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# Short-Term Energy Outlook

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# Preface

The Energy Information Administration (EIA) quarterly forecasts of short-term energy supply, demand, and prices are revised in January, April, July, and October for publication in the *Short-Term Energy Outlook* (*Outlook*). A methodology volume, published annually, contains descriptions of major changes in the forecasting system, analyzes previous forecast errors, and provides detailed analyses of current issues that affect EIA's short-term energy forecasts. The principal users of the *Outlook* are managers and energy analysts in private industry and government. The projections in this volume extend through the first half of 1987.

The forecasts are produced using the Short-Term Integrated Forecasting System (STIFS). The STIFS model uses two principal driving variables: a macroeconomic forecast and the world oil price assumptions. Macroeconomic forecasts produced by Data Resources, Inc., (DRI) are adjusted by EIA to reflect EIA projections of the world price of crude oil, which differ from DRI estimates. EIA's Oil Market Simulation Model is used to project the world oil prices. (These models are available on tape from the National Energy Information Center.)

The three projections for petroleum supply and demand are based on low, middle, and high economic growth scenarios which incorporate high, middle, and low crude oil price trajectories, respectively. The discussion and tables in this volume primarily refer to the middle, or base case, scenario and, unless otherwise noted, to the domestic situation. Other cases examining the sensitivity of total petroleum demand to varying assumptions about prices, weather, and economic activity are shown in Table 13. Discussions of the world oil price refer to the cost of imported crude oil to U.S. refiners.

The forecasts and historical data are based on EIA data 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. All percentage changes are calculated from the values in the tables rather than from the rounded numbers cited in the text.



# 1. Highlights

Total U.S. petroleum demand in 1986 is projected to be 15.8 million barrels per day, slightly above the level in 1985. Between the first half of 1986 and the first half of 1987, petroleum demand is projected to increase by about 2 percent in response to higher economic growth. A decline in the demand for residual fuel oil in 1986 is expected to be offset by increases in the demand for motor gasoline and other petroleum products. These petroleum forecasts are based on the assumption of continued moderation in world oil prices, but do not take into account the sharp drops in oil prices that occurred in early 1986 (see box below). Much lower world oil prices than assumed in the base

case would lead to lower prices for petroleum products and would increase petroleum demand, but would have little effect on markets for natural gas, coal, and electricity in the short run. The demand for total energy is expected to increase by more than 1 percent between 1985 and 1986 and by more than 2 percent between first-half 1986 and first-half 1987. The projections in this *Short-Term Energy Outlook (Outlook)* extend from the first quarter of 1986 through the second quarter of 1987. (The base case assumptions and projections are summarized in Table 1.)

Because of the increased uncertainty surrounding oil prices, the projections in this report are more uncertain than usual. As this report was being completed at the end of January 1986, the spot prices of crude oil were falling rapidly. Only a small amount of the oil imported by the United States is purchased at the spot price, although spot prices are an indication of future possibilities for oil price trends. Should the refiner acquisition cost of crude oil follow the spot price and drop substantially in the near future, more attention should be given to the high economic growth case in this report, which

assumes world oil prices fall to \$20 per barrel by the second quarter of 1986. However, this case represents an extreme combination of low prices and high economic growth. Sharp oil price reductions would be expected to result in small increases in petroleum demand in the short run and lower retail prices for petroleum products. Although the lower price assumption is for \$20 per barrel oil through mid-1987, there is no inherent floor for oil prices. World demand and supply responses to this drop in oil prices are not expected to be sufficiently large in the short run to absorb the current excess oil production.

**Table 1. Summary of Base Case Assumptions and Projections**

Assumptions and Projections	Year				Annual Percentage Change		
	1983	1984	1985	1986	1983-1984	1984-1985	1985-1986
<b>Assumptions</b>							
Real Gross National Product (billion 1972 dollars) .....	<b>1,535</b>	<b>1,639</b>	<b>1,680</b>	<i>1,716</i>	<b>6.8</b>	<b>2.5</b>	<i>2.1</i>
Index of Industrial Production (Mfg.) (index, 1977: 100) .....	<b>110.2</b>	<b>123.9</b>	<b>127.1</b>	<i>129.2</i>	<b>12.4</b>	<b>2.6</b>	<i>1.7</i>
Average Cost of Imported Crude Oil (nominal dollars per barrel) .....	<b>29.30</b>	<b>28.88</b>	<b>27.00</b>	<i>24.80</i>	<b>-1.4</b>	<b>-6.5</b>	<i>-8.1</i>
<b>Price Projections (nominal values)<sup>a</sup></b>							
Motor Gasoline <sup>b</sup> (dollars per gallon) .....	<b>1.22</b>	<b>1.20</b>	<b>1.20</b>	<i>1.14</i>	<b>-1.6</b>	<b>.0</b>	<i>-5.0</i>
Retail No. 2 Heating Oil (dollars per gallon) .....	<b>1.08</b>	<b>1.09</b>	<b>1.03</b>	<i>.99</i>	<b>.9</b>	<b>-5.5</b>	<i>-3.9</i>
Residential Natural Gas (dollars per thousand cubic feet) .....	<b>6.06</b>	<b>6.12</b>	<b>6.18</b>	<i>6.16</i>	<b>1.0</b>	<b>1.0</b>	<i>-.3</i>
Residential Electricity (cents per kilowatthour) .....	<b>7.18</b>	<b>7.56</b>	<b>7.83</b>	<i>8.15</i>	<b>5.3</b>	<b>3.6</b>	<i>4.1</i>
<b>Consumption Projections</b>							
Total Market Economies Petroleum Consumption (million barrels per day) .....	<b>45.5</b>	<b>46.2</b>	<b>45.7</b>	<i>45.9</i>	<b>1.5</b>	<b>-1.1</b>	<i>.4</i>
U.S. Total Petroleum Consumption (million barrels per day) .....	<b>15.23</b>	<b>15.73</b>	<b>15.67</b>	<i>15.80</i>	<b>3.3</b>	<b>-.4</b>	<i>.8</i>
Motor Gasoline .....	<b>6.62</b>	<b>6.69</b>	<b>6.80</b>	<i>6.88</i>	<b>1.1</b>	<b>1.6</b>	<i>1.2</i>
Distillate Fuel Oil .....	<b>2.69</b>	<b>2.84</b>	<b>2.86</b>	<i>2.85</i>	<b>5.6</b>	<b>.7</b>	<i>-.3</i>
Residual Fuel Oil .....	<b>1.42</b>	<b>1.37</b>	<b>1.19</b>	<i>1.16</i>	<b>-3.5</b>	<b>-13.1</b>	<i>-2.5</i>
Other Petroleum <sup>c</sup> .....	<b>4.50</b>	<b>4.82</b>	<b>4.82</b>	<i>4.91</i>	<b>7.1</b>	<b>.0</b>	<i>1.9</i>
Net Petroleum Imports (million barrels per day, including SPR <sup>d</sup> ) .....	<b>4.31</b>	<b>4.72</b>	<b>4.26</b>	<i>4.55</i>	<b>9.5</b>	<b>-9.7</b>	<i>6.8</i>
Coal Consumption (million short tons) .....	<b>737</b>	<b>791</b>	<b>818</b>	<i>826</i>	<b>7.3</b>	<b>3.4</b>	<i>1.0</i>
Natural Gas Consumption (trillion cubic feet) .....	<b>16.83</b>	<b>17.95</b>	<b>17.21</b>	<i>17.33</i>	<b>6.7</b>	<b>-4.1</b>	<i>.7</i>
Electricity Generation (billion kilowatthours) .....	<b>2,310.3</b>	<b>2,416.3</b>	<b>2,469.9</b>	<i>2,502.1</i>	<b>4.6</b>	<b>2.2</b>	<i>1.3</i>
Total Energy Consumption <sup>e</sup> (quadrillion Btu) .....	<b>70.50</b>	<b>74.11</b>	<b>73.95</b>	<i>75.10</i>	<b>5.1</b>	<b>-.2</b>	<i>1.6</i>
Thousand Btu/1972 Dollar of GNP .....	<b>45.93</b>	<b>45.22</b>	<b>44.02</b>	<i>43.76</i>	<b>-1.5</b>	<b>-2.7</b>	<i>-.6</i>

<sup>a</sup> All prices include taxes, except retail no. 2 heating oil prices.

<sup>b</sup> Average for all grades and services.

<sup>c</sup> Includes crude oil, pentanes plus, other hydrocarbons and alcohol, unfinished oil, and gasoline blending components.

<sup>d</sup> SPR: Strategic Petroleum Reserve.

<sup>e</sup> The conversion from physical units to Btu is calculated by STIFS using a subset of *Monthly Energy Review* (MER) conversion factors. Consequently, the historical data will not precisely match that published in the MER.

