	0.45	0.43	0.41	0.42	0.46		0.44	0.43
(dollars per gallon)	Mid	**0.57**	**0.56**	**0.52**	**0.51**	0.50	0.46	0.47	0.53	0.51	0.50	0.52	0.58	**0.55**	0.50	0.53
	High						0.51	0.55	0.61	0.58	0.56	0.60	0.63		0.54	0.59
No. 2 Heating Oil, Retail	Low						0.83	0.79	0.84	0.83	0.81	0.81	0.85		0.87	0.83
(dollars per gallon)	Mid	**0.95**	**0.91**	**0.85**	**0.88**	0.92	0.88	0.86	0.91	0.91	0.89	0.91	0.97	**0.91**	0.91	0.92
	High						0.91	0.93	0.99	0.98	0.96	0.98	1.02		0.94	0.99
No. 6 Residual Fuel Oil, Retail [c]	Low						10.16	10.04	11.60	11.73	10.92	10.91	11.89		11.65	11.41
(dollars per barrel)	Mid	**14.72**	**15.13**	**13.52**	**12.70**	14.63	12.00	12.20	13.64	13.76	13.26	13.52	15.04	**13.97**	13.16	13.93
	High						13.45	14.40	15.84	15.97	15.09	15.72	16.45		14.60	15.83
Electric Utility Fuels																
Coal	Low						1.39	1.38	1.38	1.38	1.40	1.37	1.37		1.38	1.38
(dollars per million Btu)	Mid	**1.38**	**1.39**	**1.38**	**1.38**	1.39	1.41	1.41	1.41	1.41	1.44	1.42	1.42	**1.38**	1.40	1.42
	High						1.44	1.45	1.45	1.46	1.49	1.47	1.47		1.43	1.47
Heavy Fuel Oil [d]	Low						1.77	1.80	2.14	2.02	1.89	1.93	2.19		2.07	2.01
(dollars per million Btu)	Mid	**2.50**	**2.60**	**2.30**	**2.28**	2.45	2.06	2.14	2.48	2.33	2.26	2.35	2.71	**2.40**	2.29	2.40
	High						2.29	2.49	2.84	2.67	2.54	2.70	2.94		2.50	2.71
Natural Gas	Low						2.26	2.30	2.60	2.63	2.30	2.46	2.72		2.44	2.50
(dollars per million Btu)	Mid	**2.58**	**2.63**	**2.52**	**2.54**	2.73	2.47	2.53	2.88	2.91	2.57	2.72	3.04	**2.56**	2.63	2.79
	High						2.62	2.74	3.12	3.16	2.83	3.01	3.35		2.79	3.07
Other Residential																
Natural Gas	Low						6.63	7.69	6.14	5.97	6.58	7.87	6.33		6.30	6.35
(dollars per thousand cubic feet)	Mid	**5.69**	**6.45**	**7.88**	**6.15**	6.00	6.84	8.23	6.61	6.40	7.08	8.47	6.80	**6.13**	6.51	6.82
	High						7.06	8.45	6.81	6.76	7.42	8.90	7.16		6.62	7.18
Electricity	Low						8.3	8.6	8.2	7.9	8.4	8.7	8.3		8.2	8.3
(cents per kilowatthour)	Mid	**7.8**	**8.5**	**8.7**	**8.3**	7.9	8.5	8.8	8.4	8.2	8.8	9.0	8.6	**8.3**	8.4	8.6
	High						8.9	9.2	8.8	8.7	9.4	9.7	9.2		8.7	9.2

[a] Cost of imported crude oil to U.S.
[b] Average for all grades and services.
[c] Average for all sulfur contents.
[d] Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.
Notes: Data are estimated for the first quarter of 1994. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. Price cases are derived by simulating all energy product price models under the assumptions of the three world oil price cases using the mid macroeconomic case and normal weather assumptions for all simulations. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.
Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); and *Petroleum Marketing Monthly*, DOE/EIA-0380(94/03).

