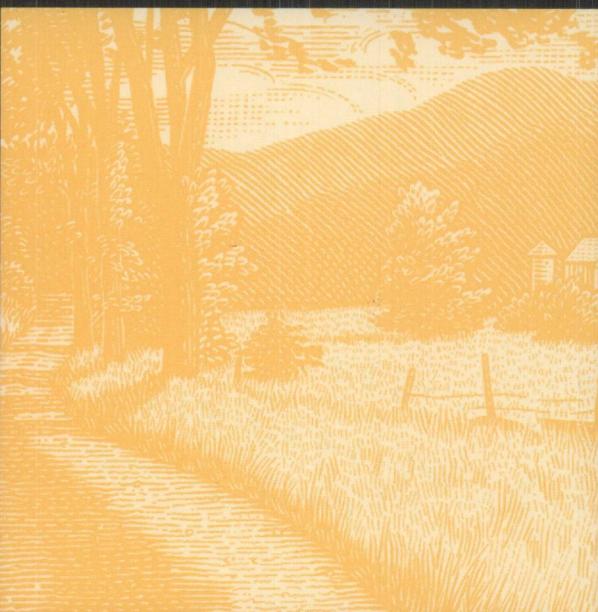
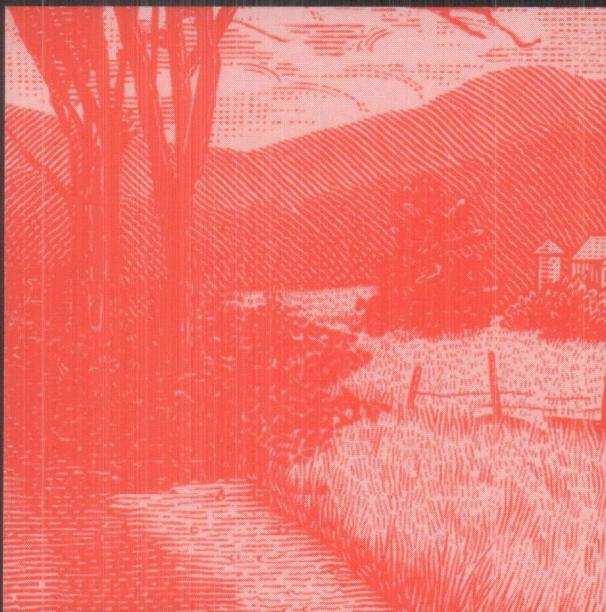
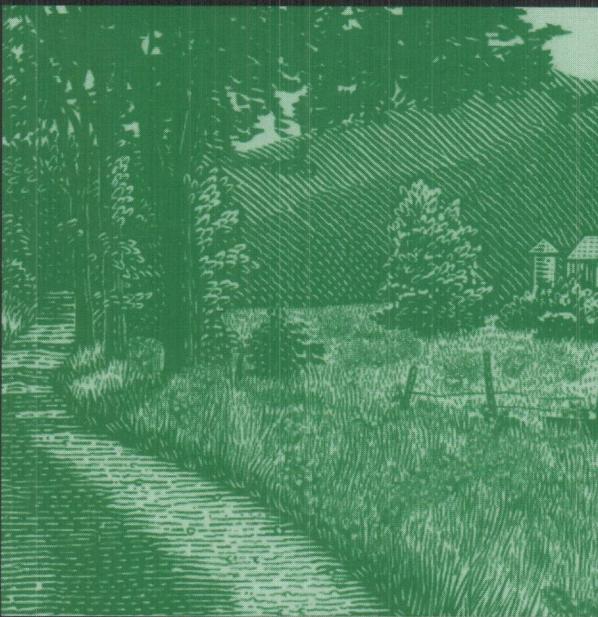


Short Term ENERGY OUTLOOK



Q U A R T E R L Y P R O J E C T I O N S

1994
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Quarter



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Short-Term Energy Outlook

Quarterly Projections

First Quarter 1994

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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 reflecting 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.

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.

The forecast period for this issue of the Outlook extends from the first quarter of 1994 through the fourth quarter of 1995. Values for the fourth quarter of 1993, 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 first quarter 1994 version of the Short-Term Integrated Forecasting System (STFS) 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 STFS database is archived quarterly and is available from the National Technical Information Service.

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.)

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The 1993 coal miners' strike resulted in significant declines in U.S. coal production and coal stockpiles. The replacement of these coal production and coal stockpiles. The replacement of these stockpiles and growth in consumption will contribute to the expected 10.0-percent increase in coal production in 1994, to a record 1,049 million short tons.

Natural gas demand took an upward swing in the latter part of 1993, offsetting weak growth during the first and second quarters. Industrial gas use was significantly stronger in the third quarter compared to 1992. Use by electric utilities apparently surged in the third quarter, despite sliding oil prices. With normal weather and low oil prices, demand growth may be slower next year.

After modest growth in 1993, U.S. petroleum demand growth in 1994 and 1995 is expected to average 350,000 barrels per day, or 2.1 percent. It is expected that residual fuel oil demand--especially in the utility sector--should recover in response to additional electricity demand and lower oil prices.

Significant changes in diesel fuel regulations occurred on October 1, 1993, including: (1) a 4.3-cents-per-gallon rise in the Federal diesel fuel tax and a requirement to dye non-taxable fuel by January 1, 1994; (2) a low-sulfur standard for on-highway use mandated by Federal law; and (3) an even tougher vehicle emissions standard enacted by the State of California. Some temporary regulations occurred, but these were alleviated rather quickly by market forces and emergency regulatory relief.

After increasing by only 10,000 barrels per day in 1993, world oil demand is estimated to rise by 880,000 barrels per day in 1994 and another 1.1 million barrels per day in 1995. Growth in the United States in 1994 and a rebound from recession in Japan and Western Europe in 1995 may result in about one-half of the 1993 to 1995 world demand growth coming from Organization of Economic Cooperation and Development (OECD) countries.

Effects of Coal Strike Will Extend into 1994

Natural Gas Demand
Expect to Rise, but Low
Oil Prices Complicate
Competitive Outlook

U.S. Oil Demand,
Lackluster of Late, Due
Modest Revival

Diesel Fuel Prices See
Regional Volatility,
Generally Higher Levels
Due to New Taxes, Rules

Recently Sluggish World
Oil Demand Should Pick
Up in 1994, 1995

Low Oil Prices May Continue with Possible Benefits to U.S. Economy, Harm to Oilpatch

Highlights

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

	Price Case ^a	Year				Annual Percentage Change		
		1992	1993	1994	1995	1992-1993	1993-1994	1994-1995
Real Gross Domestic Product (GDP) (billion 1987 dollars)	Mid	4986	5127	5280	5404	2.8	3.0	2.4
Imported Crude Oil Price (nominal dollars per barrel)	Low			12.00	12.00		-26.6	0.0
	Mid	18.20	16.35	15.39	16.64	-10.2	-5.9	8.1
	High			18.00	18.52		10.1	2.9
Petroleum Supply								
Crude Oil Production ^b (million barrels per day)	Low			6.50	6.13		-5.0	-5.7
	Mid	7.17	6.84	6.73	6.51	-4.6	-1.6	-3.2
	High			6.84	6.71		0.0	-2.0
Total Petroleum Net Imports (including SPR) (million barrels per day)	Low			8.25	9.03		10.7	9.5
	Mid	6.94	7.45	7.89	8.30	7.4	5.9	5.1
	High			7.67	7.98		3.0	3.9
Energy Demand								
Petroleum (million barrels per day)	Low			17.79	18.21		3.8	2.4
	Mid	17.10	17.13	17.66	17.86	0.2	3.1	1.1
	High			17.56	17.74		2.5	1.0
Natural Gas (trillion cubic feet)	Low			20.18	20.10		-0.4	-0.4
	Mid	19.54	20.25	20.56	20.92	3.6	1.5	1.7
	High			20.77	21.11		2.6	1.6
Coal (million short tons)	Mid	892	925	941	962	3.6	1.8	2.2
Electricity ^c (billion kilowatthours)	Mid	2757	2864	2936	3008	3.9	2.5	2.4
Gross Energy ^d (quadrillion Btu)	Mid	82.2	84.0	85.8	87.2	2.2	2.1	1.6
Gross Energy Demand per Dollar of GDP (thousand Btu per 1987 Dollar)	Mid	16.48	16.39	16.25	16.13	-0.6	-0.8	-0.7

^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 the following simulations of the Short-Term Integrated Forecasting System: for the mid oil price case, for the low oil price case, and for the high oil price case.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12); *Petroleum Supply Monthly*, DOE/EIA-0190(93/12); *Petroleum Supply Annual 1992*, DOE/EIA-0340(92)/2; *Natural Gas Monthly*, DOE/EIA-0130(93/12); *Electric Power Monthly*, DOE/EIA-0226(93/12); and *Quarterly Coal Report*, DOE/EIA-0121(93/3Q). Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1293.

One issue that distinguishes the current low oil price situation from earlier periods is the question of the return of Iraqi oil, which has not been available since the United Nations imposed an oil embargo more than 3 years ago, to the world oil market. How low world oil prices fall will depend in large part on this issue. The oil market has reacted bearishly to even the mention of Iraq's return, convincing oil market analysts that prices

While low oil prices might improve the U.S. economy overall, they would adversely affect the domestic oil and gas industry and OPEC. In 1993, petroleum exports for these 12 countries represented about 78 percent of their total export revenues.² In Saudi Arabia, for example, over 90 percent of total export revenues³ since April 1993, low world oil prices have cost Saudi Arabia about \$5 billion in export revenues.⁴ The continuation of oil prices at current levels over a 12-month period would cost Saudi Arabia about 20 percent of its annual export revenues and about 10 percent of its GDP. In addition, an extended period of low oil prices could severely hurt the oil production sector of the U.S. economy, and would accelerate the trend toward greater U.S. dependence on oil imports.⁵

the world oil price were to follow the low price path given in this Outlook (\$12 per barrel through 1995), the direct impact on the overall U.S. economy would be beneficial. Assuming prices remained at the \$12 level for a year (which is longer than any of the previous periods of low oil prices over the last decade): (1) Gross domestic product (GDP) could increase by 0.3 percent; (2) inflation could decline by 0.8 percent; and (3) a net total of 160,000 additional jobs could be created compared to the situation expected under the mid price case. ¹

Source: Energy Information Administration, *Historical Monthly Energy Review*, 1973-1988, DOE/EIA-0035(73-88) and Monthly Energy Review, DOE/EIA-0035(12).

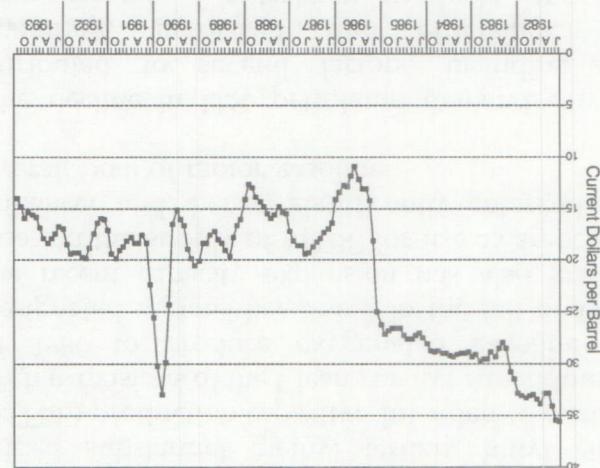


Figure FE1.1 Durations of Low World Oil Prices,

Since prices collapsed in 1986 world oil prices have fallen for brief periods before rising again. As the graph below shows, oil prices have experienced periods of sharp decline since 1986, only to rise again later as the market adjusted to the low prices.

World oil prices have dropped to their lowest level since the latter part of 1988. With worldwide recession, increasing global energy efficiency, and increased production from the Organization of Petroleum Exporting Countries (OPEC) and non-OPEC countries, prices have fallen to levels not seen in over 5 years. How long can prices remain at this level? Will they decline even more? These are just some of the questions currently facing oil market analysts.

by Douglas MacIntyre and Karen Troxell

World Oil Prices: How Low and for How Long?

Feature Articles

Feature Articles

will go lower once Iraq and the United Nations reach an agreement to lift the embargo. If recent history is any indication, however, prices should

increase some within the next year, assuming that Iraq does not return to the world oil market.

Petroleum Products Trade Patterns

by Michael Morris

Although dependence on foreign petroleum has been increasing since 1985, net imports of petroleum products have undergone a substantial decline since 1988. That decline has continued despite the recent upswing in domestic oil demand. Net imports of petroleum products are expected to resume a gradual upward trend in 1994 in response to accelerated growth in total petroleum product demand. Nonetheless, increases in domestic refinery production resulting from increased utilization rates, the continuing penetration of natural gas into residential heating oil markets, and the limited recovery of residual fuel oil demand from historical lows should continue to limit petroleum product net imports' share of the growth in the Nation's petroleum demand for several years.

Recent Trends and Developments

Between 1985 and 1993, the Nation's dependence on petroleum imports has increased from 27.3 percent of petroleum products demand to 43.8 percent.⁶ This trend was a result of the crude oil price collapse that induced a downward trend in domestic crude oil production. The last 5 years, however, have witnessed a substantial reduction in net imports of petroleum products.

Between 1988, the most recent peak year of petroleum product net imports, and 1993, net finished petroleum product imports declined by approximately 900,000 barrels per day (Table FE2.1). During the same period, domestic petroleum products consumption declined by only one-fifth that of net imports.⁷ Even though domestic petroleum products demand increased

slightly in 1993, net imports of finished petroleum products actually declined.⁸

Petroleum product imports have been squeezed by the combination of increases in refinery production of petroleum products and the decline in petroleum demand. Despite reductions in distillation capacity, refinery output of total petroleum products between 1988 and 1993 rose by almost 700,000 barrels per day (Table FE2.1). Domestic refineries have become increasingly complex and efficient. This has not only lowered the marginal cost of producing motor gasoline, but has also enabled them to increase output of distillate fuel oil, jet fuel, and several minor products, displacing sizeable quantities of imports of these products. More recently, producers had added substantial methyl tertiary butyl ether (MTBE) production capacity. Intended to comply with provisions of the Clean Air Act Amendments of 1990 to produce oxygenated gasoline for designated regions beginning in the fall of 1992, the recent capacity expansion has also greatly boosted the supply of MTBE for use as an octane enhancer and, hence, significantly enlarged the overall pool of motor gasoline.

The decline in U.S. petroleum demand can be attributed to several factors, including the economy, increased fuel efficiency, the displacement of petroleum products, and the weather. First, the economy slowed throughout 1989 and much of 1990 and fell into recession from late 1990 through mid-1991. Moreover, average economic growth during the recent recovery has been less than half that of previous post-war

Many of the conditions that compelle net product imports to absorb a greater-than-proportional share of the decline in consumption during the past 5 years are also likely to limit the increase in net product imports during 1994 and 1995. Refineries are projected to continue to increase output during the forecast interval. These facilities are projected to increase output of all major products, except residual fuel oil. Refinery output

Net imports are projected to increase in 1994 and 1995, but that increase is considerably less than that of total petroleum products consumption. Between 1993 and 1995, net finished product imports are projected to rise only 280,000 barrels per day, less than 40 percent of the projected increase in petroleum products demand.