Notes: Minor discrepancies with other published EIA historical data are due to independent rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10), *1984 International Energy Annual*, DOE/EIA-0219(84), *Petroleum Marketing Monthly*, DOE/EIA-0380(85/10), *Petroleum Supply Monthly*, DOE/EIA-0109(85/11), *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1, *Natural Gas Monthly*, DOE/EIA-0130(85/11), *Electric Power Monthly*, DOE/EIA-0226(85/11), and *Quarterly Coal Report*, DOE/EIA-0121(85/3Q); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, Second Quarter 1985*; Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand*, October 1985. Macroeconomic projections are based on modifications to Data Resources, Inc., forecast CONTROL0186.

The highlights for the base case forecast are as follows:

- The price of crude oil to the United States in the base case is assumed to fall to \$26 per barrel (in nominal terms) during the first quarter of 1986, to decline further to \$24 per barrel as early as the third quarter of 1986, and remain at that level through the first half of 1987.
- In the base case, U.S. petroleum demand in 1986 and the first half of 1987 is projected to increase slightly from the year-earlier levels, assuming the continued moderation of world oil prices.
- Net oil imports are expected to average nearly 4.6 million barrels per day in 1986 and nearly 4.5 million barrels per day in the first half of 1987, up from the 1985 level of 4.3 million barrels per day.
- In the base case, retail heating oil prices are projected to remain unchanged between the fourth quarter of 1985 and the first quarter of 1986 after showing a 7-cent-per-gallon increase between the third and fourth quarters of 1985. Thus, for the 1985-1986 winter (fourth quarter of 1985 and first quarter of 1986), average heating oil prices are projected to be about the same as the levels last winter, although crude oil prices are projected to be 4 cents per gallon lower for the same period. Distillate fuel prices are not expected to fall along with crude oil prices because of the higher demand to build up inventories from the very low levels at the beginning of the heating season. The price of heating oil in the base case for the 1986-1987 winter season is projected to be more than 7 cents per gallon below year-earlier levels, based on declining crude oil costs and assuming normal inventory levels.
- Consumption of natural gas is projected to increase slightly between 1985 and 1986, to 17.3

trillion cubic feet. The real price of natural gas over the forecast period is projected to decline. Domestic production of natural gas is expected to remain essentially flat in 1986, while net imports of natural gas are expected to increase to slightly more than 1 trillion cubic feet.

- Domestic coal consumption is expected to increase to 826 million tons in 1986 (about 1 percent above the 1985 level), with coal production at 909 million tons (about 3 percent higher than the year-earlier level). Coal consumption and production in the first half of 1987 are forecast to increase by 2 percent and 4 percent, respectively, from the first-half 1986 levels.
- An increase of more than 1 percent in total electricity generation is projected from 1985 to 1986, followed by an additional increase of 2 percent between the first half of 1986 and the first half of 1987. Generation levels from coal and nuclear power are projected to rise between 1985 and 1986, while natural gas-fired and petroleum-fired generation levels are expected to decline. These trends are expected to continue into 1987. Net imports of electricity in 1986 are projected to increase by 3 billion kilowatthours from the 1985 estimate of 41 billion kilowatthours; a further increase of more than 1 billion kilowatthours is expected between first-half 1986 and first-half 1987.
- Total U.S. energy consumption (as measured by gross energy consumption) is projected to increase by more than 1 percent in 1986 to 75.1 quadrillion Btu and then to increase by an additional 2 percent between first-half 1986 and first-half 1987. The energy intensity of U.S. economic activity is projected to be 43.8 thousand Btu per 1972 dollar of real GNP in 1986, a decline of less than 1 percent from the year-earlier level.

The forecasts previously discussed are the base case projections. Additional sensitivity cases are discussed in the consumption section for petroleum supply and disposition, based on the combined effects of alternative assumptions about economic growth, oil prices, and weather. Should the imported crude oil prices, economic growth rates, or weather during the forecast period differ from the base case assumptions, it is estimated that:

- For each 1-percent increase in GNP above the base case level, petroleum consumption and total imports in 1986 would increase by about 130,000 barrels per day (approximately 0.8 percent and 2.5 percent, respectively).
- For each \$1-per-barrel (approximately 4.1 percent) decline in the price of imported crude oil, petroleum consumption and total imports in 1986 would increase by about 100,000 barrels per day (approximately 0.6 percent and 1.9 percent, respectively).
- For each 10-percent increase in heating degree-days (from the base case level) during the first and fourth quarters, petroleum consumption and total imports for those two quarters would increase by an average of about 260,000 barrels per day (approximately 1.6 percent and 5.0 percent, respectively).

These estimates are considered reliable for relatively small changes in prices and income, as illustrated by the range of assumptions shown in Table 2. The calculations, based on data from 1978 through 1985, may include the effect of longer term structural changes induced by price increases that are not easily reversed. Caution should be taken, therefore, when extrapolating the response to more extreme changes, such as world oil prices dropping below \$20 per barrel by mid-1986. In this case, the adjustment by consumers to lower prices could not be expected to be completed within the period covered by this *Outlook*. For instance, the main stimulus to increased motor gasoline consumption in the short term is increased discretionary driving. While motorists could increase their driving in response to marginal price declines, more extreme declines are not likely to result in a proportional increase in driving. A similar situation exists with fuel oil use, for which moderate price decreases could induce more consumption based on higher thermostat settings. More extreme price decreases, however, are not likely to induce proportionately higher consumption rates.

In general, increases in energy demand based on higher utilization or switching into from petroleum energy sources could be expected in response to short-term price decreases, but with a decreasing rate of increase at lower price levels. Higher consumption based on structural changes such as larger automobiles and more oil-burning furnaces would not be expected to occur in the short term.

## 2. The Outlook

### International Petroleum Markets

#### Current Situation

Since the beginning of December, spot and future crude oil prices have dropped by more than \$10 per barrel on the domestic and international oil markets. (It will be several months, however, before refiner acquisition costs reflect this decrease if the price decline firms up. Because spot markets provide only a small part of the crude oil inputs to refineries, decreases in spot prices are only a signal that average refinery acquisition costs may fall. It will be several months before it is known whether contract prices are also adjusting to lower levels and reducing crude oil prices across the board.) The stronger-than-expected decline in spot crude oil prices is partly attributed to weak demand, but more importantly, to the strong surge in OPEC's crude oil production estimated to have occurred recently, especially in Saudi Arabia. In January 1986, the excess supply of oil on the world market is estimated to range from 2 to 3 million barrels per day.

The surge in OPEC's output followed the announcement of OPEC after a ministerial meeting in early December to take its "fair share" of the world oil market at the risk of lower prices. OPEC's action was designed to exert pressure on the non-OPEC oil producers who had been increasing their market share at OPEC's expense. This position reverses OPEC's previous public policy designed to protect oil prices by restricting production through the imposition of quotas. In practice, however, many OPEC members were already openly violating the official price and production policies. This behavior led to the decision by Saudi Arabia to abandon its role as the swing producer. Since that time, Saudi Arabia has increased its crude oil production from about 2.4 million barrels per day in June of 1985 to an estimated 4.6 to 4.8 million barrels per day in January of 1986.

Another factor in the current situation is that Saudi Arabia began to enter into netback pricing agreements in September with selected oil companies. Under these agreements, the price of crude oil is effectively equal to the market value of the refined products less the cost

of refining and transportation. In the past few months, the number of netback agreements has increased, and their use has extended to other oil exporters, adding to the number of market-oriented pricing techniques used in the oil market. One implication of the widespread use of netback agreements is that if there is excess supply, as indicated by the falling product prices, crude oil prices under such an agreement will decline and less risk is placed on the refiners as long as the products can be sold.

The level of crude oil production and the shares of production among the many oil exporters are major uncertainties now facing the oil market. If production remains high, prices could drop below the low oil price assumption (\$20 per barrel) used in this report. If the surge in production is only temporary, oil price declines are expected to be followed by some price recovery.

For those oil importing countries whose currency is not pegged to the dollar, the local cost of imported oil also can vary as the dollar value changes against their currency. Since the beginning of the second quarter of 1985, the value of the dollar has been falling. Because internationally traded oil is denominated in dollars, the foreign exchange value of oil purchased by these importers has declined. For instance, in Japan, the largest oil importer, the local currency cost of imported oil declined by 21 percent between the first and fourth quarters of 1985. Given the exchange rates and world oil prices assumed in this forecast, the major oil importing countries and consuming countries are expected to experience nominal and real declines in the local currency cost of imported crude oil through the first half of 1987.

The conflict between Iraq and Iran continues to disturb normal oil exporting activity in the Persian Gulf. Despite continued Iraqi attacks on Kharg Island since August, Iran has reportedly been able to keep about 1.6 to 1.8 million barrels per day of oil exports flowing. The increase in hostilities has elevated the concern of more widespread Persian Gulf involvement and has spurred interest in pipeline projects to provide alternatives to exporting oil through the vulnerable Strait of Hormuz. A significant expansion of the conflict could disrupt much of the expected flow through the Strait of Hormuz during 1986 (expected to be 5 to 6 million barrels per day on average). Although it currently seems unlikely, given the unpredictable and sporadic

nature of the hostilities, the conflict could intensify at any time. The effects of a disruption on world oil prices are highly uncertain and would depend on the level of hostility and on how effectively oil stocks and excess world production capacity are used.