Table 6. U.S. Petroleum Supply and Demand: Low World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Crude Oil Supply															
Domestic Production [a]	6.98	6.83	6.70	6.85	6.74	6.46	6.34	6.35	6.29	6.14	6.04	6.00	6.84	6.47	6.12
Alaska	1.64	1.56	1.48	1.65	1.62	1.53	1.52	1.57	1.53	1.48	1.45	1.43	1.58	1.56	1.47
Lower 48	5.34	5.27	5.22	5.19	5.12	4.93	4.82	4.79	4.76	4.66	4.60	4.57	5.26	4.91	4.64
Net Imports (including SPR) [b]	6.18	6.69	6.74	6.91	6.03	7.18	7.41	7.32	7.12	7.41	7.68	7.67	6.63	6.99	7.47
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.97	6.13	7.32	7.52	7.45	7.26	7.55	7.79	7.80	6.73	7.11	7.60
SPR Imports	0.01	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Exports	0.14	0.11	0.07	0.06	0.11	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.10	0.12	0.13
Other SPR Supply	0.02	0.02	0.02	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
SPR Stock Withdrawn or Added (-)	-0.03	-0.06	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.03	-0.02	-0.01
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.16	-0.02	0.02	-0.02	0.05	-0.10	0.04	-0.02	0.05	-0.05	0.01	0.00
Product Supplied and Losses	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Unaccounted-for Crude Oil	0.15	0.48	0.20	0.10	0.41	0.26	0.27	0.27	0.26	0.26	0.27	0.27	0.23	0.30	0.26
Total Crude Oil Supply	13.08	13.80	13.95	13.68	13.12	13.90	13.98	13.98	13.56	13.85	13.96	13.98	13.63	13.75	13.84
Other Supply															
NGL Production	1.76	1.75	1.72	1.68	1.71	1.72	1.72	1.75	1.73	1.70	1.71	1.75	1.73	1.73	1.72
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.26	0.26	0.26	0.26	0.28	0.32	0.33	0.33	0.33	0.26	0.27	0.33
Crude Oil Product Supplied	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Processing Gain	0.78	0.74	0.77	0.76	0.76	0.78	0.79	0.79	0.76	0.78	0.79	0.79	0.76	0.78	0.78
Net Product Imports [c]	0.86	0.81	1.01	0.88	1.04	1.30	1.33	1.26	1.15	1.36	1.37	1.38	0.89	1.23	1.32
Gross Product Imports [c]	1.76	1.72	1.85	1.85	2.03	2.22	2.19	2.22	2.08	2.25	2.23	2.34	1.80	2.16	2.22
Product Exports	0.90	0.91	0.84	0.97	0.99	0.92	0.86	0.96	0.92	0.89	0.86	0.96	0.91	0.93	0.91
Product Stock Withdrawn or Added (-) [d]	0.34	-0.63	-0.32	0.34	0.76	-0.58	-0.24	0.07	0.52	-0.41	-0.16	0.09	-0.07	0.00	0.01
Total Supply	17.13	16.68	17.36	17.60	17.65	17.39	17.85	18.14	18.05	17.62	18.02	18.32	17.19	17.76	18.00
Demand															
Motor Gasoline	7.09	7.54	7.76	7.53	7.14	7.70	7.92	7.71	7.41	7.81	7.99	7.78	7.48	7.62	7.75
Jet Fuel	1.48	1.44	1.49	1.45	1.51	1.45	1.55	1.54	1.51	1.47	1.57	1.56	1.47	1.51	1.53
Distillate Fuel Oil	3.33	2.80	2.82	3.17	3.65	3.04	2.92	3.32	3.60	3.07	2.95	3.34	3.03	3.23	3.24
Residual Fuel Oil	1.07	0.98	1.07	1.15	1.15	1.11	1.08	1.19	1.20	1.11	1.08	1.23	1.07	1.13	1.15
Other Oils [e]	4.16	3.91	4.22	4.29	4.20	4.09	4.38	4.37	4.33	4.16	4.42	4.41	4.14	4.26	4.33
Total Demand	17.13	16.68	17.36	17.60	17.65	17.39	17.85	18.14	18.05	17.62	18.02	18.32	17.19	17.76	18.00
Total Petroleum Net Imports	7.04	7.51	7.75	7.79	7.06	8.48	8.74	8.58	8.27	8.77	9.05	9.05	7.52	8.22	8.79
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) [f]	337	352	321	335	337	336	338	333	342	338	340	333	335	333	333
Total Motor Gasoline	227	220	207	225	214	219	206	223	228	223	208	221	225	223	221
Finished Motor Gasoline	187	183	170	186	176	181	168	183	188	185	169	182	186	183	182
Blending Components	40	37	37	39	38	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	40	37	38	37	42	44	44	42	45	40	42	45
Distillate Fuel Oil	97	109	130	141	99	102	121	136	100	103	124	137	141	136	137
Residual Fuel Oil	41	46	42	44	41	41	42	46	40	41	42	45	44	46	45
Other Oils [g]	262	306	334	273	264	307	323	276	264	303	312	271	273	276	271
Total Stocks (excluding SPR)	1006	1078	1076	1059	992	1043	1067	1056	1018	1051	1066	1053	1059	1056	1053
Crude Oil in SPR	578	583	586	587	589	591	593	594	595	596	597	599	587	594	599
Total Stocks (including SPR)	1584	1660	1661	1646	1581	1635	1660	1650	1612	1647	1664	1651	1646	1650	1651