Near-Term Projections

Contributing to the decline in net imports has been the increase in product exports. Between 1988 and 1993, exports rose from 661,000 to over 900,000 barrels per day.¹² The largest increases have been in distillate fuel oil and motor gasoline. Distillate exports have risen from 69,000 to over 250,000 barrels per day.¹³ Principal destinations for that product have been Mexico and East Asia. Motor gasoline exports have been Mexico and East Asia. Motor gasoline exports have risen from 22,000 to almost 130,000 barrels per day, the bulk of which has been shipped to Mexico.¹⁴ In 1991, Mexico shut down 105,000 barrels per day of refining capacity in Mexico City as a result of pollution concerns. Motor gasoline exports to Mexico are projected to continue to rise pending completion of new, more environmentally friendly refineries. Canada and Guatemala have also received shipments of motor gasoline from U.S. refineries.

season was normal in the Northeastern part of the country, that period was 8 percent warmer than normal for the United States as a whole, depressions distillate demand to the industrial sector at that time.¹¹ Reduced heating oil deliveries, combined with the increase in distillate refinery output, resulted in net exports of distillate in 1991, 1992, and 1993 (Table FE.2.1).

Feature Articles

The shift toward milder than normal weather also dampened distillate fuel consumption in both the residential/commercial and industrial sectors. In the Middle Atlantic and New England regions, the weather was 5 percent colder than normal during the winters of 1988-1989 and 1989-1990, but turned substantially warmer than normal during the 1990-1991 and 1992-1993 winter seasons, contributing to the downward trend in heating oil consumption.¹⁰ Although the 1991-1992 winter

Petroleum products continue to be displaced by other fuels, especially in price-sensitive markets. Residual fuel oil net imports plummeted by more than 200,000 barrels per day between 1988 and 1993 (Table F2.1), accounting for more than one-fourth of the total decline in net imports of refined petroleum products. The decline in residual fuel oil net imports partially reflected the domestic demand for that product, reflecting the ongoing switch to natural gas by both utilities and industrial plants as well as increases in nuclear power generation. In contrast to the substantial increase in refinery production of most of the other refined products, refinery production of residual fuel oil rose only slightly as plants continued to upgrade their facilities to produce more of the lighter products. Distillate fuel oil has also experienced some erosion of market share to natural gas in the residential/commercial sector. Kerosene demand has declined substantially as a result of displacement by both distillate and non-residual gases in the residential/commercial sector.

upturns, dampening recent increases in petroleum demand.

Feature Articles

is expected to jump from an average of 15.7 million barrels per day in 1993 to 16.1 million barrels per day in 1995 (Table FE2.1). Although crude distillation capacity is projected to remain unchanged during the forecast period, plants are undergoing upgrading and expanding their downstream capacity, enabling further increases in utilization rates. The continued rise in both output and flexibility highlights the ability of domestic refineries to reduce the role of net product imports as the principal marginal supplier of petroleum products during periods of high demand. In particular, refineries have been able to increase utilization rates to above 95 percent on a short-term basis to meet unanticipated spikes in demand. During the 1994-1995 period, the decline in net imports of motor gasoline is expected to result almost entirely from increases in MTBE

blending capacity. Despite the prospect of continued increases in shipments to Mexico, total exports of motor gasoline, having increased during the last 5 years, are projected to level off during the forecast period.

In general, the 1994-1995 forecast interval is expected to see gradual growth in net product imports. It is possible that net imports of finished petroleum products will account for a greater share of the increase in domestic petroleum demand beyond that timeframe. But the commitment of domestic refineries to upgrade capacity and increase downstream capabilities, combined with continued erosion of market share to natural gas, is likely to constrain the rise in net imports of petroleum products well into the next century.

Table FE2.1 Petroleum Demand, Refinery Output and Petroleum Product Net Imports: History and Forecast
 (Million Barrels per Day)

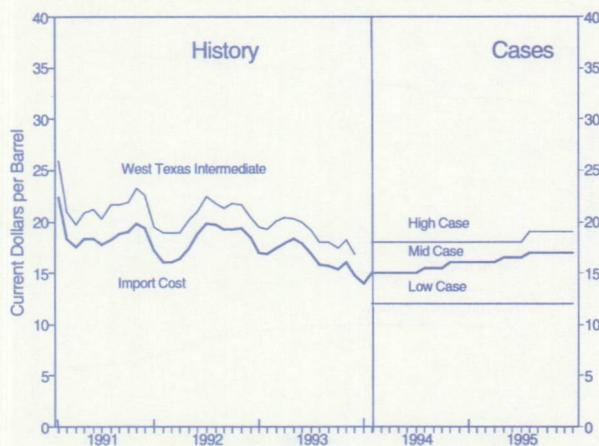
	Total Demand	Refinery Output	Net Imports							
			Gasoline	Distillate	Residual Fuel	Other	Total Finished	Unfinished	Total	
1988	17.336	15.022	.383	.233	.444	.213	1.273	.362	1.635	
1989	17.371	15.175	.330	.209	.414	.199	1.152	.348	1.500	
1990	17.037	15.272	.286	.169	.292	.215	.962	.413	1.375	
1991	16.770	15.256	.215	-.010	.226	.116	.547	.413	.960	
1992	17.101	15.398	.199	-.003	.182	.123	.501	.443	.944	
1993	17.134	15.703	.125	-.072	.209	.096	.358	.499	.857	
1994	17.662	15.938	.079	.066	.277	.160	.582	.558	1.140	
1995	17.863	16.135	.091	.097	.276	.174	.638	.535	1.173	
Net Change										
1988-93	-.206		+.681	-.258	-.305	-.235	-.915	+.137	-.778	
Net Change										
1993-95	+.730		+.432	-.034	+.169	+.067	+.078	+.280	+.036	+.316

Sources: *History: Monthly Energy Review*, DOE/EIA-0035(93/12). *Projections: Short-Term Integrated Forecasting System* (First Quarter 1994). Note: 1988-92 total demand figures reflect changes in definition for motor gasoline to ensure consistency with 1993 data and beyond (see Appendix B, *Short-Term Energy Outlook*, 1993, Fourth Quarter).

The Outlook

Outlook Assumptions

Figure 1. U.S. Monthly Crude Oil Prices



Sources: First Quarter 1994 STIFS database and Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 26.

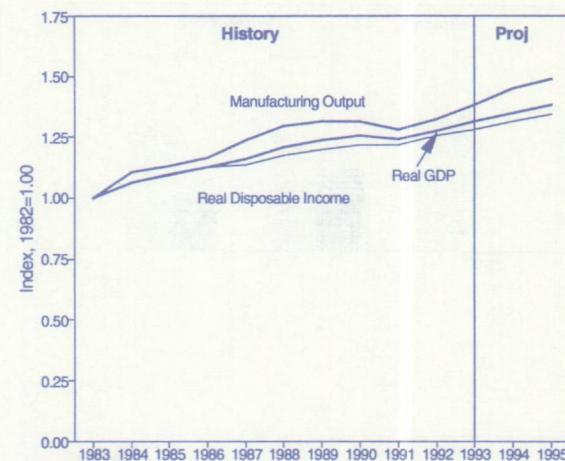
World Oil Prices

- In the mid-price case, the world oil price, defined as the average cost of imported crude for U.S. refiners, is expected to stabilize at \$15 per barrel in the first half 1994, then increase gradually to \$17 by late 1995 (Figure 1).
- The low-price scenario (world oil price of \$12 per barrel) assumes that world demand growth is minimal due to the continuation of a worldwide recession and oversupplied markets.
- The high-price scenario (world oil price increases to \$19 per barrel by late 1995) assumes world oil demand increases and/or supply decreases enable stocks to be drawn down substantially, putting the world oil market in a tight supply situation.

Economic Outlook

- Mid-price assumptions include an average economic growth rate of 2.7 percent between 1993 and 1995 for Organization for Economic Cooperation and Development (OECD) countries (Table 2).

Figure 2. U.S. Macroeconomic Indicators



Sources: First Quarter 1994 STIFS database, U.S. Commerce Department, and Federal Reserve Board. Details provided in Figure References section, p. 26.

- In the mid-price case, real gross domestic product (GDP) in the United States grows by 3.0 percent in 1994, and 2.4 percent in 1995. 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 (Figure 2 and Table 2).
- 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. The higher interest rates during the latter part of 1994 and 1995 slow investment growth; however, consumption remains relatively strong.

Weather Assumptions

- Heating degree-days and cooling degree-days are assumed to be normal in the alternative price projections featured in this *Outlook*. This implies much cooler summer temperatures in 1994.

Union and Eastern Europe is expected to decline by more than 500,000 barrels per day in 1994, and by roughly 250,000 barrels per day in 1995 (Table 4). As these countries continue 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, is the major reason for the 2.0 million barrels per day of world oil demand growth between 1993 and 1995. 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, roughly 2.5 percent in 1994 and 3 percent in 1995.

Oil demand in other non-OECD countries, rising in terms of percent change, is also

FSU = Former Soviet Union
Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 26.

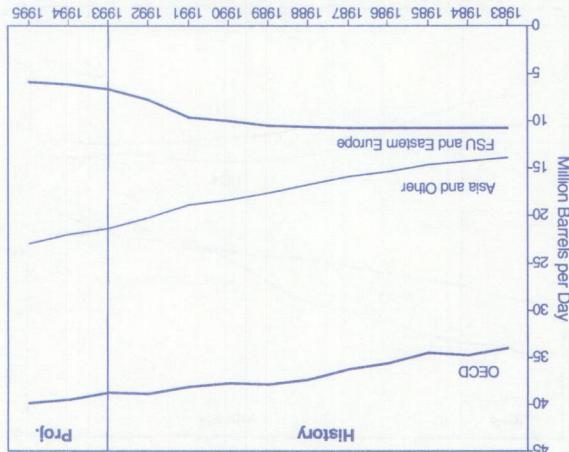


Figure 4. World Petroleum Demand

After increasing by only 10,000 barrels per day in 1993, world oil demand is expected to rise by 880,000 barrels per day in 1994 and another 1.1 million barrels per day in 1995 (Figure 3). Oil demand in countries belonging to the Organization for Economic Cooperation and Development (OECD) is expected to increase by about 670,000 barrels per day in 1994, and by about 450,000 barrels per day in 1995, as economic performance for these countries improves. This follows a decrease of 20,000 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 the graph. After rising by more than 1.1 million barrels per day in 1993, oil demand is estimated to increase by about 700,000 barrels per day in 1994, and by over 900,000 barrels per day in 1995. Oil demand in these countries continues to increase substantially each year as their economies continue to grow (Figure 4).

After declining by about 1.1 million barrels per day in 1993, oil demand in the former Soviet economies continues to rise by about 900,000 barrels per day in 1994, and by over 1,100,000 barrels per day in 1995. Oil demand in these countries continues to increase over time as their economies continue to grow (Figure 4).

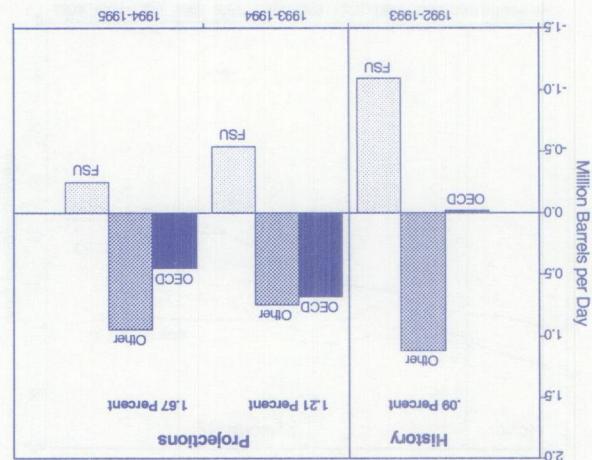
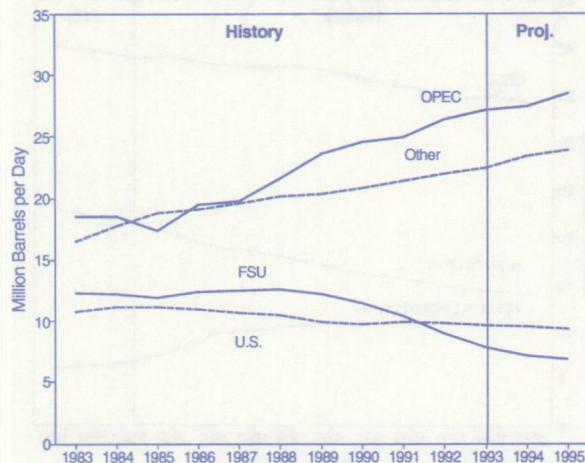


Figure 3. World Oil Demand Changes by Region

International Oil Demand

International Oil Supply

Figure 5. World Oil Production

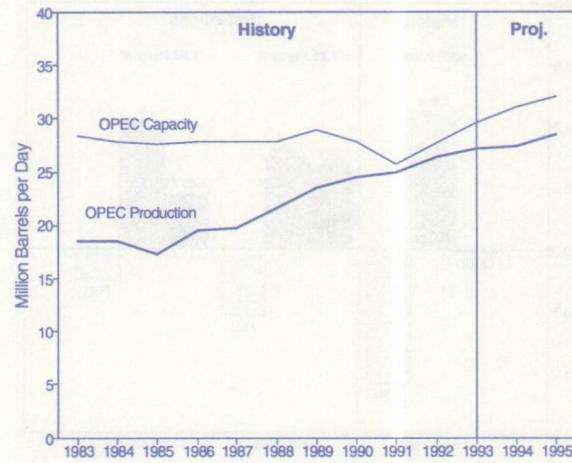


FSU = Former Soviet Union

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 26.

- After decreasing by more than 100,000 barrels per day in 1993, world petroleum production is expected to increase by over 400,000 barrels per day in 1994, and by 1.0 million 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 300,000 barrels per day in 1994, and by over 1.0 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 300,000 barrels per day over the next 2 years (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 700,000 barrels per day in 1994, and by a further 270,000 barrels per day in 1995 (Figure 5 and Table 4).

Figure 6. OPEC Oil Production and Capacity



Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 26.

- In the rest of the world, 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 projected to increase by 350,000 barrels per day in 1994 and by nearly 300,000 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 3.6 million barrels per day in 1994, before declining slightly to 3.5 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 increase), Iran (over 400,000 barrels per day) and Kuwait (nearly 300,000 barrels per day).¹⁵

Although petroleum production in the FSU is expected to continue declining throughout the forecast period, oil demand in the FSU is projected to decline by a comparable amount. This implies that net exports from the FSU will remain relatively stable at 2.0 million barrels per day in both 1994 and 1995 (Figure 8). Since exports of petroleum are a major source of hard currency for the FSU, it is projected that exports will remain relatively stable, 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.

Sources: Energy Information Administration, Energy Markets and Contingency Information Division. Details provided in Figure References Section, p. 26.