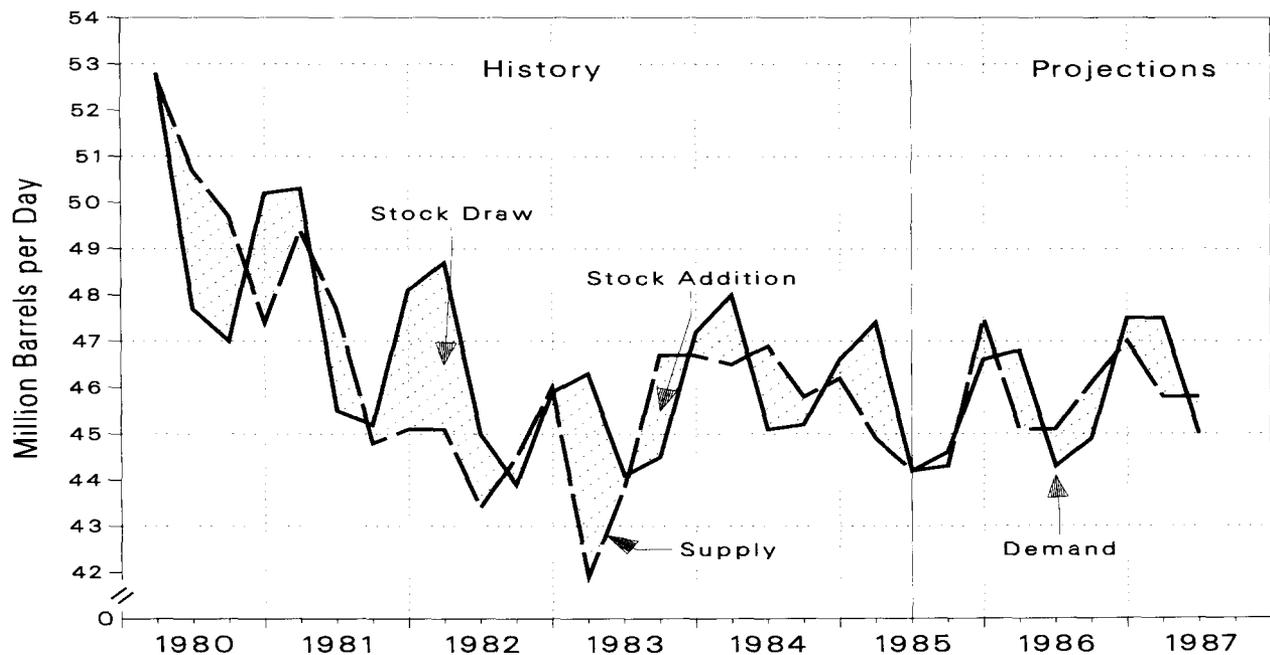
## International Petroleum Forecast

Total petroleum demand (product supplied) in the market economies is projected to increase by about 0.2 million barrels per day between 1985 and 1986. This growth is attributed to increases in the United States and the developing countries, with flat demand expected in Japan and Europe (Table 3). In the first half of 1987, petroleum demand in the market economies is expected to be 0.7 million barrels per day higher than year-earlier levels, but continued substitution of other fuels for oil essentially offsets the positive effect on consumption of the substantial decrease in real oil prices. These forecasts are based on the expectations that economic growth in the industrial countries will be 2.5 percent between 1985 and 1986 and 2.7 percent between first-half 1986 and first-half 1987, down from the longer term trend of 2.9 percent per year experienced between 1970 and 1984 (Table 4).

Total OPEC oil production (including natural gas liquids) is forecast to increase by more than 1 percent between 1985 and 1986, from 17.1 to 17.3 million barrels per day. Non-OPEC production (including liquids production from natural gas, coal, and other sources) is expected to increase by about 0.5 million barrels per day in 1986, tapering to an increase of about 0.3 million barrels per day between first-half 1986 and first-half 1987 because of slower increases in production from the North Sea, Brazil, and India. The continued increase in non-OPEC supply is the result of incremental production in many different countries. Net exports of oil from the Communist countries are assumed to remain constant between 1985 and 1986 and then decrease slightly in the first half of 1987 compared with year-earlier levels. The continuing problems with crude oil production in the Soviet Union are expected to lead to lower oil exports from that country in 1986, a decline that is projected to be offset by increased oil exports from the Republic of China.

The total supply of oil to the market economies declined by more than 2 percent between 1984 and 1985, to 45.2 million barrels per day, compared with the increase of more than 3 percent observed between 1983 and 1984 (Figure 1). This reversal is mainly attributed

**Figure 1. Market Economies Supply and Demand**



Sources: ● History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) and 1984 *International Energy Annual* DOE/EIA-0219(84) (Washington, DC); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, Second Quarter 1985*; Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand*, October 1985. ● Projections: Table 3.

to the decline of 1.5 million barrels per day in OPEC production. The upward trend is projected to return in 1986, with a 1-percent increase in the supply of oil to the market economies expected from production increases in both OPEC and non-OPEC countries. Petroleum stocks in the market economies at the end of 1986 are projected to be about 4.7 billion barrels (the same as in 1985) and then to drop to 4.6 billion barrels by mid-1987. The stability in petroleum stocks expected in 1986 is the result of weak demand, expected lower oil prices, high costs of carrying stocks, and increases in oil supplies from non-Middle East sources. At the end of the first quarter of 1986, total petroleum stocks (including strategic petroleum reserves) in the market economies are projected to be at a level equivalent to about 102 days of forward consumption (at the average consumption rate of 44.3 million barrels per day during the second quarter of 1986), which is still above the 88 days of forward consumption during the market turbulence in 1979.

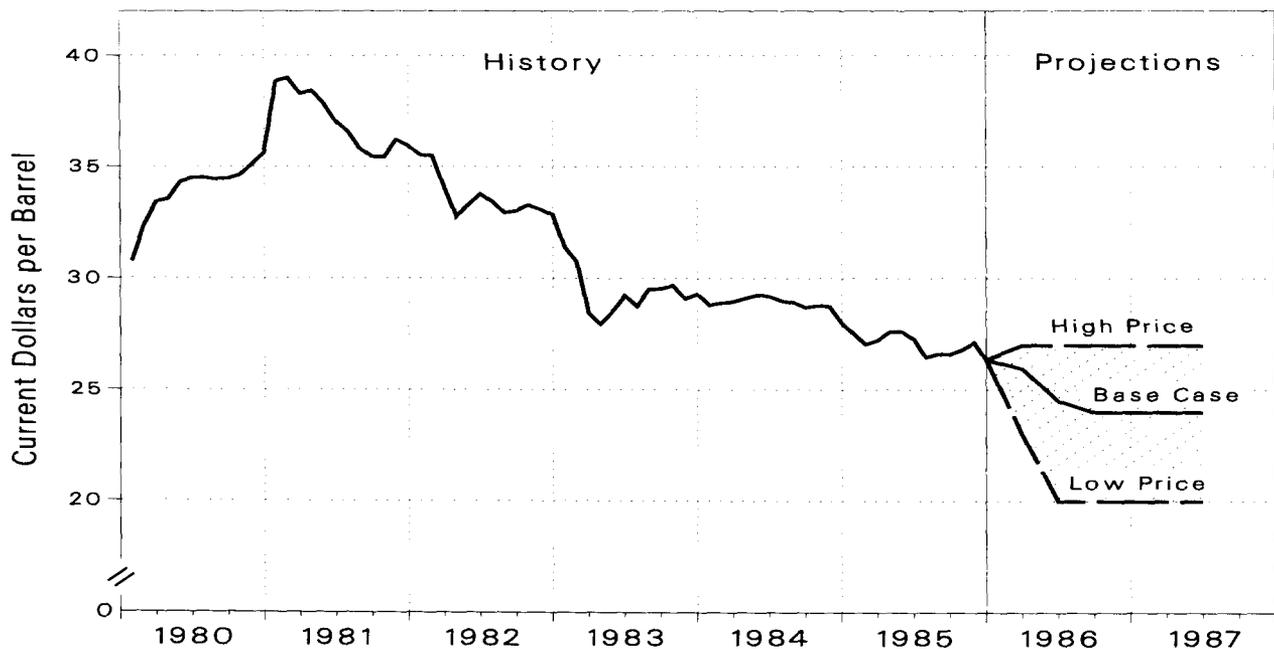
## Forecast Assumptions

### World Oil Prices

In the base case, the nominal price of imported crude oil delivered to U.S. refiners is assumed to decline to about \$26 per barrel in the first quarter of 1986, to \$25 in the second quarter of 1986, to \$24 in the third quarter of 1986, and then to remain at that level through the second quarter of 1987 (Figure 2). (These assumptions were made prior to the significant drop in spot crude oil prices that occurred in January 1986.) These declines are expected because:

- The projected demand for oil in the market economy countries is not expected to be strong enough to offset the downward pressure on oil prices resulting from the continued substitution of other fuels for oil and the projected increase in production from both OPEC and non-OPEC countries.
- The trend by the OPEC members and other oil exporters toward pricing rules that are related to market forces is expected to continue.

