



Short-Term Energy Outlook

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Short-Term Energy Outlook

Quarterly Projections

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Preface

The Energy Information Administration (EIA) prepares quarterly short-term energy supply, demand, and price projections for printed publication in January, April, July, and October in the *Short-Term Energy Outlook*. The details of these projections, as well as monthly updates on or about the 6th of each interim month, are available on the internet at: www.eia.doe.gov/emeu/steo/pub/contents.html.

The forecast period for this issue of the *Outlook* extends from the first quarter of 1998 through the fourth quarter of 1999. Values for the fourth quarter of 1997, however, are preliminary EIA estimates (for example, some monthly values for petroleum supply and disposition are derived in part from weekly data reported in EIA's *Weekly Petroleum Status Report*) or are calculated from model simulations that use the latest exogenous information available (for example, electricity sales and generation are simulated by using actual weather data). The historical energy data, compiled in the first quarter 1998 version of the Short-Term Integrated Forecasting System (STIFS) database, are mostly EIA data regularly published in the *Monthly Energy Review*, *Petroleum Supply Monthly*, and other EIA publications. Minor discrepancies between the data in these publications and the historical data in this *Outlook* are due to independent rounding.

The STIFS 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. By varying the assumptions, alternative cases are produced by using the STIFS model.

Contents

Highlights.....	ES1
Table HL1 - U.S. Energy Supply and Demand Summary	ES2

The Outlook

Outlook Assumptions.....	1
U.S. Energy Prices	3
World Oil Demand and the Southeast Asia Currency Crisis	7
International Oil Demand.....	8
International Oil Supply	10
World Oil Stocks, Capacity and Net Trade	13
U.S. Oil Demand.....	15
U.S. Oil Supply	16
U.S. Natural Gas Demand	18
U.S. Natural Gas Supply.....	19
U.S. Coal Demand and Supply	20
U.S. Electricity Demand and Supply	21
U.S. Renewable Energy Demand	23
U.S. Energy Demand and Supply Sensitivities.....	25

Summary of Important Terms.....	27
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Tables.....	31
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Quarterly and Annual History and Projections, 1997-1999

1. U.S. Macroeconomic and Weather Assumptions	31
2. U.S. Energy Indicators: Mid World Oil Price Case.....	32
3. International Petroleum Supply and Demand: Mid World Oil Price Case	33
4. U.S. Energy Prices.....	34
5. U.S. Petroleum Supply and Demand: Mid World Oil Price Case	35
6. Approximate Energy Demand Sensitivities for the STIFS Model.....	36
7. Forecast Components for U.S. Crude Oil Production	36
8. U.S. Natural Gas Supply and Demand: Mid World Oil Price Case	37
9. U.S. Coal Supply and Demand: Mid World Oil Price Case.....	38
10. U.S. Electricity Supply and Demand: Mid World Oil Price Case.....	39
11. U.S. Renewable Energy Use by Sector: Mid World Oil Price Case	40

Annual History and Base Case Projections for Selected Indicators, 1985-1999

A1. Annual U.S. Energy Supply and Demand	41
A2. Annual U.S. Macroeconomic and Weather Indicators	42
A3. Annual International Petroleum Supply and Demand.....	43
A4. Annual Average U.S. Energy Prices	44
A5. Annual U.S. Petroleum Supply and Demand.....	45
A6. Annual U.S. Natural Gas Supply and Demand.....	46
A7. Annual U.S. Coal Supply and Demand.....	47
A8. Annual U.S. Electricity Supply and Demand.....	48

Figures

1. U.S. Monthly Crude Oil Prices	1
2. U.S. Macroeconomic Indicators.....	2
3. Petroleum Product Prices.....	3
4. Natural Gas Wellhead Prices.....	5
5. Fossil Fuel Prices to Electric Utilities.....	6
6. World Oil Demand Changes by Regions	8
7. Non-OECD Oil Demand by Region.....	9
8. World Oil Supply.....	10
9. OPEC Oil Production and Capacity.....	11
10. Annual Increases in OPEC Production and World Demand Changes.....	12
11. OECD Commercial Oil Stocks	13
12. FSU Oil Output, Demand and Net Exports	14
13. U.S. Petroleum Demand Change	15
14. Distillate Demand Growth.....	16
15. U.S. Crude Oil Production	16
16. Natural Gas Demand by Sector	18
17. Total Gas in Underground Storage	19
18. Annual Change in U.S. Coal Demand.....	20
19. U.S. Electricity Demand	21
20. Electricity Generation by Fuel	22
21. Renewable Energy Use for Electricity.....	23
22. Renewable Energy Use by Sector	24
23. Macro Sensitivities.....	25
24. Weather Sensitivities	26

Highlights

Consumer News Continues to Improve for Winter Fuels

With 3 months of the 1997-1998 heating season now in the past, previous projections of lower fuels prices for the winter are translating into real reductions in heating bills for some consumers. Reduced heating fuel prices are expected to be seen through most, if not all, of the remainder of the heating season due to: 1) lower current and expected near-term world oil prices; and 2) relatively high current levels of heating fuel inventories in or near the major consuming areas. Average retail heating oil prices in the fourth quarter 1997 were an estimated 12 percent lower than they were the previous year. Current and expected winter peak prices for natural gas are well below levels seen last year, which should result in some relief to the residential customer compared to prices seen last winter.

Continued Demand Strength Should Maintain World Oil Price Levels

Despite expected slower growth in Asian markets, world oil demand is expected to increase by 1.8 million barrels per day in 1998 and another 1.9 million barrels per day in 1999. World oil demand is forecast to grow at an average annual rate of 2.5 percent between 1997-1999, after growing at an average annual rate of 1.9 percent between 1992-1996. Therefore, even as Iraq returns to the market, it is expected that oil prices will level off in 1998 at between \$16 and \$17 dollars per barrel, slightly above current levels. The forecast assumes that Iraq will be exporting about a million barrels per day during the forecast period. Following the most recent OPEC ministerial meeting, OPEC is expected to increase production by about 800,000 barrels per day in 1998 and by another 400,000 barrels per day in 1999.

Stronger Electricity Growth Expected in 1998, Assuming Normal Weather

Electricity demand growth in 1998 is expected to be 2.9 percent, despite an anticipated slowdown in U.S. economic growth from the relatively high rate seen in 1997. Projected growth would be led by increased residential demand in the first 3 quarters of 1998. This development hinges on normal weather and higher heating demand for the rest of the winter as well as higher cooling demand than seen last year, particularly in late spring and early summer. Cooling degree-days were about 9 percent below normal in 1997. A similarly weak cooling season in 1998 could reduce the 1998 growth rate by at least a third.

Table HL1. U.S. Energy Supply and Demand Summary

	Year				Annual Percentage Change		
	1996	1997	1998	1999	1996-1997	1997-1998	1998-1999
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	6928	7187	<i>7345</i>	<i>7465</i>	3.7	<i>2.2</i>	<i>1.6</i>
Imported Crude Oil Price ^a (nominal dollars per barrel).....	20.61	18.62	<i>16.73</i>	<i>17.51</i>	-9.7	<i>-10.2</i>	<i>4.7</i>
Petroleum Supply							
Crude Oil Production ^b	6.46	6.40	<i>6.42</i>	<i>6.39</i>	-0.9	<i>0.3</i>	<i>-0.5</i>
Total Petroleum Net Imports (including SPR) (million barrels per day)	8.50	8.94	<i>9.25</i>	<i>9.51</i>	5.2	<i>3.5</i>	<i>2.8</i>
Energy Demand							
World Petroleum (million barrels per day)	71.9	73.7	<i>75.5</i>	<i>77.3</i>	2.5	<i>2.4</i>	<i>2.4</i>
Petroleum (million barrels per day)	18.31	18.61	<i>18.97</i>	<i>19.22</i>	1.6	<i>1.9</i>	<i>1.3</i>
Natural Gas (trillion cubic feet)	21.96	22.10	<i>22.87</i>	<i>23.26</i>	0.6	<i>3.5</i>	<i>1.7</i>
Coal (million short tons)	1007	1034	<i>1053</i>	<i>1072</i>	2.7	<i>1.8</i>	<i>1.8</i>
Electricity (billion kilowatthours)							
Utility Sales ^c	3085	3115	<i>3205</i>	<i>3252</i>	1.0	<i>2.9</i>	<i>1.5</i>
Nonutility Own Use ^d	164	169	<i>173</i>	<i>178</i>	3.0	<i>2.4</i>	<i>2.9</i>
Total	3249	3284	<i>3378</i>	<i>3430</i>	1.1	<i>2.9</i>	<i>1.5</i>
Adjusted Total Energy Demand ^e (quadrillion Btu).....	93.9	94.8	<i>96.5</i>	<i>97.8</i>	0.9	<i>1.8</i>	<i>1.4</i>
Adjusted Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	13.56	13.19	<i>13.14</i>	<i>13.11</i>	-2.7	<i>-0.4</i>	<i>-0.2</i>
Renewable Energy as Percent of Total.....	7.7	7.8	<i>7.2</i>	<i>7.0</i>			

^aRefers to the refiner acquisition cost (RAC) of imported crude oil.

^bIncludes lease condensate.

^cTotal annual electric utility 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, "Annual Electric Utility Report," reported in several EIA publications, but match alternate annual totals reported in EIA's *Electric Power Monthly*, DOE/EIA-0226.

^dDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1997 are estimates.

^eThe conversion from physical units to Btu is calculated by using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, *Monthly Energy Review (MER)*. Consequently, the historical data may not precisely match those published in the *MER* or the *Annual Energy Review (AER)*.

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 italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1297.

The Outlook

Outlook Assumptions

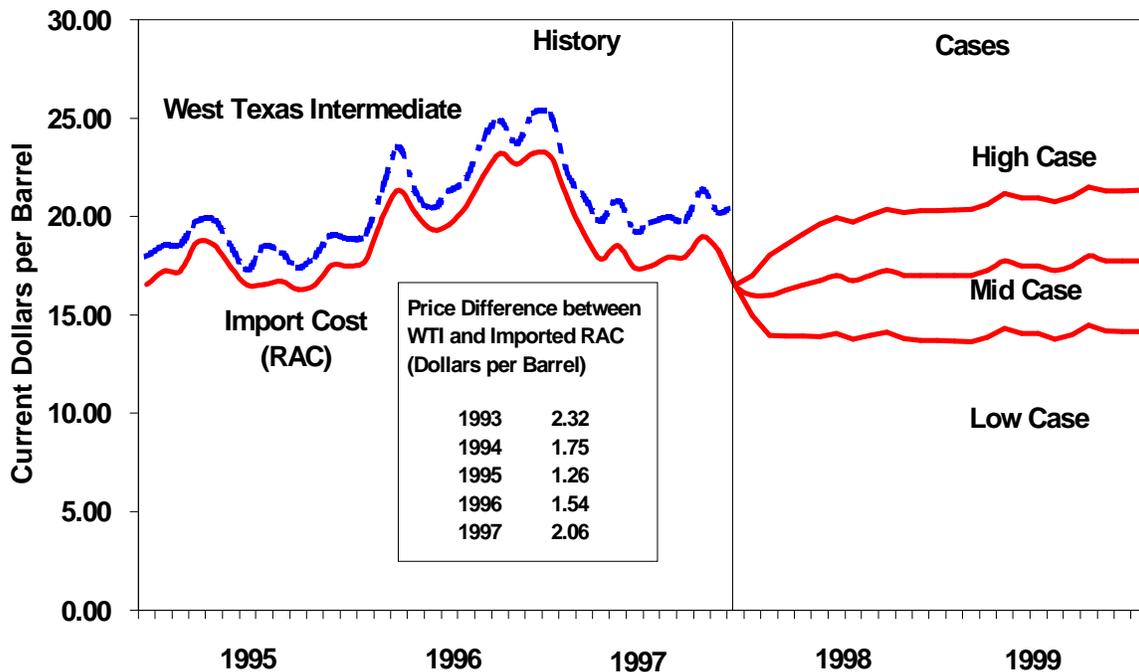


Figure 1. U.S. Monthly Crude Oil Prices

World Oil Prices

This forecast assumes that Iraqi humanitarian oil sales approved by the United Nations (U.N.) Security Council will be increased by 50 percent for most of 1998 and 1999. In addition, our new forecast accounts for increased production from some OPEC countries as a result of the increased quotas approved by OPEC on November 30, 1997. (For more information on this meeting please see <http://www.eia.doe.gov/emeu/cabs/opcomtg.html> on our web site.) This increased supply, along with a smaller oil demand increase due to the economic slowdown occurring in Southeast Asia, should lead to lower prices in 1998 than in 1997. Our current base world oil price projection calls for an average 1998 price of \$16.73 dollars per barrel, down about \$2 from our estimated 1997 world oil price of \$18.62 (Figure 1). In 1999, the world oil price is forecast to increase a little to \$17.51 as oil demand in Southeast Asia is expected to rebound slightly and increases in oil supply should more closely match increases in world oil demand. The high and low price cases illustrated in Figure 1 represent a typical uncertainty range around our base case forecast.

Economic Outlook

U.S. Gross Domestic Product (GDP) growth in 1997 was estimated at an average of 3.7 percent. In 1998 and 1999, GDP is expected to continue to grow but at somewhat slower paces of 2.2 percent and 1.6 percent, respectively. This slowdown in growth, expected in any case, has been further exacerbated by the financial crisis in Asia. However, growth in disposable income should reach 3.4 percent in 1998 and 2.3 percent in 1999 (Figure 2 and Table 1).

Inflation (consumer price index; see Table 2) should remain moderate over the next few years. Consumer price inflation is expected to be 1.7 percent in 1998 and 2.1 percent in 1999 (Table 1).

Manufacturing production growth rises more than GDP, reaching 3.1 percent in 1998, as investment and export growth remain strong. In 1999, manufacturing production growth slows to 0.8 percent as investment growth decelerates. Total employment will increase slowly over the forecast period.

Weather Assumptions

Heating and cooling degree-days are assumed to follow historical norms in the forecast period, resulting in projected heating degree-days being sharply higher (8.6 percent) during first quarter 1998 compared with first quarter 1997. Summer cooling degree-days are also projected to be above last year's by 10 percent.

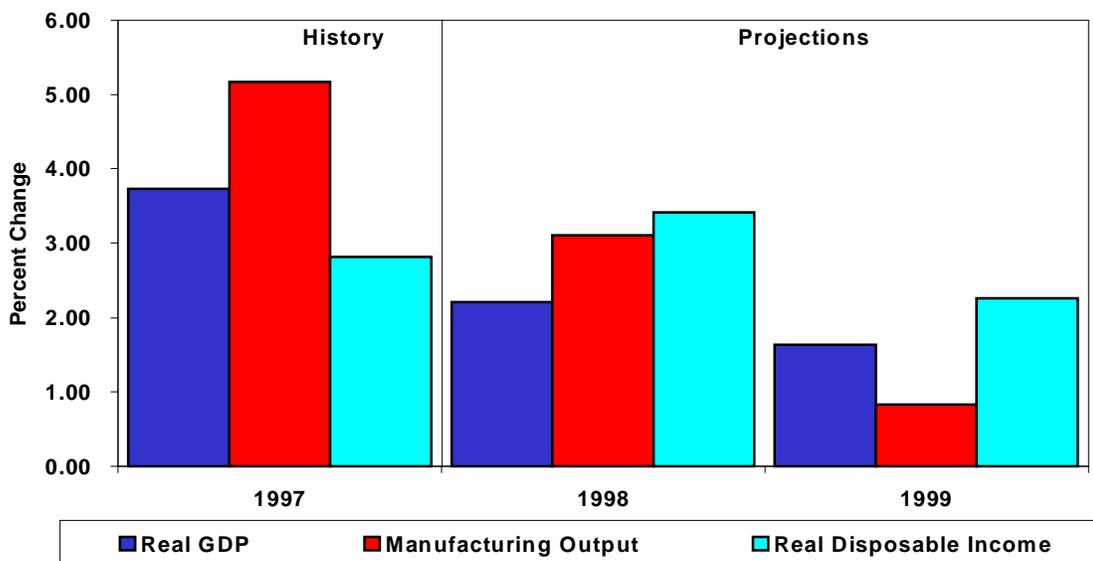


Figure 2. U.S. Macroeconomic Indicators

U.S. Energy Prices

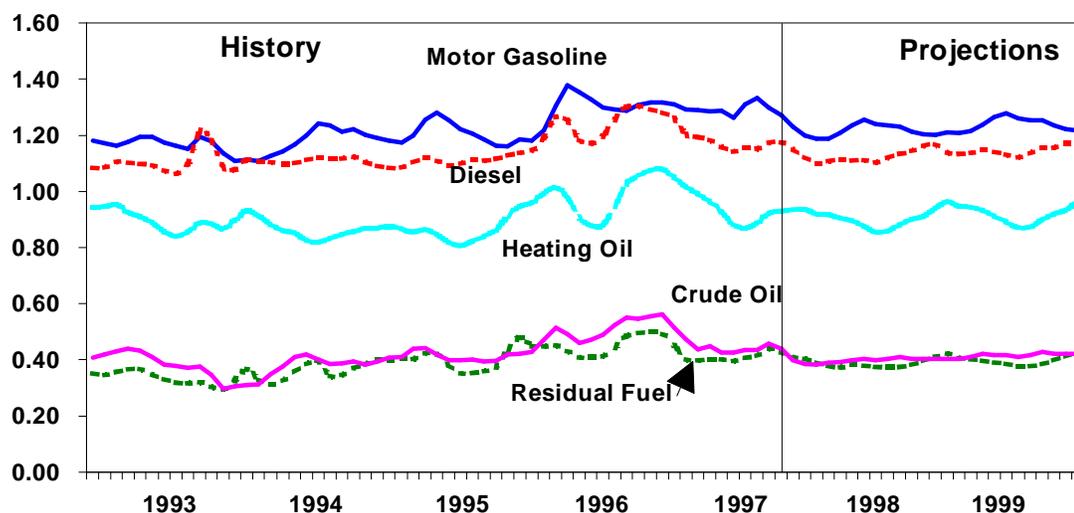


Figure 3. Petroleum Product Prices

With 3 months of the 1997-1998 heating season now in the past, previous projections of lower fuel prices for the winter are translating into real reductions in heating bills for some consumers. Reduced heating fuel prices are expected to be seen through most, if not all, of the remainder of the heating season due to: 1) lower current and expected near-term world oil prices; and 2) relatively high current levels of heating fuel inventories in or near the major consuming areas. Average retail heating oil prices were an estimated 12 percent lower in the fourth quarter 1997 than they were the previous year. Current and expected winter peak prices for natural gas are well below levels seen last year, which should result in some price relief to the residential customer compared to prices seen last winter. With crude oil prices dropping an expected \$2.00 per barrel this year, petroleum product price drops of 5-7 cents per gallon are projected in 1998. In 1999, the crude oil price is projected to rebound by \$0.75 per barrel, with product prices following suit.

Assuming normal weather for the remainder of the winter and lower crude oil prices, retail heating oil prices should average \$0.93 per gallon this winter, compared to \$1.06 per gallon last winter. Not only are world crude prices projected to be considerably lower this winter compared to prices last winter, but stocks of distillate fuel oil at the end of December, which is midway through the heating season, are now higher. They are about 5 million barrels more than they were one year ago. Furthermore, virtually all of this stock build is on the East Coast, where the most of the nation's heating oil is burned. Diesel fuel oil

prices should show declines this winter more or less comparable to heating oil prices.

U.S. retail gasoline prices peaked last year in September despite the moderate crude oil prices, because of refinery problems and high demand. With those situations over, pump prices have fallen by about 10 cents per gallon since then. They should fall even further, by more than 5 cents per gallon, through the first quarter of this year as crude oil prices fall. While retail gasoline prices are expected to rise by as much as 7 cents per gallon from winter lows to the spring peak, average prices for the next driving season are still expected to be below 1997 levels, particularly during late summer.

After a stormy period of price gyrations, natural gas wellhead prices are expected to calm down and resume their normal seasonal price patterns—peaking in the winter, dropping in the spring and summer—during the forecast period. The annual average wellhead price is projected to decline by as much as 13 percent per year in 1998 and perhaps a little more in 1999 as a result of increases in productive capacity and Canadian imports, as well as projected slower economic growth.

Natural gas spot market prices—current and near-term futures --have tumbled by one-third since mid-November after soaring by about 30 percent from September through the first half of November (Figure 4). It is fairly likely that this heating season's price peak occurred in November, as opposed to the usual December or January. Whether or not prices for the remainder of the heating season exhibit reduced volatility is debatable. But since prices have clearly shaken out from relatively high levels, even as heating demand has remained at or above normal, a broad strengthening of confidence in winter supply conditions is evident.

As the trend toward smaller working gas inventories continues, the gas market has become more vulnerable and sensitive to any significant event that adversely affects demand or supply. Last September, very hot weather in the Southwest resulted in high electricity demand for cooling, which, in turn, required electric utilities to increase consumption of fossil fuels (primarily coal and natural gas). However, deliveries of coal to that region were often delayed due to complications that arose from the merger of the two largest railroads (the Southern Pacific and the Union Pacific) that serve that area. To make up for the shortage of coal, gas was used to meet the required utility demand. This extra demand contributed to increases in the price for gas and strained inventories during the heavy storage injection season. Thus, for much of the fall season, there was considerable concern in the market as to the availability of natural gas for the upcoming winter heating season. This concern was reflected in the soaring prices. However, starting around the middle of November, the spot and

near futures price of natural gas began to plunge. One reason for the drop is that net injections into underground storage continued several weeks past their normal cutoff period. As the heating season progressed, apprehension about storage levels had eased and the spot and near-term futures prices continued to slide. But, as always, weather will be the single most important variable in determining short-term demand for natural gas. Thus, there is always the possibility of rapid price movements (up or down) over the next several months if the weather is unusually cold or mild.