[a] Includes lease condensate.
[b] Net imports equals gross imports plus SPR imports minus exports.
[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.
[d] Includes an estimate of minor product stock change based on monthly data.
[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil.
[f] Includes crude oil in transit to refineries.
[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.
SPR: Strategic Petroleum Reserve
NGL: Natural Gas Liquids
Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.
Sources: Historical data: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109(93/01-94/03); and *Weekly Petroleum Status Report*, DOE/EIA-0208(various issues).

Table 7. U.S. Petroleum Supply and Demand: Mid World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Crude Oil Supply															
Domestic Production [a]	6.98	6.83	6.70	6.85	6.74	6.62	6.56	6.61	6.61	6.50	6.44	6.45	6.84	6.63	6.50
Alaska	1.64	1.56	1.48	1.65	1.62	1.57	1.56	1.61	1.60	1.55	1.52	1.50	1.58	1.59	1.54
Lower 48	5.34	5.27	5.22	5.19	5.12	5.05	5.01	5.00	5.00	4.94	4.93	4.95	5.26	5.04	4.95
Net Imports (including SPR) [b]	6.18	6.69	6.74	6.91	6.03	7.01	7.19	7.06	6.72	7.00	7.28	7.22	6.63	6.82	7.06
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.97	6.13	7.15	7.30	7.19	6.87	7.13	7.39	7.35	6.73	6.94	7.19
SPR Imports	0.01	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Exports	0.14	0.11	0.07	0.06	0.11	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.10	0.12	0.13
Other SPR Supply	0.02	0.02	0.02	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
SPR Stock Withdrawn or Added (-)	-0.03	-0.06	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.03	-0.02	-0.01
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.16	-0.02	0.02	-0.02	0.05	-0.10	0.04	0.00	0.05	-0.05	0.01	0.00
Product Supplied and Losses	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Unaccounted-for Crude Oil	0.15	0.48	0.20	0.10	0.41	0.26	0.27	0.27	0.26	0.26	0.27	0.27	0.23	0.30	0.26
Total Crude Oil Supply	13.05	13.78	13.93	13.66	13.12	13.88	13.98	13.98	13.48	13.79	13.98	13.98	13.61	13.74	13.81
Other Supply															
NGL Production	1.76	1.75	1.72	1.68	1.71	1.72	1.72	1.75	1.73	1.71	1.71	1.75	1.73	1.73	1.72
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.26	0.26	0.26	0.26	0.28	0.32	0.33	0.33	0.33	0.26	0.27	0.33
Crude Oil Product Supplied	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Processing Gain	0.78	0.74	0.77	0.76	0.76	0.78	0.79	0.79	0.75	0.77	0.79	0.79	0.76	0.78	0.78
Net Product Imports [c]	0.86	0.81	1.01	0.88	1.04	1.25	1.22	1.15	1.12	1.28	1.20	1.22	0.89	1.16	1.20
Gross Product Imports [c]	1.76	1.72	1.85	1.85	2.03	2.17	2.08	2.11	2.04	2.17	2.06	2.18	1.80	2.10	2.11
Product Exports	0.90	0.91	0.84	0.97	0.99	0.92	0.86	0.96	0.92	0.89	0.86	0.96	0.91	0.93	0.91
Product Stock Withdrawn or Added (-) [d]	0.34	-0.63	-0.32	0.34	0.76	-0.58	-0.24	0.07	0.52	-0.41	-0.16	0.09	-0.07	0.00	0.01
Total Supply	17.13	16.68	17.36	17.60	17.65	17.32	17.74	18.03	17.93	17.48	17.85	18.16	17.19	17.69	17.86
Demand															
Motor Gasoline	7.09	7.54	7.76	7.53	7.14	7.66	7.87	7.66	7.36	7.75	7.92	7.69	7.48	7.59	7.68
Jet Fuel	1.48	1.44	1.49	1.45	1.51	1.44	1.55	1.54	1.51	1.46	1.56	1.55	1.47	1.51	1.52
Distillate Fuel Oil	3.33	2.80	2.82	3.17	3.65	3.04	2.91	3.31	3.59	3.06	2.93	3.33	3.03	3.22	3.22
Residual Fuel Oil	1.07	0.98	1.07	1.15	1.15	1.09	1.05	1.17	1.17	1.07	1.03	1.19	1.07	1.11	1.11
Other Oils [e]	4.16	3.91	4.22	4.29	4.20	4.09	4.37	4.36	4.31	4.14	4.40	4.40	4.14	4.26	4.31
Total Demand	17.13	16.68	17.36	17.60	17.65	17.32	17.74	18.03	17.93	17.48	17.85	18.16	17.19	17.69	17.86
Total Petroleum Net Imports	7.04	7.51	7.75	7.79	7.06	8.26	8.40	8.21	7.84	8.28	8.49	8.44	7.52	7.99	8.26
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) [f]	337	352	321	335	337	336	338	333	342	338	338	333	335	333	333
Total Motor Gasoline	227	220	207	225	214	219	206	223	228	223	208	221	225	223	221
Finished Motor Gasoline	187	183	170	186	176	181	168	183	188	185	169	182	186	183	182
Blending Components	40	37	37	39	38	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	40	37	38	37	42	44	44	42	45	40	42	45
Distillate Fuel Oil	97	109	130	141	99	102	121	136	100	103	124	137	141	136	137
Residual Fuel Oil	41	46	42	44	41	41	42	46	40	41	42	45	44	46	45
Other Oils [g]	262	306	334	273	264	307	323	276	264	303	312	271	273	276	271
Total Stocks (excluding SPR)	1006	1078	1076	1059	992	1043	1067	1056	1018	1051	1066	1053	1059	1056	1053
Crude Oil in SPR	578	583	586	587	589	591	593	594	595	596	597	599	587	594	599
Total Stocks (including SPR)	1584	1660	1661	1646	1581	1635	1660	1650	1612	1647	1664	1651	1646	1650	1651