**Figure 2. Imported Crude Oil Prices**



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) (Washington, DC, 1985). • Projections: Table 2.

Because of the uncertainty about world oil prices, two alternative forecasts are presented in this *Outlook* incorporating differing economic growth and price assumptions to provide a range of energy consumption projections. The petroleum price assumptions associated with these cases are as follows:

- High Economic Growth Case:

As a result of lower levels of world petroleum demand and/or higher levels of production than expected in the base case, the average price of imported crude oil to U.S. refiners is assumed to fall to \$20 per barrel by the beginning of the second quarter of 1986 and to remain at that level throughout the forecast period.

- Low Economic Growth Case:

As a result of increased tension and concern about the availability of future supply in the oil market, the price of imported crude oil is assumed to be \$27 per barrel throughout the forecast period.

The assumptions used to generate the high and low projections are designed to produce the widest probable variation in demand, given the current range of forecasts for these variables. For example, the high growth case uses the low world oil price assumption. This scenario does not necessarily imply that high economic growth will result in a lower oil price, nor is this case necessarily inconsistent. Rather, these sensitivity cases are designed to show the effects of the extreme ranges of these variables on petroleum demand.

## Macroeconomic Activity

The base case projections assume that economic growth will continue through the first half of 1987, but at a lower rate than earlier in the present economic expansion. Based on the Data Resources, Inc., forecast (DRI CONTROL0186), as modified to reflect EIA's imported crude oil price assumptions, growth in real gross national product (GNP) between 1985 and 1986 is assumed to be 2.1 percent, somewhat lower than the 2.5-percent growth estimated for 1985. Growth in real disposable personal income is projected to be 1.4 percent in 1986, while manufacturing growth is expected to be 1.7 percent for the year. Slower growth is expected this year because of a weak beginning in 1986, as production responds negatively to the high inventory

levels that existed at the end of 1985. Sluggish demand generally also reflects weak balance sheets for households after heavy borrowing in 1985. These weaknesses result in a first-quarter downturn projected for real GNP, with growth recovering to only moderate levels for the remaining three quarters of 1986. (Assumptions for the price of imported crude oil, the economy, and the weather are shown in Table 2.)

In the first half of 1987, real GNP is projected to be nearly 3.3 percent above year-earlier levels, noticeably higher than GNP growth for the year in 1986. Real disposable income is projected to be almost 2.7 percent above year-earlier levels over this interval, while manufacturing growth is expected to be 3.9 percent above the average level during the first half of 1986.

The possibility of either significantly faster or slower growth in economic variables should be considered because of the uncertainties regarding economic policy, exchange rates, inflation and interest rates, and other important variables. Two alternative cases, designated as high and low economic growth, are presented to show a range of possible energy demands. The high economic growth case is based on a higher assumed level of economic growth, combined with a lower world oil price than in the base case; the reverse is true for the low economic growth case. Real GNP growth rates for 1986 and for the first half of 1987 (compared with year-earlier levels in each case) are as follows: high growth, 3.8 percent and 5.4 percent, respectively; low growth, -0.2 percent and 0.6 percent, respectively. The high growth case assumes more robust growth than the base case throughout the forecast period, while the low growth case assumes a recession lasting from the first quarter through the third quarter of 1986, with real GNP returning to present levels by mid-1987. High and low economic growth alternatives are based on DRI forecasts OPTIM0186 and PESSIM0186, respectively, modified to reflect oil prices lower and higher than those assumed in the base case.

DRI's forecasts continue to project the Federal Reserve Board (FRB) production indexes using unrevised definitions for the variables, meaning that 1967 = 100. In future editions of the *Outlook*, after DRI has reestimated and converted their model to the revised, 1977-base year definitions, this new data base will be used exclusively. A similar conversion will be made to GNP, the GNP price deflator, and real disposable personal income after the change to a 1982-base year for the National Income and Product Accounts is completed. For this report, the FRB production index forecasts from DRI, using both the old weights and the old base year, have been converted (rebenchmarked) to a 1977-base year for reporting purposes.

# Energy Product Prices

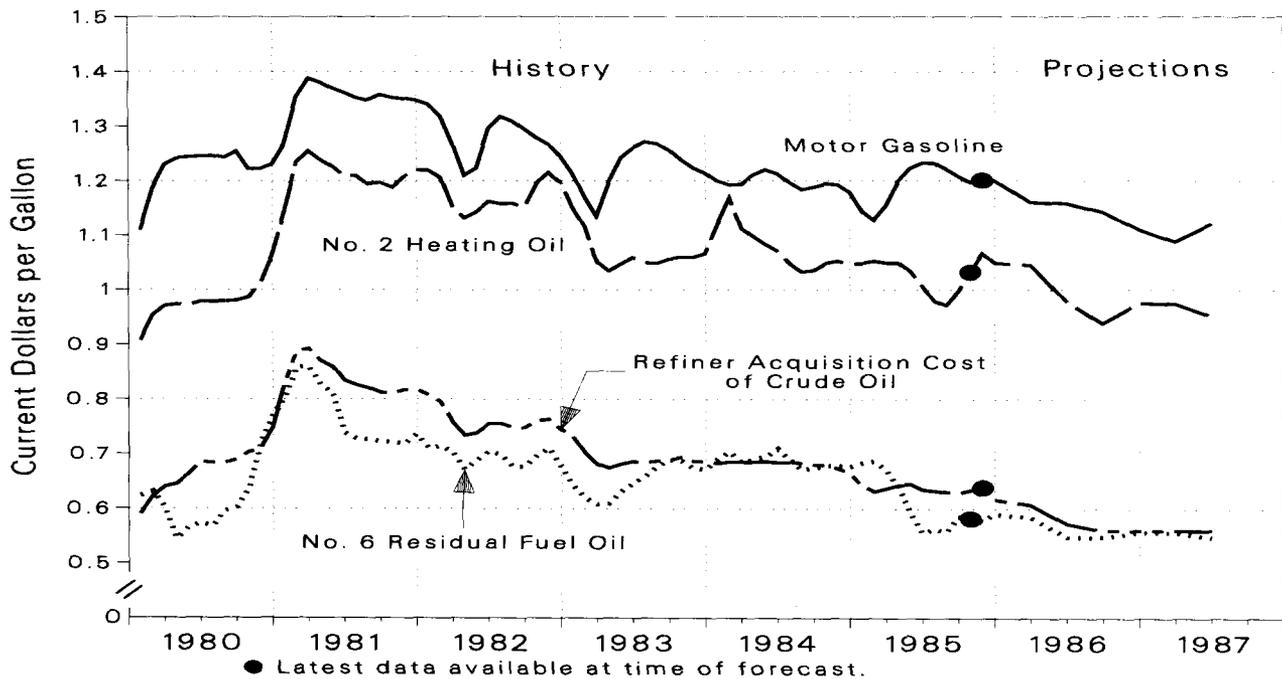
Lower world oil prices are expected to lead to nominal price declines for all petroleum products through the first half of 1987 (Figure 3 and Table 5). In anticipation of lower world oil prices, production of refined petroleum products decreased and inventories were reduced in the second half of 1985. This situation caused prices of refined products to increase in the fourth quarter of 1985 at the same time that crude prices were falling. In particular, distillate fuel oil prices increased sharply during that period.

The prices of gasoline and residual fuel oil fluctuated wildly in 1985 as a result of changing inventories of petroleum products during the British coal strike. Initially, high demand for residual fuel to replace coal in the United Kingdom probably led to the surplus of gasoline in the United States. This surplus, in turn, resulted in a drop in gasoline margins and prices in the early months of 1985. With the end of the coal strike in March 1985, refinery runs dropped, and the price of residual fuel oil fell while that for gasoline rose sharply (coinciding with the beginning of the peak driving season).

Refiners margins for motor gasoline increased by 30 percent in 1985, recouping their loss of 30 percent in 1984. Near record low margins in the first quarter of 1985, due to the surplus of gasoline, were offset by a 10-cent increase in margins in the second and third quarters of the year as inventories tightened. Assuming these events are not repeated this year, refinery margins (wholesale prices minus crude costs) are projected to increase only slightly through 1986, as production levels and demands stabilize. In the retail market, margins remained virtually unchanged in 1985 and are expected to remain nearly flat in the forecast period.