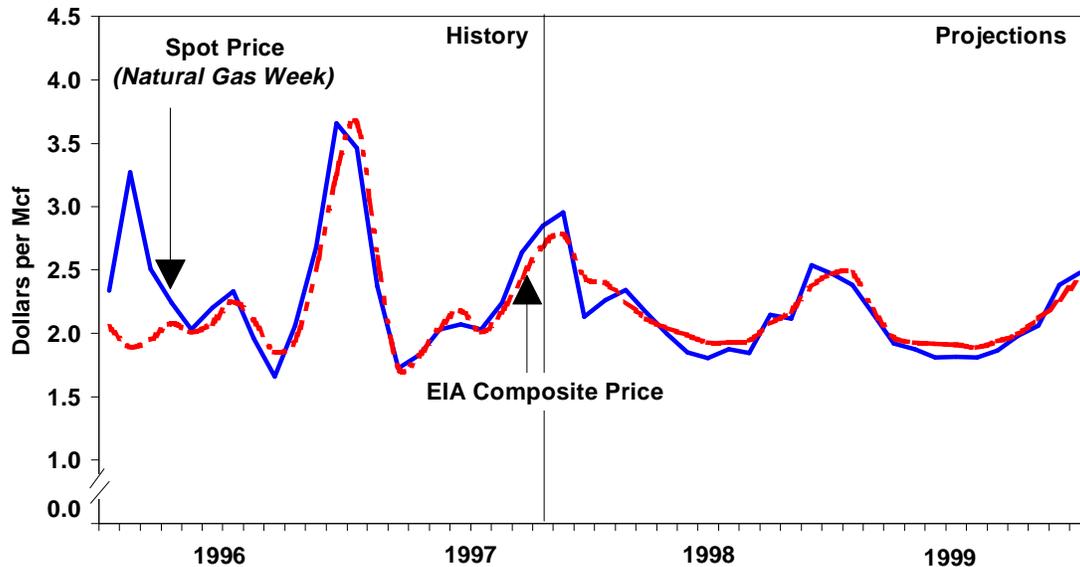


Figure 4. Natural Gas Wellhead Prices: Composite and Spot

A significant portion of the expected decrease in wellhead prices over the next few months will be passed on to the end-users. Thus, natural gas prices in the winter quarters for residential, commercial, industrial, and electric utility users will be lower than last winter's relatively high prices (Figure 4). Assuming that world crude oil prices are also lower, residual fuel oil prices should also drop. Last year, the average electric utility price paid for natural gas was about equal to the residual fuel oil price (Figure 5). This year natural gas prices are projected to be about 8 percent below the residual fuel price. In 1999, residual fuel oil prices are projected to increase, following the projected crude oil price path, while natural gas prices are projected to dip slightly. Therefore, natural gas will be even more competitive by the end of the forecast (Figure 5 and Table 4).

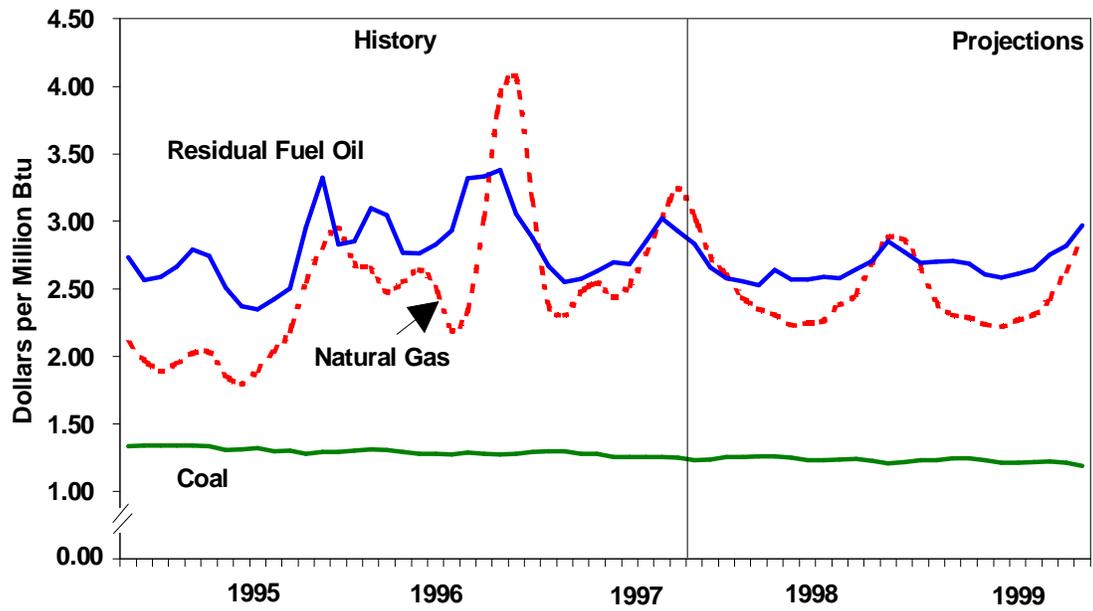


Figure 5. Fossil Fuel Prices to Electric Utilities

World Oil Demand and the Southeast Asia Economic Slowdown

The recent economic slowdown in Southeast Asia has added yet another variable of uncertainty in assessing the short-term world oil market. Now, not only is there disagreement among analysts concerning how much Iraq will export, or how big an increase is expected in Non-OPEC oil supply, but there is uncertainty surrounding the impact the latest economic slowdown in Southeast Asia will have on Asian oil demand.

Between 1992 and 1996, oil demand in Other Asia, which in our forecast is defined as all Asia except Japan and China, increased at an average annual growth rate of 8.0 percent. However, with the latest economic slowdown, major changes in several Asian economies are expected to dramatically decrease the growth in Asian oil demand over the forecast period. The questions is: How much impact on Asian oil demand will the current slowdown have?

In this forecast we have assumed that Other Asia oil demand will increase by about 400,000 barrels per day in 1998 and another 500,000 barrels per day in 1999. This is substantially less than the 600,000-700,000 barrel per day increase each year forecast before this latest slowdown. The decline could have been greater had several large oil-consuming countries in the region been affected. For example, India, Singapore, and Taiwan, representing over 35 percent of the region's oil demand, as of this publication have not been heavily affected by the economic slowdown. While we do expect a substantial reduction in the growth of oil demand in Other Asia, oil growth in the region in 1998 and 1999 should remain positive. Of course, this assumption is highly dependent on the economic growth rates of all the countries in this region. If estimates of the economic growth rates for these countries are reduced even further, expected increases in this region's oil demand would be less than assumed in this forecast.

International Oil Demand

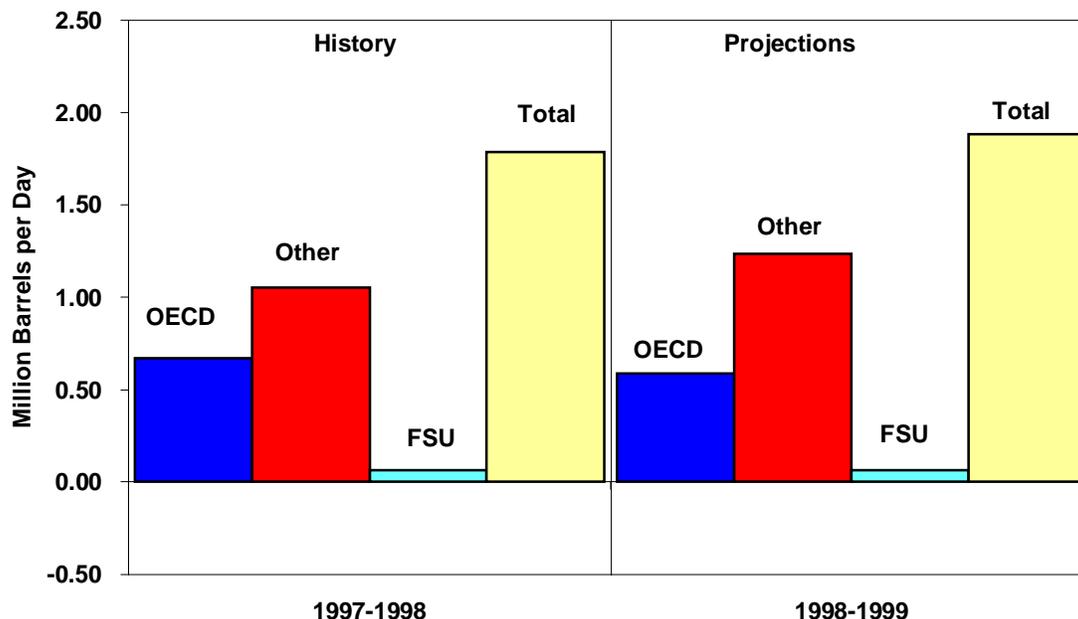


Figure 6. World Oil Demand Changes by Regions

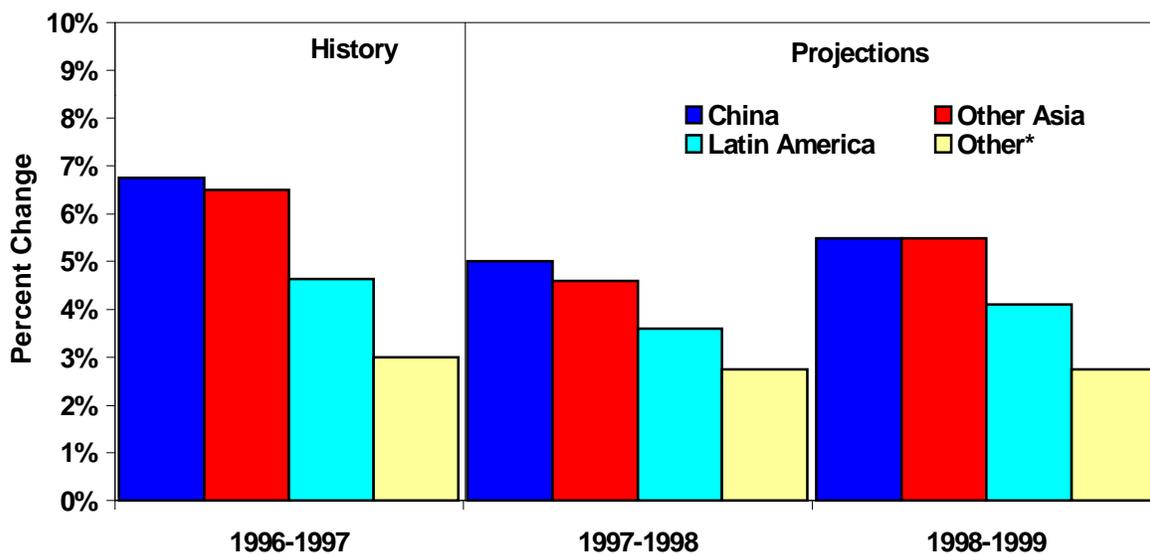
World oil demand is expected to continue to increase through 1999 (Figure 6), by which time total world oil demand may average 77.3 million barrels per day (Table 3). Problems in several Southeast Asian economies are expected to soften the increase in world oil demand, particularly for 1998. Still, following an annual world oil demand increment of 1.8 million barrels per day worldwide in 1997, world oil demand is expected to increase by another 1.8 million barrels per day in 1998 and another 1.9 million barrels per day in 1999. Thus, world oil demand under these assumptions will be growing at an average annual rate of 2.5 percent between 1997-1999 after growing at an average annual rate of only 1.9 percent between 1992-1996.

Oil demand in countries of the Organization for Economic Cooperation and Development (OECD) is expected to increase by about 700,000 barrels per day in 1998 and another 600,000 barrels per day in 1999, an average annual rate of 1.5 percent (Figure 6 and Table 3). The United States' oil demand growth represents over half of OECD oil demand growth in 1998, but less than half of OECD oil demand growth in 1999.

The major story of this forecast is the effect the recent economic slowdown in Southeast Asia might have on oil demand growth in the region. Prior to this

recent economic slowdown, non-OECD countries exhibited strong growth in oil demand (Figure 7). This was especially true in Asian countries. For example, oil demand in China has grown by 7.5 percent per year so far this decade, and in Other Asia (see page 27 for definition), oil demand has grown by 8.0 percent per year so far this decade. However, partly due to the recent economic slowdown in several Asian countries, this forecast estimates an average annual growth rate of 5.2 percent in China's oil demand and 5.1 percent for Other Asian oil demand. While this may appear higher than some other estimates, Other Asia includes several countries, such as India and Pakistan, which have not been affected by the economic slowdown as of this publication.

After showing growth in oil demand in 1997 for the first time since the collapse of the Soviet Union, oil demand in the former Soviet Union (FSU) is projected to increase even further in 1998 and 1999. This increase reflects the expectation that growth in economic activity will continue to be positive over the forecast period. Demand stood at 8.9 million barrels per day in 1988, reached a low of 4.5 million barrels per day in 1996, and is forecast to increase to 4.7 million barrels per day by 1999 (Table 3).



*Includes E. Europe, Middle East, & Africa

Figure 7. Non-OECD Oil Demand by Region

International Oil Supply

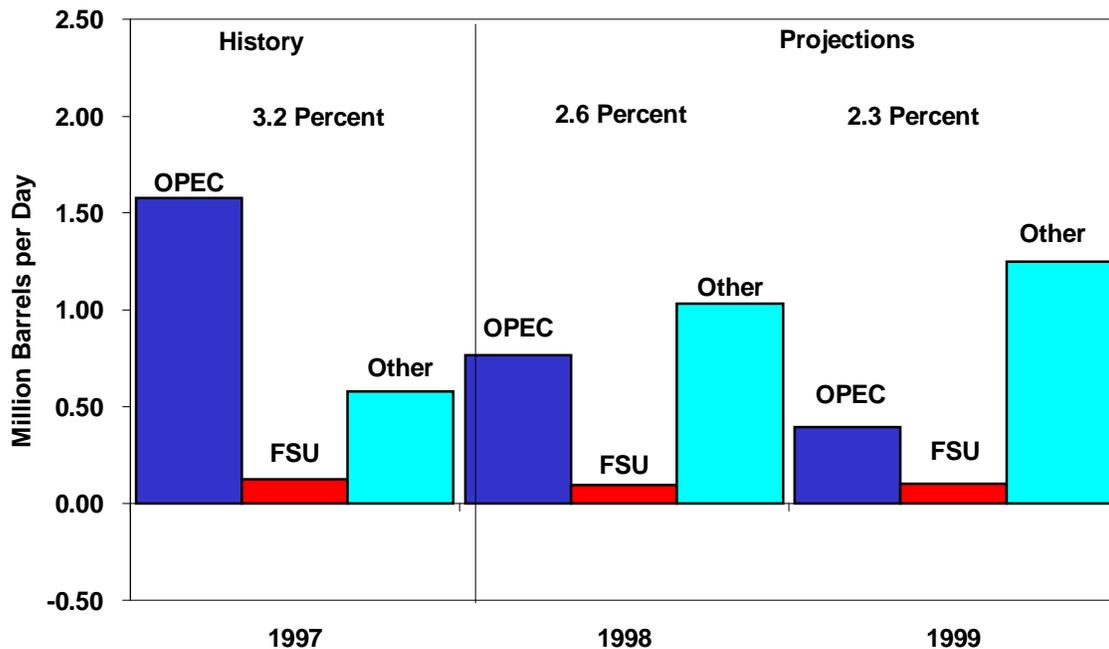


Figure 8. World Oil Supply (Changes from previous Year)

On December 4, 1997, the United Nations (UN) renewed a new 6-month program for Iraqi oil exports under UN Security Council Resolution 986. These oil sales, which originally started in December 1996, have added about 750,000 barrels per day of oil to the world market over the last year. Resolution 986 allows Iraq to sell up to \$1.07 billion (\$1 billion worth of oil plus \$70 million paid to Turkey for use of the Iraq-Turkey oil pipeline) of oil every 90 days for 2 consecutive periods totaling 180 days (6 months). After deducting a predetermined amount for war reparations to Kuwait and to fund UN operations in Iraq, proceeds from Iraqi oil sales are then used to purchase humanitarian goods, such as medicine, health supplies, foodstuffs, and materials for essential Iraqi civilian needs. However, since the renewal on December 4 took effect, Iraq has not exported any oil under this program. Iraq has stated that they will begin exporting again once the aid distribution plan is approved. Following UN approval of the aid distribution plan on January 5, 1998, Iraq's oil minister stated that he expects oil exports to begin within a "couple of days". Also, in January, UN Secretary General Kofi Annan is expected to release a report that may recommend an increase in the amount of the oil sales. For the purposes of this forecast, we have assumed that Iraqi oil exports will average about 1 million barrels per day in 1998 and 1999. This is merely an assumption for this forecast and does not reflect any official US government view on the future of Iraqi oil exports.

Besides Iraqi oil exports, the other major story affecting world oil supply is the increase in OPEC's production quotas as a result of their last meeting which ended on December 1, 1997. At this meeting, the Organization of Petroleum Exporting Countries (OPEC) announced an increase in their crude oil production ceiling from 25.03 million barrels per day to 27.5 million barrels per day, a growth of just under 10 percent. The increase was allocated on a pro rata system whereby most country quotas were increased by the same percentage. Algeria received a slightly larger increase because it received a smaller increase the last time quotas were set. However, OPEC crude oil production is not expected to increase by 10 percent since many countries are already producing at maximum capacity. For this forecast we have assumed that OPEC oil production will increase by about 800,000 barrels per day in 1998 and another 400,000 barrels per day in 1999 (Figure 8).

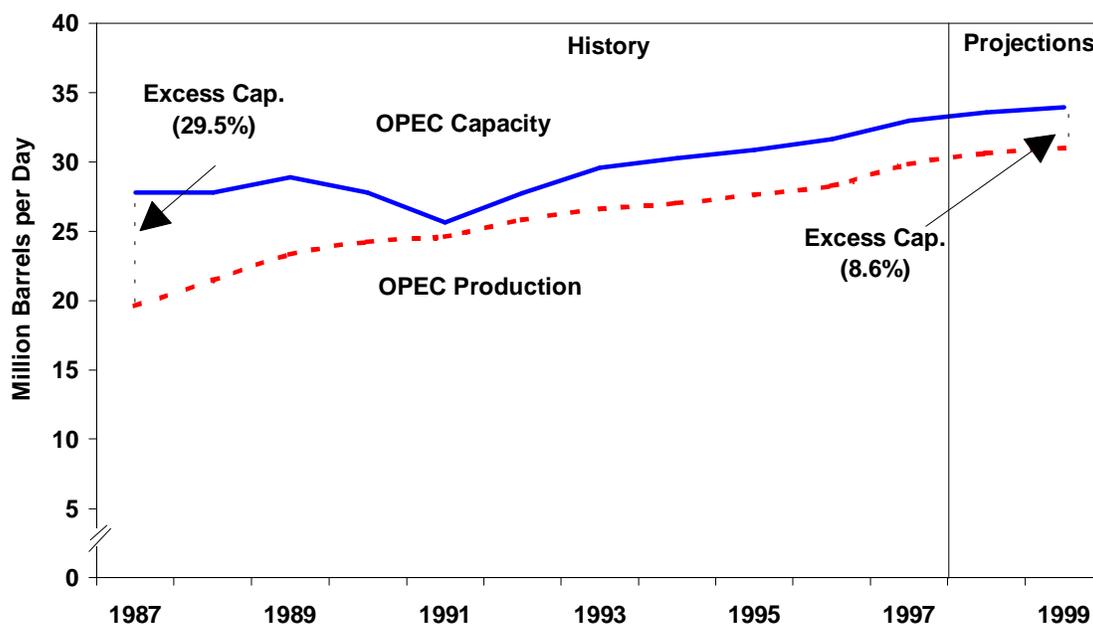


Figure 9. OPEC Oil Production and Capacity

Sustained growth of non-OPEC supply is expected to continue for the foreseeable future, both inside and outside of the OECD (Figure 8). The major growth story within the OECD region is North Sea production, which grew by about 2.2 million barrels per day between 1990 and 1996. North Sea production did not increase in 1997, as several oil development projects were delayed. However, this forecast assumes a return to growth in North Sea oil production, with an increase of about 400,000 barrels per day expected in both 1998 and 1999 (Table 3).

Outside the OECD, the non-OPEC growth story is depicted by the "Other" group (Figure 8). Increments from this group are accelerating due to increases from Latin America, Africa, Other Asia, and some slight increases from the Middle East. Privatization efforts are beginning to accelerate growth, particularly in Latin America. Together, the non-OECD, non-OPEC countries,

excluding the Former Soviet Union republics (FSU), are expected to increase production by 1.2 million barrels per day between 1997 and 1999 to 18.4 million barrels per day (Table 3).

Joint ventures in the FSU, although growing slowly due to legal problems and export pipeline constraints, are beginning to foster positive supply prospects. Significant near-term increases are most likely to come from Kazakhstan, Russia, and Azerbaijan, rather than from any of the other former republics. This forecast assumes oil supply from the Former Soviet Union will increase by about 100,000 barrels per day in both 1998 and 1999.

Non-OPEC supply has become a significant source of oil production during the last few years. Since 1994, OPEC production has increased less than world oil demand in every year (Figure 10).