[a] Includes lease condensate.

[b] Net imports equals gross imports plus SPR imports minus exports.

[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

[d] Includes an estimate of minor product stock change based on monthly data.

[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil.

[f] Includes crude oil in transit to refineries.

[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109(93/01-94/03); and *Weekly Petroleum Status Report*, DOE/EIA-0208(various issues).

Table 8. U.S. Petroleum Supply and Demand: High World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Crude Oil Supply															
Domestic Production [a]	6.98	6.83	6.70	6.85	6.74	6.70	6.70	6.81	6.86	6.78	6.75	6.77	6.84	6.74	6.79
Alaska	1.64	1.56	1.48	1.65	1.62	1.59	1.58	1.63	1.63	1.58	1.54	1.52	1.58	1.60	1.57
Lower 48	5.34	5.27	5.22	5.19	5.12	5.12	5.13	5.18	5.23	5.20	5.21	5.25	5.26	5.14	5.22
Net Imports (including SPR) [b]	6.18	6.69	6.74	6.91	6.03	6.91	7.05	6.84	6.39	6.67	6.97	6.88	6.63	6.71	6.73
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.97	6.13	7.05	7.16	6.97	6.53	6.80	7.09	7.01	6.73	6.83	6.86
SPR Imports	0.01	0.04	0.01	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Exports	0.14	0.11	0.07	0.06	0.11	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.10	0.12	0.13
Other SPR Supply	0.02	0.02	0.02	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
SPR Stock Withdrawn or Added (-)	-0.03	-0.06	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.03	-0.02	-0.01
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.16	-0.02	0.02	-0.02	0.05	-0.10	0.04	0.00	0.05	-0.05	0.01	0.00
Product Supplied and Losses	-0.01	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Unaccounted-for Crude Oil	0.15	0.48	0.20	0.10	0.41	0.26	0.27	0.27	0.25	0.26	0.27	0.27	0.23	0.30	0.26
Total Crude Oil Supply	13.08	13.80	13.95	13.68	13.12	13.88	13.98	13.96	13.40	13.74	13.98	13.97	13.63	13.74	13.77
Other Supply															
NGL Production	1.76	1.75	1.72	1.68	1.71	1.72	1.72	1.75	1.73	1.71	1.71	1.75	1.73	1.73	1.72
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.26	0.26	0.26	0.26	0.28	0.32	0.33	0.33	0.33	0.26	0.26	0.33
Crude Oil Product Supplied	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Processing Gain	0.78	0.74	0.77	0.76	0.76	0.78	0.79	0.79	0.75	0.77	0.79	0.79	0.76	0.78	0.77
Net Product Imports [c]	0.86	0.81	1.01	0.88	1.04	1.20	1.11	1.07	1.08	1.22	1.07	1.13	0.89	1.11	1.13
Gross Product Imports [c]	1.76	1.72	1.85	1.85	2.03	2.12	1.98	2.03	2.01	2.11	1.93	2.09	1.80	2.04	2.04
Product Exports	0.90	0.91	0.84	0.97	0.99	0.92	0.86	0.96	0.92	0.89	0.86	0.96	0.91	0.93	0.91
Product Stock Withdrawn or Added (-) [d]	0.34	-0.63	-0.32	0.34	0.76	-0.58	-0.24	0.07	0.52	-0.41	-0.16	0.09	-0.07	0.00	0.01
Total Supply	17.13	16.68	17.36	17.60	17.65	17.27	17.64	17.93	17.82	17.36	17.72	18.07	17.19	17.62	17.74
Demand															
Motor Gasoline	7.09	7.54	7.76	7.53	7.14	7.63	7.82	7.61	7.31	7.71	7.87	7.66	7.48	7.55	7.64
Jet Fuel	1.48	1.44	1.49	1.45	1.51	1.44	1.55	1.54	1.51	1.46	1.56	1.55	1.47	1.51	1.52
Distillate Fuel Oil	3.33	2.80	2.82	3.17	3.65	3.03	2.90	3.29	3.57	3.04	2.92	3.31	3.03	3.22	3.21
Residual Fuel Oil	1.07	0.98	1.07	1.15	1.15	1.08	1.02	1.14	1.14	1.04	0.99	1.16	1.07	1.10	1.08