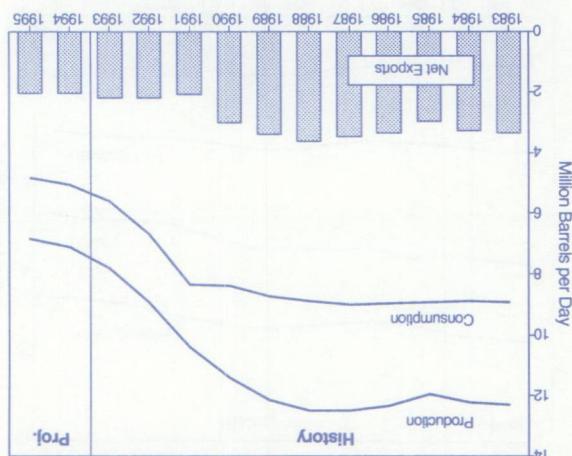


Figure 8. FSU Oil Output, Demand, and Net Exports

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 expects that stock levels will remain about constant 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 remain constant, 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 (non strategic) stocks between year-end 1992 and year-end 1993.¹⁶ Low oil prices leave little incentive for reductions until 1995.

Sources: Energy Information Administration, Energy Markets and Compliance Division. Details provided in Figure References Section, p. 26.

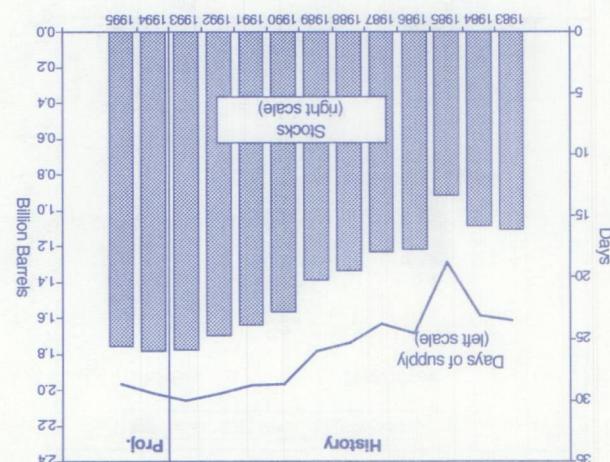
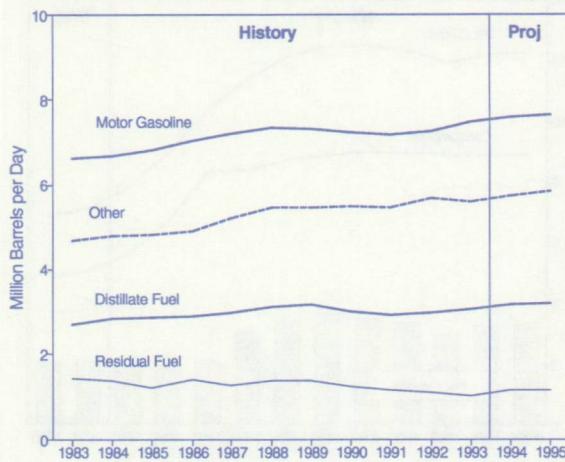


Figure 7. Market Economies' Commercial Oil Stocks

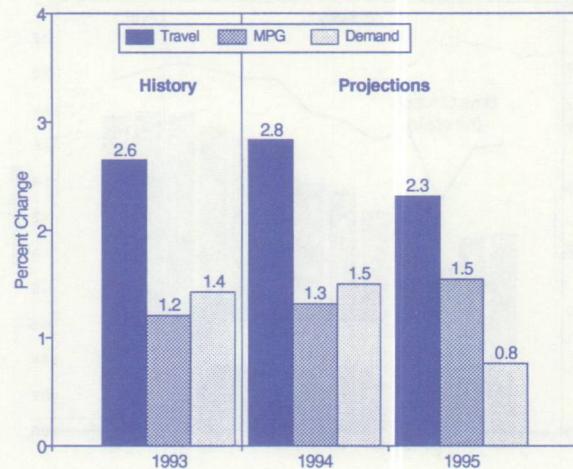
U.S. Oil Demand

Figure 9. U.S. Petroleum Demand



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

Figure 10. Gasoline Market Indicators



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- Despite relatively weak demand growth in 1993 for petroleum overall, the *Outlook* expects solid gains in the United States in 1994, and continued, but more modest, growth in 1995.
- Demand weakness in 1993 was concentrated in the second quarter, due to factors expected to be reversed next year. Low heating requirements compared to 1992 (and to normal) levels minimized distillate fuel and propane demand in the U.S. Northeast. Also, heavy oil use at electric utilities in the Northeast was reduced by sizeable increases in nuclear-powered electricity generation.
- Despite higher taxes and stricter quality controls on diesel fuel, distillate fuel use rose in late 1993 compared to 1992, portending steady gains through 1995 as economic activity continues to expand and prices remain low.
- Continued growth in the economy, combined with declining or steady real fuel costs, is expected to bolster growth in highway travel by an average 2.6 percent for the next two years (Figure 10 and Table 3). That will offset the effect of continued fuel efficiency increases

of 1.4 percent per year, leading to average gasoline demand growth of just over 1 percent through 1995. Fuel efficiency increases, which have been moderating for the past few years, reflect flat efficiency growth in new vehicles as well as the depletion of older, less efficient, vehicles.

- Continued turmoil and intense competition in the air travel industry is assumed to result in a significant slide in airline ticket prices (after inflation) through 1995 (Table 3), combined with lower jet fuel prices next year, and by expected increases in aggregate industry flight capacity through 1995, air travel and jet fuel use should increase over the forecast.
- A recovery limited to near-1992 levels for liquefied petroleum gases (LPG) is expected by 1995, assuming that no repeat of the unusually high agricultural demand for propane seen in 1992 occurs.¹⁷ Despite significant economic growth over the next two years, LPG use as feedstock in chemical operations may be limited by the expected low price of competing feedstocks, such as residual fuel and natural gas.

- Domestic crude oil production is expected to decline by 111,000 barrels per day in 1994 (Table 7). For 1995, the decline in U.S. oil imports of crude oil and products of 850 thousand barrels per day between 1993 and 1995, to 8.30 million barrels per day, or 46.5 percent of total petroleum demand (Figure 11). And result in a total production rate of 6.5 million barrels per day (Figure 11).
 - The United States means an increase in net imports of crude oil and products of 850 thousand barrels per day between 1993 and 1995, to 8.30 million barrels per day, or 46.5 percent of total petroleum demand (Figure 12).
 - A decline from 1992 levels in the drilling rig count in the first half of 1993 was reversed in the third quarter of 1993 despite relatively low crude prices. The Baker Hughes cumulative rig count with 1993 in 1994, and decrease in oil production forecasts in this case than 1992 through December.¹⁸ The base case for 1995 is 4.6 percent higher average rig count for 1993 is 4.6 percent higher than 1992 through December. It could easily foil the expected oil price trend could cause a one percent decline in rig counts in 1994.
 - However, the reaction to the current negative oil price drilling developments and yield acceleration of the expected production positive drilling developments and yield decline. It could cause substantial increases in shale-in and abandoned oil wells.
 - Net import share of demand could range from 45.0 percent to 49.6 percent in 1995 (Tables 6 and 8).
 - •

Sources: First Quarter 1994 STPS databases. Details provided in Figure References Section, p. 26.

Administrations, Services, and Natural Gas Divisions. Details provided in Figure 1994 STS databases and Energy Information Administration Section, p. 26.

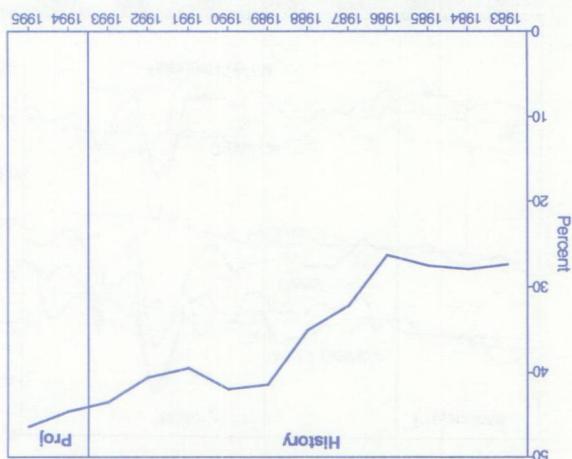


Figure 12. U.S. Net Oil Imports' Share of Demand

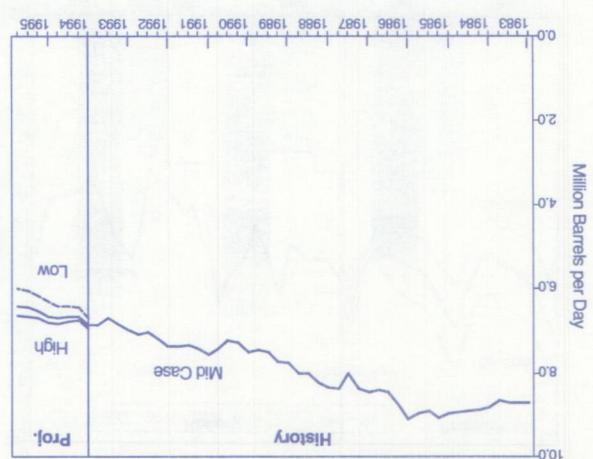
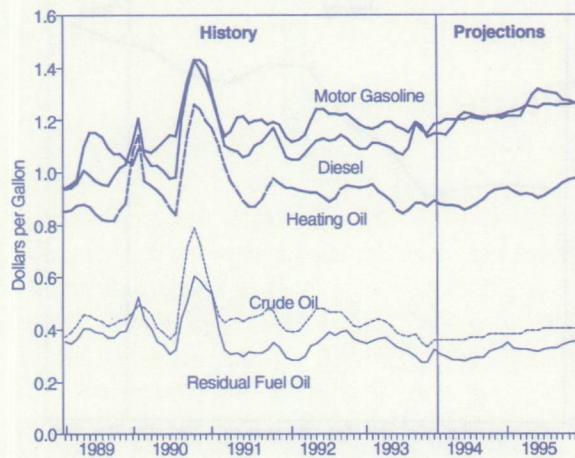


Figure 11. U.S. Crude Oil Production

U.S. Oil Supply

U.S. Energy Prices

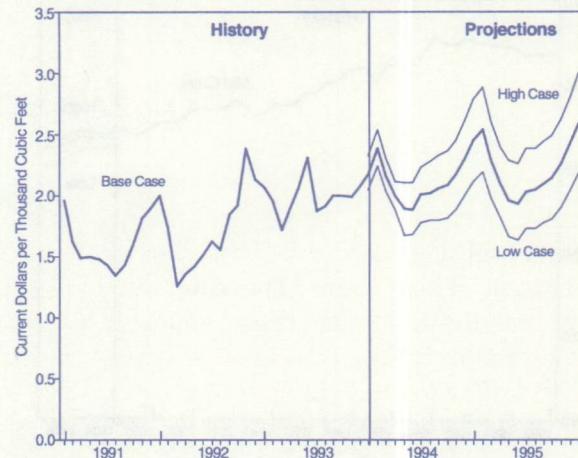
Figure 13. U.S. Petroleum Prices



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- Crude oil prices are assumed to range between \$12 and \$19 per barrel through the forecast. The average refiner acquisition cost (RAC) this year is expected to be \$16.35. Current prices are indicative of oversupply in world markets. In 1994, the RAC is expected to fall to \$15.39 per barrel, then rise to \$16.64 in 1995 (Table 5).
- U.S. product prices are low in real terms, mostly because of declining crude oil prices. The 4.3-cents-per-gallon motor fuel oil tax, imposed October 1, 1993, has been offset to some extent by sliding oil prices.
- Motor gasoline prices remain weak and are expected to average \$1.19 per gallon for all of 1994, a 2-cents-per-gallon increase over 1993 prices. However, prices are expected to average \$1.27 cents per gallon in 1995 due to somewhat higher crude oil costs and additional refining cost for reformulated gasoline (Table 5).
- Diesel fuel oil prices are expected to increase by 9 cents per gallon in 1994 due to the same Federal motor vehicle tax increase and the

Figure 14. U.S. Natural Gas Wellhead Prices



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- implementation of new low-sulfur content requirements.¹⁹ (See box on page 15)
- Retail heating oil prices are expected to decrease slightly in 1994 following the crude oil price path, then rebound by 4 cents per gallon in 1995, spurred by higher demand and rising crude oil costs (Table 5).
- The average natural gas wellhead price in 1993 is estimated at 26 cents higher than in 1992. In 1994, wellhead prices are expected to increase by 13 cents per thousand cubic feet, and by 8 cents in 1995 (Table 5 and Figure 14).
- Residential natural gas prices are projected to increase by 28 cents per thousand cubic feet in 1994 and by an additional 26 cents in 1995 due to higher wellhead prices and the increased costs related to FERC Order 636 (see related box and Table 5).
- Coal prices to electric utilities should increase slightly in both 1994 and 1995 because of cost increases related to compliance with the Clean Air Act.

Under the 1990 Clean Air Act Amendments, refiners are required to supply low-sulfur diesel fuel for on-highway use. The Environmental Protection Agency (EPA) oversees the States' enforcement of these rules. California mandated even more stringent specifications (lower sulfur content and lower aromatics) than the Federal rules. These specifications are enforced by the California Air Resources Board (CARB). The initial results of these rules, combined with some refinery outages, were supply shortages and steep prices in the Midwest and on the West Coast.

New legislation increased Federal taxes on diesel fuel by 4.3 cents per gallon on October 1, 1993. Certain uses of this fuel, such as farming use, off-highway use, and home heating use, are exempt from the tax, which was collected at the wholesale distributor level. The new law changed the point of tax collection to the terminial rack (similar to the gasoline rules) effective January 1, 1994. Diesel fuel exempt from Federal taxes will be dyed to distinguish it from the "clear" taxable fuel. Tax-exempt low-sulfur diesel will contain a red dye, while high-sulfur diesel will remain a blue dye. A buyer with a tax contain a blue dye. A buyer with a tax exemption who cannot obtain the dyed fuel must pay the taxes on purchases of the clear fuel up front, then file for a tax refund from the U.S. Treasury Department.

On October 1, 1993, three regulations regarding diesel fuel went into effect, increasing prices for this fuel. These were (1) a 4.3-cents-per-gallon increase in the Federal diesel fuel tax and a requirement to dye non-taxable fuel by January 1, 1994; (2) a low-sulfur standard for on-highway use mandated by Federal law; (3) an even tougher vehicle emissions standard enacted by the State of California. The outcome of these changes occurred simultaneously on October 1, has been diesel fuel shortages and price spikes, particularly in California, where the regulations are the strongest. Prices in the Midwest also rose dramatically, due in part to refinery and pipeline disruption caused by the summer floods.

The New Era of Diesel Fuel Prices

U.S. Energy Prices

August to the early part of October, rack diesel prices increased by about 30 cents per gallon in the major California cities.²² High-sulfur prices in the Midwest also rose by more than 20 cents per gallon from mid-August to mid-October.²³

To alleviate the shortages and to calm the market, the CARB suspended for 45 days its low-sulfur and low-aromatics requirements for off-highway use. In addition, the CARB suspended for 120 days the low-sulfur rules for certain off-road vehicles. The suspension of these rules, combined with lower crude oil prices and a higher-than-normal volume of out-of-state shipments attracted by the high prices, helped bring down the San Francisco price to less than \$0.50 per gallon in mid-December.²⁴

Also by December, rack prices in St. Louis for low-sulfur diesel had fallen to an average of less than \$0.50 per gallon, while the price difference between high-sulfur and low-sulfur grades fell to about 1 to 2 cents as EPA had allowed certain exemptions for marketers to use the high-sulfur fuel.²⁵ Moreover, the disruptive effects of the summer floods had diminished and winter demand for high-sulfur heating oil helped narrow the spread.