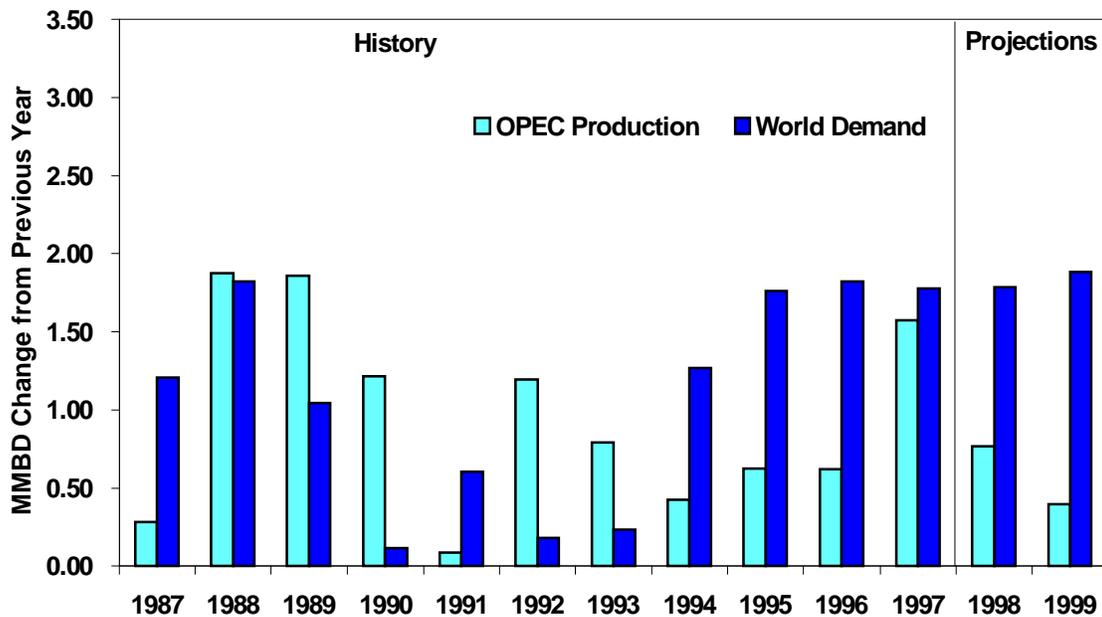


Figure 10. Annual Increases in OPEC Production and World Demand Changes, 1986-1998

World Oil Stocks, Capacity and Net Trade

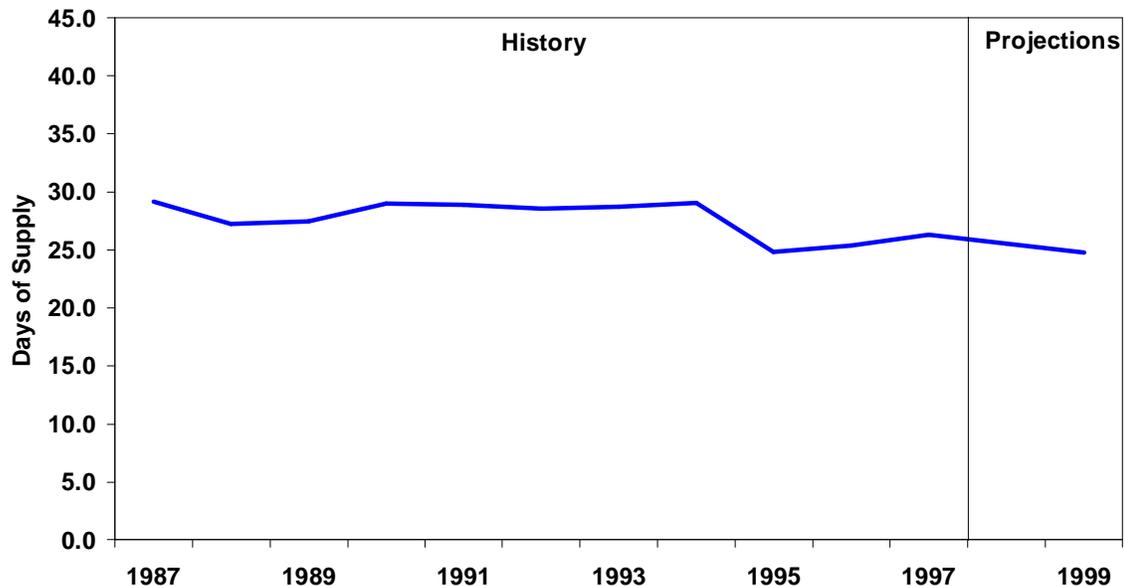


Figure 11. OECD Commercial Oil stocks

Commercial oil inventories (measured in days of supply) in OECD countries increased significantly in 1997 but are expected to drop some in 1998 and 1999 (Figure 11). However, OECD commercial inventories at the end of 1999 are still expected to be above the historically low levels seen at the end of 1995 and 1996. The increase in 1997 was in large part due to the increase in oil exports from Iraq and the continued increase in oil supply from non-OPEC regions.

Outside Iraq, OPEC oil production capacity is expected to increase by about 600,000 barrels per day in 1998 and another 400,000 barrels per day in 1999. However, OPEC excess production capacity is expected to decrease over the forecast period as increases in actual production are expected to exceed expansions in production capacity. OPEC excess oil production capacity is expected to decline by about 500,000 barrels per day between 1996 and 1999. Saudi Arabia controls the bulk of OPEC excess production capacity.

Current exports of crude oil worldwide are averaging 34 million barrels per day, with about 60 percent originating from OPEC countries. Saudi Arabia is by far the world's largest exporter, with over 7 million barrels per day of crude exports. Net exports from the FSU are expected to stabilize at 2.7 million barrels per day in 1998 and 1999 as increases in oil production are expected to be countered by increases in oil demand (Figure 12 and Table 3). By 1998, oil production in some

of the FSU republics, such as Kazakhstan, Azerbaijan and Russia, should begin increasing at more substantial rates. Thus, exports are expected to rise from 2.6 million barrels per day in 1996 to 2.7 million barrels per day in 1997 and 1998. FSU exports are much higher than they were immediately following the collapse of the FSU (2.1 million barrels per day in 1991 and 1992) and are now at levels seen just prior to the collapse of the FSU.

With our assumption that Iraqi oil exports allowed by the UN will increase in 1998, along with expected increases in oil production from Saudi Arabia, Kuwait, and the United Arab Emirates, exports from the Persian Gulf region are also expected to increase in 1998.

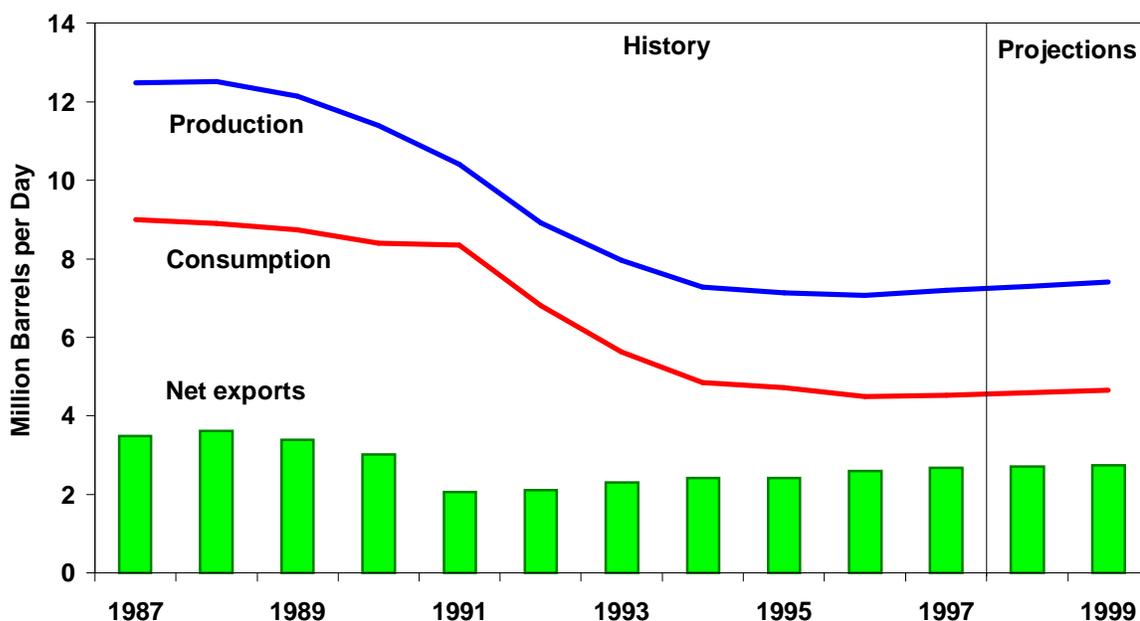


Figure 12. FSU Oil Output, Demand and Net Exports

U.S. Oil Demand

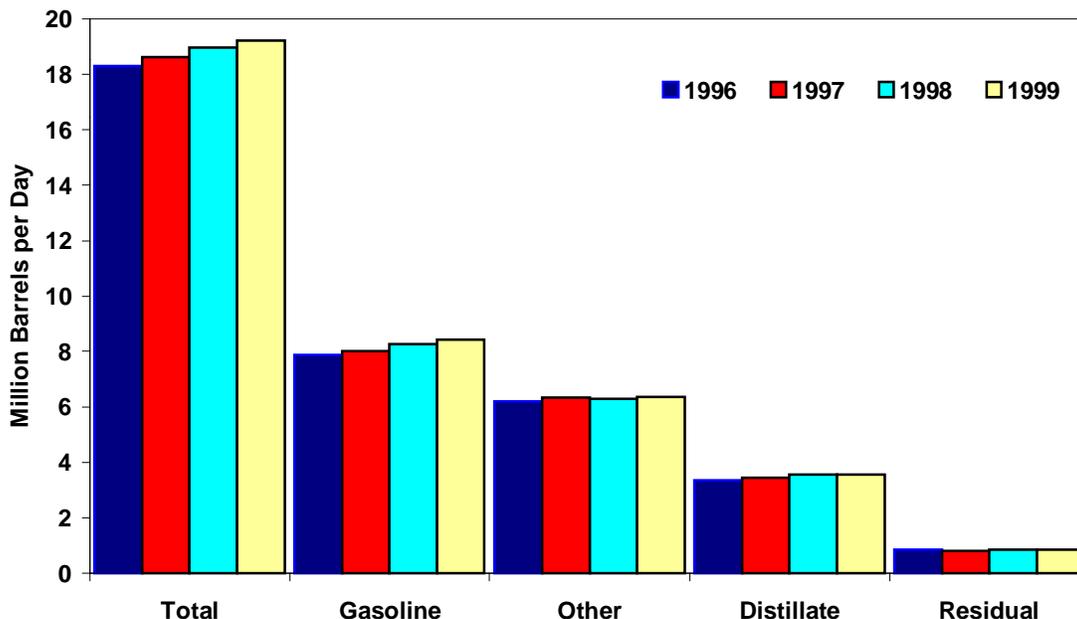


Figure 13. U. S. Petroleum Demand Change

Following estimated growth of 300,000 barrels per day, or 1.6 percent, in 1997, U.S. petroleum demand is projected to increase by a further 360,000 barrels per day, or 2.0 percent, in 1998 (Figure 13). The assumption of a normal winter, following last year's mild season, is expected to contribute to a year-to-year first-quarter demand increase of 680,000 barrels per day. Transportation demand is projected to continue its brisk growth, buoyed by sustained high growth in personal disposable income as well as continuing declines in fuel costs. In 1999, continued moderation in economic growth is expected to bring about a smaller, 250,000 barrels-per-day, or 1.3 percent, increase in petroleum demand.

After a 1.6-percent increase estimated for 1997, growth in gasoline demand for 1998 is expected to more than double, buoyed by 3.4-percent increase in personal disposable income as well as a 7-percent decline in inflation-adjusted retail gasoline prices. Demand growth is expected to slow to 2.0 percent in 1999, however, reflecting moderation in personal income growth.

In 1998, assumptions of normal winter weather, a 5-percent increase in diesel fuel demand, and a recovery in heating oil demand from last year's decline are expected to boost growth in total distillate fuel demand to 3.4 percent in 1998 compared to 2.4 percent in 1997 (Figure 14). In 1999, the resumption of declines in heating-oil demand as well as a sharp slowdown in industrial demand growth are expected to constrain total distillate fuel demand to less than 1 percent.

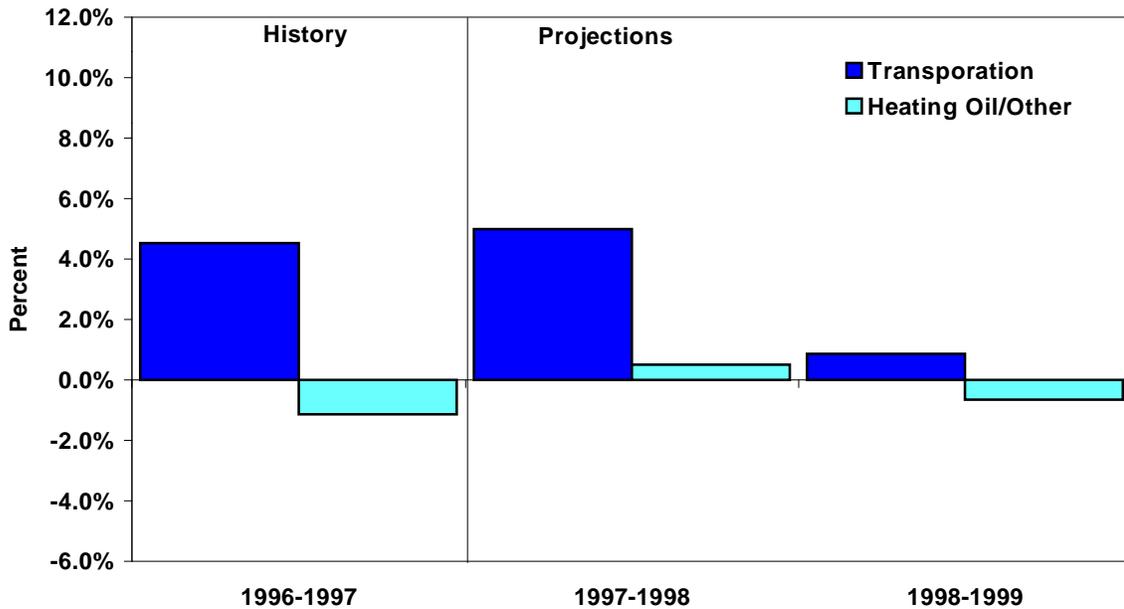


Figure 14. Distillate Demand Growth

Residual fuel oil demand, having declined by an estimated 5 percent in 1997, is expected to rebound in 1998 and level off in 1999. Strength in bunker and electric utility demand accounts for much of the growth in 1998. In 1999, however, continued declines in natural gas prices, a firming of residual fuel oil prices, and a sharp slowdown in manufacturing activity are expected to prevent additional residual fuel oil demand growth.

U.S. Oil Supply

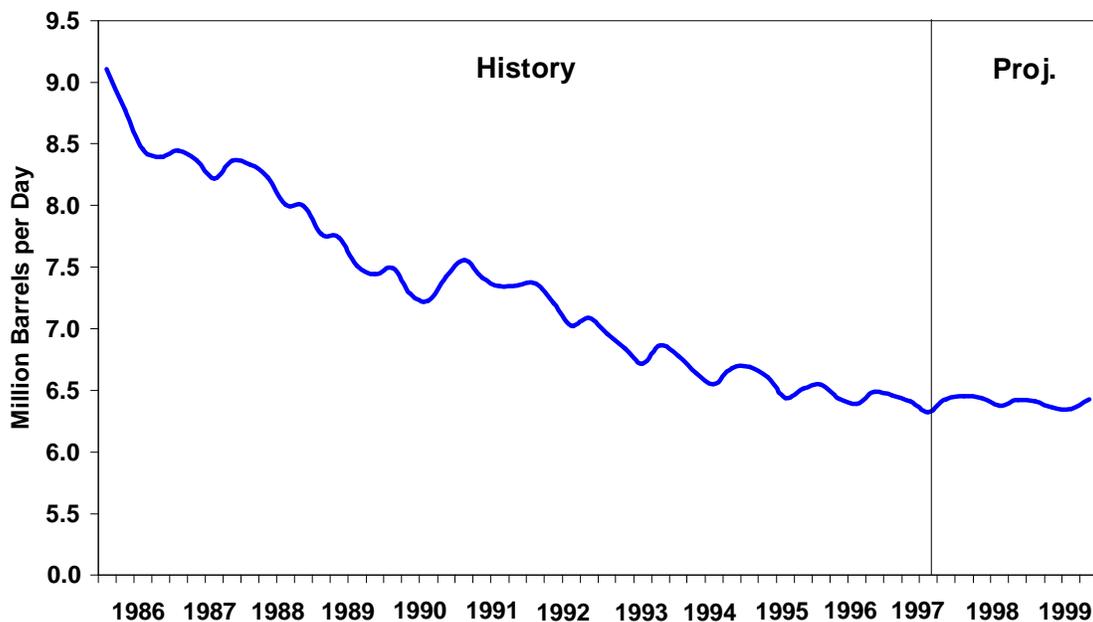


Figure 15. U.S. Crude Oil Production

The outlook for a slight increase in domestic oil production in 1998 over 1997 production continues to hold. Average domestic oil production is expected to increase by 16,000 barrels per day, or 0.25 percent, in 1998 to a level of 6.42 million barrels per day (Figure 15). If this expectation is realized, it will be the first time annual U.S. oil production has not decreased noticeably in the aggregate since 1991, when the U.S. bolstered domestic production subsequent to the Gulf War. The downward trend resumes in 1999 with a 0.6 percent decline expected.

Lower-48 States oil production is expected to increase by 120,000 barrels per day to about 5.2 million barrels per day in 1998, followed by a decrease of 35,000 barrels per day in 1999. The increase in 1998 is due mainly to production from new Federal Offshore fields in the Gulf of Mexico. Included is a 30,000 bpd increase in the Auger production due to facilities improvement (debottlenecking). The Ram-Powell production began in third quarter 1997, with an accompanying increase of 60,000 barrels per day in early 1998. British Petroleum has purchased Marathon's Troika sub-sea project and accelerated production to an adjoining platform in November 1997. This production will add 80,000 barrels per day to offshore production in early 1998. Shell will start production in 1999 in their Ursa field, which will peak in production in the year 2000 at 150,000 barrels per day of condensate. Oil production from the Mars, Ram-Powell, Auger, Troika, Ursa, and Santa Ynez Federal Offshore fields is expected to account for about 10.7 per cent of the lower-48 oil production by the 4th quarter of 1999.

Alaska is expected to account for 18.7 percent of the total U.S. oil production in 1999, while its oil production is expected to decrease by 8 percent in 1998 and remain flat in 1999.

U.S. Natural Gas Demand

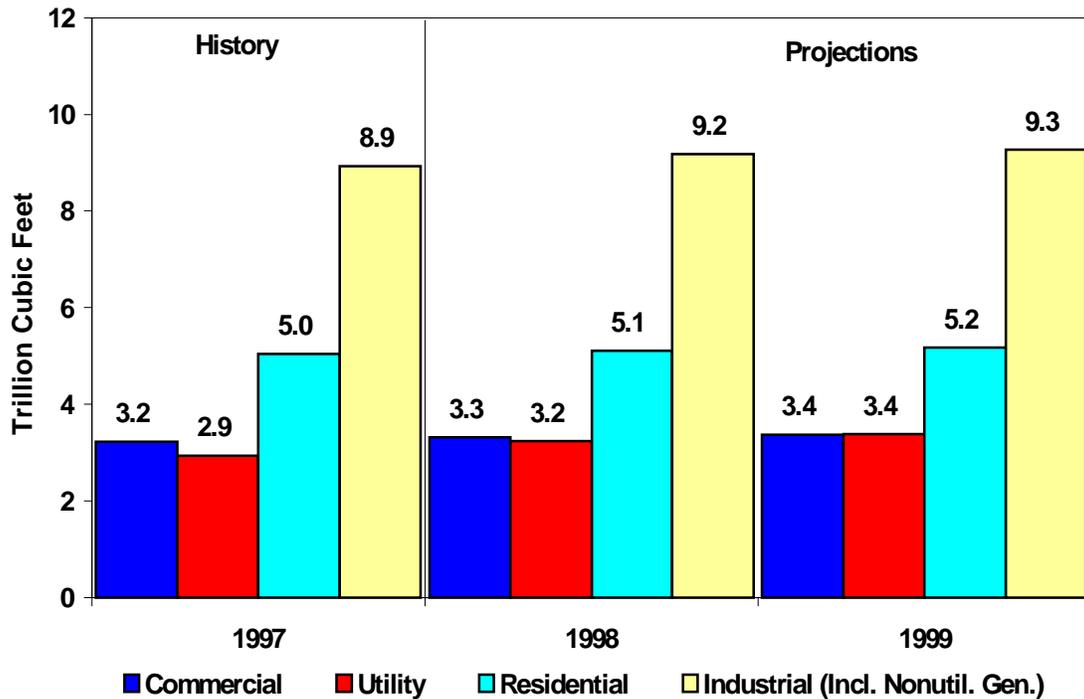


Figure 16. Natural Gas Demand by Sector

Strong demand growth for natural gas (3.5 percent) is expected for 1998, following demand growth of less than 1 percent in 1997. Moderating natural gas prices, normal weather, and a large drop expected in previously high hydroelectric output levels are mainly responsible for the expected growth in gas demand of over 700 billion cubic feet. Demand is expected to increase across all sectors (Figure 16), but this year, residential sector demand increases will accompany the continued increases in the industrial and electricity generating sectors.

In 1997, positive natural gas demand growth was evident in the industrial and electricity generating sectors, (Table 8), due to rapidly rising economic growth. Problems with coal deliveries, particularly in Texas, led to substitution of natural gas for coal at several utilities to conserve coal stocks. However, weather-related demand declines in the residential sector served to counteract high demand growth in the power sector.

Gas demand is expected to continue to grow in 1999, although at a slower pace, along with the economy. In 1999, natural gas demand is expected to rise by 1.7 percent, as industrial and electricity generation use of gas rises more slowly as economic growth slows.

U.S. Natural Gas Supply

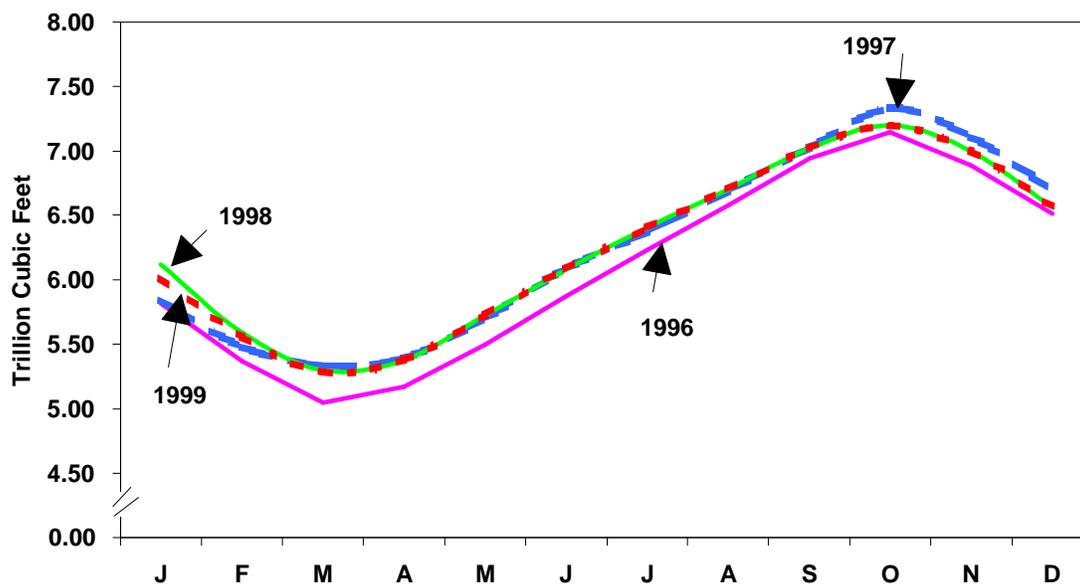


Figure 17. Total Gas in Underground Storage

Total underground gas storage levels, as well as levels in all three major storage regions (East, Producing, and West), remain above last year's storage levels at this time (Figure 17). Average temperatures have been generally milder-than-normal across the U.S. thus far this winter, despite some cold periods. The weather and storage situations have been key factors in the current downward tendency in gas prices.