Retail motor gasoline prices averaged about \$1.20 per gallon for both 1984 and 1985. Gasoline prices are projected to fall by 6 cents per gallon in 1986 and by 5 cents per gallon between first-half 1986 and first-half 1987, these drops being attributable mainly to lower crude oil prices. The lead- phasedown ruling from the Environmental Protection Agency will continue to add 1 to 2 cents per gallon to the average price of gasoline over the forecast period as the average cost of leaded fuel (including the new low-lead gasoline) increases and as the demand for unleaded fuel increases because of less misfueling than occurred previously.

**Figure 3. Retail Prices for Petroleum Products**



Sources: ● History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) (Washington, DC, 1985). ● Projections: Table 5.

Combined retail and refinery heating oil margins decreased by 1 percent in 1985. Low margins for the first three quarters of the year were offset by high margins in the fourth quarter. Unusually low heating oil inventories at the beginning of the winter caused margins to rise; retail prices increased sharply that quarter as the entire increase was passed through to consumers. However, rapid inventory build-up by the middle of the winter, combined with normal heating degree-days assumed in the first quarter of 1986 and declining crude oil costs, are expected to stabilize heating oil prices for the remainder of the winter. This path is counter to normal seasonal patterns, which usually show a rise in heating oil prices in the first quarter of the year. Heating oil margins are projected to increase at the rate of inflation in 1986, assuming normal inventories. Retail heating oil prices are projected to decrease by 4 cents per gallon in 1986 due to declining crude oil costs.

Refiners margins for diesel fuel are expected to follow the same pattern as that for heating oil. In 1985, these margins changed very little, and retail prices thus remained unchanged from 1984 to 1985. In 1986 and first-half 1987, however, margins are assumed to increase with the rate of inflation. Nevertheless, diesel prices are projected to decline by 3 cents per gallon in 1986 and by an additional 4 cents per gallon in the first half of 1987 compared with the year-earlier level because the assumed decline in crude oil prices more than offsets any increases in the margins.

Residual fuel oil prices fluctuate around crude oil prices depending on supply and demand conditions. In 1984, residual fuel oil prices rose to match crude oil prices as the demand for residual fuel oil as a feedstock increased and as the average mix of imported crude oil became heavier. In the first quarter of 1985, residual fuel oil prices were about \$1.80 per barrel above crude oil costs, presumably due to the high demand caused by the British coal strike (Table 5). By the second quarter of 1985, the strike had ended, residual fuel oil was in surplus, and its price had dropped \$1.75 per barrel below that for crude oil, resulting in negative

margins. In the forecast period, no major change is anticipated in the refinery demand for heavy feedstocks. Thus, as crude oil costs decrease, the price of residual fuel oil is projected to decrease (by 5 cents per gallon in 1986 and by a further 2 cents per gallon in the first half of 1987) and remain below the refiner cost of crude oil.

Despite fears of significant increases in electricity prices due to new capacity additions, the national average price of residential electricity increased at less than the inflation rate between the third quarter of 1985 and the year-earlier level. The average residential price of electricity is projected to increase at about the rate of inflation throughout the forecast period. Lower fuel costs and more moderate interest rates are expected to partially offset increases in costs due to the addition of new generating capacity. The electricity prices shown in Table 5 could be lower over the forecast period if larger declines in the variable costs of generating electricity offset more of the cost increases resulting from using new capacity. On the other hand, electricity prices could rise more rapidly than forecast if the growth in generating capacity exceeds the growth in electricity demand. Because electricity is a price-regulated service, prices are determined by regulator-approved cost of production and can vary greatly among areas of the country and different companies.

In the base case, the average annual residential price of natural gas is projected to remain flat in nominal terms between 1985 and 1986. This projection is based on the expectation that wellhead prices will not increase and that margins will remain unchanged. However, spot market wellhead prices have been declining, and, if the trend continues, end-use prices will decline throughout the forecast period. In the low price scenario, residential natural gas prices are expected to decrease by more than 2 percent in 1986 and fall by an additional 4 percent between first-half 1986 and first-half 1987. Competition from declining residual fuel oil prices, as well as a projected flat demand for natural gas, should keep wellhead prices from rising.

## Lower Fuel Costs and Higher Electricity Prices: Recent Trends

The timing of changes in electricity prices has been especially difficult to forecast in recent months. This uncertainty is mostly due to the major structural changes occurring in the electric utility industry. These changes include shifts in generating capacity from oil and gas to coal, the addition of coal and nuclear facilities that were planned years ago, and regulatory problems in assessing the value of new plants. With respect to fuel costs, the gap between the prices of oil and gas has narrowed. In addition, the prices of both these fuels have fallen in real terms, making the choice between them more difficult to predict. Interest rates, a measure of the incremental cost of capital to electric utilities, have fluctuated widely, but have been falling recently.

The *Outlook* projects electricity prices for the residential sector, which accounts for about 35 percent of total electricity sales. Between 1983 and 1984, residential electricity prices for selected private utilities rose by 5.3 percent, or by about 1.5 percent in real terms. During this time, the average real cost of fossil fuels to utilities fell by 4.3 percent. This drop was primarily attributed to a shift in fuels used at electric utilities from oil to coal, and falling real coal and natural gas prices. However, the addition of capital costs also affects electricity prices.

During 1984, 6 new nuclear reactors, representing 7 gigawatts of generating capacity, came into service. Nine additional units, totaling nearly 10 gigawatts of generation capacity, began operation in 1985. Eighteen coal plants with 11 gigawatts of capacity were added

in 1984, and another 11 plants with nearly 6 gigawatts came on line in 1985. At the national level, as the cost of building those plants is added to the calculation of electricity prices, fixed costs may have risen by more than the fuel costs declined.

In part, the high capital costs of the new plants are determined by the interest costs associated with plant construction which have been at historically high rates. In 1983, for example, new long-term debt and total short-term debt accounted for about 9 percent of the outstanding \$136 billion debt of privately-owned electric utilities. Although each of these effects, taken alone, is small relative to the national situation, the impact on any given local market can be dramatic. If that local market is a major metropolitan area, the impact will be seen in national level data.

Two other reasons for rising electricity prices also should be considered. The first is that regional shifts in demand (e.g., from the Northeast to the Sun Belt) could change the national price level even without a change in the underlying cost factors. Secondly, hydroelectric generation has declined steadily from the record year in 1983, with the slack taken up by more expensive gas- and coal-fired generation. Although the generation of hydroelectricity is primarily the domain of public utilities (and therefore not included in EIA's electricity price statistics), the sale of hydropower to private utilities has a significant impact on costs at private utilities. These factors could continue to exert upward pressure on residential electricity prices in the near term, despite the decrease in variable costs such as fossil fuel prices.

# U.S. Petroleum Outlook

## Overview

U.S. petroleum product supplied in 1986 is projected to rise slightly to 15.8 million barrels per day, with the effects of lower prices and modest economic growth offsetting conservation and efficiency improvements. Net petroleum imports (crude oil plus petroleum products) are projected to average nearly 4.6 million barrels per day in 1986, almost 7 percent above the 1985 level. (The base case forecast is shown in Table 6; alternative cases for high and low growth are shown in Tables 7 and 8, respectively.) During the first half of 1987, total petroleum demand is projected to average 16.0 million barrels per day, about 2 percent above the corresponding 1986 rate.

## Motor Gasoline

Motor gasoline product supplied averaged an estimated 6.8 million barrels per day in 1985, less than 2 percent above the 1984 average (Table 9). Continued growth in travel demand combined with a marked decline in apparent gains in average vehicle efficiency has brought gasoline demand to its highest average level since 1979. A further increase in demand of about 1 percent is projected in 1986. Average automobile efficiency is expected to progress sluggishly throughout the forecast, as rapidly declining real gasoline prices continue to remove incentives for consumers to purchase more efficient new cars. The first half of 1986 is expected to bring little or no change in gasoline demand compared with first-half 1985 levels, implying that increased efficiency will offset growth in motor travel demand. Much of the income growth and gasoline price declines for this forecast are projected to occur during the second half of 1986 and into 1987. (During this period, increased vehicle efficiency is projected to be outweighed by higher travel demand.) If current vehicle efficiency trends continue into 1987 as projected in this *Outlook*, gasoline demand in the first half of 1987 could be nearly 3 percent greater than the same period in 1986.

Based on Energy Information Administration data on motor gasoline consumption, combined with vehicle

travel data published by the Federal Highway Administration,<sup>1</sup> growth in average gasoline-powered vehicle-miles per gallon (the average for all cars) was an estimated 3.9 percent per year between 1978 and 1982. However, in recent years, the trend has been toward noticeably slower rates of growth in average miles per gallon. It is estimated that overall average miles per gallon increased by about 2.3 percent per year between 1982 and 1985. The significant deceleration in the rate of increase in average automobile efficiency follows from, and is being reinforced by, a prolonged drop in real motor gasoline prices. Real gasoline prices peaked in the second quarter of 1981 and are expected to fall to pre-Iranian levels by 1986 (Figure 4). Because the response of vehicle efficiency to changes in gasoline prices is considerably lagged, the reductions in real gasoline prices that began in 1981 are only recently having a significant impact on slowing the improvement of vehicle efficiency.