Currently, high-sulfur/low-sulfur price spreads appear to be below levels expected to cover mean cost differentials, which have been pegged to 3 to 5 cents per gallon²⁶. It will remain to be seen if the resumption of California low-sulfur rules and increased aggregate diesel fuel demand restores the expected price differentials.

Figure 15. Weekly Wholesale Diesel Prices: St. Louis and New York

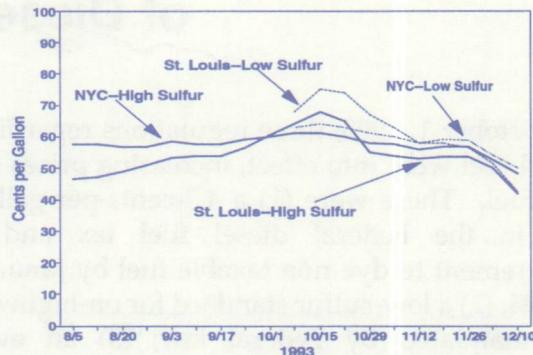


Figure 16. Weekly Wholesale Diesel Prices: Houston and San Francisco

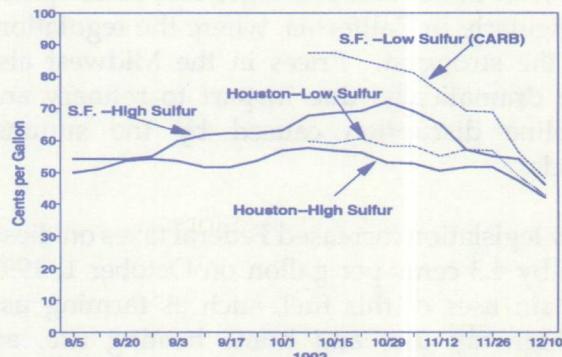
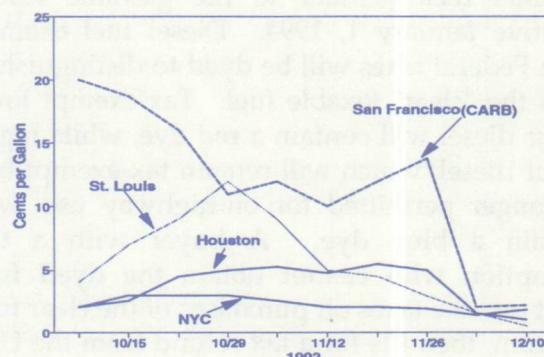


Figure 17. Low-Sulfur/High-Sulfur Diesel Price Differentials



Source (all figures): *Platt's Oilgram Price Report* (various issues), August-December 1993.

(See Appendix A for sensitivity calculation methodology.)

- A \$1-per-barrel increase in crude oil prices, assuming no price response from non petroleum energy sources, reduces demand by about 55,000 barrels per day.
 - A \$1-per-barrel increase in crude oil prices boosts domestic oil supply (crude oil and natural gas liquids production) by 93,000 barrels per day.
 - A 1-percent increase in heating degree-days increases demand by about 37,000 barrels per day. The impact of heating degree-days deviations from normal is not likely to be symmetrical. Extremely cold weather is likely to result in indirect effects on fuel oil markets due to natural gas supply constraints that have no counterpart in the case of mild weather.
 - A 1-percent increase in cooling degree-days (Figure 19).
 - Increases petroleum demand by about 16,000 barrels per day.

Sources: First Counter 1994 STI/Fs database. Details provided in Figure References Section, p. 26.

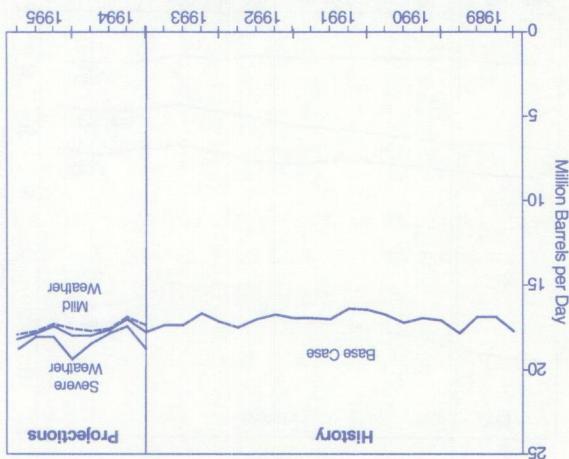


Figure 19. Total Petroleum Demand: Weather Cases

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 assumptions for the mid-case forecast, are illustrated in Figures 18 and 19.

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

A 1-percent increase in real GDP raises petroleum demand by about 145,000 barrels per day. Actual impacts from shifts in economic growth may vary depending upon the distribution of incremental growth upon sectors.

Sources: First Quarter 1994 SIDS database. Details provided in Figure References Section, p. 26.

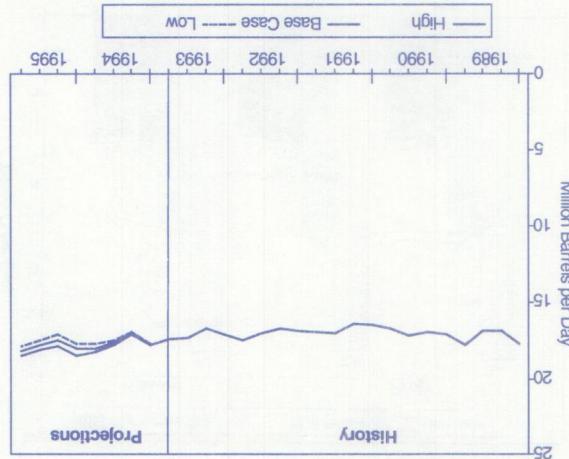
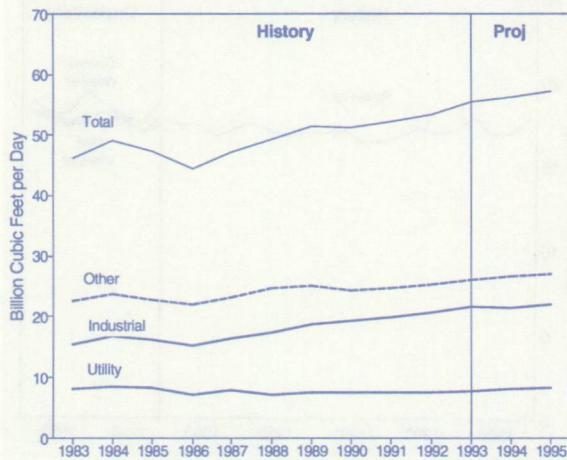


Figure 18. Total Petroleum Demand: Macro Cases

U.S. Oil Demand and Supply Sensitivities

U.S. Natural Gas Demand

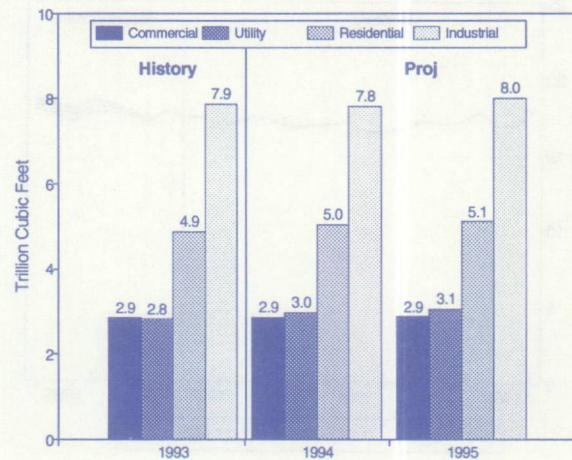
Figure 20. U.S. Natural Gas Demand Trends



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- Although natural gas demand was lower than expected in the first half of 1993 due to higher gas wellhead prices and increased utility coal, nuclear, and hydro generation, it rose dramatically in the second half (9.42 trillion cubic feet versus 9.02 trillion cubic feet in the second half of 1992), with the result of an estimated annual growth rate of 3.6 percent (Tables 1, 11 and Figure 20). The third quarter saw a substantial rise in industrial and electric utility demand for natural gas as electricity demand surged.
- In 1994, gas demand is forecast to rise by 1.5 percent to 20.56 trillion cubic feet. In 1995, gas demand is forecast to rise by an additional 1.7 percent to 20.92 trillion cubic feet (Table 11).
- Residential and commercial sector demand in 1993 are estimated to have increased by 3.9 percent and by 2.0 percent, respectively. The increased demand in these sectors primarily reflects the return to normal weather. Residential and commercial demand growth in 1994 is projected at 3.5 percent and 0.3 percent, respectively, driven primarily by the increasing number of gas customers (Table 11).

Figure 21. U.S. Natural Gas Demand by Sector



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- and Figure 21). Customers have been growing by roughly 1 million annually since 1985, a trend projected to continue (Table 3).
- Industrial gas demand moderated in the first half of 1993 in response to higher gas prices. However, rising economic growth and lower gas prices in the second half of 1993 resulted in a strong recovery.
 - After falling below 1992 levels in the first half of 1993, utility gas use has been rising more than expected in the second half of 1993 and is expected to continue to rise through 1994 due to rising electricity demand and low coal inventories. In 1995, however, utility gas demand growth slows as coal and nuclear power meet incremental electricity demand.
 - Lower oil prices in the first two quarters of 1994, as well as normal summer weather, contributes to slower gas demand growth of 1.5 percent in 1994. With stronger economic growth and oil prices rising to \$17 per barrel, gas demand is expected to rise by 1.7 percent in 1995 (Tables 2, 5, and 11) in the mid price case.

Storage levels appeared adequate at the start of the winter heating season. Total natural gas in underground storage at end October was estimated at 7,305 billion cubic feet (Figure 23). While the redissipation of over 200 billion cubic feet of working gas to base gas has affected the level of working-gas storage relative to base gas, total gas in storage was considerably above the end October 1992 level.²⁹

Institutional changes being brought about by FERC Order 636, as well as the decline in domestic production capacity, are factors tending to increase the demand for gas storage services. Storage is becoming more important for maintaining deliverability of gas during peak demand periods.

Referring to Table 11, a 14.8 percent increase in capacity forecast in 1994, and by 10.7 percent in 1995, reflecting large increases in capacity forecast to rise by 10.7 percent in 1993, by 5.2 percent in 1994, and by 10.7 percent in 1995, reflecting large increases in capacity (Table 11).

Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

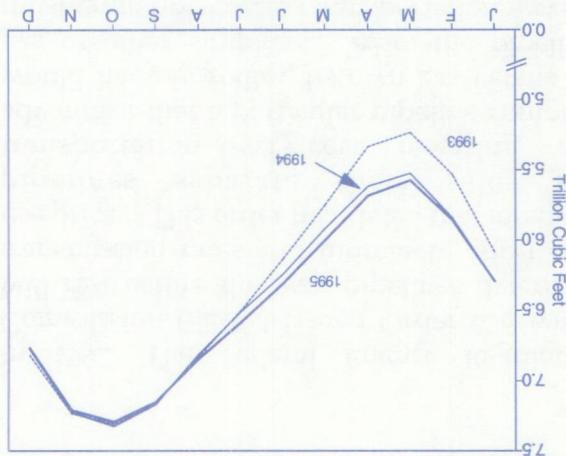


Figure 23. Total Gas in Underground Storage

U.S. Natural Gas Supply

- Net imports of natural gas are expected to continue their rising trend throughout the

- when only 331 were drilled.²⁸
- since 1984, when 1,599 were drilled, and 1992, 80-percent drop in U.S. exploratory gas wells exploration and drilling. There has been an enough capital is being brought online because new reserves are being brought online because capacity (Table 11 and Figure 22). Not enough forecast, however, production is expected to be constant, due to declining production

- percent on an annual basis in 1993. In the future, production is expected to be constant, as oil prices remain weak.
- envisioned over the forecast, as oil prices (Table 5). Much slower growth in prices is seen in 1993, a 14.8 percent increase over 1992 rose an estimated 26 cents per thousand cubic feet in 1993, a 14.8 percent increase over 1992

- average annual wellhead natural gas prices generally improved gas price regime.
- late 1994, as gas-directed drilling responds to declines of 3.6 percent in 1994, but only 2.6 percent in 1995.²⁹ Improvements are seen by states continues to slide, with projected declines from 1994 to 1995, reflecting gas price

References Section, p. 26.

Sources: First Quarter 1994 STIFS database and Energy Information Administration, References Section, p. 26.

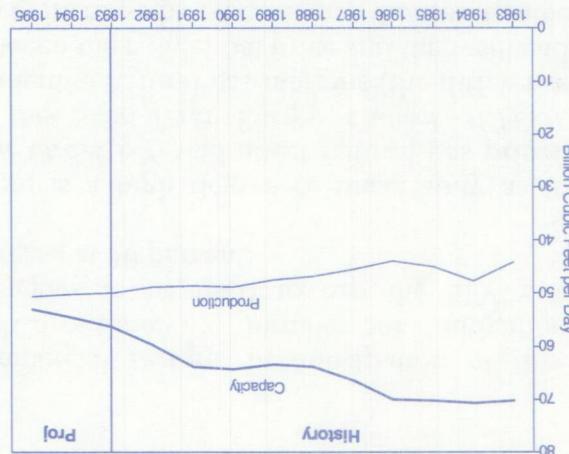


Figure 22. U.S. Dry Gas Production and Capacity

FERC Order 636

In 1992, The Federal Energy Regulatory Commission (FERC) issued Order 636 which will restructure the way pipelines determine transmission rates and ultimately affect end-use prices. This order mandated that interstate pipelines separate their sales and transportation services, negating any advantage that a particular pipeline company would have in selling its own gas versus the gas of other suppliers. Also, the pipelines must grant open access transportation services "that are equal in quality whether the gas is purchased directly from the pipeline company or elsewhere."³⁰ Each pipeline restructured its services by November 1, 1993, in compliance with Order 636.

One major provision of Order 636 is that pipelines change the way they set rates, switching from the modified fixed variable (MFV) rate design to a straight fixed-variable (SFV) rate design. The SFV rate design is intended to promote competition by eliminating price distortions under the MFV rate structure. The design change alters the way fixed and variable costs are allocated to reservation and usage fees. Under SFV, the costs associated with the pipelines' rate of return are recovered through the reservation fee and therefore are not dependent on throughput. There is concern among Congress and consumer groups that this rate design switch may lead to higher end-use prices, particularly in the "captive" residential and

commercial sectors. In anticipation of this, FERC outlined a number of mitigation strategies to be used to cap the SFV rate increase at 10 percent.

There is a high degree of uncertainty as to how Order 636 will affect natural gas prices. In the *Short-Term Energy Outlook (STEO)*, residential natural gas margins (the difference between the residential price and the wellhead price) increase by 34 cents per thousand cubic feet from 1993 through 1995 due in part to projected revenue shifts and transition costs. Projected weak oil prices will act as a ceiling, keeping interruptible (electric utility) natural gas margins from growing in the forecast period and resulting in an estimated \$0.5 billion loss in revenues. As a result of Order 636, this projected loss of revenues in the interruptible sector will be added to the rate base in the "captive" sectors, increasing residential margins in real terms, for the forecast period. There is also an additional passthrough of 20 cents per thousand cubic feet due to projected wellhead price increases. Thus, the total increase for the residential price is projected to be 54 cents per thousand cubic feet from 1993 through 1995.