Underground gas storage levels are expected to end the winter (first quarter 1998) at about last year's levels.

Despite the large increase in drilling activity in 1997 to the highest levels since 1990 and relatively higher wellhead prices, U.S. gas production rose less than 1 percent from 1996 levels, reflecting the limited growth in demand. High decline rates for some recent wells, particularly in the Gulf Outer Continental Shelf, indicate a need for continued high levels of drilling to maintain production. Dry gas production growth is expected to average 1.3 percent through 1999 as net imports rise significantly to meet increasing gas demand.

In 1997, net imports increased by 2.4 percent, not as much as they did in 1996, due to limitations on import pipeline capacity from Canada. In 1998, net imports are expected to rise by 9.1 percent and by another 7.3 percent in 1999, as a total of about 2.6 billion cubic feet per day of increased Canadian export pipeline capacity is expected to be added in these years.

U.S. Coal Demand and Supply

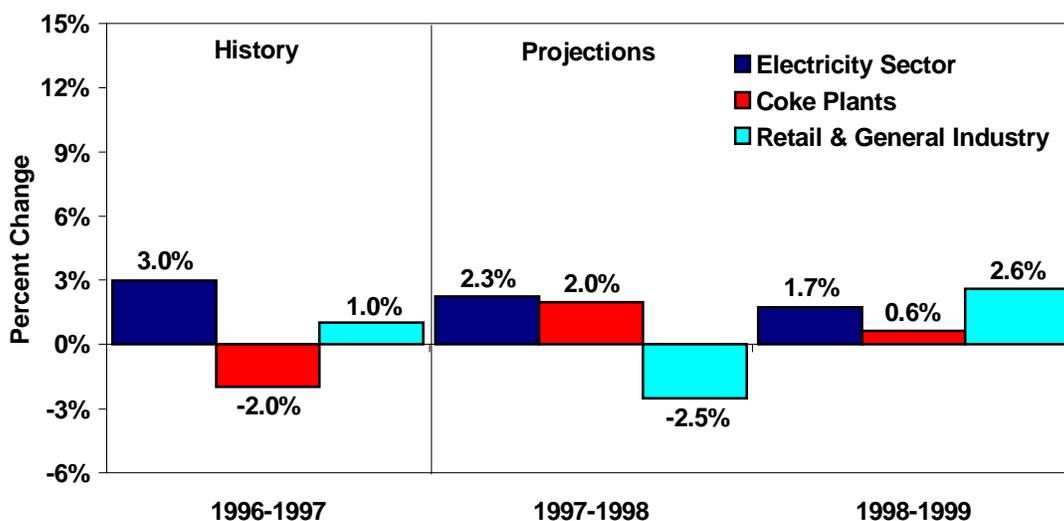


Figure 18. Annual Change in U. S. Coal Demand

Total coal demand is expected to increase by 1.9 percent in 1998 and by 1.8 percent in 1999, compared to 2.7 percent growth in 1997 (Table 9). Coal demand by the electricity sector (including independent power producers) grew by 3 percent to a record 925.4 million short tons in 1997, despite relatively weak electricity demand growth of about 1.1 percent. Significant declines in nuclear generation was largely responsible for the rise in coal consumed for power generation. Continued growth in electricity demand (2.9 percent in 1998 and 1.5 percent in 1999), combined with assumed declines in hydroelectric generation will spur the continued growth in coal demand by the electricity sector. The electric sector currently consumes nearly 90 percent of all coal used in the United States.

Coal carbonized (consumed) by coke plants fell 2.0 percent in 1997 to 31.1 million short tons. Demand for coal at coke plants is expected to be under 32 million short tons throughout the forecast period, primarily as a result of coking plant capacity constraints. The growth of coke plant coal consumption is also hindered by the use of non-coke methods of steel production (steel recycling and electric arc furnaces) by the iron and steel industry. Electric-arc production grew by 5.7 percent in 1997, accounting for 43 percent of all raw steel produced in the United States. Coal-based raw steel production grew by 1.1 percent in 1997.

Demand for coal by the retail and general industry sectors is projected at 75.2 million short tons in 1998, a 2.5 percent decrease from 1997 demand. In 1999, demand is expected to be 77.2 million short tons.

U.S. coal exports are expected to rebound in 1998. Exports are projected to be 89.9 million short tons in 1998 (a 4.3 percent increase) and 90.1 in 1999 (Table 9).

Coal production was a record 1,092 million short tons in 1997. Production is expected to grow by 2.7 percent in 1998, with annual output exceeding 1,120 million short tons. Production will grow by an additional 1.8 percent in 1999. Production in the Western region should continue to rise significantly over the forecast period (6.7 percent in 1998 and 5.3 percent in 1999). The Western region is expected to become the nation's largest coal producer in 1998 supplanting the Appalachian region. Production in the Appalachian region is expected to remain near 467 million short tons throughout the forecast period, while production in the Interior region will continue to decline.

U.S. Electricity Demand and Supply

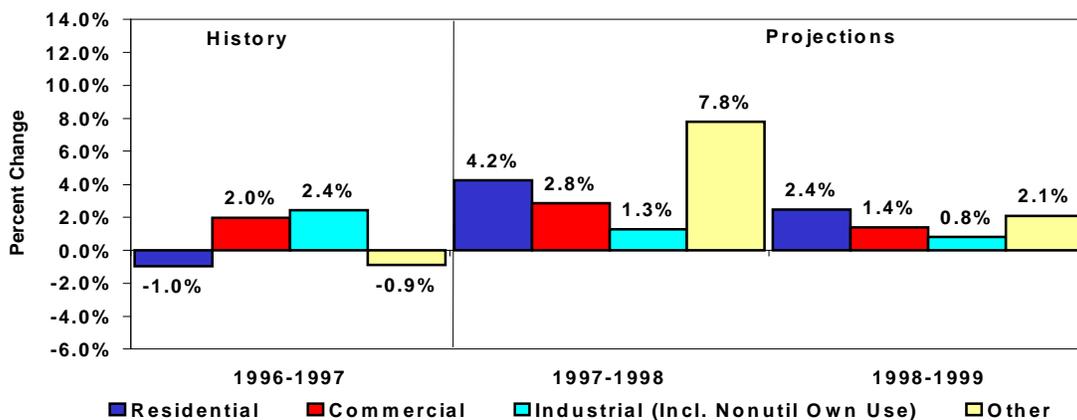


Figure 19. U.S. Electricity Demand

Total electricity demand growth for 1997 was estimated at 1.1 percent above 1996 levels, somewhat lower than estimated in the previous (December) forecast. Electricity demand growth in 1998 is expected to be 2.9 percent (Figure 19 and Table 10), which is somewhat higher than the demand growth projected in our previous forecast. This increase is due largely to the expected rise in residential demand in the first 3 quarters of 1998, when normal weather should cause noticeably more heating demand in the first quarter and more cooling demand in the second and third quarters than was the case last year. Higher growth in commercial demand is also a factor. In 1999, total demand for electricity is expected to be up by 1.5 percent, as the economy continues to grow, although at a slower rate than in 1998.

Growth in nuclear power generation in 1997 is estimated to have been negative (-6.9 percent) due to many nuclear plants being down for maintenance or offline due to performance concerns. In 1998, nuclear generation is forecast to recover,

as some of the downed plants go back on line, but not back up to peak 1996 levels. Coal, oil, and natural gas demand for electricity generation increased in 1997 as these fuels filled in for the deficiency in nuclear generation (Figure 20). Problems with coal transport by train, which resulted in lower-than-usual coal stocks at utilities in Texas, should be resolved early in 1998. Coal and natural gas generation of electricity is projected to rise significantly in both 1998 and 1999. Hydroelectric generation for all of 1997 was higher than it was in 1996 due to the even higher rain and snowfall levels experienced, but it is assumed to be down in 1998 and 1999 toward normal levels.

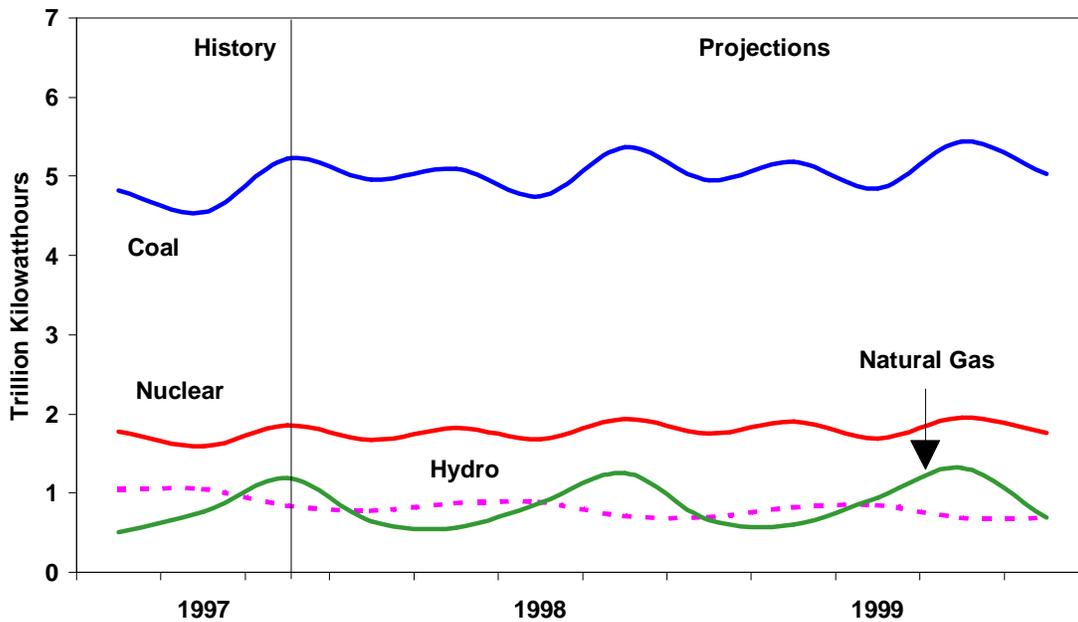


Figure 20. Electric Utility Generation by Fuel

U.S. Renewable Energy Demand

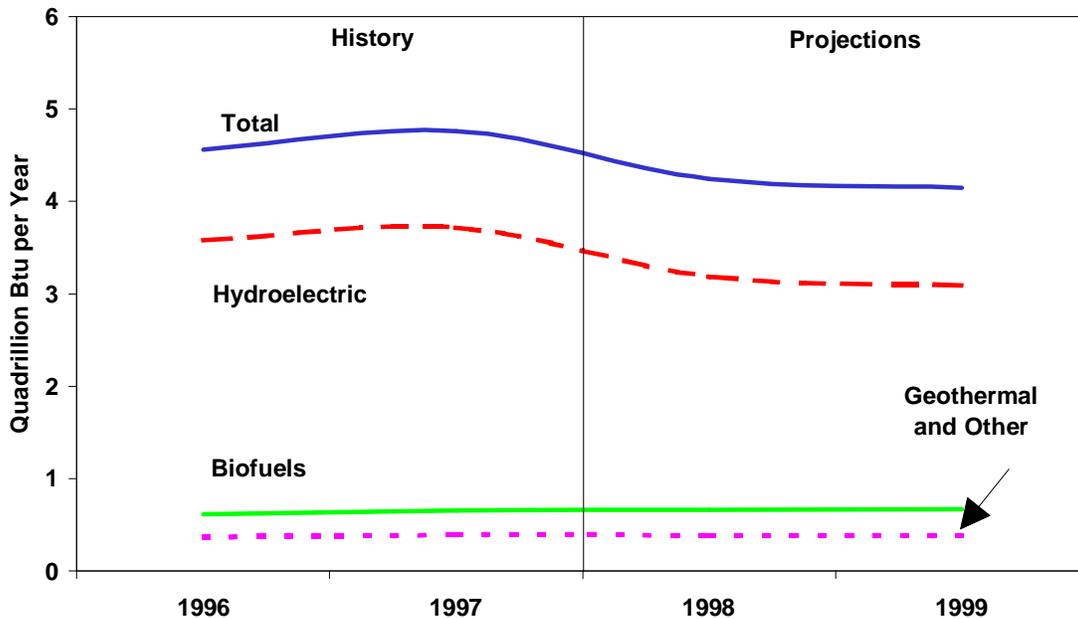


Figure 21. Renewable Energy Use for Electricity

Renewable energy use in the United States amounted to about 7.4 quadrillion Btu (quads), or about 7.8 percent of total domestic gross energy demand, in 1997 (Tables HL1 and 11). In 1998, use of renewables is expected to decrease by about 6.5 percent due to an assumed decline in hydroelectric generation to normal levels. In 1999, renewables use is expected to decrease further by an annual average of 1.2 percent, if hydroelectric availability continues to decline to more normal levels.

More than half of all renewable energy use measured by EIA is associated with the production of electricity. While the biggest component of electricity producers' use of renewables is hydroelectric power generated by electric utilities (Figure 21), a significant and growing portion of renewables use occurs at nonutility generating facilities.

Hydropower generation by electric utilities in 1998 and 1999 is expected to be lower than the abnormally high levels seen in 1996 and 1997 because of the assumption that weather will be normal. Less rain and snow fall leads to lower hydropower availability.

Most of the nonutility use of renewables involves biofuels, principally wood, wood by-products, and waste, and use of these sources of energy are projected to grow through the forecast period (Figure 21).

Currently, aside from power generation, the most significant area of renewables use is in the industrial sector, accounting for 21 percent of the total in 1997. This component is principally biofuels.

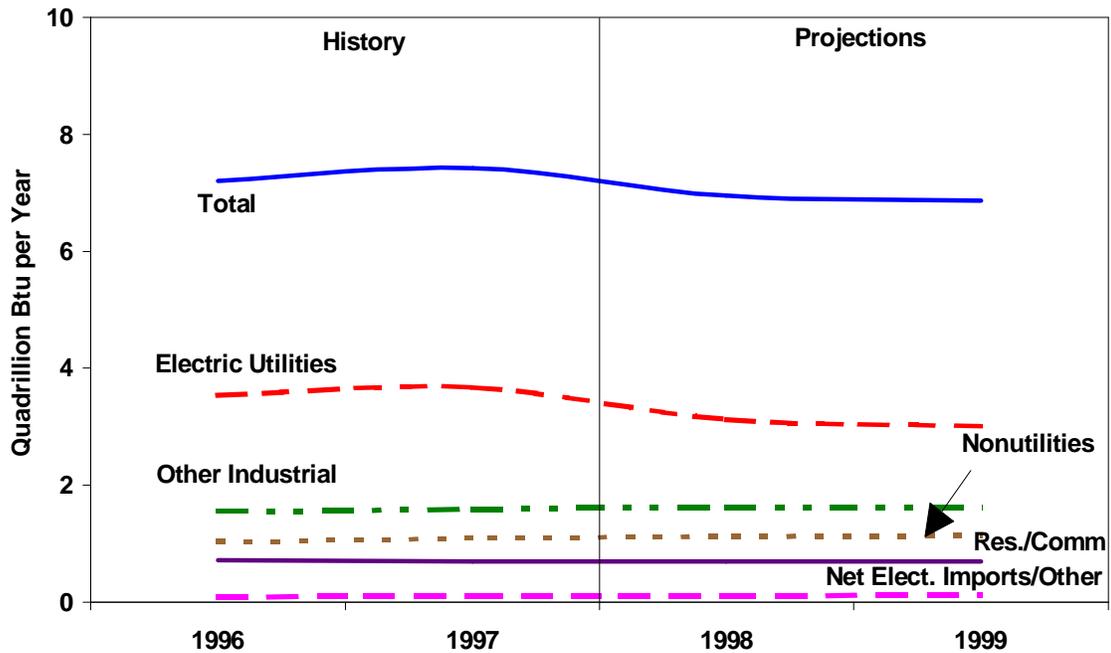


Figure 22. Renewable Energy Use by Sector

Renewables use in the combined residential and commercial sector, at about 0.70 quad in 1997 (Figure 22), generally accounts for about 9 percent of total domestic renewables demand (Table 11). Most of this energy is wood used for home heating, with only a very small amount having to do with solar hot water heating.

U.S. Energy Demand and Supply Sensitivities

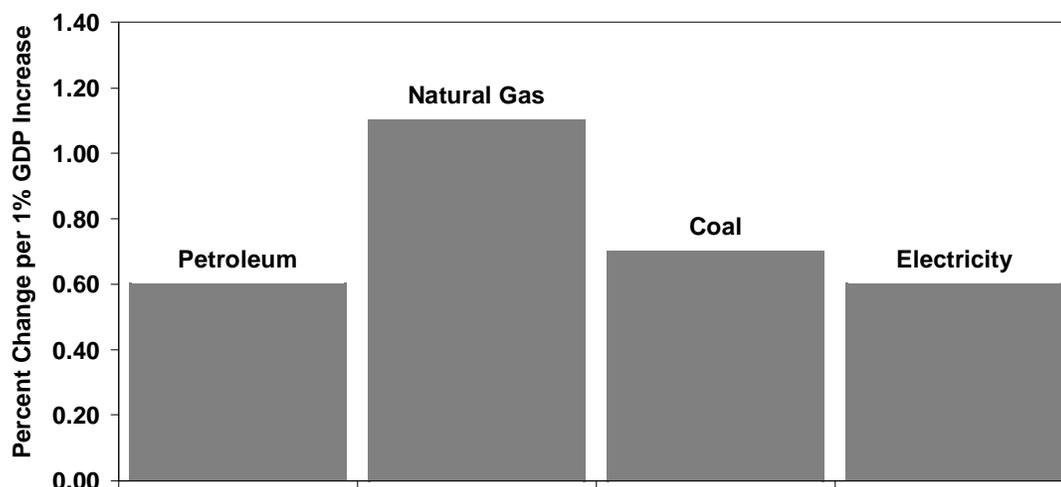


Figure 23. Macro Sensitivities

The petroleum demand and supply outlook for the mid-price case is based on assumed normal temperatures and GDP growth of 2.2 percent per year in 1998 and 1.6 percent in 1999. To enhance the usefulness of the mid-case forecasts, sensitivities of energy demand and supply are also derived, using alternative macroeconomic, price and weather assumptions. Plausible macroeconomic and weather-related petroleum demand sensitivities are illustrated in Figures 23 and 24 and Table 6.

A 1-percent increase in real GDP raises petroleum demand by about 0.6 percent; natural gas demand by 1.1 percent; coal demand by 0.7 percent; and electricity demand by 0.6 percent (Figure 23). The impact of shifts in economic growth varies, depending upon distribution of incremental growth across energy-intensive and non-energy-intensive sectors.

A 10 percent increase in crude oil prices, assuming no price response from non-petroleum energy sources, reduces petroleum demand by 0.3 percent. A 10 percent increase in gas prices at the wellhead, assuming no price response for other fuels, reduces natural gas demand by 0.4 percent.

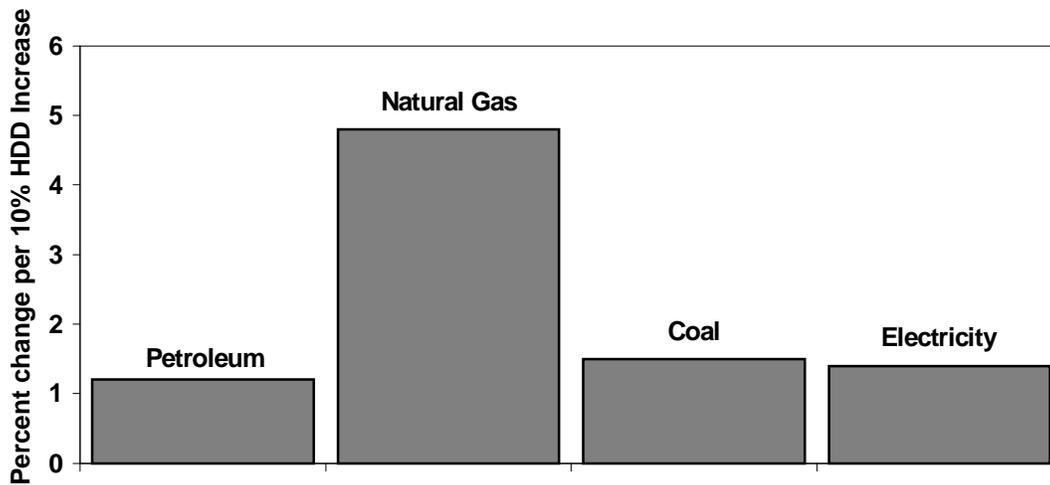


Figure 24. Weather Sensitivities

A 10-percent increase in heating degree-days increases winter petroleum demand by 1.2 percent; natural gas demand by 4.8 percent; coal demand by 1.5 percent; and electricity demand by 1.4 percent (Figure 24). The impact of heating degree-day deviations from normal may not be symmetrical. Extremely cold weather could result in indirect effects on fuel oil markets due to potential natural gas supply constraints.

A 10-percent increase in cooling degree-days increases summer petroleum demand by about 0.1 percent, other fuels by 1.4 percent.

A \$1-per-barrel increase in crude oil prices boosts domestic oil supply (crude oil and natural gas liquids production) by about 75,000 barrels per day (Table 7).

Summary of Important Terms

PETROLEUM PRICES

Refiner acquisition cost of crude oil (RAC): The average monthly cost of crude oil to U.S. refiners, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs. Typically, the imported RAC is about \$1.50 per barrel below the monthly average spot price of West Texas Intermediate (WTI) crude oil and is within about \$0.20 per barrel of the average monthly spot price of Brent crude oil. Unless otherwise stated, the imported RAC is what is referred to in this report as the "world oil price" or "average crude oil price."

Retail motor gasoline prices: The average pump price of gasoline (all services, all grades) for the United States. Unless otherwise stated, the average gasoline retail price is based on the composite gasoline price average computed by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers--about 80 percent of the total U.S. population.

Wholesale motor gasoline price: The monthly average price to refiners of motor gasoline (all types) sold to resellers; it is reported monthly on Table 4 of EIA's *Petroleum Marketing Monthly*.

Retail heating oil price: The cost of Number 2 distillate fuel oil to residences (less taxes). The retail heating oil price referred to in this report is from Table 18 of EIA's *Petroleum Marketing Monthly*.