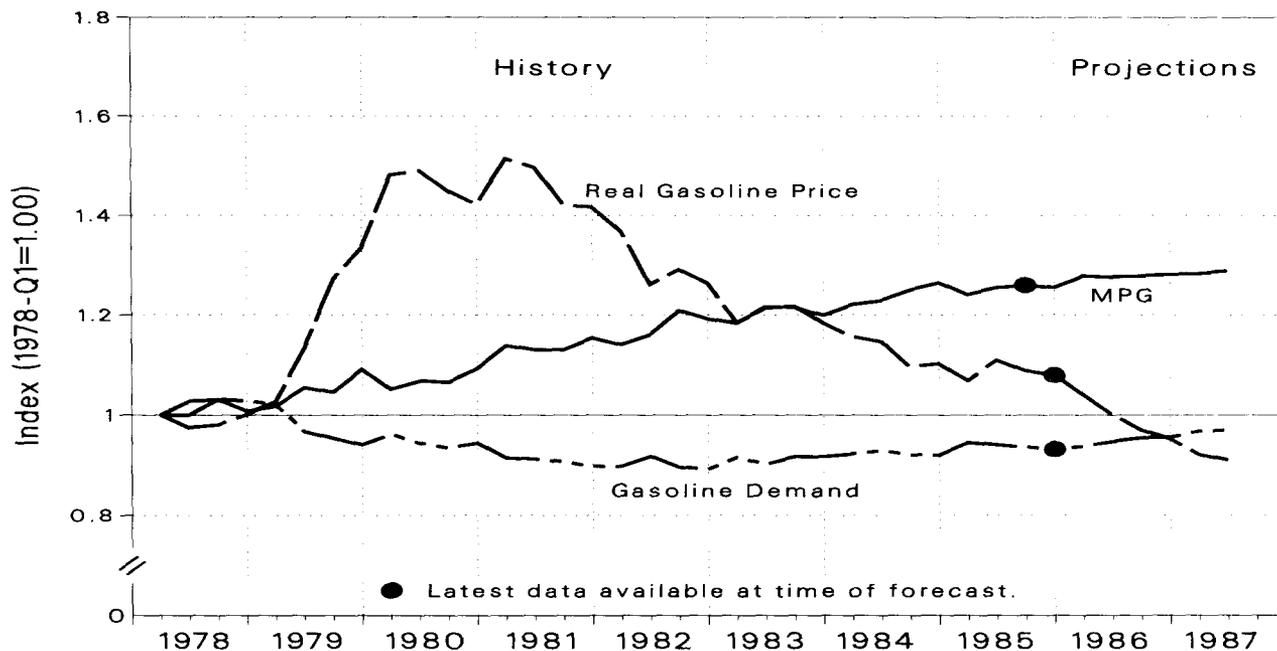
Automobile efficiency is estimated to have improved by only 1.4 percent between 1984 and 1985 and is expected to improve by an average of 1.6 percent between 1985 and 1986. Efficiency gains in the first half of 1987 are expected to be slightly less than 1 percent. A recent change in the Corporate Average Fuel Economy (CAFE) standard<sup>2</sup> for new passenger cars from 27.5 miles per gallon to 26.0 miles per gallon would not have any effect on the expected short-run trends in automobile efficiency. Such a change in the standard would only be reflective of recent trends in consumer preference for larger, relatively less fuel-efficient automobiles, but would allow manufacturers to respond to those preferences without penalty.

Growth in motor vehicle travel is estimated to have averaged about 3.0 percent for 1985, with 2.6-percent growth expected for 1986. These growth rates are noticeably lower than the 4.4-percent rate for 1984. The lower growth rates in motor vehicle travel expected in 1985 and 1986 result from the markedly slower expected rates of growth in personal income and in industrial activity (implying slower growth in related commercial travel). For example, growth in real disposable personal income for 1984 to 1985 was 2.1 percent and is expected to be 1.4 percent between 1985 and 1986, compared with 6.8 percent between 1983 and 1984. The impact of slower growth in income and production on vehicle travel is expected to be partly offset by the persistent declines in real gasoline prices, at least on an annual basis. The average annual real price of gasoline is expected to decline by about 8 percent between 1985 and 1986. In the first half of 1987, real disposable personal income is assumed to grow at a

<sup>1</sup>U.S. Department of Transportation, Federal Highway Administration, Highway Statistics Division, *Highway Statistics* (Annual), Table VM-1 (Washington, DC), various issues. These estimates of trends in miles per gallon may differ from historical estimates provided by the Federal Highway Administration because of differences in gasoline demand estimates compared to Energy Information Administration estimates and because of uncertainty associated with the estimates of gasoline-powered travel used here.

<sup>2</sup>The change by the U.S. Department of Transportation's Motor Vehicle Requirements Division is for the 1986 model year.

**Figure 4. Motor Gasoline Demand, Vehicle Efficiency, and Real Gasoline Price Trends**



Sources: ● History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) (Washington, DC, 1985); Federal Highway Administration, *Traffic Volume Trends* (monthly). ● Projections: Tables 5 and 9 and from unpublished output from the Energy Information Administration's Short Term Integrated Forecasting System.

noticeably faster rate than in the first half of 1986, and this, combined with the expectation that real gasoline prices will fall by 8 percent, is expected to induce an increase in travel demand of well over 3 percent. This rate of growth in travel, offset by less than 1 percent growth in efficiency, leads to projected growth in gasoline demand of about 3 percent in the first half of 1987.

### Distillate Fuel Oil

As a result of the moderation in economic growth, particularly in the industrial sector, distillate fuel oil

consumption is projected to remain about constant between 1985 and 1986 (Table 10), at less than 2.9 million barrels per day. Some gains as a result of economic growth are expected to offset efficiency improvements and conservation in the transportation and industrial sectors. Assumed normal weather patterns imply virtually no change in the residential and commercial space heating requirements between 1985 and 1986, resulting in no expected change in distillate demand. In the first half of 1987, demand for distillate fuel oil is expected to average slightly more than 2.9 million barrels per day, about 2 percent above the corresponding 1986 projections, primarily due to growth in the industrial and transportation sectors.

## Winter 1985-1986: Return to "Normal" Distillate Stocks?

Through early January, the winter of 1985-1986 displayed a very unusual pattern of distillate supply and demand. Mild autumn weather and widespread expectations of lower world oil prices combined to make refiners (and retailers) reluctant to hold distillate stocks above minimum levels. This situation resulted in stock levels well below normal through late December.

Spot prices for distillate fuel oil increased from a summer low of about \$29 per barrel to a high of \$37 per barrel in November. This increase was due to concerns about international supplies and to speculation about low stocks in the face of the upcoming winter. With the onset of colder weather in December, however, refiners and marketers both began increasing their distillate stock levels. A drop in the spot price (from the \$37 per barrel peak in November to \$28 per barrel by the third week of January) also resulted in higher demand by retailers in order to supply their customers. Consequently, both refinery production and primary stocks began a steep rise--with distillate stocks reach-

ing 147 million barrels by January 10, a level within EIA's normal range for that date. Most of the stock buildup was attributed to production increases. Between October 1 and January 10, distillate production was running 10 percent ahead of last season's rate. (Distillate imports during the fourth quarter of 1985 were down by about 25,000 barrels per day from year-earlier levels because of higher import prices compared with a year ago.)

Heating degree-days from October 1, 1985, through January 11, 1986, both nationally and in the distillate-dependent Northeast, were substantially higher (14 percent nationally and 12 percent in the Northeast) than during the past heating season. Product supplied, however, had increased by a much lower percentage, probably because of lower demand during the milder, early part of the heating season (September through November). Assuming normal weather over the remainder of the winter, distillate demand is expected to be somewhat lower than last year, when heating degree-days were about 4 percent above normal during the first quarter of 1985.

## Residual Fuel Oil

Total consumption of residual fuel oil declined by more than 60 percent between 1977 and 1985, showing the largest rate of decrease of any of the petroleum products. Total consumption of residual fuel oil is expected to drop further by almost 3 percent between 1985 and 1986 (Table 11). This rate is lower than the 13-percent decline estimated for 1985, as lower residual fuel oil prices make this fuel more competitive with natural gas in some areas of the country, bolstering its demand. This competitive trend is expected to continue into the first half of 1987, with demand for residual fuel oil projected to remain at the first-half 1986 level.