Other Oils [e]	4.16	3.91	4.22	4.29	4.20	4.08	4.36	4.35	4.29	4.12	4.38	4.38	4.14	4.25	4.29
Total Demand	17.13	16.68	17.36	17.60	17.65	17.27	17.64	17.93	17.82	17.36	17.72	18.07	17.19	17.62	17.74
Total Petroleum Net Imports	7.04	7.51	7.75	7.79	7.06	8.12	8.16	7.91	7.47	7.89	8.05	8.02	7.52	7.82	7.86
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) [f]	337	352	321	335	337	336	338	333	342	338	338	333	335	333	333
Total Motor Gasoline	227	220	207	225	214	219	206	223	228	223	208	221	225	223	221
Finished Motor Gasoline	187	183	170	186	176	181	168	183	188	185	169	182	186	183	182
Blending Components	40	37	37	39	38	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	40	37	38	37	42	44	44	42	45	40	42	45
Distillate Fuel Oil	97	109	130	141	99	102	121	136	100	103	124	137	141	136	137
Residual Fuel Oil	41	46	42	44	41	41	42	46	40	41	42	45	44	46	45
Other Oils [g]	262	306	334	273	264	307	323	276	264	303	312	271	273	276	271
Total Stocks (excluding SPR)	1006	1078	1076	1059	992	1043	1067	1056	1018	1051	1066	1053	1059	1056	1053
Crude Oil in SPR	578	583	586	587	589	591	593	594	595	596	597	599	587	594	599
Total Stocks (including SPR)	1584	1660	1661	1646	1581	1635	1660	1650	1612	1647	1664	1651	1646	1650	1651

[a] Includes lease condensate.

[b] Net imports equals gross imports plus SPR imports minus exports.

[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

[d] Includes an estimate of minor product stock change based on monthly data.

[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil.

[f] Includes crude oil in transit to refineries.

[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109(93/01-94/03); and *Weekly Petroleum Status Report*, DOE/EIA-0208(various issues).

Table 9. U.S. Petroleum Demand Sensitivities

	1994 Three Quarters[a]	1995 Four Quarters[a]
Economic Activity		
Gross Domestic Product (billion 1987 dollars)	5,298 - 5,385	5,307 - 5,531
Resulting Change in Petroleum Demand (million barrels per day)[b]	0.17	0.68
Energy Prices		
Imported Crude Oil (nominal dollars per barrel)[c]	$11.33 - $16.84	$12 - $18.50
Resulting Change in Petroleum Demand (million barrels per day)[b]		
Due to Changes in the Crude Oil Price	-0.14	-0.26
Weather		
Heating Degree-Days[d]	16.39 - 19.97	20.28 - 23.99
Resulting Change in Petroleum Demand (million barrels per day)	0.54	0.77
Cooling Degree-Days[d]	5.57 - 6.58	5.57 - 6.58
Resulting Change in Petroleum Demand (million barrels per day)[b]	0.11	0.28

[a] In the weather case, calculations apply to certain quarters only, as follows: for heating degree-days: for 1994, the fourth quarter only is used; for 1995: the average of first and fourth quarters only are used; for cooling degree-days in both years, the average of second and third quarters only are used.
[b] Ranges of petroleum product supplied associated with varying each determinant (or determinants), holding other things equal.
[c] Cost of imported crude oil to U.S. refiners.
[d] Heating and cooling degree-days are U.S. 1990 population-weighted.
  Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Markets and Contingency Information Division, Short-Term Integrated Forecasting System.