PETROLEUM DEMAND and SUPPLY

Petroleum Demand (consumption/petroleum products supplied): For each product (gasoline, distillate, etc.), the amount supplied is calculated by summing production, imports, and net withdrawals from primary stocks and subtracting exports. Thus, petroleum demand is represented by the "disappearance" of product from the primary supply system. This demand definition coincides exactly with the term "product supplied" as used in EIA's *Petroleum Supply Monthly*.

Petroleum Stocks, primary: Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tank arms, and bulk terminals. Crude oil that is in transit from Alaska or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. These are the only stocks included in this report when petroleum inventories or inventory changes are discussed. Excluded are stocks of foreign origin that are held in bonded warehouse storage.

NATURAL GAS

Natural gas wellhead price: The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing States and the U.S. Minerals Management Service, Department of the Interior. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to State production, severance, and similar charges.

Natural gas spot price: A transition price for natural gas concluded "on the spot," that is, on a one-time prompt (immediate) basis, as opposed to a longer-term contract price which obligates the seller to deliver the product at an agreed price over an extended period of time.

MACROECONOMIC

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier may be either U.S. residents or residents of foreign countries. Nominal GDP refers to current dollar value; real GDP refers to GDP corrected for inflation.

GDP Implicit Price Deflator: A byproduct of the price deflation of gross domestic product (GDP). It is derived as the ratio of current- to constant-dollar GDP. It is a weighted average of the detailed price indexes used in the deflation of GDP, but these indexes are combined using weights that reflect the composition of GDP in each period. Thus, changes in the implicit price deflator reflect not only changes in prices but also changes in the composition of GDP. Corresponding current- and constant-dollar series are published by the U.S. Bureau of Economic Analysis, National Income and Product Accounts. The current base year for the deflator is 1992.

Manufacturing Production Index: A measure of nondurable and durable manufacturing production expressed as a percentage of output in a reference period (currently 1987). Data are published by the Federal Reserve System in the Federal Reserve Bulletin.

Employment: Employment data refer to persons on establishment payrolls who received pay for any part of the pay period which includes the 12th of the month (or the last day of the calendar month for government employees). The data exclude proprietors, the self-employed, unpaid volunteer or family workers, farm workers, and domestic workers. Salaried officers of corporations are included. Employment statistics are published by the U.S. Bureau of Labor Statistics in the Employment and Earnings report.

Consumer Price Index: A measure of the average change in prices paid by urban consumers for a fixed market basket of goods and services. The consumer price index is based on the prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors and dentists fees, and other goods and services that people buy for day-to-day living. All taxes directly associated with the purchase and use of items are included in the index. The consumer price index is published by the U.S. Bureau of Labor Statistics in the *Monthly Labor Review*.

Degree-days, cooling (CDD): For one day, the number of degrees that the average temperature for that day is above 65 degrees Fahrenheit. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period. As covered in this report, cooling degree-days in a period represent the sum of daily degree-day calculations over the period. Thus, national cooling-degree-days for a month represent the weighted-average of the daily cooling degree-days for the States, summed across all days in the month. The weights used are population shares unless otherwise noted.

Degree-days, heating (HDD): For one day, the number of degrees that the average temperature is below 65 degrees Fahrenheit. The daily average temperature is the mean of the maximum and minimum temperatures for a 24-hour period. As covered in this report, heating degree-days in a period represent the sum of daily degree-day calculations over the period. Thus, national heating-degree-days for a month represent the weighted-average of the daily heating degree-days for the States, summed across all days in the month. The weights used are population shares unless otherwise noted.

British thermal unit (Btu): The quantity of heat required to raise the temperature of 1 pound of water by 1 degree Fahrenheit. In this report, Btu-equivalent energy values are calculated by multiplying estimated thermal content coefficients per physical unit for various products by the respective quantities. These are then aggregated across products to obtain, for example, total energy demand or supply variables.

TOTAL ENERGY

Total energy demand: The sum of fossil fuel consumed by the five sectors (residential, commercial, industrial, transportation, and electric utility), plus hydroelectric power, nuclear electric power, net imports of coal coke, and electricity generated for distribution from wood, waste, geothermal, wind, photovoltaic, and solar thermal energy.

Adjusted Total Energy Demand: Total Energy Demand (as defined above), plus estimated renewable energy use in the residential, commercial, and industrial sectors not included in the definition of Total Energy Demand. This adjustment amounted to an estimated 3.4 quadrillion Btu (about 4 percent) over and above Total Energy Demand in 1995.

GEOGRAPHICAL

Other Asia includes: Afghanistan, American Samoa, Bangladesh, Bhutan, Brunei, Burma, Cambodia, Cook Islands, Fiji, French Polynesia, Hong Kong (prior to July 1, 1997), India, Indonesia, Kiribati, North Korea, South Korea, Laos, Macau, Malaysia, Maldives, Mongolia, Nauru, Nepal, New Caledonia, Niue, Pakistan, Papua New Guinea, Philippines, Singapore, Solomon Islands, Sri Lanka, Taiwan, Thailand, Tonga, U.S. Pacific Islands, Vanuatu, Vietnam, Wake Island, Western Samoa.

Latin America is defined as including all of the countries of Central and South America, plus Mexico, but excluding Puerto Rico and the U.S. Virgin Islands.

The States in the Appalachian region are: Alabama, Georgia, Eastern Kentucky, Maryland, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.

The Interior region is composed of: Arkansas, Illinois, Indiana, Iowa, Kansas, Western Kentucky, Louisiana, Missouri, Oklahoma, and Texas.

The Western region States are: Alaska, Arizona, California, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, and Wyoming.

Table 1. U.S. Macroeconomic and Weather Assumptions

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Macroeconomic ^a															
Real Gross Domestic Product (billion chained 1992 dollars - SAAR).....	7102	7160	7218	<i>7268</i>	<i>7299</i>	<i>7332</i>	<i>7359</i>	<i>7390</i>	<i>7417</i>	<i>7447</i>	<i>7476</i>	<i>7521</i>	<i>7187</i>	<i>7345</i>	<i>7465</i>
Percentage Change from Prior Year.....	4.0	3.4	3.9	<i>3.6</i>	<i>2.8</i>	<i>2.4</i>	<i>2.0</i>	<i>1.7</i>	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	<i>1.8</i>	<i>3.7</i>	<i>2.2</i>	<i>1.6</i>
Annualized Percent Change from Prior Quarter.....	4.8	3.3	3.2	<i>2.8</i>	<i>1.7</i>	<i>1.8</i>	<i>1.5</i>	<i>1.7</i>	<i>1.4</i>	<i>1.6</i>	<i>1.6</i>	<i>2.4</i>			
GDP Implicit Price Deflator (Index, 1992=1.000).....	1.118	1.123	1.127	<i>1.132</i>	<i>1.137</i>	<i>1.141</i>	<i>1.146</i>	<i>1.151</i>	<i>1.157</i>	<i>1.161</i>	<i>1.166</i>	<i>1.170</i>	<i>1.125</i>	<i>1.144</i>	<i>1.164</i>
Percentage Change from Prior Year.....	2.3	2.2	1.9	<i>1.9</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.8</i>	<i>1.8</i>	<i>1.7</i>	<i>1.7</i>	<i>2.0</i>	<i>1.7</i>	<i>1.7</i>
Real Disposable Personal Income (billion chained 1992 Dollars - SAAR).....	5161	5201	5235	<i>5281</i>	<i>5342</i>	<i>5378</i>	<i>5414</i>	<i>5457</i>	<i>5494</i>	<i>5512</i>	<i>5527</i>	<i>5543</i>	<i>5220</i>	<i>5398</i>	<i>5519</i>
Percentage Change from Prior Year.....	2.2	2.8	2.8	<i>3.5</i>	<i>3.5</i>	<i>3.4</i>	<i>3.4</i>	<i>3.3</i>	<i>2.8</i>	<i>2.5</i>	<i>2.1</i>	<i>1.6</i>	<i>2.8</i>	<i>3.4</i>	<i>2.3</i>
Manufacturing Production (Index, 1992=1.000).....	1.200	1.212	1.233	<i>1.251</i>	<i>1.255</i>	<i>1.262</i>	<i>1.266</i>	<i>1.264</i>	<i>1.264</i>	<i>1.268</i>	<i>1.274</i>	<i>1.282</i>	<i>1.224</i>	<i>1.262</i>	<i>1.272</i>
Percentage Change from Prior Year.....	5.2	4.7	5.2	<i>5.6</i>	<i>4.6</i>	<i>4.1</i>	<i>2.7</i>	<i>1.1</i>	<i>0.7</i>	<i>0.5</i>	<i>0.7</i>	<i>1.4</i>	<i>5.2</i>	<i>3.1</i>	<i>0.8</i>
OECD Economic Growth (percent) ^b													<i>3.1</i>	<i>2.2</i>	<i>2.2</i>
Weather ^c															
Heating Degree-Days															
U.S.	2143	669	122	<i>1741</i>	<i>2327</i>	<i>524</i>	<i>89</i>	<i>1636</i>	<i>2327</i>	<i>524</i>	<i>89</i>	<i>1636</i>	<i>4675</i>	<i>4576</i>	<i>4576</i>
New England.....	3119	1078	281	<i>2416</i>	<i>3267</i>	<i>915</i>	<i>171</i>	<i>2269</i>	<i>3267</i>	<i>915</i>	<i>171</i>	<i>2269</i>	<i>6894</i>	<i>6621</i>	<i>6621</i>
Middle Atlantic.....	2814	887	187	<i>2152</i>	<i>2993</i>	<i>716</i>	<i>105</i>	<i>2026</i>	<i>2993</i>	<i>716</i>	<i>105</i>	<i>2026</i>	<i>6040</i>	<i>5839</i>	<i>5839</i>
U.S. Gas-Weighted.....	2275	711	127	<i>1799</i>	<i>2426</i>	<i>539</i>	<i>81</i>	<i>1686</i>	<i>2426</i>	<i>539</i>	<i>81</i>	<i>1686</i>	<i>4912</i>	<i>4732</i>	<i>4732</i>
Cooling Degree-Days (U.S.)	29	275	716	<i>71</i>	<i>30</i>	<i>334</i>	<i>758</i>	<i>72</i>	<i>30</i>	<i>334</i>	<i>758</i>	<i>72</i>	<i>1091</i>	<i>1193</i>	<i>1193</i>

^aMacroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case.

^bOECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Mexico is also a member but is not yet included in OECD data.

^cPopulation-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 1990 population. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

SAAR: Seasonally-adjusted annualized rate.

Note: Historical data are printed in bold; forecasts are in italics.

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1297.

Table 2. U.S. Energy Indicators: Mid World Oil Price Case

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Macroeconomic ^a															
Real Fixed Investment (billion chained 1992 dollars-SAAR).....	1079	1111	1148	<i>1160</i>	<i>1180</i>	<i>1197</i>	<i>1211</i>	<i>1218</i>	<i>1222</i>	<i>1229</i>	<i>1238</i>	<i>1247</i>	<i>1125</i>	<i>1201</i>	<i>1234</i>
Real Exchange Rate (index)	1.085	1.096	1.106	<i>1.102</i>	<i>1.097</i>	<i>1.088</i>	<i>1.083</i>	<i>1.074</i>	<i>1.067</i>	<i>1.058</i>	<i>1.043</i>	<i>1.032</i>	<i>1.097</i>	<i>1.086</i>	<i>1.050</i>
Business Inventory Change (billion chained 1992 dollars-SAAR).....	20.9	29.0	16.9	<i>14.2</i>	<i>11.1</i>	<i>6.7</i>	<i>2.1</i>	<i>-1.0</i>	<i>-3.1</i>	<i>-3.7</i>	<i>-3.5</i>	<i>-3.2</i>	<i>20.2</i>	<i>4.7</i>	<i>-3.4</i>
Producer Price Index (index, 1980-1984=1.000).....	1.284	1.268	1.272	<i>1.275</i>	<i>1.272</i>	<i>1.274</i>	<i>1.277</i>	<i>1.280</i>	<i>1.282</i>	<i>1.284</i>	<i>1.286</i>	<i>1.289</i>	<i>1.275</i>	<i>1.276</i>	<i>1.286</i>
Consumer Price Index (index, 1980-1984=1.000).....	1.597	1.601	1.609	<i>1.618</i>	<i>1.622</i>	<i>1.629</i>	<i>1.637</i>	<i>1.646</i>	<i>1.655</i>	<i>1.663</i>	<i>1.672</i>	<i>1.682</i>	<i>1.606</i>	<i>1.634</i>	<i>1.668</i>
Petroleum Product Price Index (index, 1980-1984=1.000).....	0.722	0.675	0.667	<i>0.652</i>	<i>0.615</i>	<i>0.603</i>	<i>0.611</i>	<i>0.614</i>	<i>0.623</i>	<i>0.620</i>	<i>0.625</i>	<i>0.628</i>	<i>0.679</i>	<i>0.611</i>	<i>0.624</i>
Non-Farm Employment (millions).....	121.1	121.9	122.6	<i>123.3</i>	<i>123.9</i>	<i>124.4</i>	<i>124.9</i>	<i>125.3</i>	<i>125.6</i>	<i>125.9</i>	<i>126.1</i>	<i>126.4</i>	<i>122.2</i>	<i>124.6</i>	<i>126.0</i>
Commercial Employment (millions).....	82.6	83.2	83.7	<i>84.4</i>	<i>84.9</i>	<i>85.3</i>	<i>85.7</i>	<i>86.1</i>	<i>86.5</i>	<i>86.8</i>	<i>87.0</i>	<i>87.4</i>	<i>83.5</i>	<i>85.5</i>	<i>86.9</i>
Total Industrial Production (index, 1992=1.000).....	1.183	1.196	1.215	<i>1.230</i>	<i>1.233</i>	<i>1.238</i>	<i>1.242</i>	<i>1.242</i>	<i>1.241</i>	<i>1.245</i>	<i>1.250</i>	<i>1.258</i>	<i>1.206</i>	<i>1.239</i>	<i>1.249</i>
Housing Stock (millions).....	112.1	112.5	112.9	<i>113.3</i>	<i>113.6</i>	<i>114.0</i>	<i>114.4</i>	<i>114.8</i>	<i>115.1</i>	<i>115.5</i>	<i>115.8</i>	<i>116.2</i>	<i>112.7</i>	<i>114.2</i>	<i>115.6</i>
Miscellaneous															
Gas Weighted Industrial Production (index, 1992=1.000).....	1.125	1.135	1.137	<i>1.148</i>	<i>1.146</i>	<i>1.146</i>	<i>1.146</i>	<i>1.146</i>	<i>1.145</i>	<i>1.147</i>	<i>1.150</i>	<i>1.156</i>	<i>1.136</i>	<i>1.146</i>	<i>1.149</i>
Vehicle Miles Traveled ^b (million miles/day).....	6463	7139	7295	<i>6852</i>	<i>6673</i>	<i>7410</i>	<i>7582</i>	<i>7106</i>	<i>6904</i>	<i>7619</i>	<i>7781</i>	<i>7281</i>	<i>6939</i>	<i>7195</i>	<i>7398</i>
Vehicle Fuel Efficiency (index, 1995=1.000).....	1.000	1.028	1.041	<i>0.996</i>	<i>1.004</i>	<i>1.038</i>	<i>1.051</i>	<i>0.997</i>	<i>1.011</i>	<i>1.046</i>	<i>1.061</i>	<i>1.007</i>	<i>1.017</i>	<i>1.023</i>	<i>1.032</i>
Real Vehicle Fuel Cost (cents per mile).....	4.06	3.85	3.83	<i>3.88</i>	<i>3.61</i>	<i>3.60</i>	<i>3.54</i>	<i>3.63</i>	<i>3.57</i>	<i>3.57</i>	<i>3.49</i>	<i>3.57</i>	<i>3.91</i>	<i>3.59</i>	<i>3.55</i>
Air Travel Capacity (mill. available ton-miles/day).....	402.1	417.1	433.5	<i>425.5</i>	<i>427.4</i>	<i>445.0</i>	<i>460.0</i>	<i>448.7</i>	<i>441.0</i>	<i>455.9</i>	<i>470.5</i>	<i>459.0</i>	<i>419.6</i>	<i>445.4</i>	<i>456.7</i>
Aircraft Utilization (mill. revenue ton-miles/day).....	230.5	248.0	260.6	<i>248.4</i>	<i>243.0</i>	<i>257.8</i>	<i>270.4</i>	<i>252.5</i>	<i>246.5</i>	<i>262.2</i>	<i>276.4</i>	<i>261.7</i>	<i>247.0</i>	<i>256.0</i>	<i>261.8</i>
Aircraft Yield (cents per ton-mile).....	14.16	13.61	13.04	<i>13.61</i>	<i>14.25</i>	<i>14.06</i>	<i>13.38</i>	<i>14.21</i>	<i>14.88</i>	<i>14.59</i>	<i>13.81</i>	<i>14.54</i>	<i>13.60</i>	<i>13.98</i>	<i>14.45</i>
Raw Steel Production (millions tons).....	26.47	26.59	26.52	<i>27.74</i>	<i>28.77</i>	<i>28.89</i>	<i>28.77</i>	<i>29.27</i>	<i>29.68</i>	<i>29.47</i>	<i>29.15</i>	<i>29.79</i>	<i>107.03</i>	<i>115.71</i>	<i>118.09</i>

^aMacroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case.

^bIncludes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

Note: Historical data are printed in bold; forecasts are in italics.

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1297.

Table 3. International Petroleum Supply and Demand: Mid World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Demand^a															
OECD															
U.S. (50 States).....	18.2	18.5	18.7	<i>19.0</i>	<i>18.9</i>	<i>18.7</i>	<i>19.0</i>	<i>19.3</i>	<i>19.2</i>	<i>19.0</i>	<i>19.2</i>	<i>19.5</i>	<i>18.6</i>	<i>19.0</i>	<i>19.2</i>
U.S. Territories.....	0.2	0.2	0.2	<i>0.2</i>											
Canada.....	1.8	1.8	1.9	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>1.9</i>
Europe.....	14.3	14.1	14.3	<i>14.8</i>	<i>14.5</i>	<i>14.3</i>	<i>14.5</i>	<i>15.0</i>	<i>14.7</i>	<i>14.5</i>	<i>14.7</i>	<i>15.2</i>	<i>14.4</i>	<i>14.6</i>	<i>14.8</i>
Japan.....	6.4	5.2	5.5	<i>6.2</i>	<i>6.4</i>	<i>5.2</i>	<i>5.5</i>	<i>6.3</i>	<i>6.5</i>	<i>5.3</i>	<i>5.6</i>	<i>6.4</i>	<i>5.8</i>	<i>5.9</i>	<i>6.0</i>
Australia and New Zealand.....	0.9	0.9	0.9	<i>1.0</i>	<i>1.0</i>	<i>0.9</i>	<i>0.9</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>0.9</i>	<i>1.0</i>	<i>0.9</i>	<i>1.0</i>	<i>1.0</i>
Total OECD.....	41.9	40.7	41.5	<i>43.2</i>	<i>42.8</i>	<i>41.3</i>	<i>42.1</i>	<i>43.7</i>	<i>43.4</i>	<i>41.8</i>	<i>42.7</i>	<i>44.3</i>	<i>41.8</i>	<i>42.5</i>	<i>43.1</i>
Non-OECD															
Former Soviet Union.....	4.8	4.3	4.3	<i>4.7</i>	<i>4.8</i>	<i>4.4</i>	<i>4.4</i>	<i>4.8</i>	<i>4.9</i>	<i>4.4</i>	<i>4.4</i>	<i>4.9</i>	<i>4.5</i>	<i>4.6</i>	<i>4.7</i>
Europe.....	1.5	1.3	1.3	<i>1.4</i>	<i>1.5</i>	<i>1.3</i>	<i>1.3</i>	<i>1.4</i>	<i>1.6</i>	<i>1.4</i>	<i>1.4</i>	<i>1.5</i>	<i>1.4</i>	<i>1.4</i>	<i>1.5</i>
China.....	3.8	3.8	3.8	<i>3.9</i>	<i>3.9</i>	<i>4.0</i>	<i>4.0</i>	<i>4.1</i>	<i>4.2</i>	<i>4.2</i>	<i>4.2</i>	<i>4.3</i>	<i>3.8</i>	<i>4.0</i>	<i>4.2</i>
Other Asia.....	9.1	8.9	8.4	<i>9.6</i>	<i>9.5</i>	<i>9.3</i>	<i>8.8</i>	<i>10.1</i>	<i>10.1</i>	<i>9.8</i>	<i>9.3</i>	<i>10.6</i>	<i>9.0</i>	<i>9.4</i>	<i>10.0</i>
Other Non-OECD.....	12.9	13.3	13.0	<i>13.3</i>	<i>13.3</i>	<i>13.7</i>	<i>13.4</i>	<i>13.7</i>	<i>13.8</i>	<i>14.2</i>	<i>13.9</i>	<i>14.1</i>	<i>13.1</i>	<i>13.5</i>	<i>14.0</i>
Total Non-OECD.....	32.1	31.6	30.9	<i>32.9</i>	<i>33.2</i>	<i>32.7</i>	<i>32.0</i>	<i>34.1</i>	<i>34.5</i>	<i>34.0</i>	<i>33.2</i>	<i>35.4</i>	<i>31.9</i>	<i>33.0</i>	<i>34.3</i>
Total World Demand.....	73.9	72.3	72.4	<i>76.1</i>	<i>76.0</i>	<i>74.0</i>	<i>74.0</i>	<i>77.8</i>	<i>77.9</i>	<i>75.8</i>	<i>75.9</i>	<i>79.7</i>	<i>73.7</i>	<i>75.5</i>	<i>77.3</i>
Supply^b															
OECD															
U.S. (50 States).....	9.4	9.4	9.4	<i>9.4</i>	<i>9.4</i>	<i>9.5</i>	<i>9.4</i>	<i>9.4</i>	<i>9.4</i>	<i>9.4</i>	<i>9.4</i>	<i>9.5</i>	<i>9.4</i>	<i>9.4</i>	<i>9.4</i>
Canada.....	2.6	2.5	2.6	<i>2.6</i>	<i>2.6</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.8</i>	<i>2.8</i>	<i>2.6</i>	<i>2.7</i>	<i>2.7</i>
North Sea ^c	6.5	6.1	6.0	<i>6.4</i>	<i>6.5</i>	<i>6.3</i>	<i>6.7</i>	<i>6.9</i>	<i>7.0</i>	<i>6.8</i>	<i>7.0</i>	<i>7.3</i>	<i>6.2</i>	<i>6.6</i>	<i>7.0</i>
Other OECD.....	1.6	1.6	1.6	<i>1.7</i>	<i>1.6</i>	<i>1.7</i>	<i>1.7</i>								
Total OECD.....	20.1	19.6	19.6	<i>20.1</i>	<i>20.2</i>	<i>20.1</i>	<i>20.4</i>	<i>20.8</i>	<i>20.8</i>	<i>20.6</i>	<i>20.9</i>	<i>21.2</i>	<i>19.8</i>	<i>20.4</i>	<i>20.9</i>
Non-OECD															
OPEC.....	29.5	29.6	30.1	<i>30.2</i>	<i>30.4</i>	<i>30.5</i>	<i>30.7</i>	<i>30.9</i>	<i>30.9</i>	<i>31.0</i>	<i>31.1</i>	<i>31.2</i>	<i>29.9</i>	<i>30.6</i>	<i>31.0</i>
Former Soviet Union.....	7.1	7.2	7.3	<i>7.3</i>	<i>7.3</i>	<i>7.3</i>	<i>7.3</i>	<i>7.4</i>	<i>7.4</i>	<i>7.4</i>	<i>7.4</i>	<i>7.5</i>	<i>7.2</i>	<i>7.3</i>	<i>7.4</i>
China.....	3.2	3.2	3.2	<i>3.3</i>	<i>3.2</i>	<i>3.3</i>	<i>3.3</i>								
Mexico.....	3.4	3.4	3.5	<i>3.5</i>	<i>3.5</i>	<i>3.5</i>	<i>3.5</i>	<i>3.5</i>	<i>3.6</i>	<i>3.6</i>	<i>3.6</i>	<i>3.6</i>	<i>3.4</i>	<i>3.5</i>	<i>3.6</i>
Other Non-OECD.....	10.4	10.5	10.4	<i>10.5</i>	<i>10.7</i>	<i>10.8</i>	<i>10.9</i>	<i>11.0</i>	<i>11.2</i>	<i>11.4</i>	<i>11.5</i>	<i>11.8</i>	<i>10.4</i>	<i>10.9</i>	<i>11.5</i>
Total Non-OECD.....	53.6	54.0	54.4	<i>54.7</i>	<i>55.1</i>	<i>55.4</i>	<i>55.7</i>	<i>56.0</i>	<i>56.3</i>	<i>56.6</i>	<i>56.9</i>	<i>57.3</i>	<i>54.2</i>	<i>55.5</i>	<i>56.8</i>
Total World Supply.....	73.7	73.5	74.1	<i>74.8</i>	<i>75.3</i>	<i>75.5</i>	<i>76.1</i>	<i>76.8</i>	<i>77.1</i>	<i>77.2</i>	<i>77.8</i>	<i>78.5</i>	<i>74.0</i>	<i>75.9</i>	<i>77.6</i>
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	-0.1	-0.7	-0.2	<i>0.4</i>	<i>0.5</i>	<i>-0.6</i>	<i>-0.3</i>	<i>0.5</i>	<i>0.4</i>	<i>-0.6</i>	<i>-0.3</i>	<i>0.5</i>	<i>-0.1</i>	<i>0.0</i>	<i>0.0</i>
Other.....	0.3	-0.5	-1.5	<i>0.9</i>	<i>0.3</i>	<i>-0.9</i>	<i>-1.7</i>	<i>0.5</i>	<i>0.4</i>	<i>-0.9</i>	<i>-1.6</i>	<i>0.7</i>	<i>-0.2</i>	<i>-0.5</i>	<i>-0.3</i>
Total Stock Withdrawals.....	0.3	-1.3	-1.7	<i>1.3</i>	<i>0.7</i>	<i>-1.5</i>	<i>-2.0</i>	<i>1.0</i>	<i>0.8</i>	<i>-1.4</i>	<i>-1.9</i>	<i>1.2</i>	<i>-0.3</i>	<i>-0.4</i>	<i>-0.3</i>
Closing Stocks, OECD only (billion barrels).....	2.7	2.7	2.8	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.8</i>	<i>2.7</i>	<i>2.6</i>	<i>2.7</i>	<i>2.8</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>
Non-OPEC Supply.....	44.2	43.9	44.0	<i>44.6</i>	<i>44.9</i>	<i>45.0</i>	<i>45.4</i>	<i>45.9</i>	<i>46.2</i>	<i>46.3</i>	<i>46.7</i>	<i>47.3</i>	<i>44.2</i>	<i>45.3</i>	<i>46.7</i>
Net Exports from Former Soviet Union.....	2.3	2.9	3.0	<i>2.5</i>	<i>2.4</i>	<i>2.9</i>	<i>2.9</i>	<i>2.6</i>	<i>2.5</i>	<i>3.0</i>	<i>3.0</i>	<i>2.6</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>