There are several other provisions of Order 636 not discussed here. (For a detailed description of Order 636 see Energy Information Administration, *Natural Gas 1992, Issues and Trends*, DOE/EIA-0560(92), chapters 2 and 4).

comply with the Clean Air Act Amendments. Planning to use low-sulfur foreign coal to A few coastal U.S. electric utilities are

in 1995 in the mid price case (Table 12). growth by 7.3 percent in 1994 and 11.5 percent recovering along the global economy, and grow by 3.6 percent in 1993. In 1994 and 1995, Total coal consumption grew by an estimated 3.6 percent in 1993. In 1994 and 1995, exports are seen

U.S. coal exports are expected to decline by continuing weakness due to the nearly one-fourth in 1993 due to the economy, and continuing subsidies for domestic European coal. Exports are seen

U.S. coal displaced to meet environmental regulations. These sectors begin to shrink as coal is industrial output rises. In 1995, demand from sectors may recover somewhat in 1994 as demand by the retail and industrial

Coal demand is expected to produce a somewhat higher

increases in the domestic production of steel are expected to produce a somewhat higher demand for coal at coke plants in 1994 and 1995. However, capacity limits at domestic coke plants will constrain coal demand for this sector for the foreseeable future.

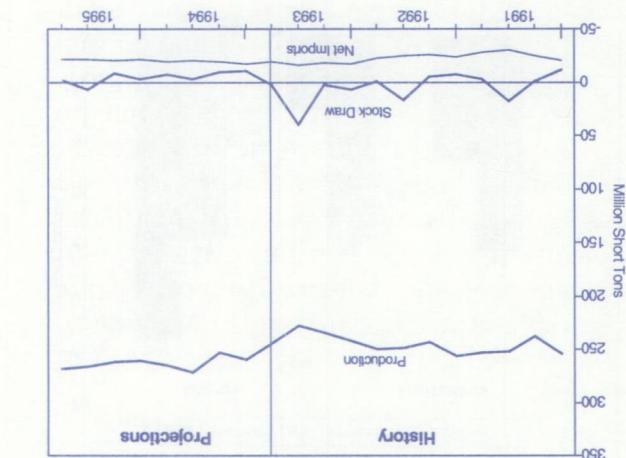


Figure 25. Components of U.S. Coal Supply

- Utility coal demand is expected to increase by 1.9 percent in 1994 and 2.4 percent in 1995 (Table 12).

- Utility coal demand is expected to grow by 3.6 percent in 1993. In 1994 and 1995, increases of 1.8 and 2.2 percent are forecast (Table 12). Growing electricity demand will be over the next 2 years (Figure 24).

- Total coal consumption grew by an estimated 3.6 percent in 1993. In 1994 and 1995, consumers replenish stocks drawn down as a result of the strike, and as coal consumption increases (Figure 25). The coal strike ended in December 1993.

- Coal production is expected to grow by 10.4 percent in 1994 as coal producers and consumers repatriate stocks drawn down as a result of the strike, and as coal consumption increases (Figure 25). The coal strike ended in December 1993.

- The strike by the United Mine Workers of America (UMWA) against member companies of the Bituminous Coal Operators' Association (BCOA) had a significant effect on coal production and stocks. Coal production is estimated to have declined by almost 5 percent in 1993 to 950 million short tons (Table 12).

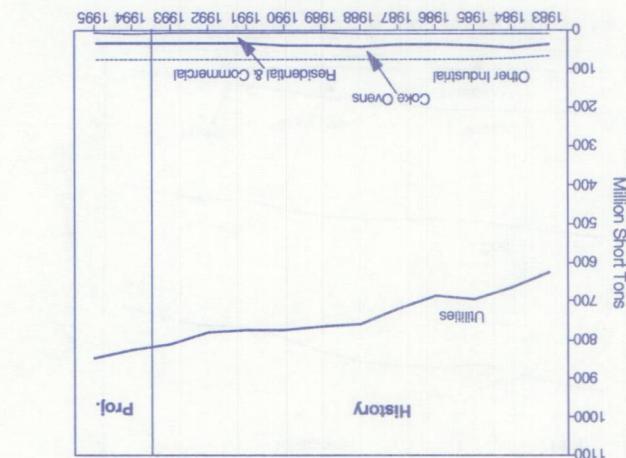
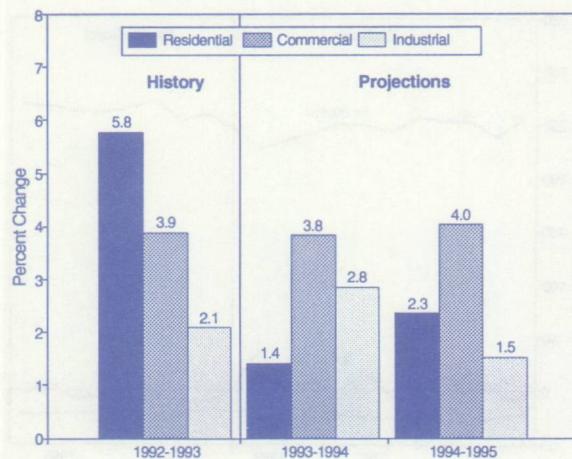


Figure 24. U.S. Coal Demand Trends

U.S. Coal Demand and Supply

U.S. Electricity Demand and Supply

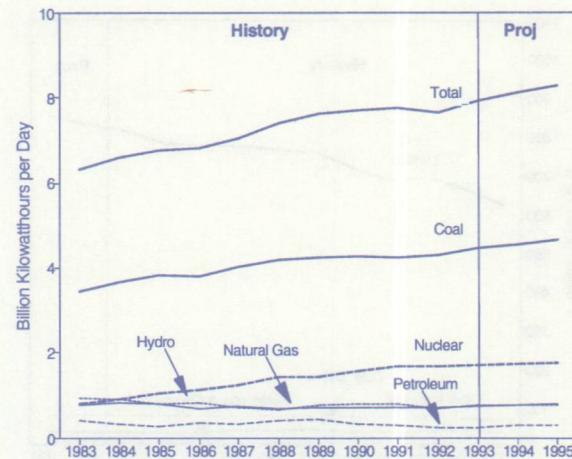
Figure 26. Electricity Demand Changes by Sector



Sources: First Quarter 1994 STIFS database. Details provided in Figure References Section, p. 26.

- Electricity demand is estimated to have risen by 3.9 percent in 1993, driven primarily by weather factors and to a lesser extent by rising economic growth. In 1994 and 1995, demand is expected to rise by 2.5 and 2.4 percent, respectively, as the economy strengthens (Table 13 and Figure 26).
- The hot summer in 1993 was a major cause of a gain in residential demand of 5.8 percent for the year, especially because cool summer weather in 1992 caused low residential demand for that year.³¹
- Industrial demand growth in 1994 is expected to rise by 2.8 percent above the 1993 level, along with total manufacturing production. In 1995, industrial demand grows by only 1.5 percent as the economic growth rate declines (Table 13).
- Coal, oil and natural gas generation are expected to meet the increased demand for electricity in 1994, projected to grow by 2.5 percent. Oil generation is rising fastest, due to

Figure 27. U.S. Electricity Supply Trends



Sources: First Quarter 1994 STIFS database and Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels. Details provided in Figure References Section, p. 26.

- low oil prices. Net imports from Canada remained relatively constant in 1993 due to below normal water conditions in British Columbia, but are expected to rise in 1994 with the assumption of a return to normal water conditions in that province (Table 13 and Figure 27).
- In 1995, coal and nuclear generation are expected to grow by 2.5 and 2.4 percent, respectively, as oil and natural gas generation both slow because of higher oil and gas prices. Also, nuclear power generation is expected to increase in 1995 due to the startup of Watts Bar in late 1994. Hydropower is to remain relatively flat in both 1994 and 1995 assuming normal precipitation levels (Table 13).
 - U.S. utilities are expected to generate an average of 2.4 percent more electricity in 1994 and 1995. Non utility generation is expected to increase by 9.2 and 3.9 percent in 1994 and 1995, respectively. Non utility generation growth in 1993 is estimated at 6.6 percent (Table 13).

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: $(5338 - 5221) / ((5338 + 5221) / 2)$, or 2.2 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 274,000 barrels per day; thus, a 1-percent change in GDP corresponds to a change in demand of

$(274,000 / 2.2)$, or 125,000 barrels per day. For 1995, a 4.2-percent change in GDP corresponds to a change in demand of 694,000 barrels per day; thus, a 1-percent change in GDP corresponds to a demand change of 165,000 barrels per day. The average of the 1994 and 1995 results (weighting the 1994 and 1995 results by 365 days) is 145,000 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

World Oil Prices: How Low and for How Long?

¹Table 9 and DRI/McGraw Hill Forecast CONTROL1293.

²The WEFA Group, *Middle East and Africa Economic Outlook*, October 1993.

³The WEFA Group, *Middle East and Africa Economic Outlook*, October 1993.

⁴Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), and Table 5.

⁵The WEFA Group, *Middle East and Africa Economic Outlook*, October 1993.

Petroleum Products Trade Patterns

⁶Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Tables 3.1a and 3.1b.

⁷Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Tables 3.1a and 3.1b.

⁸Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Tables 3.1a and 3.1b.

⁹Federal Highway Administration, *Traffic Volume Trends*; and Federal Aviation Administration Projections, Table 3.

¹⁰U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Monthly State, Regional and National History and Cooling Degree Days Weighted by Population*.

¹¹U.S. Department of Commerce, National Oceanic and Atmospheric Administration, *Monthly State, Regional and National History and Cooling Degree Days Weighted by Population*.

¹²Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Table 3.1b.

¹³Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Table 3.5.

¹⁴Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12), Table 3.4.

International Oil Supply

¹⁵Excess Capacity data by country provided by EIA's Energy Markets and Contingency Information Division.

World Oil Stocks and Net Trade

¹⁶Based 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 Demand

¹⁷Based on comparison between data in Energy Information Administration, *Petroleum Supply Annual, Volume 1*, DOE/EIA-0340(92/1) and detailed data in first quarter 1994 STIFS database, case "BBB" (base case).

U.S. Oil Supply

¹⁸*Oil and Gas Journal*, "Baker Hughes Rig Count," December 13, 1993, p. 68.

U.S. Energy Prices

¹⁹Published estimates of the cost of producing low-sulfur diesel fuel range from 2 to 7 cents per gallon. Environmental Protection Agency, *Federal Register*, Vol. 54, No. 163, August 24, 1989, p. 35278. Cambridge Energy Research Associates. *The U.S. Refining Industry: Facing the Challenges of the 1990's* (January 1992), page 54.

²⁰*Platt's Oilgram Price Report*, October 8, 1993, p. 5.

²¹*Platt's Oilgram Price Report*, September 10, 1993, p. 5.

Text References and Notes

²²*Platt's Oilgram Price Report*, September 10, 1993, p. 5.

²³*Lundberg Letter*, October 21, 1993, p. 4. *Platt's Oilgram Price Report*, August 13, 1993 and October 8, 1993, p. 5.

²⁴*Platt's Oilgram Price Report*, December 13, 1993, p. 5.

²⁵*Platt's Oilgram Price Report*, December 13, 1993, p. 5.

²⁶See Energy Information Administration, *Monthly Energy Review*, "Demand, Supply and Price Outlook for Low-Sulfur Diesel Fuel," DOE/EIA-0035(93/08) (Washington DC, August 1983), p. 5.

U.S. Natural Gas Supply

²⁷Monthly values for natural gas productive capacity for history and projections are available in the First Quarter 1994 STIFS database, with projections provided by Energy Information Administration, Reserves and Natural Gas Division.

²⁸Energy Information Administration, *Monthly Energy Review*, September 1993.

²⁹Energy Information Administration, *Natural Gas Monthly*, December 1993, DOE/EIA-0130(93/12), p. 21..

³⁰Energy Information Administration, *Natural Gas 1992, Issues and Trends*, DOE/EIA-0560(92), pp. 19, 20.

U.S. Electricity Demand and Supply

³¹Residential demand in 1992 was 934 billion kilowatthours. See Energy Information Administration, *Electric Power Monthly*, DOE/EIA-0226(93/12).

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*, December 3, 1993. **Projections:** First 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 CONTROL1293, 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(91), 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;

Figure References

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(91), 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:** First 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 1992, 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:** First 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:** First 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 Annual*, DOE/EIA-0109, Table S1. **Projections:** First 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:** First quarter 1994 STIFS database.
14. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Natural Gas Monthly*, DOE/EIA-0130(93/12), Table 4. **Projections:** First quarter 1994 STIFS database, cases "BBB," "BLB," and "BHB" cases.

Figure References

15. **History:** *Platt's Oilgram Price Report* (various issues, August-December 1993).
16. **History:** *Platt's Oilgram Price Report* (various issues, August-December 1993).
17. **History:** *Platt's Oilgram Price Report* (various issues, August-December 1993).
18. **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:** First quarter 1994 STIFS database, cases "BBB," "BBS," and "BBL."
19. **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:** First quarter STIFS database, cases "BBB," "HBB," and "LBB."
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:** First quarter 1994 STIFS database, case "BBB."
21. **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:** First quarter 1994 STIFS database, case "BBB."
22. **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:** First quarter 1994 STIFS database, case "BBB"; and Energy Information Administration, Reserves and Natural Gas Division.
23. **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:** First quarter 1994 STIFS database, case "BBB."
24. **History:** Compiled from quarterly data used in publication of Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121, Table 45. **Projections:** First quarter 1994 STIFS database, case "BBB."
25. **History:** Compiled from quarterly data used in publication of Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121, Table 1. **Projections:** First quarter 1994 STIFS database, case "BBB"; and Energy Information Administration, Office of Coal, Nuclear, Electric and Alternate Fuels.
26. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Electric Power Monthly*, DOE/EIA-0226, Table 51. **Projections:** First quarter 1994 STIFS database, case "BBB."