Table 10. Forecast Components for U.S. Crude Oil Production
(Million Barrels per Day)

	High Price Case	Low Price Case	Difference Total	Difference Uncertainty	Difference Price Impact
United States	6.77	6.00	0.78	0.17	0.61
Lower 48 States	5.25	4.57	0.68	0.12	0.57
Alaska	1.52	1.43	0.09	0.05	0.05

  Note: Components provided are for the fourth quarter 1995; totals are from Tables 6 and 8. Totals may not add to sum of components due to independent rounding.
  Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

Table 11. U.S. Natural Gas Supply and Demand: Mid World Oil Price Case
(Trillion Cubic Feet)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Total Dry Gas Production [a]	4.62	4.55	4.55	4.72	4.59	4.70	4.79	5.00	4.84	4.70	4.79	5.04	18.45	19.09	19.37
Net Imports	0.53	0.49	0.53	0.54	0.56	0.53	0.51	0.60	0.65	0.59	0.56	0.66	2.09	2.21	2.46
Supplemental Gaseous Fuels	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.13	0.11	0.11
Total New Supply	5.19	5.07	5.11	5.30	5.19	5.26	5.33	5.63	5.52	5.31	5.37	5.74	20.67	21.41	21.94
Underground Working Gas Storage															
Opening	6.64	5.23	6.16	7.16	6.67	5.20	6.09	7.10	6.66	5.43	6.17	7.12	6.64	6.67	6.66
Closing	5.23	6.16	7.16	6.67	5.20	6.09	7.10	6.66	5.43	6.17	7.12	6.72	6.67	6.66	6.72
Net Withdrawals [b]	1.41	-0.93	-1.00	0.49	1.47	-0.88	-1.01	0.44	1.24	-0.75	-0.94	0.39	-0.03	0.00	-0.06
Total Supply [a]	6.60	4.14	4.11	5.79	6.66	4.38	4.32	6.07	6.76	4.56	4.43	6.13	20.65	21.42	21.88
Balancing Item [c]	0.00	0.10	-0.08	-0.54	0.09	0.29	-0.20	-0.69	0.09	0.29	-0.20	-0.69	-0.52	-0.50	-0.50
Total Primary Supply [a]	6.60	4.24	4.03	5.25	6.75	4.66	4.12	5.38	6.85	4.85	4.23	5.44	20.12	20.91	21.38
Demand															
Lease and Plant Fuel	0.30	0.30	0.30	0.31	0.32	0.30	0.30	0.31	0.32	0.30	0.30	0.31	1.21	1.22	1.23
Pipeline Use	0.20	0.13	0.12	0.16	0.19	0.15	0.13	0.16	0.19	0.15	0.14	0.16	0.60	0.63	0.63
Residential	2.31	0.85	0.39	1.37	2.35	0.96	0.43	1.32	2.29	0.97	0.44	1.34	4.92	5.07	5.04
Commercial	1.20	0.54	0.36	0.78	1.20	0.55	0.32	0.73	1.17	0.55	0.32	0.73	2.88	2.80	2.77
Industrial	2.07	1.83	1.91	2.01	2.15	1.99	1.99	2.20	2.30	2.09	2.06	2.24	7.82	8.33	8.69
Electric Utilities	0.52	0.60	0.95	0.62	0.55	0.72	0.94	0.66	0.58	0.79	0.97	0.66	2.68	2.86	3.01
Total Demand	6.60	4.24	4.03	5.25	6.75	4.66	4.12	5.38	6.85	4.85	4.23	5.44	20.12	20.91	21.38

[a] Excludes nonhydrocarbon gases removed.

[b] Net withdrawals may vary from the difference between opening and closing stocks of gas in underground storage due to book transfers between base and working gas categories, and other storage operator revisions of working gas inventories.

[c] The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); *Natural Gas Monthly*, DOE/EIA-0130(94/03); and *Electric Power Monthly*, DOE/EIA-0226(94/02).