^aDemand 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.

^bIncludes 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.

^cIncludes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Mexico is also a member, but is not yet included in OECD data.

OPEC: Organization of Petroleum Exporting Countries: Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

SPR: Strategic Petroleum Reserve

Former Soviet Union: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

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

Sources: Energy Information Administration: latest data available from EIA databases supporting the following reports: *International Petroleum Statistics Report*, DOE/EIA-0520; Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

Table 4. U. S. Energy Prices
(Nominal Dollars)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Imported Crude Oil ^a															
(dollars per barrel)	21.03	17.93	17.80	17.94	16.09	16.75	17.00	17.00	17.08	17.58	17.58	17.75	18.62	16.73	17.51
Natural Gas Wellhead															
(dollars per thousand cubic feet)	2.66	2.01	2.25	2.68	2.15	1.94	1.96	2.29	2.16	1.89	1.92	2.25	2.40	2.08	2.06
Petroleum Products															
Gasoline Retail ^b															
(dollars per gallon)	1.31	1.29	1.30	1.27	1.19	1.23	1.24	1.21	1.21	1.26	1.25	1.23	1.29	1.22	1.24
No. 2 Diesel Oil, Retail															
(dollars per gallon)	1.25	1.18	1.15	1.17	1.11	1.11	1.12	1.16	1.14	1.14	1.14	1.17	1.19	1.12	1.15
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.65	0.57	0.54	0.56	0.52	0.52	0.53	0.56	0.55	0.53	0.55	0.58	0.58	0.53	0.55
No. 2 Heating Oil, Retail															
(dollars per gallon)	1.05	0.97	0.88	0.93	0.93	0.90	0.87	0.92	0.95	0.92	0.88	0.95	0.99	0.92	0.94
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel)	19.00	16.84	17.04	17.77	16.45	15.87	15.71	16.69	17.26	16.44	15.93	17.38	17.71	16.21	16.79
Electric Utility Fuels															
Coal															
(dollars per million Btu)	1.29	1.29	1.26	1.24	1.24	1.26	1.23	1.22	1.22	1.24	1.21	1.21	1.27	1.24	1.22
Heavy Fuel Oil ^d															
(dollars per million Btu)	2.91	2.59	2.74	2.92	2.60	2.58	2.58	2.75	2.73	2.66	2.61	2.86	2.80	2.62	2.71
Natural Gas															
(dollars per million Btu)	3.11	2.45	2.56	3.09	2.59	2.29	2.29	2.66	2.62	2.27	2.26	2.63	2.73	2.41	2.40
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	6.67	6.89	8.51	6.81	6.48	6.85	8.03	6.28	6.34	6.97	8.18	6.59	6.89	6.60	6.65
Electricity															
(cents per kilowatthour)	8.04	8.69	8.79	8.31	7.95	8.53	8.69	8.25	7.91	8.47	8.73	8.23	8.46	8.36	8.34

^aRefiner acquisition cost (RAC) of imported crude oil.

^bAverage for all grades and services.

^cAverage for all sulfur contents.

^dIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

Notes: Data are estimated for the fourth quarter of 1997. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Marketing Monthly*, DOE/EIA-0380; *Natural Gas Monthly*, DOE/EIA-0130; *Monthly Energy Review*, DOE/EIA-0035; *Electric Power Monthly*, DOE/EIA-0226.

Table 5. U.S. Petroleum Supply and Demand: Mid World Oil Price Case
(Million Barrels per Day, Except Closing Stocks)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Crude Oil Supply															
Domestic Production ^a	6.45	6.41	6.33	6.43	6.45	6.44	6.38	6.42	6.41	6.36	6.35	6.43	6.40	6.42	6.39
Alaska	1.36	1.30	1.24	1.29	1.23	1.18	1.15	1.21	1.24	1.19	1.16	1.19	1.30	1.19	1.19
Lower 48	5.09	5.11	5.09	5.14	5.22	5.26	5.23	5.21	5.17	5.17	5.19	5.24	5.11	5.23	5.19
Net Imports (including SPR) ^b	7.32	8.11	8.17	7.96	7.24	8.13	8.27	7.85	7.63	8.36	8.52	8.08	7.89	7.88	8.15
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SPR Stock Withdrawn or Added (-)	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Other Stock Withdrawn or Added (-)	-0.34	-0.08	0.20	-0.10	-0.01	-0.02	0.06	0.02	-0.06	-0.02	0.06	0.02	-0.08	0.01	0.00
Product Supplied and Losses	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	-0.01
Unaccounted-for Crude Oil	0.24	0.41	0.46	0.38	0.26	0.28	0.28	0.28	0.27	0.28	0.29	0.28	0.37	0.28	0.28
Total Crude Oil Supply	13.71	14.84	15.16	14.67	13.94	14.82	14.99	14.57	14.24	14.97	15.21	14.81	14.60	14.58	14.81
Other Supply															
NGL Production.....	1.87	1.84	1.86	1.85	1.87	1.88	1.86	1.88	1.88	1.87	1.86	1.87	1.86	1.87	1.87
Other Hydrocarbon and Alcohol Inputs.....	0.31	0.34	0.36	0.32	0.31	0.31	0.32	0.32	0.33	0.32	0.33	0.32	0.33	0.31	0.33
Crude Oil Product Supplied.....	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01
Processing Gain.....	0.78	0.84	0.87	0.84	0.77	0.83	0.85	0.82	0.79	0.85	0.86	0.84	0.83	0.82	0.84
Net Product Imports ^c	1.30	1.22	0.82	0.85	1.53	1.44	1.31	1.19	1.44	1.51	1.32	1.18	1.05	1.37	1.36
Product Stock Withdrawn or Added (-) ^d ..	0.26	-0.62	-0.38	0.50	0.48	-0.57	-0.34	0.47	0.47	-0.57	-0.34	0.48	-0.06	0.01	0.01
Total Supply	18.23	18.46	18.69	19.03	18.92	18.72	18.99	19.26	19.16	18.97	19.25	19.51	18.60	18.97	19.22
Demand															
Motor Gasoline.....	7.59	8.15	8.23	8.08	7.81	8.38	8.47	8.37	8.02	8.55	8.62	8.49	8.01	8.26	8.42
Jet Fuel	1.57	1.56	1.65	1.64	1.65	1.60	1.68	1.70	1.67	1.62	1.71	1.72	1.61	1.66	1.68
Distillate Fuel Oil	3.58	3.33	3.23	3.64	3.85	3.43	3.36	3.62	3.86	3.44	3.37	3.64	3.45	3.56	3.57
Residual Fuel Oil.....	0.90	0.77	0.77	0.79	1.00	0.80	0.77	0.86	0.97	0.81	0.78	0.86	0.81	0.86	0.85
Other Oils ^e	4.61	4.65	4.81	4.88	4.62	4.51	4.71	4.71	4.65	4.55	4.77	4.80	4.74	4.64	4.69
Total Demand.....	18.24	18.46	18.69	19.03	18.92	18.72	18.99	19.26	19.16	18.97	19.25	19.51	18.61	18.97	19.22
Total Petroleum Net Imports	8.62	9.32	8.99	8.81	8.77	9.57	9.59	9.05	9.07	9.87	9.84	9.26	8.94	9.25	9.51
Closing Stocks (million barrels)															
Crude Oil (excluding SPR).....	314	322	303	312	313	315	309	307	313	315	309	307	312	307	307
Total Motor Gasoline.....	200	205	199	202	212	212	207	200	212	211	207	200	202	200	200
Finished Motor Gasoline	154	164	158	159	171	172	166	159	171	171	166	159	159	159	159
Blending Components	46	41	41	43	42	40	41	41	42	40	41	41	43	41	41
Jet Fuel	39	43	45	44	41	43	44	44	42	43	45	44	44	44	44
Distillate Fuel Oil	102	118	139	132	98	110	128	131	94	108	127	132	132	131	132
Residual Fuel Oil	41	39	35	38	31	36	38	42	34	38	39	42	38	42	42
Other Oils ^e	253	286	309	265	255	289	304	261	254	288	302	257	265	261	257
Total Stocks (excluding SPR)	949	1013	1030	993	950	1004	1030	985	948	1002	1028	982	993	985	982
Crude Oil in SPR.....	563	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Total Stocks (including SPR)	1512	1577	1594	1556	1513	1567	1593	1548	1512	1565	1591	1545	1556	1548	1545

^aIncludes lease condensate.

^bNet imports equals gross imports plus SPR imports minus exports.

^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

^dIncludes 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.

^eIncludes 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 italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109, and *Weekly Petroleum Status Report*, DOE/EIA-0208.

Table 6. Approximate Energy Demand Sensitivities^a for the STIFS^b Model
(Percent Deviation Base Case)

Demand Sector	+1% GDP	+ 10% Prices		+ 10% Weather ^e	
		Crude Oil ^c	N.Gas Wellhead ^d	Fall/Winter ^f	Spring/Summer ^f
Petroleum					
Total.....	0.6%	-0.3%	0.1%	1.1%	0.1%
Motor Gasoline	0.1%	-0.3%	0.0%	0.0%	0.0%
Distillate Fuel	0.8%	-0.2%	0.0%	2.7%	0.1%
Residual Fuel.....	1.6%	-3.4%	2.6%	2.0%	2.7%
Natural Gas					
Total.....	1.1%	0.3%	-0.4%	4.4%	1.0%
Residential.....	0.1%	0.0%	0.0%	8.2%	0.0%
Commercial.....	0.9%	0.0%	0.0%	7.3%	0.0%
Industrial	1.7%	0.2%	-0.5%	1.3%	0.0%
Electric Utility	1.8%	1.6%	-1.5%	1.0%	4.0%
Coal					
Total.....	0.7%	0.0%	0.0%	1.7%	1.7%
Electric Utility	0.6%	0.0%	0.0%	1.9%	1.9%
Electricity					
Total.....	0.6%	0.0%	0.0%	1.5%	1.7%
Residential.....	0.1%	0.0%	0.0%	3.2%	3.6%
Commercial.....	0.9%	0.0%	0.0%	1.0%	1.4%
Industrial	0.8%	0.0%	0.0%	0.3%	0.2%

^aPercent change in demand quantity resulting from specified percent changes in model inputs.

^bShort-Term Integrated Forecasting System.

^cRefiner acquisitions cost of imported crude oil.

^dAverage unit value of marketed natural gas production reported by States.

^eRefers to percent changes in degree-days.

^fResponse during fall/winter period(first and fourth calendar quarters) refers to change in heating degree-days.

Response during the spring/summer period refers to change in cooling degree-days.

Table 7. 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	6.77	6.03	0.74	0.11	0.63
Lower 48 States	5.55	4.87	0.68	0.08	0.60
Alaska	1.22	1.16	0.05	0.03	0.03

Note: Components provided are for the fourth quarter 1999. 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 8. U.S. Natural Gas Supply and Demand: Mid world Oil Price Case
(Trillion cubic Feet)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Total Dry Gas Production.....	4.72	4.70	4.75	<i>4.80</i>	<i>4.76</i>	<i>4.74</i>	<i>4.80</i>	<i>4.87</i>	<i>4.83</i>	<i>4.81</i>	<i>4.87</i>	<i>4.94</i>	<i>18.96</i>	<i>19.17</i>	<i>19.45</i>
Net Imports	0.74	0.68	0.68	<i>0.76</i>	<i>0.78</i>	<i>0.75</i>	<i>0.76</i>	<i>0.83</i>	<i>0.83</i>	<i>0.81</i>	<i>0.81</i>	<i>0.88</i>	<i>2.85</i>	<i>3.11</i>	<i>3.34</i>
Supplemental Gaseous Fuels	0.03	0.03	0.03	<i>0.03</i>	<i>0.04</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.04</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.12</i>	<i>0.13</i>	<i>0.13</i>
Total New Supply	5.49	5.40	5.45	<i>5.59</i>	<i>5.57</i>	<i>5.52</i>	<i>5.58</i>	<i>5.73</i>	<i>5.70</i>	<i>5.65</i>	<i>5.71</i>	<i>5.86</i>	<i>21.93</i>	<i>22.41</i>	<i>22.92</i>
Underground Working Gas Storage															
Opening	6.51	5.33	6.09	<i>7.02</i>	<i>6.70</i>	<i>5.30</i>	<i>6.08</i>	<i>7.02</i>	<i>6.56</i>	<i>5.29</i>	<i>6.08</i>	<i>7.02</i>	<i>6.51</i>	<i>6.70</i>	<i>6.56</i>
Closing.....	5.33	6.09	7.02	<i>6.70</i>	<i>5.30</i>	<i>6.08</i>	<i>7.02</i>	<i>6.56</i>	<i>5.29</i>	<i>6.08</i>	<i>7.02</i>	<i>6.56</i>	<i>6.70</i>	<i>6.56</i>	<i>6.56</i>
Net Withdrawals	1.18	-0.75	-0.94	<i>0.33</i>	<i>1.40</i>	<i>-0.78</i>	<i>-0.94</i>	<i>0.46</i>	<i>1.28</i>	<i>-0.79</i>	<i>-0.94</i>	<i>0.46</i>	<i>-0.18</i>	<i>0.13</i>	<i>0.00</i>
Total Supply.....	6.67	4.65	4.51	<i>5.92</i>	<i>6.97</i>	<i>4.74</i>	<i>4.64</i>	<i>6.19</i>	<i>6.98</i>	<i>4.86</i>	<i>4.77</i>	<i>6.31</i>	<i>21.75</i>	<i>22.54</i>	<i>22.92</i>
Balancing Item ^a	0.19	0.15	0.00	<i>0.01</i>	<i>0.38</i>	<i>0.25</i>	<i>0.00</i>	<i>-0.29</i>	<i>0.48</i>	<i>0.23</i>	<i>-0.04</i>	<i>-0.33</i>	<i>0.35</i>	<i>0.33</i>	<i>0.34</i>
Total Primary Supply	6.86	4.80	4.52	<i>5.93</i>	<i>7.35</i>	<i>4.99</i>	<i>4.64</i>	<i>5.89</i>	<i>7.45</i>	<i>5.08</i>	<i>4.73</i>	<i>5.99</i>	<i>22.10</i>	<i>22.87</i>	<i>23.26</i>
Demand															
Lease and Plant Fuel.....	0.31	0.31	0.31	<i>0.33</i>	<i>0.33</i>	<i>0.32</i>	<i>0.32</i>	<i>0.33</i>	<i>0.33</i>	<i>0.32</i>	<i>0.32</i>	<i>0.33</i>	<i>1.26</i>	<i>1.29</i>	<i>1.29</i>
Pipeline Use.....	0.22	0.15	0.14	<i>0.20</i>	<i>0.23</i>	<i>0.17</i>	<i>0.16</i>	<i>0.20</i>	<i>0.23</i>	<i>0.17</i>	<i>0.16</i>	<i>0.20</i>	<i>0.70</i>	<i>0.75</i>	<i>0.76</i>
Residential.....	2.28	0.88	0.38	<i>1.50</i>	<i>2.45</i>	<i>0.86</i>	<i>0.38</i>	<i>1.42</i>	<i>2.48</i>	<i>0.87</i>	<i>0.38</i>	<i>1.44</i>	<i>5.04</i>	<i>5.11</i>	<i>5.17</i>
Commercial.....	1.27	0.62	0.40	<i>0.93</i>	<i>1.38</i>	<i>0.62</i>	<i>0.41</i>	<i>0.90</i>	<i>1.41</i>	<i>0.63</i>	<i>0.42</i>	<i>0.92</i>	<i>3.22</i>	<i>3.32</i>	<i>3.38</i>
Industrial (Incl. Cogenerators)	2.27	2.08	2.07	<i>2.32</i>	<i>2.37</i>	<i>2.14</i>	<i>2.12</i>	<i>2.34</i>	<i>2.38</i>	<i>2.16</i>	<i>2.14</i>	<i>2.38</i>	<i>8.74</i>	<i>8.96</i>	<i>9.06</i>
Cogenerators ^b	0.53	0.56	0.56	<i>0.63</i>	<i>0.57</i>	<i>0.55</i>	<i>0.60</i>	<i>0.67</i>	<i>0.59</i>	<i>0.56</i>	<i>0.61</i>	<i>0.69</i>	<i>2.28</i>	<i>2.39</i>	<i>2.46</i>
Electricity Production															
Electric Utilities	0.47	0.72	1.15	<i>0.59</i>	<i>0.54</i>	<i>0.85</i>	<i>1.21</i>	<i>0.64</i>	<i>0.57</i>	<i>0.90</i>	<i>1.26</i>	<i>0.66</i>	<i>2.93</i>	<i>3.24</i>	<i>3.39</i>
Nonutilities (Excl. Cogen.)	0.05	0.05	0.05	<i>0.05</i>	<i>0.05</i>	<i>0.05</i>	<i>0.05</i>	<i>0.06</i>	<i>0.05</i>	<i>0.05</i>	<i>0.05</i>	<i>0.06</i>	<i>0.20</i>	<i>0.20</i>	<i>0.21</i>
Total Demand	6.86	4.80	4.52	<i>5.93</i>	<i>7.35</i>	<i>4.99</i>	<i>4.64</i>	<i>5.89</i>	<i>7.45</i>	<i>5.08</i>	<i>4.73</i>	<i>5.99</i>	<i>22.10</i>	<i>22.87</i>	<i>23.26</i>

^aThe balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

^bQuarterly estimates and projections for gas consumption by nonutility generators are based on estimates for quarterly gas-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Annual projections for nonutility gas consumption, as well as the detail on independent power producers' share of gas consumption, are provided by CNEAF.

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

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Oil and Gas, Reserves and Natural Gas Division.