Figure References

27. **History:** Compiled from monthly data used in publication of Energy Information Administration, *Electric Power Monthly*, DOE/EIA-0226(93/12), Table 3 and Form EIA-759. **Projections:** First 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				1994				1995				Year		
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Macroeconomic ^a																
Real Gross Domestic Product (billion 1987 dollars)	High					5239	5307	5367	5438	5477	5505	5529	5557		5338	5517
	Mid	5078	5102	5136	5191	5227	5265	5293	5333	5365	5392	5416	5443	5127	5280	5404
	Low					5215	5223	5219	5228	5252	5279	5302	5328		5221	5290
Percentage Change from Prior Year	High					3.2	4.0	4.5	4.8	4.5	3.7	3.0	2.2		4.1	3.4
	Mid	3.2	2.9	2.8	2.4	2.9	3.2	3.1	2.7	2.6	2.4	2.3	2.1	2.8	3.0	2.4
	Low					2.7	2.4	1.6	0.7	0.7	1.1	1.6	1.9		1.8	1.3
Annualized Percent Change from Prior Quarter	High					3.7	5.2	4.5	5.3	2.9	2.0	1.8	2.0			
	Mid	0.8	1.9	2.6	4.3	2.8	2.9	2.1	3.1	2.4	2.0	1.8	2.0			
	Low					1.8	0.6	(0.3)	0.7	1.8	2.0	1.8	2.0			
GDP Implicit Price Deflator (Index, 1987=1.000)	High					1.263	1.269	1.274	1.279	1.288	1.295	1.302	1.311		1.271	1.299
	Mid	1.233	1.240	1.245	1.253	1.264	1.272	1.280	1.287	1.297	1.304	1.311	1.320	1.243	1.276	1.308
	Low					1.265	1.275	1.286	1.295	1.306	1.313	1.320	1.329		1.280	1.317
Percentage Change from Prior Year	High					2.4	2.3	2.3	2.1	2.0	2.1	2.2	2.5		2.3	2.2
	Mid	2.9	2.8	2.8	2.5	2.5	2.6	2.8	2.7	2.6	2.5	2.4	2.5	2.8	2.6	2.5
	Low					2.6	2.8	3.3	3.4	3.2	3.0	2.7	2.6		3.0	2.9
Real Disposable Personal Income (billion 1987 Dollars)	High					3776	3819	3860	3909	3943	3963	3982	3993		3841	3970
	Mid	3643	3694	3704	3752	3767	3787	3804	3830	3858	3877	3896	3907	3698	3797	3884
	Low					3757	3756	3748	3750	3772	3792	3810	3820		3753	3799
Percentage Change from Prior Year	High					3.7	3.4	4.2	4.2	4.4	3.8	3.2	2.2		3.9	3.4
	Mid	1.7	2.4	2.2	0.9	3.4	2.5	2.7	2.1	2.4	2.4	2.4	2.0	1.8	2.7	2.3
	Low					3.1	1.7	1.2	0.0	0.4	1.0	1.6	1.9		1.5	1.2
Manufacturing Production (Index, 1987=1.000)	High					1.163	1.192	1.216	1.240	1.252	1.259	1.263	1.268		1.203	1.260
	Mid	1.104	1.113	1.120	1.141	1.157	1.171	1.179	1.188	1.195	1.202	1.206	1.211	1.120	1.174	1.204
	Low					1.151	1.150	1.142	1.136	1.139	1.145	1.149	1.154		1.145	1.147
Percentage Change from Prior Year	High					5.4	7.1	8.6	8.7	7.6	5.6	3.8	2.2		7.5	4.7
	Mid	4.8	4.3	4.7	5.0	4.8	5.2	5.3	4.1	3.3	2.6	2.3	1.9	4.7	4.8	2.5
	Low					4.3	3.3	2.0	(0.5)	-1.0	-0.5	0.6	1.6		2.2	0.2
OECD Economic Growth (percent) ^b														1.2	2.4	2.9
Weather ^c																
Heating Degree-Days																
U.S.		2342	527	118	1691	2401	536	88	1669	2401	536	88	1669	4678	4694	4694
New England		3300	820	194	2293	3223	928	193	2223	3223	928	193	2223	6607	6567	6567
Middle Atlantic		2979	622	134	2063	2988	727	118	2018	2988	727	118	2018	5798	5851	5851
U.S. Gas-Weighted		2367	527	81	1686	2426	539	81	1686	2426	539	81	1686	4661	4732	4732
Cooling Degree-Days (U.S.)		17	312	831	59	28	327	755	63	28	327	755	63	1219	1172	1172

^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*, December 1993; 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)*, December 1993. 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 *															
Real Fixed Investment (billion 1987 dollars)	774	791	806	830	849	870	891	911	930	942	953	963	800	880	947
Real Exchange Rate (index)	1.036	1.011	1.032	1.051	1.056	1.059	1.052	1.049	1.048	1.039	1.029	1.022	1.032	1.054	1.034
Business Inventory Change (billion 1987 dollars)	-0.8	5.0	0.6	-1.8	4.6	11.2	13.3	17.8	17.7	17.0	16.8	14.2	0.7	11.7	16.4
Wholesale Price Index (index, 1980-1984=1.000)	1.186	1.197	1.190	1.188	1.198	1.202	1.208	1.215	1.224	1.230	1.236	1.243	1.190	1.206	1.233
Consumer Price Index (index, 1980-1984=1.000)	1.433	1.443	1.448	1.459	1.471	1.482	1.493	1.505	1.518	1.529	1.540	1.554	1.446	1.488	1.536
Petroleum Product Price Index (index, 1980-1984=1.000)	0.627	0.654	0.610	0.603	0.611	0.621	0.579	0.566	0.626	0.660	0.622	0.596	0.623	0.594	0.626
Non-Farm Employment (millions)	109.45	109.99	110.37	110.86	111.52	112.08	112.64	113.23	113.81	114.39	114.95	115.46	110.17	112.37	114.66
Commercial Employment (millions)	72.13	72.76	73.20	73.62	74.16	74.71	75.26	75.82	76.39	76.94	77.46	77.96	72.93	74.99	77.19
Total Industrial Production (index, 1987=1.000)	1.098	1.104	1.110	1.129	1.143	1.156	1.163	1.171	1.177	1.183	1.187	1.192	1.110	1.158	1.185
Housing Stock (millions)	106.19	106.49	106.80	107.10	107.40	107.70	108.10	108.40	108.73	109.10	109.40	109.77	106.65	107.90	109.25
Miscellaneous															
Gas Weighted Industrial Production (index, 1987=1.000)	1.095	1.104	1.108	1.124	1.132	1.146	1.153	1.161	1.166	1.169	1.172	1.175	1.108	1.148	1.171
Vehicle Miles Traveled (million miles per day)	5705	6508	6726	6176	5944	6700	6878	6307	6081	6854	7038	6452	6282	6459	6608
Vehicle Fuel Efficiency (miles per gallon)	19.16	20.55	20.64	19.56	19.46	20.85	20.95	19.71	19.77	21.16	21.26	20.02	20.00	20.26	20.57
Real Vehicle Fuel Cost (cents per mile)	4.27	4.00	3.89	4.09	4.00	3.90	3.89	4.07	4.05	3.99	3.98	4.08	4.05	3.96	4.02
Air Travel Capacity (available ton-miles)	334.5	339.5	354.1	345.1	344.2	357.3	379.5	365.5	359.7	370.5	391.6	376.2	343.3	361.8	374.6
Aircraft Utilization (revenue ton-miles)	174.8	188.6	202.1	182.6	177.8	194.7	213.2	191.0	183.5	200.4	219.1	195.7	187.1	194.2	199.8
Aircraft Yield (cents per ton-mile)	14.47	13.64	12.92	13.85	14.05	13.09	11.93	12.87	13.85	13.06	12.00	13.03	13.69	12.93	12.94
Residential Natural Gas Customers (millions)	52.35	51.75	51.34	51.72	52.45	52.16	51.85	52.28	53.05	52.96	52.72	53.17	51.79	52.19	52.98
Commercial Natural Gas Customers (millions)	4.50	4.40	4.31	4.38	4.51	4.45	4.36	4.45	4.58	4.53	4.46	4.56	4.40	4.44	4.53
Raw Steel Production (millions)	23.62	24.14	23.94	24.60	23.52	24.49	24.90	25.75	25.81	26.47	26.44	26.89	96.31	98.66	105.61

* 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(93/12); U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, December 1993; 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)*, December 1993. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1293.

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	17.37	17.77	17.23	17.63	18.01	17.99	17.47	17.81	18.18	17.13	17.66	17.86
U.S. Territories	0.22	0.24	0.21	0.22	0.23	0.23	0.22	0.23	0.23	0.23	0.22	0.23	0.22	0.22	0.23
Canada	1.67	1.65	1.73	1.75	1.70	1.67	1.76	1.78	1.72	1.70	1.78	1.80	1.70	1.73	1.75
Europe ^b	13.67	13.10	13.56	13.76	13.74	13.16	13.63	13.82	13.89	13.30	13.78	13.98	13.52	13.59	13.74
Japan	6.15	5.06	4.83	5.55	6.13	5.05	4.93	5.66	6.04	5.12	5.03	5.77	5.39	5.44	5.49
Australia and New Zealand	0.85	0.86	0.83	0.85	0.84	0.86	0.85	0.87	0.85	0.88	0.87	0.89	0.85	0.85	0.87
Total OECD	39.68	37.58	38.52	39.49	40.40	38.19	39.02	40.37	40.72	38.70	39.49	40.85	38.82	39.49	39.94
Non-OECD															
Former Soviet Union	6.33	5.60	5.15	5.35	5.38	5.04	4.76	5.08	5.11	4.79	4.53	4.83	5.60	5.06	4.81
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	19.01	18.96	18.69	18.84	19.57	19.67	19.39	19.54	20.30	18.48	19.01	19.73
Total Non-OECD	28.70	27.64	27.32	28.36	28.49	27.82	27.67	28.86	29.16	28.49	28.37	29.58	28.00	28.21	28.90
Total World Demand	68.38	65.22	65.84	67.85	68.89	66.01	66.69	69.23	69.89	67.20	67.86	70.43	66.82	67.70	68.84
Supply ^c															
OECD															
U.S. (50 States)	9.85	9.53	9.42	9.58	9.59	9.46	9.39	9.49	9.41	9.26	9.20	9.22	9.60	9.48	9.27
Canada	2.09	2.16	2.25	2.24	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	5.08	5.25	4.75	4.95	5.35	5.20	4.80	5.00	5.30	4.57	5.08	5.08
Other OECD	1.42	1.42	1.42	1.41	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	17.67	18.31	18.47	17.84	18.03	18.57	18.35	17.75	17.94	18.31	17.77	18.23	18.09
Non-OECD															
OPEC	27.42	26.66	27.30	27.15	27.22	27.23	27.44	27.85	28.15	28.25	28.55	29.05	27.14	27.44	28.50
Former Soviet Union	8.28	8.04	7.55	7.40	7.27	7.16	7.05	6.96	6.89	6.86	6.82	6.81	7.81	7.11	6.84
China	2.88	2.93	2.88	2.90	2.90	2.91	2.92	2.93	2.94	2.95	2.96	2.97	2.90	2.92	2.96
Mexico	3.10	3.15	3.15	3.12	3.15	3.15	3.15	3.15	3.20	3.20	3.20	3.20	3.13	3.15	3.20
Other Non-OECD	8.24	8.22	8.31	8.28	8.56	8.55	8.63	8.60	8.81	8.80	8.88	8.85	8.26	8.59	8.84
Total Non-OECD	49.92	49.01	49.19	48.85	49.10	49.00	49.19	49.49	49.99	50.06	50.41	50.88	49.24	49.20	50.34
Total World Supply	67.63	66.41	66.86	67.15	67.57	66.84	67.23	68.06	68.34	67.81	68.35	69.19	67.01	67.43	68.42
Stock Changes and Statistical Discrepancy															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	0.09	-0.84	-0.01	-0.05	0.60	-0.48	-0.27	0.22	0.50	-0.46	-0.18	0.23	-0.20	0.01	0.02
Other	0.66	-0.20	-1.26	0.48	0.42	-0.66	-0.59	0.64	0.69	-0.51	-0.68	0.64	-0.09	-0.05	0.03
Total Stock Withdrawals	0.75	-1.04	-1.27	0.43	1.02	-1.14	-0.86	0.85	1.19	-0.98	-0.86	0.87	-0.29	-0.04	0.05
Statistical Discrepancy	0.00	-0.14	0.25	0.27	0.30	0.31	0.32	0.32	0.36	0.36	0.37	0.37	0.09	0.31	0.36
Closing Stocks (billion barrels) ^e	5.59	5.69	5.81	5.77	5.67	5.78	5.86	5.78	5.67	5.76	5.84	5.76	5.77	5.78	5.76
Non-OPEC Supply	40.20	39.75	39.56	40.00	40.34	39.61	39.78	40.21	40.19	39.56	39.80	40.14	39.88	39.99	39.92
Net Exports from Former Soviet Union	1.95	2.44	2.40	2.05	1.89	2.12	2.29	1.88	1.78	2.07	2.30	1.98	2.21	2.04	2.03

^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(93/12); and *International Energy Annual 1991*, DOE/EIA-0219(91); Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database through December 1993.

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

	Price Case	1993				1994				1995				Year		
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1993	1994	1995
Imported Crude Oil ^a (dollars per barrel)	Low					12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
	Mid	17.34	17.66	15.61	14.94	15.00	15.00	15.50	16.00	16.00	16.50	17.00	17.00	16.35	15.39	16.64
	High					18.00	18.00	18.00	18.00	18.00	18.00	19.00	19.00		18.00	18.52
Natural Gas Wellhead (dollars per thousand cubic feet)	Low					2.05	1.71	1.80	2.00	1.99	1.67	1.77	2.04		1.89	1.87
	Mid	1.86	2.07	1.97	2.08	2.18	1.92	2.05	2.31	2.31	1.97	2.09	2.42	1.99	2.12	2.20
	High					2.32	2.14	2.32	2.62	2.62	2.30	2.44	2.81		2.35	2.55
Petroleum Products																
Gasoline Retail ^b (dollars per gallon)	Low					1.09	1.13	1.13	1.11	1.12	1.18	1.18	1.15		1.12	1.16
	Mid	1.17	1.19	1.16	1.17	1.15	1.21	1.22	1.21	1.21	1.29	1.30	1.27	1.17	1.19	1.27
	High					1.20	1.28	1.28	1.26	1.26	1.33	1.35	1.32		1.25	1.31
No. 2 Diesel Oil, Retail (dollars per gallon)	Low					1.12	1.13	1.12	1.12	1.14	1.15	1.14	1.14		1.12	1.14
	Mid	1.10	1.10	1.08	1.17	1.19	1.20	1.20	1.22	1.23	1.25	1.26	1.26	1.11	1.20	1.25
	High					1.26	1.27	1.26	1.26	1.28	1.29	1.30	1.31		1.26	1.29
No. 2 Heating Oil, Wholesale (dollars per gallon)	Low					0.42	0.40	0.41	0.44	0.43	0.40	0.41	0.45		0.42	0.42
	Mid	0.57	0.56	0.52	0.52	0.50	0.48	0.50	0.55	0.53	0.51	0.54	0.58	0.54	0.51	0.54
	High					0.58	0.55	0.56	0.60	0.58	0.55	0.59	0.63		0.57	0.59
No. 2 Heating Oil, Retail (dollars per gallon)	Low					0.82	0.79	0.80	0.83	0.83	0.80	0.81	0.85		0.82	0.83
	Mid	0.95	0.91	0.85	0.88	0.88	0.87	0.88	0.93	0.93	0.91	0.93	0.97	0.91	0.90	0.94
	High					0.95	0.94	0.95	0.98	0.98	0.95	0.98	1.02		0.96	0.99
No. 6 Residual Fuel Oil, Retail ^c (dollars per gallon)	Low					10.69	9.65	9.69	10.65	11.20	10.28	10.14	11.14		10.21	10.72
	Mid	14.72	15.13	13.52	11.79	12.89	11.81	12.19	13.54	14.00	13.34	13.61	14.59	13.81	12.65	13.91
	High					15.08	13.97	13.99	15.00	15.46	14.40	15.07	16.07		14.56	15.28
Electric Utility Fuels																
Coal (dollars per million Btu)	Low					1.38	1.39	1.38	1.38	1.39	1.41	1.38	1.38		1.38	1.39
	Mid	1.38	1.39	1.38	1.39	1.40	1.43	1.42	1.42	1.43	1.45	1.43	1.43	1.39	1.42	1.43
	High					1.46	1.49	1.49	1.48	1.49	1.51	1.49	1.48		1.48	1.49
Heavy Fuel Oil ^d (dollars per million Btu)	Low					1.83	1.71	1.75	1.97	1.91	1.81	1.82	2.06		1.81	1.89
	Mid	2.50	2.60	2.32	2.18	2.17	2.05	2.15	2.45	2.35	2.30	2.37	2.62	2.41	2.20	2.40
	High					2.51	2.40	2.43	2.69	2.57	2.47	2.61	2.86		2.50	2.62
Natural Gas (dollars per million Btu)	Low					2.56	2.20	2.24	2.55	2.51	2.17	2.22	2.57		2.36	2.34
	Mid	2.58	2.63	2.48	2.69	2.68	2.39	2.46	2.82	2.78	2.44	2.50	2.91	2.59	2.56	2.63
	High					2.81	2.59	2.69	3.08	3.04	2.72	2.78	3.23		2.77	2.91
Other Residential																
Natural Gas (dollars per thousand cubic feet)	Low					5.79	6.41	7.53	6.00	5.90	6.49	7.67	6.18		6.12	6.24
	Mid	5.69	6.45	7.88	6.11	6.02	6.70	7.92	6.33	6.28	6.92	8.19	6.60	6.12	6.40	6.66
	High					6.19	6.92	8.24	6.60	6.62	7.31	8.68	6.98		6.62	7.03
Electricity (cents per kilowatthour)	Low					7.8	8.3	8.5	8.1	7.8	8.3	8.6	8.2		8.1	8.2
	Mid	7.8	8.5	8.7	8.4	8.0	8.5	8.7	8.3	8.2	8.8	9.0	8.6	8.3	8.4	8.6
	High					8.4	8.9	9.2	8.7	8.7	9.3	9.6	9.1		8.8	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 fourth quarter of 1992. 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. Historical data are printed in bold, forecasts are in italic. The forecasts were generated by the following simulations of the Short-Term Integrated Forecasting System: for the mid oil price case, for the low oil price case, and for the high oil price case.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(93/12); and *Petroleum Marketing Monthly*, DOE/EIA-0380(93/12).