Table 12. U.S. Coal Supply and Demand: Mid World Oil Price Case
(Million Short Tons)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Production	242.0	234.8	227.7	239.3	258.0	254.1	266.2	262.8	258.6	260.1	264.0	265.6	943.8	1041.1	1048.3
Primary Stock Levels [a]															
Opening	34.0	38.3	34.8	27.2	25.3	28.0	29.0	29.0	29.0	29.0	30.0	30.0	34.0	25.3	29.0
Closing	38.3	34.8	27.2	25.3	28.0	29.0	29.0	29.0	29.0	30.0	30.0	30.0	25.3	29.0	30.0
Net Withdrawals	-4.3	3.5	7.6	1.9	-2.7	-1.0	0.0	0.0	0.0	-1.0	0.0	0.0	8.7	-3.7	-1.0
Imports	1.2	1.1	2.1	2.9	1.6	1.7	1.7	1.8	1.7	1.7	1.8	1.8	7.3	6.7	6.9
Exports	18.9	19.9	18.5	17.2	17.2	19.9	20.5	19.7	21.1	21.7	21.8	21.7	74.5	77.4	86.4
Total Net Domestic Supply	220.0	219.4	219.0	226.9	239.7	234.8	247.4	244.8	239.2	239.1	244.0	245.7	885.3	966.8	967.8
Secondary Stock Levels [b]															
Opening	163.7	152.7	154.8	121.9	120.0	116.3	130.9	132.1	135.5	134.0	142.7	137.3	163.7	120.0	135.5
Closing	152.7	154.8	121.9	120.0	116.3	130.9	132.1	135.5	134.0	142.7	137.3	139.4	120.0	135.5	139.4
Net Withdrawals	11.0	-2.2	33.0	1.9	3.7	-14.6	-1.3	-3.4	1.5	-8.7	5.4	-2.1	43.7	-15.5	-3.9
Total Supply	231.1	217.2	252.0	228.7	243.5	220.2	246.1	241.5	240.6	230.3	249.4	243.5	929.0	951.3	963.9
Demand															
Coke Plants	7.8	7.9	8.0	8.0	7.5	7.7	8.0	7.9	7.5	7.5	7.7	7.6	31.6	31.1	30.4
Electric Utilities	200.3	187.7	223.1	202.3	214.1	192.7	218.9	211.4	211.1	203.0	222.5	213.9	813.5	837.1	850.5
Retail and General Industry [c]	21.1	20.1	19.6	21.9	21.9	19.8	19.3	22.2	22.1	19.8	19.1	22.0	82.8	83.1	83.0
Total Demand	229.2	215.8	250.7	232.2	243.5	220.2	246.1	241.5	240.6	230.3	249.4	243.5	927.9	951.3	963.9
Discrepancy [d]	1.9	1.5	1.3	-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0

[a] Primary stocks are held at the mines, preparation plants, and distribution points.

[b] Secondary stocks are held by users.

[c] Synfuels plant demand in 1992 was 1.7 million tons per quarter, and is assumed to remain at that level in 1993, 1994, and 1995.

[d] Historical period discrepancy reflects an unaccounted-for shipper and receiver reporting difference.

Notes: Rows and columns may not add due to independent rounding. Zeros indicate amounts of less than 500,000 tons. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); and *Quarterly Coal Report*, DOE/EIA-0221(93/4Q).

Table 13. U.S. Electricity Supply and Demand: Mid World Oil Price Case
(Billion Kilowatthours)