Table 9. U.S. Coal Supply and Demand: Mid World Oil Price Case
(Million Short Tons)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Production	273.9	269.7	265.3	<i>282.9</i>	<i>284.4</i>	<i>274.0</i>	<i>281.5</i>	<i>281.6</i>	<i>290.6</i>	<i>278.9</i>	<i>286.2</i>	<i>285.6</i>	<i>1091.8</i>	<i>1121.5</i>	<i>1141.2</i>
Appalachia.....	119.0	117.8	108.6	<i>121.1</i>	<i>121.6</i>	<i>115.7</i>	<i>112.6</i>	<i>118.4</i>	<i>122.1</i>	<i>115.8</i>	<i>111.8</i>	<i>117.8</i>	<i>466.6</i>	<i>468.2</i>	<i>467.4</i>
Interior.....	42.9	41.4	42.8	<i>44.5</i>	<i>43.0</i>	<i>40.3</i>	<i>43.4</i>	<i>42.2</i>	<i>42.3</i>	<i>39.3</i>	<i>42.0</i>	<i>40.7</i>	<i>171.5</i>	<i>168.9</i>	<i>164.2</i>
Western.....	112.0	110.5	113.9	<i>117.3</i>	<i>119.9</i>	<i>118.0</i>	<i>125.6</i>	<i>121.0</i>	<i>126.2</i>	<i>123.8</i>	<i>132.4</i>	<i>127.1</i>	<i>453.7</i>	<i>484.4</i>	<i>509.5</i>
Primary Stock Levels ^a															
Opening.....	31.1	37.5	42.5	<i>33.0</i>	<i>31.0</i>	<i>34.0</i>	<i>34.0</i>	<i>32.0</i>	<i>30.0</i>	<i>34.0</i>	<i>34.0</i>	<i>32.0</i>	<i>31.1</i>	<i>31.0</i>	<i>30.0</i>
Closing.....	37.5	42.5	33.0	<i>31.0</i>	<i>34.0</i>	<i>34.0</i>	<i>32.0</i>	<i>30.0</i>	<i>34.0</i>	<i>34.0</i>	<i>32.0</i>	<i>30.0</i>	<i>31.0</i>	<i>30.0</i>	<i>30.0</i>
Net Withdrawals.....	-6.5	-5.0	9.5	<i>2.0</i>	<i>-3.0</i>	<i>(S)</i>	<i>2.0</i>	<i>2.0</i>	<i>-4.0</i>	<i>(S)</i>	<i>2.0</i>	<i>2.0</i>	<i>0.1</i>	<i>1.0</i>	<i>(S)</i>
Imports.....	1.3	1.7	2.2	<i>1.9</i>	<i>1.8</i>	<i>7.2</i>	<i>7.3</i>	<i>7.3</i>							
Exports.....	20.0	20.6	22.4	<i>23.2</i>	<i>21.9</i>	<i>22.5</i>	<i>22.8</i>	<i>22.7</i>	<i>22.0</i>	<i>22.6</i>	<i>22.8</i>	<i>22.7</i>	<i>86.2</i>	<i>89.9</i>	<i>90.1</i>
Total Net Domestic Supply.....	248.8	245.8	254.7	<i>263.6</i>	<i>261.4</i>	<i>253.3</i>	<i>262.6</i>	<i>262.7</i>	<i>266.5</i>	<i>258.1</i>	<i>267.2</i>	<i>266.7</i>	<i>1012.9</i>	<i>1040.0</i>	<i>1058.4</i>
Secondary Stock Levels ^b															
Opening.....	123.0	119.8	128.1	<i>109.8</i>	<i>110.0</i>	<i>111.0</i>	<i>119.2</i>	<i>105.9</i>	<i>108.1</i>	<i>109.3</i>	<i>117.5</i>	<i>104.6</i>	<i>123.0</i>	<i>110.0</i>	<i>108.1</i>
Closing.....	119.8	128.1	109.8	<i>110.0</i>	<i>111.0</i>	<i>119.2</i>	<i>105.9</i>	<i>108.1</i>	<i>109.3</i>	<i>117.5</i>	<i>104.6</i>	<i>106.7</i>	<i>110.0</i>	<i>108.1</i>	<i>106.7</i>
Net Withdrawals.....	3.2	-8.2	18.3	<i>-0.2</i>	<i>-1.0</i>	<i>-8.2</i>	<i>13.3</i>	<i>-2.2</i>	<i>-1.2</i>	<i>-8.3</i>	<i>12.9</i>	<i>-2.1</i>	<i>13.0</i>	<i>1.9</i>	<i>1.3</i>
Total Supply	251.9	237.6	273.0	<i>263.4</i>	<i>260.4</i>	<i>245.1</i>	<i>275.9</i>	<i>260.5</i>	<i>265.3</i>	<i>249.8</i>	<i>280.1</i>	<i>264.5</i>	<i>1025.9</i>	<i>1041.9</i>	<i>1059.8</i>
Demand															
Coke Plants.....	7.6	7.4	7.9	<i>8.2</i>	<i>7.8</i>	<i>7.6</i>	<i>7.9</i>	<i>8.3</i>	<i>8.1</i>	<i>7.9</i>	<i>7.8</i>	<i>8.1</i>	<i>31.1</i>	<i>31.7</i>	<i>31.9</i>
Electricity Production															
Electric Utilities.....	218.2	207.4	243.1	<i>230.8</i>	<i>228.5</i>	<i>215.5</i>	<i>246.3</i>	<i>227.9</i>	<i>232.1</i>	<i>219.5</i>	<i>249.8</i>	<i>231.2</i>	<i>899.4</i>	<i>918.2</i>	<i>932.6</i>
Nonutilities (Excl. Cogen.) ^c	6.5	6.5	6.5	<i>6.5</i>	<i>7.0</i>	<i>7.0</i>	<i>7.0</i>	<i>7.0</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>	<i>7.5</i>	<i>26.0</i>	<i>28.0</i>	<i>30.0</i>
Retail and General Industry ^d	20.2	18.3	18.1	<i>20.5</i>	<i>19.9</i>	<i>17.8</i>	<i>17.5</i>	<i>20.1</i>	<i>20.6</i>	<i>18.0</i>	<i>18.0</i>	<i>20.7</i>	<i>77.2</i>	<i>75.2</i>	<i>77.2</i>
Total Demand.....	252.5	239.5	275.6	<i>266.0</i>	<i>263.2</i>	<i>247.9</i>	<i>278.7</i>	<i>263.3</i>	<i>268.3</i>	<i>252.8</i>	<i>283.1</i>	<i>267.5</i>	<i>1033.6</i>	<i>1053.1</i>	<i>1071.8</i>
Discrepancy ^e	-0.5	-2.0	-2.6	<i>-2.6</i>	<i>-2.8</i>	<i>-2.8</i>	<i>-2.8</i>	<i>-2.8</i>	<i>-3.0</i>	<i>-3.0</i>	<i>-3.0</i>	<i>-3.0</i>	<i>-7.7</i>	<i>-11.2</i>	<i>-12.0</i>

^aPrimary stocks are held at the mines, preparation plants, and distribution points.

^bSecondary stocks are held by users.

^cConsumption of coal by Independent Power Producers (IPPs). In 1995, IPP consumption was estimated to be 5.390 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Data for fourth quarter 1997 are estimates. These quantities are not reported in EIA's *Monthly Energy Review* or *Annual Energy Review*.

^dSynfuels plant demand has historically averaged 1.7 million tons per quarter and is assumed to remain at that level throughout the forecast.

^eHistorical period discrepancy reflects an unaccounted-for shipper and receiver reporting difference. Estimated IPP consumption not included in production (waste coal) has been netted out of the discrepancy. The estimated annual consumption for 1995 is 8.5 million tons, 9.6 million tons in 1996, 10.4 million tons in 1997, 11.2 million tons in 1998 and 12.0 million tons in 1999.

(S) indicates amounts of less than 50,000 tons in absolute value.

Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Quarterly Coal Report*, DOE/EIA-0121, and *Electric Power Monthly*, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

Table 10. U.S. Electricity Supply and Demand: Mid World Oil Price Case
(Billion Kilowatthours)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Net Utility Generation															
Coal.....	434.0	414.0	480.5	460.7	458.4	432.8	492.4	455.8	465.8	440.4	498.9	461.9	1789.2	1839.3	1867.0
Petroleum.....	17.6	15.4	24.6	21.1	25.0	18.2	21.9	16.5	23.6	18.8	22.8	17.0	78.6	81.7	82.3
Natural Gas.....	45.6	69.1	109.6	56.9	52.0	81.3	116.1	61.7	54.8	86.1	121.6	63.8	281.2	311.2	326.2
Nuclear.....	160.0	144.4	171.0	152.6	163.9	153.0	178.5	161.2	171.2	154.2	179.8	162.4	628.1	656.6	667.7
Hydroelectric.....	94.3	96.0	77.7	72.1	78.5	80.6	65.6	64.0	73.8	77.2	63.7	63.5	340.1	288.7	278.2
Geothermal and Other ^a	1.6	1.8	2.0	1.9	1.7	1.7	1.7	1.7	1.6	1.5	1.6	1.6	7.4	6.7	6.3
Subtotal.....	753.1	740.8	865.4	765.3	779.5	767.6	876.2	760.9	790.8	778.2	888.5	770.2	3124.6	3184.2	3227.7
Nonutility Generation ^b															
Coal.....	15.3	16.3	16.4	18.4	16.6	15.9	17.3	19.3	17.0	16.3	17.7	19.8	66.4	69.1	70.8
Petroleum.....	4.0	4.2	4.2	4.7	4.4	4.2	4.6	5.1	4.7	4.5	4.9	5.5	17.1	18.4	19.6
Natural Gas.....	49.2	52.5	52.8	59.1	53.7	51.4	55.9	62.6	55.2	52.9	57.6	64.5	213.7	223.7	230.2
Other Gaseous Fuels ^c	2.9	3.1	3.1	3.5	3.0	2.9	3.1	3.5	3.0	2.9	3.1	3.5	12.5	12.5	12.6
Hydroelectric.....	3.9	4.2	4.2	4.7	4.4	4.2	4.5	5.1	4.6	4.4	4.7	5.3	17.1	18.2	19.0
Geothermal and Other ^d	19.0	20.3	20.4	22.9	20.3	19.4	21.2	23.7	20.5	19.6	21.3	23.9	82.6	84.6	85.3
Subtotal.....	94.3	100.6	101.2	113.3	102.3	98.0	106.7	119.4	104.9	100.5	109.4	122.5	409.4	426.4	437.4
Total Generation.....	847.4	841.4	966.6	878.6	881.8	865.6	982.8	880.3	895.7	878.8	997.9	892.7	3534.0	3610.5	3665.1
Net Imports ^e	7.5	8.9	11.8	7.8	7.0	8.6	11.5	7.6	7.2	9.2	11.7	7.9	36.1	34.7	36.0
Total Supply.....	854.9	850.3	978.4	886.4	888.8	874.2	994.3	887.9	902.9	888.0	1009.6	900.7	3570.1	3645.2	3701.1
Losses and Unaccounted for ^f	53.3	82.0	74.6	76.7	53.2	75.5	69.4	69.3	54.0	76.6	70.4	70.2	286.5	267.4	271.2
Demand															
Electric Utility Sales															
Residential.....	276.8	226.2	309.8	255.4	292.4	245.2	319.6	256.3	298.9	252.0	327.8	262.1	1068.2	1113.5	1140.8
Commercial.....	214.5	217.6	256.0	220.9	222.9	225.3	261.1	225.7	227.2	228.6	264.2	227.9	909.1	934.9	947.8
Industrial.....	248.0	259.5	269.8	261.1	252.5	262.6	272.7	261.5	253.3	263.5	273.9	263.6	1038.4	1049.2	1054.4
Other.....	23.4	23.6	26.7	25.7	26.3	25.9	28.3	26.6	26.9	26.4	28.9	27.1	99.3	107.1	109.3
Subtotal.....	762.8	726.9	862.2	763.1	794.1	759.0	881.6	770.1	806.3	770.5	894.8	780.7	3115.0	3204.7	3252.2
Nonutility Gener. for Own Use ^b	38.8	41.4	41.7	46.6	41.5	39.8	43.3	48.5	42.6	40.9	44.5	49.8	168.6	173.1	177.7
Total Demand.....	801.6	768.4	903.9	809.8	835.6	798.8	924.9	818.6	848.9	811.3	939.2	830.4	3283.6	3377.9	3429.9
Memo:															
Nonutility Sales to															
Electric Utilities ^b	<i>55.5</i>	<i>59.2</i>	<i>59.5</i>	<i>66.6</i>	<i>60.7</i>	<i>58.2</i>	<i>63.3</i>	<i>70.9</i>	<i>62.3</i>	<i>59.7</i>	<i>65.0</i>	<i>72.7</i>	<i>240.8</i>	<i>253.2</i>	<i>259.7</i>

^a"Other" includes generation from wind, wood, waste, and solar sources.

^bElectricity from nonutility sources, including cogenerators and small power producers. Quarterly estimates and projections for nonutility net sales, own use, and generation by fuel source supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867, "Annual Nonutility Power Producer Report."

^cIncludes refinery still gas and other process or waste gases, and liquefied petroleum gases.

^dIncludes geothermal, solar, wind, wood, waste, nuclear, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.

^eData for 1996 are estimates.

^fBalancing item, mainly transmission and distribution losses.

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

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

Table 11. U.S. Renewable Energy Use by Sector: Mid World Oil Price Case
(Quadrillion Btu)

	Year				Annual Percentage Change		
	1996	1997	1998	1999	1996-1997	1997-1998	1998-1999
Electric Utilities							
Hydroelectric Power ^a	3.411	3.538	<i>3.002</i>	<i>2.894</i>	3.7	<i>-15.1</i>	<i>-3.6</i>
Geothermal, Solar and Wind Energy ^b	0.110	0.112	<i>0.100</i>	<i>0.092</i>	1.8	<i>-10.7</i>	<i>-8.0</i>
Biofuels ^c	0.020	0.021	<i>0.020</i>	<i>0.020</i>	5.0	<i>-4.8</i>	<i>0.0</i>
Total	3.541	3.671	<i>3.122</i>	<i>3.005</i>	3.7	<i>-15.0</i>	<i>-3.7</i>
Nonutility Power Generators							
Hydroelectric Power ^a	0.170	0.175	<i>0.187</i>	<i>0.195</i>	2.9	<i>6.9</i>	<i>4.3</i>
Geothermal, Solar and Wind Energy ^b	0.257	0.280	<i>0.288</i>	<i>0.293</i>	8.9	<i>2.9</i>	<i>1.7</i>
Biofuels ^c	0.597	0.634	<i>0.647</i>	<i>0.650</i>	6.2	<i>2.1</i>	<i>0.5</i>
Total	1.024	1.089	<i>1.122</i>	<i>1.138</i>	6.3	<i>3.0</i>	<i>1.4</i>
Total Power Generation.....	4.565	4.760	<i>4.244</i>	<i>4.144</i>	4.3	<i>-10.8</i>	<i>-2.4</i>
Other Sectors							
Residential and Commercial ^d	0.713	0.695	<i>0.697</i>	<i>0.697</i>	-2.5	<i>0.3</i>	<i>0.0</i>
Industrial ^e	1.546	1.586	<i>1.620</i>	<i>1.620</i>	2.6	<i>2.1</i>	<i>0.0</i>
Transportation ^f	0.082	0.100	<i>0.107</i>	<i>0.115</i>	22.0	<i>7.0</i>	<i>7.5</i>
Total	2.341	2.381	<i>2.423</i>	<i>2.431</i>	1.7	<i>1.8</i>	<i>0.3</i>
Net Imported Electricity ^g	0.307	0.291	<i>0.280</i>	<i>0.291</i>	-5.2	<i>-3.8</i>	<i>3.9</i>
Total Renewable Energy Demand.....	7.214	7.432	<i>6.948</i>	<i>6.865</i>	3.0	<i>-6.5</i>	<i>-1.2</i>

^aConventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

^bAlso includes photovoltaic and solar thermal energy.

^cBiofuels are fuelwood, wood byproducts, waste wood, municipal solid waste, manufacturing process waste, and alcohol fuels.

^dIncludes biofuels and solar energy consumed in the residential and commercial sectors.

^eConsists primarily of biofuels for use other than in electricity cogeneration.

^fEthanol blended into gasoline.

^gRepresents 78.6 percent of total electricity net imports, which is the proportion of total 1994 net imported electricity (0.459 quadrillion Btu) attributable to renewable sources (0.361 quadrillion Btu).

(S) Less than 500 billion Btu.

NM indicates percent change calculations are not meaningful or undefined at the precision level of this table.

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

Sources: Historical data: Estimates derived from Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels Energy Information Administration, *Renewable Energy Annual, 1995*; Projections: Renewables growth in sectors other than electric utilities taken from Energy Information Administration, *Annual Energy Outlook* database and Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration.

Table A1. Annual U.S. Energy Supply and Demand

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	5324	5488	5649	5865	6062	6136	6079	6244	6390	6611	6742	6928	7187	<i>7345</i>	<i>7465</i>
Imported Crude Oil Price ^a (nominal dollars per barrel)	26.99	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.62	<i>16.73</i>	<i>17.51</i>
Petroleum Supply															
Crude Oil Production ^b (million barrels per day)	8.97	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.40	<i>6.42</i>	<i>6.39</i>
Total Petroleum Net Imports (including SPR) (million barrels per day)	4.29	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	8.94	<i>9.25</i>	<i>9.51</i>
Energy Demand															
World Petroleum (million barrels per day)	59.9	60.2	61.8	63.1	64.9	65.9	66.0	66.6	66.8	67.0	68.3	70.1	71.9	<i>73.7</i>	<i>75.5</i>
U.S. Petroleum (million barrels per day)	15.78	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.61	<i>18.97</i>	<i>19.22</i>
Natural Gas (trillion cubic feet)	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	22.10	<i>22.87</i>	<i>23.26</i>
Coal (million short tons)	818	804	837	884	891	897	894	907	944	951	962	1007	1034	<i>1053</i>	<i>1072</i>
Electricity (billion kilowatthours) Utility Sales ^c	2324	2369	2457	2578	2647	2713	2762	2763	2861	2935	3013	3085	3115	<i>3205</i>	<i>3252</i>
Nonutility Own Use ^d	NA	NA	NA	NA	108	113	122	132	138	150	158	164	169	<i>173</i>	<i>178</i>
Total	2324	2369	2457	2578	2755	2826	2884	2895	3000	3085	3171	3249	3284	<i>3378</i>	<i>3430</i>
Total Energy Demand ^e (quadrillion Btu)	74.0	74.3	76.9	80.2	81.3	81.2	81.1	82.4	84.2	85.9	87.5	89.7	90.9	<i>92.8</i>	<i>94.1</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	13.90	13.54	13.61	13.68	13.42	13.23	13.33	13.20	13.17	12.99	12.98	12.95	12.65	<i>12.64</i>	<i>12.60</i>
Adjusted Total Energy Demand ^e (quadrillion Btu)	NA	NA	NA	NA	NA	84.1	84.0	85.5	87.3	89.2	90.9	93.9	94.8	<i>96.5</i>	<i>97.8</i>
Adjusted Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	NA	NA	NA	NA	NA	13.70	13.82	13.70	13.67	13.49	13.49	13.56	13.19	<i>13.14</i>	<i>13.11</i>

^aRefers to the imported cost of crude oil to U.S. refiners.

^bIncludes lease condensate.

^cTotal annual electric utility 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.

^dDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1997 are estimates.

^e"Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, *Annual Energy Review*, 1995, DOE/EIA-0384(95), Table 1.1 for the period 1960 to 1989. Adjusted "Total Energy Demand" refers to the aggregate energy demand concept reported in the same table for 1990 and beyond. The former concept is extended here in order to provide a more consistent long-term energy demand series. The latter concept is more comprehensive and is intended as the primary energy demand aggregate for assessing energy intensity trends since 1990. The adjusted measure incorporates information on renewable energy consumption among households, commercial establishments, and electricity generating facilities other than electric utilities (including industrial cogenerators). The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, *Monthly Energy Review (MER)*. Consequently, the historical data may not precisely match those published in the *MER* or the *AER*.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520; *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1297.

Table A2. Annual U.S. Macroeconomic and Weather Indicators

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Macroeconomic															
Real Gross Domestic Product (billion chained 1992 dollars)	5324	5488	5649	5865	6062	6136	6079	6244	6390	6611	6742	6928	7187	<i>7345</i>	<i>7465</i>
GDP Implicit Price Deflator (Index, 1992=1.000).....	0.786	0.806	0.831	0.861	0.897	0.936	0.973	1.000	1.026	1.051	1.078	1.102	1.125	<i>1.144</i>	<i>1.164</i>
Real Disposable Personal Income (billion chained 1992 Dollars).....	3972	4101	4168	4332	4417	4498	4500	4627	4704	4805	4964	5077	5220	<i>5398</i>	<i>5519</i>
Manufacturing Production (Index, 1987=1.000).....	0.857	0.881	0.928	0.971	0.990	0.985	0.962	1.000	1.037	1.094	1.132	1.164	1.224	<i>1.262</i>	<i>1.272</i>
Real Fixed Investment (billion chained 1992 dollars)	799	805	799	818	832	806	741	783	843	916	962	1042	1125	<i>1201</i>	<i>1234</i>
Real Exchange Rate (Index, 1990=1.000).....	NA	NA	NA	NA	NA	1.000	1.006	1.012	1.056	1.033	0.960	1.015	1.097	<i>1.086</i>	<i>1.050</i>
Business Inventory Change (billion chained 1992 dollars)	-4.5	-4.2	5.1	9.5	19.2	6.6	-6.1	-9.2	6.1	11.1	7.8	9.9	20.2	<i>4.7</i>	<i>-3.4</i>
Producer Price Index (index, 1980-1984=1.000).....	1.032	1.002	1.028	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.275	<i>1.276</i>	<i>1.286</i>
Consumer Price Index (index, 1980-1984=1.000).....	1.076	1.097	1.137	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	<i>1.634</i>	<i>1.668</i>
Petroleum Product Price Index (index, 1980-1984=1.000).....	0.832	0.532	0.568	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.679	<i>0.611</i>	<i>0.624</i>
Non-Farm Employment (millions).....	97.4	99.3	102.0	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.5	122.2	<i>124.6</i>	<i>126.0</i>
Commercial Employment (millions).....	60.8	62.9	65.2	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.0	83.5	<i>85.5</i>	<i>86.9</i>
Total Industrial Production (index, 1987=1.000).....	0.880	0.890	0.931	0.973	0.990	0.989	0.969	1.000	1.034	1.086	1.121	1.152	1.206	<i>1.239</i>	<i>1.249</i>
Housing Stock (millions).....	96.3	98.0	99.8	101.6	102.9	103.5	104.5	105.5	106.8	108.2	109.8	111.2	112.7	<i>114.2</i>	<i>115.6</i>
Weather ^a															
Heating Degree-Days															
U.S.	4642	4295	4334	4653	4726	4016	4200	4441	4700	4483	4531	4713	4675	<i>4576</i>	<i>4576</i>
New England	6571	6517	6546	6715	6887	5848	5960	6844	6728	6672	6559	6679	6894	<i>6621</i>	<i>6621</i>
Middle Atlantic	5660	5665	5699	6088	6134	4998	5177	5964	5948	5934	5831	5986	6040	<i>5839</i>	<i>5839</i>
U.S. Gas-Weighted	4856	4442	4391	4779	4856	4139	4337	4458	4754	4659	4707	5040	4912	<i>4732</i>	<i>4732</i>
Cooling Degree-Days (U.S.)	1194	1249	1269	1283	1156	1260	1331	1040	1218	1220	1293	1180	1091	<i>1193</i>	<i>1193</i>

^aPopulation-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 1990 population. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

Notes: Historical data are printed in bold; forecasts are in italics.