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	6.86	6.70	6.50	6.40	6.40	6.31	6.15	6.06	6.00	6.84	6.50	6.13
Alaska	1.64	1.56	1.48	1.68	1.60	1.55	1.52	1.55	1.50	1.45	1.44	1.42	1.59	1.55	1.45
Lower 48	5.34	5.27	5.22	5.18	5.09	4.96	4.89	4.85	4.81	4.70	4.62	4.58	5.25	4.95	4.68
Net Imports (including SPR) ^b	6.18	6.69	6.74	6.76	6.26	7.05	7.41	7.32	7.24	7.59	7.75	7.75	6.60	7.01	7.59
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.86	6.40	7.18	7.52	7.45	7.39	7.72	7.86	7.89	6.70	7.14	7.72
SPR Imports	0.01	0.04	0.01	0.00	0.01	0.00	0.00								
Exports	0.14	0.11	0.07	0.10	0.14	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.11	0.13	0.13
Other SPR Supply	0.02	0.02	0.02	0.01	0.02	0.01	0.01								
SPR Stock Withdrawn or Added (-)	-0.03	-0.06	-0.03	-0.01	-0.03	-0.01	-0.01								
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.23	0.00	0.04	0.00	0.05	-0.10	0.04	-0.02	0.05	-0.06	0.02	0.00
Product Supplied and Losses	-0.01														
Unaccounted-for Crude Oil	0.15	0.48	0.20	0.24	0.25	0.26	0.27	0.27	0.26	0.27	0.27	0.27	0.27	0.26	0.27
Total Crude Oil Supply	13.08	13.80	13.95	13.62	13.19	13.85	14.07	14.04	13.70	14.03	14.05	14.06	13.62	13.79	13.97
Other Supply															
NGL Production	1.76	1.75	1.72	1.70	1.72	1.69	1.68	1.72	1.71	1.69	1.67	1.71	1.73	1.70	1.69
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.27	0.25	0.24	0.24	0.27	0.25	0.24	0.24	0.25	0.26	0.25	0.25
Crude Oil Product Supplied	0.01														
Processing Gain	0.78	0.74	0.77	0.75	0.76	0.80	0.81	0.81	0.79	0.81	0.82	0.82	0.76	0.80	0.81
Net Product Imports ^c	0.86	0.81	1.01	0.75	1.30	1.27	1.24	1.15	1.26	1.53	1.45	1.54	0.86	1.24	1.45
Gross Product Imports ^c	1.76	1.72	1.85	1.78	2.26	2.13	2.06	2.07	2.15	2.38	2.28	2.47	1.78	2.13	2.32
Product Exports	0.90	0.91	0.84	1.03	0.96	0.86	0.83	0.92	0.89	0.85	0.83	0.93	0.92	0.89	0.87
Product Stock Withdrawn or Added (-) ^d	0.34	-0.63	-0.32	0.19	0.61	-0.51	-0.26	0.18	0.61	-0.49	-0.17	0.19	-0.10	0.00	0.03
Total Supply	17.13	16.68	17.36	17.37	17.85	17.34	17.79	18.17	18.33	17.82	18.10	18.59	17.13	17.79	18.21
Demand															
Motor Gasoline	7.09	7.54	7.76	7.52	7.32	7.70	7.88	7.68	7.39	7.79	7.97	7.76	7.48	7.65	7.73
Jet Fuel	1.48	1.44	1.49	1.46	1.49	1.45	1.56	1.57	1.53	1.48	1.59	1.59	1.47	1.52	1.55
Distillate Fuel Oil	3.33	2.80	2.82	3.23	3.51	2.99	2.89	3.29	3.63	3.08	2.95	3.39	3.04	3.17	3.26
Residual Fuel Oil	1.07	0.98	1.07	0.97	1.36	1.12	1.10	1.24	1.43	1.27	1.17	1.35	1.02	1.21	1.31
Other Oils ^e	4.16	3.91	4.22	4.18	4.18	4.07	4.35	4.38	4.35	4.19	4.42	4.51	4.12	4.25	4.37
Total Demand	17.13	16.68	17.36	17.37	17.85	17.34	17.79	18.17	18.33	17.82	18.10	18.59	17.13	17.79	18.21
Total Petroleum Net Imports	7.04	7.51	7.75	7.51	7.56	8.31	8.65	8.47	8.50	9.12	9.21	9.30	7.45	8.25	9.03
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) ^f	337	352	321	342	342	338	338	333	342	338	340	333	342	333	333
Total Motor Gasoline	227	220	207	225	223	219	208	221	223	219	209	221	225	221	221
Finished Motor Gasoline	187	183	170	186	183	181	169	182	183	181	170	182	186	182	182
Blending Components	40	37	37	39	40	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	41	46	47	47	48	47	47	45	48	41	48	48
Distillate Fuel Oil	97	109	130	145	103	105	126	136	104	108	125	134	145	136	134
Residual Fuel Oil	41	46	42	45	42	44	45	48	42	45	44	48	45	48	48
Other Oils ^g	262	306	334	281	270	315	327	283	265	308	318	274	281	283	274
Total Stocks (excluding SPR)	1006	1078	1076	1079	1024	1067	1091	1070	1023	1064	1080	1057	1079	1070	1057
Crude Oil in SPR	578	583	586	587	588	589	591	592	593	594	595	596	587	592	596
Total Stocks (including SPR)	1584	1660	1661	1666	1612	1656	1681	1661	1616	1658	1675	1654	1666	1661	1654

^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.

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	6.86	6.85	6.73	6.66	6.69	6.66	6.52	6.46	6.42	6.84	6.73	6.51
Alaska	1.64	1.56	1.48	1.68	1.64	1.58	1.55	1.59	1.57	1.52	1.51	1.49	1.59	1.59	1.52
Lower 48	5.34	5.27	5.22	5.18	5.21	5.15	5.10	5.10	5.08	5.00	4.95	4.93	5.25	5.14	4.99
Net Imports (including SPR) ^b	6.18	6.69	6.74	6.76	6.07	6.78	7.16	6.99	6.72	7.09	7.35	7.31	6.60	6.75	7.12
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.86	6.21	6.91	7.26	7.12	6.86	7.23	7.46	7.44	6.70	6.88	7.25
SPR Imports	0.01	0.04	0.01	0.00	0.01	0.00	0.00								
Exports	0.14	0.11	0.07	0.10	0.14	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.11	0.13	0.13
Other SPR Supply	0.02	0.02	0.02	0.01	0.02	0.01	0.01								
SPR Stock Withdrawn or Added (-)	-0.03	-0.06	-0.03	-0.01	-0.03	-0.01	-0.01								
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.23	0.00	0.04	0.00	0.05	-0.10	0.04	0.00	0.05	-0.06	0.02	0.00
Product Supplied and Losses	-0.01														
Unaccounted-for Crude Oil	0.15	0.48	0.20	0.24	0.25	0.26	0.27	0.27	0.26	0.26	0.27	0.27	0.26	0.26	0.26
Total Crude Oil Supply	13.05	13.78	13.93	13.70	13.16	13.80	14.07	13.99	13.53	13.91	14.07	14.04	13.62	13.76	13.89
Other Supply															
NGL Production	1.76	1.75	1.72	1.70	1.73	1.70	1.69	1.72	1.73	1.70	1.68	1.72	1.73	1.71	1.71
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.27	0.25	0.24	0.24	0.27	0.25	0.24	0.24	0.25	0.26	0.25	0.25
Crude Oil Product Supplied	0.01														
Processing Gain	0.78	0.74	0.77	0.75	0.76	0.80	0.81	0.81	0.78	0.80	0.82	0.82	0.76	0.80	0.80
Net Product Imports ^c	0.86	0.81	1.01	0.75	1.25	1.20	1.08	1.04	1.09	1.30	1.16	1.14	0.86	1.14	1.17
Gross Product Imports ^c	1.76	1.72	1.85	1.78	2.21	2.05	1.90	1.96	1.98	2.15	1.99	2.07	1.78	2.03	2.05
Product Exports	0.90	0.91	0.84	1.03	0.96	0.86	0.83	0.92	0.89	0.85	0.83	0.93	0.92	0.89	0.87
Product Stock Withdrawn or Added (-) ^d	0.34	-0.63	-0.32	0.19	0.61	-0.51	-0.26	0.18	0.61	-0.49	-0.17	0.19	-0.10	0.00	0.03
Total Supply	17.13	16.68	17.36	17.37	17.77	17.23	17.63	18.01	17.99	17.47	17.81	18.18	17.13	17.66	17.86
Demand															
Motor Gasoline	7.09	7.54	7.76	7.52	7.27	7.65	7.82	7.62	7.33	7.71	7.88	7.67	7.48	7.59	7.65
Jet Fuel	1.48	1.44	1.49	1.46	1.49	1.45	1.56	1.57	1.52	1.48	1.58	1.58	1.47	1.52	1.54
Distillate Fuel Oil	3.33	2.80	2.82	3.23	3.50	2.98	2.88	3.28	3.56	3.03	2.92	3.31	3.04	3.16	3.20
Residual Fuel Oil	1.07	0.98	1.07	0.97	1.34	1.08	1.04	1.19	1.31	1.11	1.04	1.19	1.02	1.16	1.16
Other Oils ^e	4.16	3.91	4.22	4.18	4.17	4.06	4.34	4.36	4.27	4.14	4.40	4.42	4.12	4.23	4.31
Total Demand	17.13	16.68	17.36	17.37	17.77	17.23	17.63	18.01	17.99	17.47	17.81	18.18	17.13	17.66	17.86
Total Petroleum Net Imports	7.04	7.51	7.75	7.51	7.32	7.97	8.23	8.03	7.81	8.39	8.52	8.45	7.45	7.89	8.30
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) ^f	337	352	321	342	342	338	338	333	342	338	338	333	342	333	333
Total Motor Gasoline	227	220	207	225	223	219	208	221	223	219	209	221	225	221	221
Finished Motor Gasoline	187	183	170	186	183	181	169	182	183	181	170	182	186	182	182
Blending Components	40	37	37	39	40	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	41	46	47	47	48	47	47	45	48	41	48	48
Distillate Fuel Oil	97	109	130	145	103	105	126	136	104	108	125	134	145	136	134
Residual Fuel Oil	41	46	42	45	42	44	45	48	42	45	44	48	45	48	48
Other Oils ^g	262	306	334	281	270	315	327	283	265	308	318	274	281	283	274
Total Stocks (excluding SPR)	0														
Crude Oil in SPR	578	583	586	587	588	589	591	592	593	594	595	596	587	592	596
Total Stocks (including SPR)	1584	1660	1661	1666	1612	1656	1681	1661	1616	1658	1675	1654	1666	1661	1654