Nonutility demand for residual fuel oil is projected to increase by more than 1 percent between 1985 and 1986 as a result of lower prices and continued growth

in industrial activity. During the first half of 1987, however, nonutility demand is expected to remain stable compared with the first-half 1986 level. The upward effects on demand from lower fuel oil prices and increased industrial activity are expected to be offset by decreases in demand due to conservation activity. Consumption of residual fuel oil at electric utilities is projected to decline by almost 12 percent between 1985 and 1986, with the decline slowing to about 3 percent between first-half 1986 and first-half 1987 (see Electric Power section). Residual fuel oil is expected to remain a relatively high-priced fuel option for electric utilities, although lower crude oil prices could result in a slowing of the decline in utility demand for residual fuel oil in some areas of the country.

## Other Petroleum Products

Other petroleum products supplied is projected to grow by about 2 percent between 1985 and 1986 and then to increase by about the same percentage between first-half 1986 and first-half 1987. Jet fuel, petrochemical feedstocks, and liquefied petroleum gases (LPG) are the principal components of the other products category, accounting for 3.2 million barrels per day out of a total of nearly 4.8 million barrels per day during 1985 (Table 12). The remaining products, grouped under the miscellaneous category, include petroleum coke, kerosene, still gas, road oil and asphalt, lubricants, waxes, aviation gasoline, special naphthas, and other small-volume petroleum products.

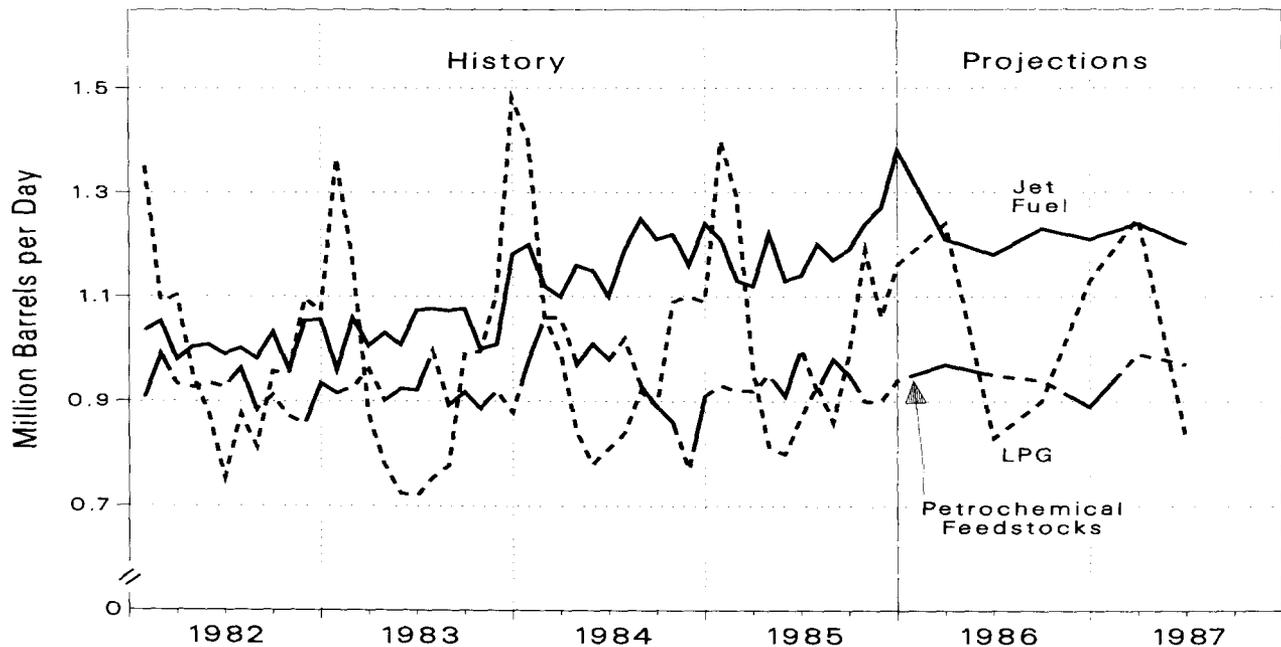
LPG product supplied in 1985 increased by about 4 percent from 1984 levels (Figure 5). This increase is mainly attributed to colder-than-normal weather experienced during the early part of the year. LPG demand

is expected to rise only slightly in 1986 and in the first half of 1987, despite continued declines anticipated in real oil prices.

Jet fuel demand is projected to increase slightly between 1985 and 1986 and then increase by 2 percent between first-half 1986 and first-half 1987. These increases reflect the combined impact of higher incomes and lower fuel costs. Jet fuel product supplied increased by less than 2 percent in 1985 relative to the 1984 level, following a 13-percent rate of growth experienced during 1984.

The use of petroleum to produce petrochemicals dropped by about 2 percent between 1984 and 1985. Feedstock product supplied is expected to increase slightly in 1986 and in the first half of 1987, corresponding to anticipated increases in activity in the chemical sector. The current low inventories of the primary petrochemicals, particularly ethylene, should also contribute to increases in feedstock demand in the near future.

**Figure 5. Major Components of Other Petroleum Demand**



Sources: ● History: Energy Information Administration, *Petroleum Supply Annual* (1982-1984), DOE/EIA-0340(82/84)/1, *Petroleum Supply Monthly*, DOE/EIA-0109(85/11), and *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02) (Washington, DC).  
● Projections: Table 12.

Demand for miscellaneous petroleum products is expected to continue to grow moderately throughout the forecast period. Asphalt and road oil product supplied is projected to grow the most rapidly of the miscellaneous products, while little change is anticipated for still gas, coke, and most of the other small-volume petroleum products. Only kerosene demand is projected to decline in both 1986 and the first half of 1987, corresponding to the historical evidence that kerosene demand declines as income rises.

## Domestic Crude Oil Production

Domestic production of crude oil in the base case is projected to increase slightly in 1986, to nearly 9.0 million barrels per day (Table 6). In the first half of 1987, domestic production of crude oil is expected to be nearly 1 percent above year-earlier levels. Alaskan production in 1986 is projected to be nearly 2 percent higher than the level in 1985. A 3-percent increase in Alaskan production is expected during the first half of 1987 compared with year-earlier levels, due mainly to increased production from the Lisburne reservoir of the Prudhoe Bay field and from the Milne Point field. Oil production in the lower 48 States is expected to be 7.12 million barrels per day in 1985 and to remain at about that level in 1986 and in the first half of 1987.

## Petroleum Inventories

With oil prices firming early in the fourth quarter and with winter approaching, crude oil imports and refinery inputs increased during the remainder of 1985 (Table 6). This situation, combined with warmer than normal weather in October and November, helped to boost end-of-year stocks of petroleum products, especially distillate fuel oil, which entered the fourth quarter of 1985 at almost 26 million barrels below the year-earlier level. This increase places primary stock holders in a position to continue the historical seasonal petroleum product stock patterns. Motor gasoline stocks are projected to peak in the first quarter of 1986, ending at 199 million barrels, then experience a drawdown during the summer driving season (ending the third quarter at 184 million barrels) and to remain near that level through the end of the year. Distillate fuel oil stocks are expected to decline throughout the remainder of the winter heating season, ending the first quarter of 1986 at 110 million barrels.

Distillate stocks at the end of 1985 were higher than at the end of the third quarter of 1985: The primary stock level at the end of the fourth quarter was at 145 million barrels and 47.9 days of supply (calculated using the next quarter's anticipated rate of product supplied), compared with 117 million barrels and 39.8 days of supply at the end of the third quarter. The seasonal stock build in preparation for the winter of 1986-1987 is expected to begin earlier this year than in 1985 because the price uncertainty experienced in 1985 is assumed not to recur. Stocks at the end of the third quarter of 1986 are projected to be 140 million barrels, or 46.0 days of supply.

The fill rate for the Strategic Petroleum Reserve (SPR) for January 1986 is projected to be 50,000 barrels per day and then is assumed to be zero through the remainder of the forecast period pending budget decisions. Since this assumption was made, however, it was announced that the fill rate would remain at 50,000 barrels per day until the SPR contained 499 million barrels.