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17*(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL1297.

Table A3. Annual International Petroleum Supply and Demand Balance
(Millions Barrels per Day, Except Closing Stocks)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Demand ^a															
OECD															
U.S. (50 States)	15.8	16.3	16.7	17.3	17.4	17.0	16.8	17.1	17.2	17.7	17.7	18.3	18.6	19.0	19.2
Europe ^b	12.0	12.5	12.6	12.7	12.8	12.9	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.6	14.8
Japan	4.4	4.4	4.5	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.8	5.9	6.0
Other OECD	2.5	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	2.9	3.0	3.0	3.1
Total OECD	34.7	35.7	36.3	37.5	37.9	37.8	38.1	38.8	39.0	39.9	40.5	41.4	41.8	42.5	43.1
Non-OECD															
Former Soviet Union	9.0	9.0	9.0	8.9	8.7	8.4	8.3	6.8	5.6	4.8	4.7	4.5	4.5	4.6	4.7
Europe	1.9	1.8	1.8	1.8	1.8	1.7	1.4	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.5
China	1.9	2.0	2.1	2.3	2.4	2.3	2.5	2.7	3.0	3.1	3.3	3.6	3.8	4.0	4.2
Other Asia	3.7	3.9	4.1	4.4	4.9	5.3	5.7	6.2	6.8	7.3	7.9	8.5	9.0	9.4	10.0
Other Non-OECD	9.1	9.5	9.7	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.3	12.7	13.1	13.5	14.0
Total Non-OECD	25.5	26.1	26.7	27.4	28.0	28.2	28.5	28.0	28.1	28.4	29.5	30.5	31.9	33.0	34.3
Total World Demand	60.2	61.8	63.1	64.9	66.0	66.0	66.6	66.8	67.0	68.3	70.1	71.9	73.7	75.5	77.3
Supply ^c															
OECD															
U.S. (50 States)	11.2	11.0	10.7	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.4	9.4	9.4
Canada	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.7
North Sea ^d	3.6	3.9	3.9	3.9	3.9	4.0	4.2	4.6	4.8	5.5	6.0	6.2	6.2	6.6	7.0
Other OECD	1.4	1.2	1.3	1.3	1.2	1.4	1.4	1.4	1.3	1.4	1.4	1.6	1.6	1.7	1.7
Total OECD	18.1	17.9	17.9	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.8	20.4	20.9
Non-OECD															
OPEC	17.2	19.3	19.6	21.5	23.3	24.5	24.6	25.8	26.6	27.0	27.7	28.3	29.9	30.6	31.0
Former Soviet Union	11.9	12.3	12.5	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.2	7.3	7.4
China	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.1	3.2	3.3	3.3
Mexico	3.0	2.8	2.9	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.6
Other Non-OECD	6.6	10.9	6.9	7.4	7.7	8.0	8.1	8.3	8.7	9.1	9.8	10.2	10.4	10.9	11.5
Total Non-OECD	41.2	43.9	44.6	47.0	48.9	49.7	49.1	49.1	49.3	49.6	50.7	52.0	54.2	55.5	56.8
Total World Supply	59.3	61.8	62.5	64.8	65.9	66.8	66.7	67.0	67.3	68.2	69.9	71.7	74.0	75.9	77.6
Total Stock Withdrawals	0.9	0.0	0.6	0.1	0.0	-0.8	-0.1	-0.2	-0.3	0.1	0.2	0.2	-0.3	-0.4	-0.3
Closing Stocks, OECD only (billion barrels)	2.6	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.7	2.7
Net Exports from Former Soviet Union	3.0	3.4	3.5	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.4	2.6	2.7	2.7	2.7

^aDemand 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.

^bOECD Europe includes the former East Germany.

^cIncludes 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.

^dIncludes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Mexico is also a member but OECD data do not yet include Mexico.

OPEC: Organization of Petroleum Exporting Countries: Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

SPR: Strategic Petroleum Reserve

Former Soviet Union: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

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

Sources: Energy Information Administration: latest data available from EIA databases supporting the following reports: *International Petroleum Statistics Report*, DOE/EIA-0520, and Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

Table A4. Annual Average U.S. Energy Prices
(Nominal Dollars)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Imported Crude Oil ^a															
(dollars per barrel).....	28.88	26.99	14.00	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.62	16.73	17.51
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	2.51	1.94	1.66	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.16	2.40	2.08	2.06
Petroleum Products															
Gasoline Retail ^b															
(dollars per gallon)	1.20	0.93	0.96	0.96	1.06	1.22	1.20	1.19	1.17	1.17	1.21	1.29	1.29	1.22	1.24
No. 2 Diesel Oil, Retail															
(dollars per gallon)	1.16	0.88	0.93	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.10	1.23	1.19	1.12	1.15
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.78	0.49	0.53	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.58	0.53	0.55
No. 2 Heating Oil, Retail															
(dollars per gallon)	1.05	0.84	0.80	0.81	0.90	1.06	1.02	0.93	0.91	0.89	0.87	0.99	0.99	0.92	0.94
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel).....	25.57	14.46	17.76	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	18.97	17.71	16.21	16.79
Electric Utility Fuels															
Coal															
(dollars per million Btu)	1.65	1.58	1.51	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.24	1.22
Heavy Fuel Oil ^d															
(dollars per million Btu)	4.26	2.40	2.98	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.80	2.62	2.71
Natural Gas															
(dollars per million Btu)	3.43	2.35	2.24	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.73	2.41	2.40
Other Residential															
Natural Gas															
(dollars per thousand cubic feet).....	6.12	5.83	5.55	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.89	6.60	6.65
Electricity															
(cents per kilowatthour).....	7.8	7.4	7.4	7.5	7.6	7.8	8.1	8.2	8.3	8.4	8.4	8.4	8.5	8.4	8.3

^aRefiner acquisition cost (RAC) of imported crude oil.

^bAverage for all grades and services.

^cAverage for all sulfur contents.

^dIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

Notes: Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Marketing Monthly*, DOE/EIA-0380; *Natural Gas Monthly*, DOE/EIA-0130; *Monthly Energy Review*, DOE/EIA-0035; *Electric Power Monthly*, DOE/EIA-0226.

Table A5. Annual U.S. Petroleum Supply and Demand
(Million Barrels per Day, Except Closing Stocks)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Crude Oil Supply															
Domestic Production ^a	8.97	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.40	<i>6.42</i>	<i>6.39</i>
Alaska	1.83	1.87	1.96	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	<i>1.19</i>	<i>1.19</i>
Lower 48	7.15	6.81	6.39	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.11	<i>5.23</i>	<i>5.19</i>
Net Imports (including SPR) ^b	3.00	4.02	4.52	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	7.89	<i>7.88</i>	<i>8.15</i>
Other SPR Supply	0.00	<i>0.00</i>	<i>0.00</i>												
Stock Draw (Including SPR)	-0.05	-0.08	-0.12	0.00	-0.09	0.02	-0.01	0.01	-0.06	-0.02	0.09	0.05	-0.08	<i>0.01</i>	<i>0.00</i>
Product Supplied and Losses	-0.06	-0.05	-0.03	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	<i>-0.01</i>	<i>-0.01</i>
Unaccounted-for Crude Oil	0.15	0.14	0.14	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.37	<i>0.28</i>	<i>0.28</i>
Total Crude Oil Supply	12.00	12.72	12.85	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.60	<i>14.58</i>	<i>14.81</i>
Other Supply															
NGL Production	1.61	1.55	1.59	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.86	<i>1.87</i>	<i>1.87</i>
Other Hydrocarbon and Alcohol Inputs	0.11	0.11	0.12	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.33	<i>0.31</i>	<i>0.33</i>
Crude Oil Product Supplied	0.06	0.05	0.03	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	<i>0.01</i>	<i>0.01</i>
Processing Gain	0.56	0.62	0.64	0.66	0.66	0.70	0.71	0.77	0.76	0.77	0.77	0.84	0.83	<i>0.82</i>	<i>0.84</i>
Net Product Imports ^c	1.29	1.41	1.39	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.05	<i>1.37</i>	<i>1.36</i>
Product Stock Withdrawn or Added (-)	0.15	-0.12	0.09	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.06	<i>0.01</i>	<i>0.01</i>
Total Supply	15.78	16.33	16.72	17.33	17.37	17.05	16.76	17.10	17.25	17.72	17.72	18.31	18.60	<i>18.97</i>	<i>19.22</i>
Demand															
Motor Gasoline ^d	6.78	6.94	7.19	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.01	<i>8.26</i>	<i>8.42</i>
Jet Fuel	1.22	1.31	1.38	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.61	<i>1.66</i>	<i>1.68</i>
Distillate Fuel Oil	2.87	2.91	2.98	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.45	<i>3.56</i>	<i>3.57</i>
Residual Fuel Oil	1.20	1.42	1.26	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.81	<i>0.86</i>	<i>0.85</i>
Other Oils ^e	3.71	3.75	3.90	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.74	<i>4.64</i>	<i>4.69</i>
Total Demand	15.78	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.61	<i>18.97</i>	<i>19.22</i>
Total Petroleum Net Imports	4.29	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	8.94	<i>9.25</i>	<i>9.51</i>
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	321	331	349	330	341	323	325	318	335	337	303	284	312	<i>307</i>	<i>307</i>
Total Motor Gasoline	223	233	226	228	213	220	219	216	226	215	202	195	202	<i>200</i>	<i>200</i>
Jet Fuel	40	50	50	44	41	52	49	43	40	47	40	40	44	<i>44</i>	<i>44</i>
Distillate Fuel Oil	144	155	134	124	106	132	144	141	141	145	130	127	132	<i>131</i>	<i>132</i>
Residual Fuel Oil	50	47	47	45	44	49	50	43	44	42	37	46	38	<i>42</i>	<i>42</i>
Other Oils ^f	247	265	260	267	257	261	267	263	273	275	258	250	265	<i>261</i>	<i>257</i>

^aIncludes lease condensate.

^bNet imports equals gross imports plus SPR imports minus exports.

^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

^dFor years prior to 1993, motor gasoline includes an estimate of fuel ethanol blended into gasoline and certain product reclassifications, not reported elsewhere in EIA. See Appendix B in Energy Information Administration, *Short-Term Energy Outlook*, EIA/DOE-0202(93/3Q), for details on this adjustment.

^eIncludes 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.

^fIncludes 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 italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109, and *Weekly Petroleum Status Report*, DOE/EIA-0208.

Table A6. Annual U.S. Natural Gas Supply and Demand
(Trillion Cubic Feet)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Total Dry Gas Production	16.45	16.06	16.62	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.79	18.96	<i>19.17</i>	<i>19.45</i>
Net Imports.....	0.89	0.69	0.94	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.85	<i>3.11</i>	<i>3.34</i>
Supplemental Gaseous Fuels.....	0.13	0.11	0.10	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.12	<i>0.13</i>	<i>0.13</i>
Total New Supply.....	17.47	16.86	17.66	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.69	21.93	<i>22.41</i>	<i>22.92</i>
Total Underground Storage															
Opening.....	6.71	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	<i>6.70</i>	<i>6.56</i>
Closing	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.70	<i>6.56</i>	<i>6.56</i>
Net Withdrawals.....	0.26	-0.12	0.02	-0.10	0.33	-0.61	0.16	0.14	-0.01	-0.32	0.46	-0.01	-0.18	<i>0.13</i>	<i>0.00</i>
Total Supply	17.73	16.74	17.68	18.32	19.02	18.77	19.61	20.02	20.42	21.08	21.86	21.68	21.75	<i>22.54</i>	<i>22.92</i>
Balancing Item ^a	-0.45	-0.52	-0.47	-0.29	-0.22	-0.05	-0.58	-0.47	-0.14	-0.37	-0.28	0.29	0.35	<i>0.33</i>	<i>0.34</i>
Total Primary Supply.....	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	22.10	<i>22.87</i>	<i>23.26</i>
Demand															
Lease and Plant Fuel	0.97	0.92	1.15	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.26	<i>1.29</i>	<i>1.29</i>
Pipeline Use	0.50	0.49	0.52	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.70	<i>0.75</i>	<i>0.76</i>
Residential	4.43	4.31	4.31	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	5.04	<i>5.11</i>	<i>5.17</i>
Commercial	2.43	2.32	2.43	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.22	<i>3.32</i>	<i>3.38</i>
Industrial (Incl. Nonutilities).....	5.90	5.58	5.95	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.94	<i>9.17</i>	<i>9.27</i>
Cogenerators ^b	0.00	0.00	0.00	0.00	1.12	1.30	1.41	1.67	1.80	1.98	2.18	2.09	2.28	<i>2.39</i>	<i>2.46</i>
Other Nonutil. Gen. ^b	0.00	0.00	0.00	0.00	0.06	0.09	0.16	0.18	0.22	0.17	0.17	0.18	0.20	<i>0.20</i>	<i>0.21</i>
Electric Utilities.....	3.04	2.60	2.84	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.93	<i>3.24</i>	<i>3.39</i>
Total Demand.....	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	22.10	<i>22.87</i>	<i>23.26</i>

^aThe balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

^bAnnual projections for nonutility gas consumption, as well as the detail on independent power producers' share of gas consumption, are provided by the office of Coal, Nuclear, Electric and Alternative Fuels, Energy Information Administration.

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

Sources: Historical data: Energy Information Administration; latest data available from EIA databases supporting the following reports: *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Oil and Gas, Reserves and Natural Gas Division.

Table A7. Annual U.S. Coal Supply and Demand
(Million Short Tons)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Production.....	883.6	890.3	918.8	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1091.8	<i>1121.5</i>	<i>1141.2</i>
Appalachia.....	NA	NA	NA	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	466.6	<i>468.2</i>	<i>467.4</i>
Interior.....	NA	NA	NA	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	171.5	<i>168.9</i>	<i>164.2</i>
Western.....	NA	NA	NA	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	453.7	<i>484.4</i>	<i>509.5</i>
Primary Stock Levels ^a															
Opening.....	34.1	33.1	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	31.1	<i>31.0</i>	<i>30.0</i>
Closing.....	33.1	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	31.1	31.0	<i>30.0</i>	<i>30.0</i>
Net Withdrawals.....	1.0	1.0	3.8	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	3.4	0.1	<i>1.0</i>	<i>S</i>
Imports.....	2.0	2.2	1.7	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.2	<i>7.3</i>	<i>7.3</i>
Exports.....	92.7	85.5	79.6	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	86.2	<i>89.9</i>	<i>90.1</i>
Total Net Domestic Supply.....	793.9	808.0	844.7	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	983.9	1012.9	<i>1040.0</i>	<i>1058.4</i>
Secondary Stock Levels ^b															
Opening.....	197.2	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	<i>110.0</i>	<i>108.1</i>
Closing.....	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	110.0	<i>108.1</i>	<i>106.7</i>
Net Withdrawals.....	27.0	-5.0	-10.2	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.6	13.0	<i>1.9</i>	<i>1.3</i>
Total Supply	820.8	803.1	834.4	882.3	896.5	899.4	891.4	901.8	930.2	946.1	951.9	995.5	1025.9	<i>1041.9</i>	<i>1059.8</i>
Demand															
Coke Plants.....	41.1	35.9	37.0	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	31.1	<i>31.7</i>	<i>31.9</i>
Electricity Production															
Electric Utilities.....	693.8	685.1	717.9	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	899.4	<i>918.2</i>	<i>932.6</i>
Nonutilities (Excl. Cogen.) ^c	NA	NA	NA	NA	0.9	1.6	6.0	14.8	17.8	20.9	21.2	24.0	26.0	<i>28.0</i>	<i>30.0</i>
Retail and General Industry ^d	83.2	83.3	82.1	83.4	82.3	83.1	81.5	80.2	81.1	81.2	78.6	76.4	77.2	<i>75.2</i>	<i>77.2</i>
Total Demand ^e	818.0	804.2	836.9	883.6	890.6	897.1	893.6	907.3	943.7	951.1	961.8	1006.8	1033.6	<i>1053.1</i>	<i>1071.8</i>
Discrepancy ^f	2.8	-1.2	-2.5	-1.3	5.9	2.4	-2.3	-5.4	-13.5	-4.9	-9.9	-11.3	-7.7	<i>-11.2</i>	<i>-12.0</i>

^aPrimary stocks are held at the mines, preparation plants, and distribution points.

^bSecondary stocks are held by users.

^cConsumption of coal by Independent Power Producers (IPPs). In 1995, IPP consumption was estimated to be 5.390 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Data for fourth quarter 1997 are estimates. These quantities are not reported in EIA's *Monthly Energy Review* or *Annual Energy Review*.

^dSynfuels plant demand has historically averaged 1.7 million tons per quarter and is assumed to remain at that level throughout the forecast.

^eTotal excludes any shipments to independent power producers (IPPs) not calculated in Retail and General Industry for years prior to 1993.

^fHistorical period discrepancy reflects an unaccounted-for shipper and receiver reporting difference. It also includes any shipment to IPPs not captured in Retail and General Industry and consumption by IPPs not included in production (waste coal).

(S) indicates amounts of less than 50,000 tons.

Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Energy Information Administration; latest data available from EIA databases supporting the following reports: *Quarterly Coal Report*, DOE/EIA-0121, and *Electric Power Monthly*, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

Table A8. Annual U.S. Electricity Supply and Demand
(Billion Kilowatthours)

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Net Utility Generation															
Coal.....	1402.1	1385.8	1463.8	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1789.2	<i>1839.3</i>	<i>1867.0</i>
Petroleum.....	100.2	136.6	118.5	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	78.6	<i>81.7</i>	<i>82.3</i>
Natural Gas.....	291.9	248.5	272.6	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	281.2	<i>311.2</i>	<i>326.2</i>
Nuclear.....	383.7	414.0	455.3	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.1	<i>656.6</i>	<i>667.7</i>
Hydroelectric.....	281.1	290.8	249.7	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	340.1	<i>288.7</i>	<i>278.2</i>
Geothermal and Other ^a	10.7	11.5	12.3	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.4	<i>6.7</i>	<i>6.3</i>
Subtotal.....	2469.8	2487.3	2572.1	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3124.6	<i>3184.2</i>	<i>3227.7</i>
Nonutility Generation ^b	#N/A	#N/A	#N/A	#N/A	#N/A	221.8	253.7	296.0	325.5	354.9	374.4	382.5	409.4	<i>426.4</i>	<i>437.4</i>
Total Generation.....	#N/A	#N/A	#N/A	#N/A	#N/A	3030.0	3078.7	3093.2	3208.1	3265.6	3369.0	3460.0	3534.0	<i>3610.5</i>	<i>3665.1</i>
Net Imports.....	40.9	35.9	46.3	31.8	11.0	2.0	22.3	28.3	28.4	44.6	37.6	38.0	36.1	<i>34.7</i>	<i>36.0</i>
Total Supply.....	NA	NA	NA	NA	2986.6	3032.0	3101.0	3121.6	3236.5	3310.3	3406.6	3498.0	3570.1	<i>3645.2</i>	<i>3701.1</i>
Losses and Unaccounted for ^c	NA	NA	NA	NA	231.4	206.1	217.1	226.6	236.9	225.5	235.4	249.3	286.5	<i>267.4</i>	<i>271.2</i>
Demand															
Electric Utility Sales															
Residential.....	793.9	819.1	850.4	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1078.5	1068.2	<i>1113.5</i>	<i>1140.8</i>
Commercial.....	606.0	630.5	660.4	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	891.6	909.1	<i>934.9</i>	<i>947.8</i>
Industrial.....	836.8	830.5	858.2	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1014.3	1038.4	<i>1049.2</i>	<i>1054.4</i>
Other.....	87.3	88.6	88.2	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	100.2	99.3	<i>107.1</i>	<i>109.3</i>
Subtotal.....	2324.0	2368.8	2457.3	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3084.7	3115.0	<i>3204.7</i>	<i>3252.2</i>
Nonutility Own Use ^b	#N/A	#N/A	#N/A	#N/A	#N/A	113.4	121.9	131.6	138.1	150.2	157.9	164.0	168.6	<i>173.1</i>	<i>177.7</i>
Total Demand.....	#N/A	#N/A	#N/A	#N/A	#N/A	2825.9	2883.9	2895.0	2999.6	3084.8	3171.2	3248.6	3283.6	<i>3377.9</i>	<i>3429.9</i>
Memo:															
Nonutility Sales															
to Electric Utilities ^d	26.0	39.9	50.0	68.0	83.0	108.5	131.9	164.4	187.4	204.7	216.5	218.5	240.8	<i>253.2</i>	<i>259.7</i>

^aOther includes generation from wind, wood, waste, and solar sources.

^bFor 1989 to 1991, estimates for nonutility generation are estimates made by the Energy Markets and Contingency Information Division, based on Form EIA-867 data. Historical data and Projections for the same items are from the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration, based on Form EIA-867 (Annual Nonutility Power Producer Report).

^cBalancing item, mainly transmission and distribution losses.

^dHistorical data for nonutility sales to electric utilities are from the Energy Information Administration, *Annual Energy Review*, DOE/EIA-0389, Table 8.1, for 1982 to 1988; from Form EIA-867 (Annual Nonutility Power Producer Report) for 1989 to 1996.

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

Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.