^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(93/01-93/12); 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	6.86	6.94	6.83	6.78	6.83	6.82	6.70	6.66	6.65	6.84	6.84	6.71
Alaska	1.64	1.56	1.48	1.68	1.66	1.60	1.57	1.61	1.60	1.55	1.53	1.51	1.59	1.61	1.55
Lower 48	5.34	5.27	5.22	5.18	5.27	5.23	5.21	5.22	5.22	5.15	5.13	5.14	5.25	5.23	5.16
Net Imports (including SPR) ^b	6.18	6.69	6.74	6.76	5.96	6.63	7.03	6.79	6.49	6.84	7.15	7.05	6.60	6.60	6.88
Gross Imports (excluding SPR)	6.33	6.80	6.81	6.86	6.10	6.76	7.14	6.92	6.63	6.98	7.26	7.18	6.70	6.73	7.01
SPR Imports	0.01	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Exports	0.14	0.11	0.07	0.10	0.14	0.14	0.11	0.13	0.14	0.14	0.11	0.13	0.11	0.13	0.13
Other SPR Supply	0.02	0.02	0.02	0.01	0.01	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	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.03	-0.01	-0.01
Other Stock Withdrawn or Added (-)	-0.21	-0.16	0.34	-0.23	0.00	0.04	0.00	0.05	-0.10	0.04	0.00	0.05	-0.06	0.02	0.00
Product Supplied and Losses	-0.01	-0.01	-0.01	-0.01	-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	0.24	0.25	0.26	0.27	0.26	0.26	0.26	0.27	0.27	0.27	0.26	0.26
Total Crude Oil Supply	13.08	13.80	13.95	13.62	13.13	13.75	14.07	13.92	13.46	13.84	14.07	14.01	13.62	13.72	13.84
Other Supply															
NGL Production	1.76	1.75	1.72	1.70	1.73	1.70	1.69	1.73	1.73	1.70	1.68	1.73	1.73	1.71	1.71
Other Hydrocarbon and Alcohol Inputs	0.33	0.22	0.23	0.27	0.25	0.24	0.24	0.27	0.25	0.24	0.24	0.25	0.26	0.25	0.25
Crude Oil Product Supplied	0.01	0.01	0.01	0.01	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	0.75	0.75	0.79	0.82	0.81	0.77	0.80	0.82	0.81	0.76	0.79	0.80
Net Product Imports ^c	0.86	0.81	1.01	0.75	1.20	1.12	0.95	1.00	1.03	1.23	1.04	1.07	0.86	1.07	1.09
Gross Product Imports ^c	1.76	1.72	1.85	1.78	2.16	1.98	1.78	1.93	1.92	2.08	1.87	1.99	1.78	1.96	1.97
Product Exports	0.90	0.91	0.84	1.03	0.96	0.86	0.83	0.92	0.89	0.85	0.83	0.93	0.92	0.89	0.87
Product Stock Withdrawn or Added (-) ^d	0.34	-0.63	-0.32	0.19	0.61	-0.51	-0.26	0.18	0.61	-0.49	-0.17	0.19	-0.10	0.00	0.03
Total Supply	17.13	16.68	17.36	17.37	17.69	17.11	17.51	17.91	17.87	17.33	17.69	18.07	17.13	17.56	17.74
Demand															
Motor Gasoline	7.09	7.54	7.76	7.52	7.23	7.60	7.77	7.58	7.29	7.68	7.84	7.64	7.48	7.55	7.61
Jet Fuel	1.48	1.44	1.49	1.46	1.49	1.45	1.56	1.56	1.52	1.48	1.58	1.58	1.47	1.52	1.54
Distillate Fuel Oil	3.33	2.80	2.82	3.23	3.49	2.97	2.86	3.26	3.54	3.01	2.90	3.30	3.04	3.15	3.19
Residual Fuel Oil	1.07	0.98	1.07	0.97	1.31	1.04	1.00	1.16	1.27	1.05	0.99	1.15	1.02	1.13	1.12
Other Oils ^e	4.16	3.91	4.22	4.18	4.17	4.05	4.32	4.35	4.24	4.11	4.38	4.40	4.12	4.22	4.28
Total Demand	17.13	16.68	17.36	17.37	17.69	17.11	17.51	17.91	17.87	17.33	17.69	18.07	17.13	17.56	17.74
Total Petroleum Net Imports	7.04	7.51	7.75	7.51	7.16	7.75	7.99	7.79	7.52	8.07	8.19	8.12	7.45	7.67	7.98
Closing Stocks (million barrels)															
Crude Oil (excluding SPR) ^f	337	352	321	342	342	338	338	333	342	338	338	333	342	333	333
Total Motor Gasoline	227	220	207	225	223	219	208	221	223	219	209	221	225	221	221
Finished Motor Gasoline	187	183	170	186	183	181	169	182	183	181	170	182	186	182	182
Blending Components	40	37	37	39	40	38	39	39	40	38	39	39	39	39	39
Jet Fuel	41	45	41	41	46	47	47	48	47	47	45	48	41	48	48
Distillate Fuel Oil	97	109	130	145	103	105	126	136	104	108	125	134	145	136	134
Residual Fuel Oil	41	46	42	45	42	44	45	48	42	45	44	48	45	48	48
Other Oils ^g	262	306	334	281	270	315	327	283	265	308	318	274	281	283	274
Total Stocks (excluding SPR)	1006	1078	1076	1079	1024	1067	1091	1070	1023	1064	1080	1057	1079	1070	1057
Crude Oil in SPR	578	583	586	587	588	589	591	592	593	594	595	596	587	592	596
Total Stocks (including SPR)	1584	1660	1661	1666	1612	1656	1681	1661	1616	1658	1675	1654	1666	1661	1654

^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(93/01-93/12); and *Weekly Petroleum Status Report*, DOE/EIA-0208(various issues).

Table 9. U.S. Petroleum Demand Sensitivities

	1994	1995
	Four Quarters ^a	Four Quarters ^a
Economic Activity		
Gross Domestic Product (billion 1987 dollars)	5,221 - 5,338	5,290 - 5,517
Resulting Change in Petroleum Demand (million barrels per day) ^b	0.27	0.69
Energy Prices		
Imported Crude Oil (nominal dollars per barrel) ^c	\$12 - \$18	\$12 - \$18.50
Resulting Change in Petroleum Demand (million barrels per day) ^b		
Due to Changes in the Crude Oil Price	-0.23	-0.47
Weather		
Heating Degree Days ^d	20.85 - 24.64	20.85 - 24.64
Resulting Change in Petroleum Demand (million barrels per day)	0.54	0.68
Cooling Degree Days ^d	5.51 - 6.53	5.51 - 6.53
Resulting Change in Petroleum Demand (million barrels per day) ^b	0.21	0.29

^a In the weather case, calculations apply to certain quarters only, as follows: for heating degree days, the average of first and fourth quarters only are used; for cooling degree days, 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. 1980 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	Uncertainty	Price Impact
United States	6.65	6.00	0.65	0.13	0.52
Lower 48 States	5.14	4.58	0.56	0.08	0.48
Alaska	1.51	1.42	0.10	0.05	0.05

Note: Components provided are for the fourth quarter 1995 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	4.59	4.53	4.48	4.66	4.73	4.54	4.40	4.61	4.80	4.60	4.37	4.67	18.27	18.28	18.43
Net Imports	0.53	0.49	0.53	0.58	0.58	0.52	0.52	0.62	0.65	0.58	0.57	0.68	2.13	2.24	2.48
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	5.16	5.05	5.03	5.27	5.34	5.08	4.95	5.26	5.48	5.20	4.96	5.38	20.52	20.63	21.02
Underground Working Gas Storage															
Opening	6.64	5.23	6.13	7.15	6.81	5.52	6.24	7.16	6.78	5.57	6.31	7.15	6.64	6.81	6.78
Closing	5.23	6.13	7.15	6.81	5.52	6.24	7.16	6.78	5.57	6.31	7.15	6.77	6.81	6.78	6.77
Net Withdrawals ^b	1.41	-0.90	-1.02	0.34	1.29	-0.71	-0.93	0.38	-0.74	-0.84	-0.84	0.38	-0.17	0.03	0.01
Total Supply ^a	6.57	4.15	4.01	5.62	6.63	4.37	4.03	5.64	4.74	4.36	4.12	5.76	20.34	20.67	21.03
Balancing Item ^c	0.04	0.10	0.02	-0.24	0.07	0.28	-0.04	-0.42	2.02	0.38	-0.04	-0.42	-0.09	-0.11	-0.11
Total Primary Supply ^a	6.61	4.24	4.02	5.38	6.70	4.65	3.99	5.22	6.76	4.74	4.08	5.34	20.25	20.56	20.92
Demand															
Lease and Plant Fuel	0.30	0.30	0.29	0.31	0.32	0.30	0.30	0.31	0.32	0.30	0.30	0.31	1.21	1.23	1.22
Pipeline Use	0.21	0.13	0.12	0.15	0.18	0.14	0.13	0.16	0.19	0.15	0.13	0.16	0.61	0.61	0.63
Residential	2.31	0.85	0.39	1.33	2.29	0.97	0.44	1.34	2.32	0.99	0.45	1.36	4.87	5.04	5.11
Commercial	1.20	0.54	0.36	0.76	1.19	0.57	0.36	0.76	1.19	0.57	0.36	0.76	2.86	2.87	2.88
Industrial	2.07	1.83	1.91	2.07	2.17	1.90	1.77	1.98	2.19	1.94	1.84	2.04	7.87	7.83	8.02
Electric Utilities	0.52	0.60	0.95	0.76	0.55	0.76	0.99	0.67	0.56	0.80	1.00	0.70	2.83	2.97	3.05
Total Demand	6.61	4.24	4.02	5.38	6.70	4.65	3.99	5.22	6.76	4.74	4.08	5.34	20.25	20.56	20.92

^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(93/12); *Natural Gas Monthly*, DOE/EIA-0130(93/12); and *Electric Power Monthly*, DOE/EIA-0226(93/12).

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	242.5	234.9	227.7	245.0	259.8	253.0	271.4	265.0	260.0	261.4	266.6	269.2	950.1	1049.2	1057.2
Primary Stock Levels ^a	<i>34.0</i>	<i>38.3</i>	<i>34.8</i>	<i>27.2</i>	<i>26.0</i>	<i>28.0</i>	<i>29.0</i>	<i>29.0</i>	<i>29.0</i>	<i>29.0</i>	<i>29.0</i>	<i>29.0</i>	<i>34.0</i>	<i>26.0</i>	<i>29.0</i>
Opening	34.0	38.3	34.8	27.2	26.0	28.0	29.0	29.0	29.0	29.0	29.0	29.0	26.0	29.0	29.0
Closing	38.3	34.8	27.2	26.0	28.0	29.0	26.0	29.0	29.0						
Net Withdrawals	<i>-4.3</i>	<i>3.5</i>	<i>7.6</i>	<i>1.2</i>	<i>-2.0</i>	<i>-1.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>8.0</i>	<i>-3.0</i>	<i>0.0</i>
Imports	<i>1.2</i>	<i>1.1</i>	<i>2.1</i>	<i>1.8</i>	<i>1.4</i>	<i>1.5</i>	<i>1.6</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.8</i>	<i>1.8</i>	<i>6.2</i>	<i>6.2</i>	<i>6.9</i>
Exports	18.9	19.9	18.5	20.8	19.6	20.9	22.0	21.2	23.1	22.7	23.8	23.7	78.1	83.8	93.4
Total Net Domestic Supply	220.5	219.5	219.0	227.2	239.6	232.6	251.0	245.4	238.6	240.4	244.6	247.2	886.2	968.6	970.7
Secondary Stock Levels ^b	<i>163.7</i>	<i>152.7</i>	<i>154.5</i>	<i>122.2</i>	<i>120.7</i>	<i>129.3</i>	<i>137.3</i>	<i>140.5</i>	<i>148.2</i>	<i>152.2</i>	<i>160.6</i>	<i>154.3</i>	<i>163.7</i>	<i>120.7</i>	<i>148.2</i>
Opening	163.7	152.7	154.5	122.2	120.7	129.3	137.3	140.5	148.2	152.2	160.6	154.3	157.0	120.7	148.2
Closing	152.7	154.5	122.2	120.7	129.3	137.3	140.5	148.2	152.2	160.6	154.3	157.0	120.7	148.2	157.0
Net Withdrawals	<i>11.0</i>	<i>-1.9</i>	<i>32.3</i>	<i>1.5</i>	<i>-8.5</i>	<i>-8.1</i>	<i>-3.2</i>	<i>-7.7</i>	<i>-4.0</i>	<i>-8.4</i>	<i>6.2</i>	<i>-2.6</i>	<i>43.0</i>	<i>-27.5</i>	<i>-8.7</i>
Total Supply	231.5	217.7	251.2	228.7	231.0	224.5	247.8	237.7	234.6	232.0	250.8	244.6	929.1	941.1	962.0
Demand															
Coke Plants	<i>7.8</i>	<i>7.9</i>	<i>8.3</i>	<i>7.8</i>	<i>7.7</i>	<i>7.8</i>	<i>8.2</i>	<i>8.2</i>	<i>7.9</i>	<i>8.0</i>	<i>8.4</i>	<i>8.3</i>	<i>31.8</i>	<i>31.9</i>	<i>32.6</i>
Electric Utilities	200.8	187.8	223.1	199.1	201.6	197.3	220.4	207.3	204.8	204.6	223.2	214.1	810.8	826.6	846.8
Retail and General Industry ^c	<i>21.1</i>	<i>20.1</i>	<i>18.8</i>	<i>21.8</i>	<i>21.8</i>	<i>19.4</i>	<i>19.3</i>	<i>22.2</i>	<i>21.8</i>	<i>19.4</i>	<i>19.2</i>	<i>22.1</i>	<i>81.9</i>	<i>82.6</i>	<i>82.6</i>
Total Demand	229.7	215.8	250.3	228.7	231.0	224.5	247.8	237.7	234.6	232.0	250.8	244.6	924.5	941.1	962.0
Discrepancy ^d	<i>1.8</i>	<i>1.9</i>	<i>1.0</i>	<i>0.0</i>	<i>4.6</i>	<i>0.0</i>	<i>0.0</i>								

^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(93/12); and *Quarterly Coal Report*, DOE/EIA-0221(93/3Q).

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	404.7	378.7	448.4	400.4	406.3	399.6	442.3	417.7	412.6	414.9	447.6	431.8	1632.3	1665.9	1706.9
Petroleum	22.7	18.3	33.1	12.4	28.2	25.9	28.6	24.1	28.6	28.5	29.8	25.3	86.5	106.8	112.3
Natural Gas	50.3	56.8	91.0	71.2	51.4	71.1	92.3	62.8	52.3	74.3	93.3	65.1	269.3	277.6	284.9
Nuclear	157.0	146.2	162.7	156.2	160.1	139.7	170.7	157.5	163.2	143.6	175.1	161.2	622.1	628.0	643.2
Hydroelectric	67.8	81.1	60.3	60.2	70.7	76.3	62.6	61.1	71.5	74.8	62.9	62.5	269.5	270.6	271.7
Geothermal and Other ^a	2.5	2.2	2.4	2.3	2.2	2.1	2.2	2.2	2.1	2.0	2.1	2.1	9.5	8.7	8.3
Subtotal	705.1	683.3	797.9	702.9	718.9	714.8	798.7	725.4	730.2	738.2	810.8	748.0	2889.2	2957.8	3027.2
Nonutility Generation ^b	75.6	75.9	83.6	78.7	82.5	82.9	91.3	85.9	85.8	86.2	94.9	89.3	313.8	342.6	356.1
Total Generation	780.7	759.3	881.6	781.6	801.4	797.7	890.0	811.3	816.0	824.3	905.7	837.3	3203.0	3300.4	3383.3
Net Imports	6.2	3.7	10.2	8.2	7.9	7.5	9.0	7.9	8.1	7.7	9.2	8.1	28.2	32.2	33.0
Total Supply	786.9	762.9	891.8	789.7	809.4	805.1	899.0	819.2	824.1	832.0	914.9	845.4	3231.3	3332.6	3416.4
Lost and Unaccounted for ^c	50.6	63.0	59.8	66.2	46.6	76.2	63.6	69.9	46.3	79.5	63.8	73.0	239.6	256.4	262.7
Demand															
Electric Utility Sales															
Residential	260.2	210.1	292.1	225.5	266.5	220.4	280.6	234.3	267.4	230.5	282.3	245.0	987.9	1001.8	1025.2
Commercial	186.7	189.0	224.0	193.6	195.6	197.2	229.0	201.8	203.5	205.5	237.8	210.0	793.3	823.7	856.8
Industrial	234.6	246.5	256.0	248.3	242.3	254.0	262.7	254.4	247.4	257.8	266.3	257.2	985.4	1013.4	1028.8
Other	24.0	23.3	25.8	24.0	24.6	23.5	25.8	23.7	24.5	23.5	25.9	23.7	97.1	97.6	97.5
Subtotal	705.5	668.9	797.9	691.4	729.1	695.1	798.1	714.2	742.8	717.3	812.3	735.9	2863.6	2936.5	3008.3
Nonutility Generation for Own Use ^b	30.8	31.0	34.1	32.1	33.7	33.8	37.3	35.1	35.0	35.2	38.7	36.4	128.1	139.8	145.3
Total Demand	736.3	699.9	832.0	723.5	762.8	728.9	835.3	749.2	777.8	752.5	851.0	772.3	2991.7	3076.3	3153.7
Memo:															
Utility Purchases from Nonutilities ^b	42.5	42.7	47.0	44.2	46.4	46.6	51.3	48.3	48.2	48.4	53.3	50.2	176.3	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. For the purposes of this Table, the difference between nonutility generation and generation for own use is identically equal to purchases from nonutilities by electric utilities.

^c Balancing item, mainly transmission and distribution losses.

Notes: Data for utility purchases from nonutilities, net utility imports, 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(93/12); and *Electric Power Monthly*, DOE/EIA-0226(93/12).

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