	1993				1994				1995				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Supply															
Net Utility Generation															
Coal	404.8	378.7	448.6	407.0	431.9	389.3	439.2	426.8	426.5	411.4	446.1	431.3	1639.2	1687.2	1715.4
Petroleum	22.7	18.3	33.1	25.4	39.7	28.8	31.0	25.8	30.2	27.2	29.5	25.8	99.5	125.4	112.7
Natural Gas	50.4	56.9	90.9	60.7	52.4	68.0	88.9	62.1	55.2	75.0	91.9	62.5	258.9	271.4	284.6
Nuclear	157.0	146.2	162.7	144.4	154.3	149.5	163.2	150.1	156.9	138.4	168.9	155.5	610.3	617.2	619.8
Hydroelectric	67.8	81.1	60.3	55.9	63.7	73.3	60.9	60.1	70.5	74.7	63.2	62.8	265.1	257.9	271.2
Geothermal and Other [a]	2.5	2.2	2.4	2.4	2.3	2.2	2.2	2.2	2.1	2.0	2.1	2.1	9.6	8.9	8.3
Subtotal	705.2	683.4	798.0	695.9	744.3	711.2	785.4	727.1	741.4	728.8	801.7	740.1	2882.5	2968.0	3012.0
Nonutility Generation [b]	75.6	75.9	82.9	78.7	82.5	82.9	91.3	85.9	85.8	86.2	94.9	89.3	313.2	342.7	356.1
Total Generation	780.8	759.4	881.0	774.6	827.0	794.1	876.7	813.0	827.2	815.0	896.6	829.4	3195.7	3310.9	3368.2
Net Imports	6.2	3.7	10.2	8.7	8.7	7.5	9.0	7.9	8.1	7.7	9.2	8.1	28.7	33.0	33.0
Total Supply	787.0	763.0	891.2	783.3	835.7	801.6	885.7	820.9	835.3	822.6	905.8	837.4	3224.4	3343.9	3401.2
Lost and Unaccounted for [c]	50.7	63.1	59.4	58.6	57.2	65.2	61.4	61.2	53.2	66.4	62.4	62.3	231.9	244.9	244.3
Demand															
Electric Utility Sales															
Residential	260.2	210.1	292.1	231.9	279.4	229.8	272.3	241.5	269.5	235.5	278.8	247.4	994.3	1023.1	1031.2
Commercial	186.7	189.0	224.0	190.7	197.1	196.3	225.5	203.6	203.7	205.5	234.6	211.3	790.4	822.4	855.1
Industrial	234.6	246.5	256.0	245.8	244.1	252.6	263.7	255.3	249.6	256.3	265.8	255.8	982.9	1015.7	1027.5
Other	24.0	23.3	25.8	24.1	24.3	23.9	25.6	24.2	24.4	23.8	25.5	24.1	97.2	97.9	97.8
Subtotal	705.5	668.9	797.9	692.5	744.9	702.5	787.1	724.6	747.1	721.1	804.6	738.7	2864.8	2959.1	3011.6
Nonutility Generation for Own Use [b]	30.8	31.0	33.8	32.1	33.7	33.8	37.3	35.1	35.0	35.2	38.7	36.4	127.8	139.8	145.3
Total Demand	736.3	699.9	831.7	724.6	778.6	736.4	824.3	759.7	782.1	756.3	843.4	775.1	2992.6	3098.9	3156.9
Memo:															
Utility Purchases from Nonutilities [b]	42.5	42.7	46.6	44.2	46.4	46.6	51.3	48.3	48.2	48.4	53.3	50.2	175.9	192.5	200.1

[a] Other includes generation from wind, wood, waste, and solar sources.

[b] Total nonutility generation includes electricity output from cogeneration facilities, independent power producers, and all other types of nonutility facilities. Generation for own use is principally internal use at cogeneration facilities, but may also include some net distribution of electricity by nonutilities to entities other than electric utilities.

[c] Balancing item, mainly transmission and distribution losses.

Notes: Data for utility purchases from nonutilities, net utility imports, non-utility generation, and losses and unaccounted for are estimated for 1993. Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System, with projections of nuclear power, hydroelectric generation, net imports and nonutility production being provided exogenously by the Office of Coal, Nuclear, Electric and Alternate Fuels .

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(94/03); and *Electric Power Monthly*, DOE/EIA-0226(94/02).
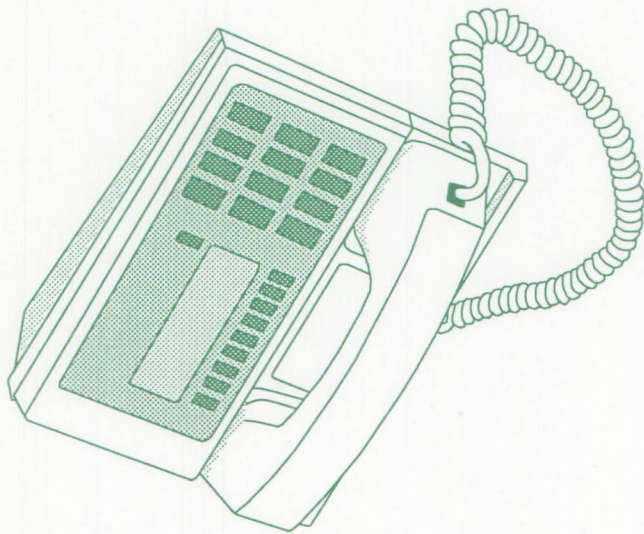
Call for your copy of *EIA New Releases*

A concise and timely review of new statistical publications and energy news

Offered from the National Energy Information Center

For a complimentary copy of this bimonthly bulletin, or a complimentary subscription, call (202)586-8800.

Energy Information Administration
U.S. Department of Energy
Forrestal Building, EI-231
Washington, DC 20585

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300