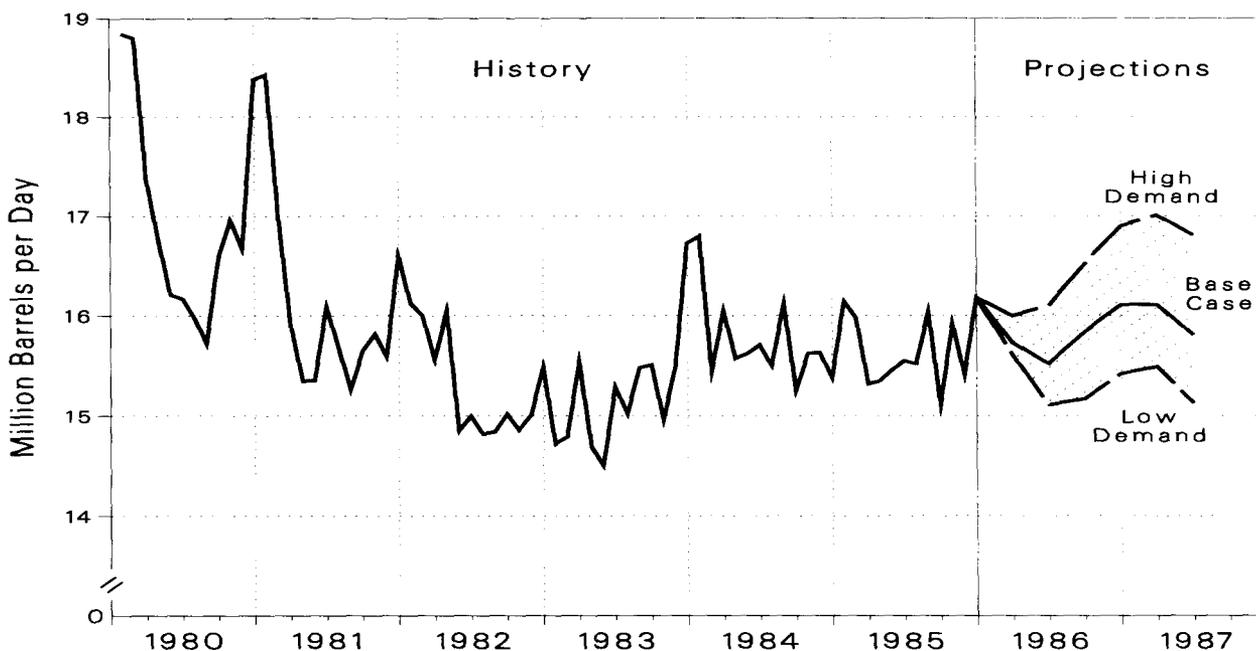
## Petroleum Demand Sensitivities

Table 13 and Figure 6 show the response of petroleum demand to changes in price, income, and weather. The sensitivity cases were developed as follows:

- The low and high price demands are based on the price paths shown in Table 5, holding the variables representing economic activity at their base case levels.
- The economic sensitivity cases are derived from the low and high economic growth assumptions given in Table 2, holding prices at their base case trajectories.
- The weather sensitivity cases are based on variations in population-weighted heating degree-days and cooling degree-days of 10 percent in the first and fourth quarters and 15 percent in the second and third quarters, respectively.

During 1986, prices are expected to contribute most to the uncertainty range, which averages about 1.2 million barrels per day overall. The uncertainty attributed to income in 1986 also is projected to be significant, with a range of 420,000 barrels per day resulting from income variations above and below the base case level. During the first half of 1987, the sensitivities attributed to both prices and income result in a wide uncertainty range of about 1.7 million barrels per day.

**Figure 6. Total Petroleum Demand**



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) (Washington, DC, 1985). • Projections: Tables 6, 7, and 8.

## Projections for Other Major Energy Sources

### Natural Gas

Total natural gas consumption is projected to increase slightly between 1985 and 1986, with a decline in gas use at electric utilities balanced by an increase in the all other uses category (Table 14). This forecast contrasts with the experience between 1984 and 1985, when total natural gas consumption is estimated to have declined by about 4 percent. The historical levels of natural gas use shown here differ from those pub-

lished in the previous editions of the *Outlook* because of major data revisions for both years. The projection for natural gas demand reflects the assumed continuation of economic growth and only moderate changes in natural gas prices during 1986 and the first half of 1987.

Net imports of natural gas from Canada are expected to increase by 18 percent from 1985 to 1986 as the price of Canadian gas becomes more competitive with that from domestic sources. In 1985, the Canadian government announced an export policy calling for export prices to be referenced to price zones near the export point rather than using the Toronto city-gate price as a floor for export prices. About 60 percent of Canadian industrial contracts will expire during 1986 and will be subject to the new policy. Further, other contracts not set to expire during this year can also be renegotiated if both parties agree. The increase in natural gas imports is expected to continue in the first half of 1987.

# Coal

**Coal Production.** By the beginning of 1986, excess domestic coal stocks that were evident at the beginning of 1985 had been substantially reduced, leading to the projection of moderate growth in coal production to about 909 million tons in 1986. Coal production in 1985 is estimated to have been about 886 million tons, 1 percent below the 1984 level (Table 15). Despite significant increases in demand for U.S. coal in 1985, production was depressed because of large inventories left over from the massive stock-piling that occurred in 1984 in anticipation of a coal strike (Figure 7). Continued growth in domestic coal use is projected to push coal production in the first half of 1987 to 467 million tons, almost 4 percent higher than the level for the first half of 1986.

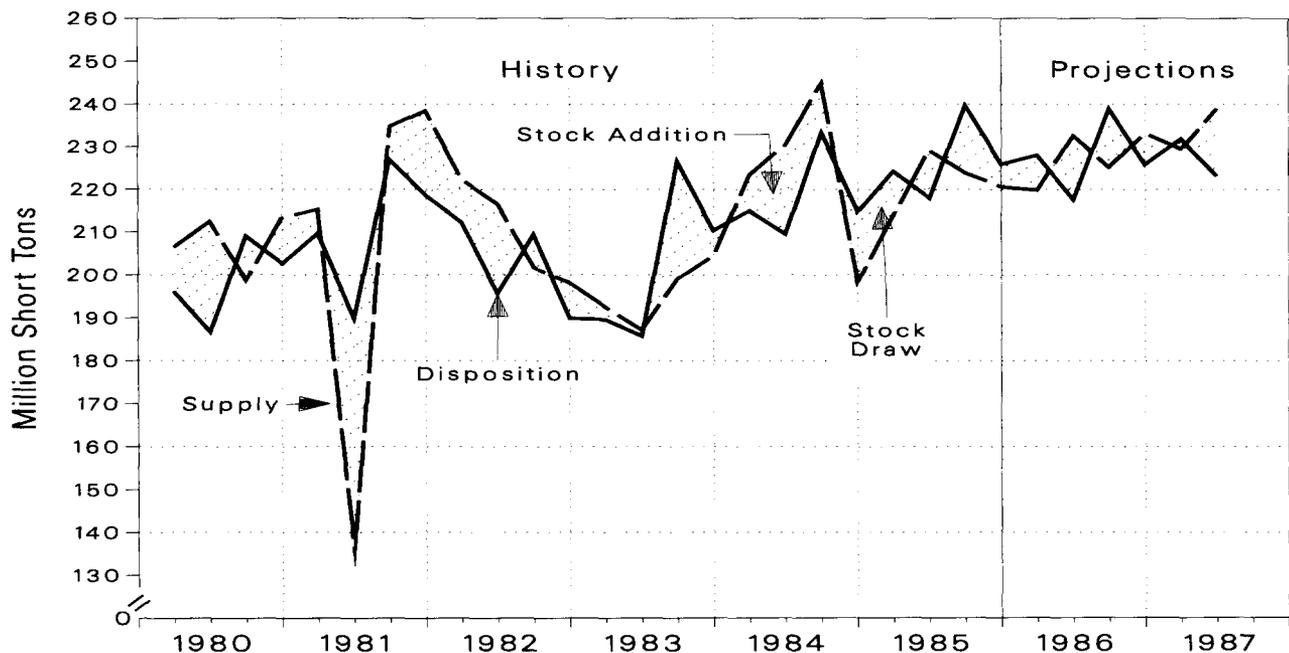
**Domestic Coal Consumption.** Total domestic coal consumption is estimated to have increased by almost 4 percent in 1985, led mainly by increases in the electric utility market, and is forecast to rise by just under 1 percent between 1985 and 1986 (Figure 7). Utility coal consumption in 1986 is not expected to show the high

growth experienced in the previous 2 years. Weak demand for industrial coal in 1986 and 1987 should keep overall coal demand growth at modest levels.

Electric utility coal consumption in 1986 is expected to be 703 million tons, an increase of just over 1 percent from 1985 levels. This rate of increase contrasts with the nearly 5-percent growth observed between 1984 and 1985. Utility coal consumption growth in 1985 was high, due to increased utilization of coal plants and new coal capacity that become operational as well as to a sharp drop in hydroelectric availability as a result of lower-than-normal water levels. Hydroelectric generation should return to normal levels in 1986. Additional factors explaining the slowing of coal consumption in 1986 include the relatively slow growth expected in overall electricity demand, the continued growth expected in nuclear generation, and the slowing of coal-fired capacity additions.

Because coal-fired generating capacity is projected to keep pace with electricity demand, the average utilization for coal-fired plants is not expected to improve significantly over the forecast period. Average utilization rates at coal-fired generating plants are estimated

**Figure 7. Coal Supply and Disposition**



Sources: • History: Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121(85/3Q) (Washington, DC, 1985). • Projections: Table 15.

to have exceeded 53 percent in 1985.<sup>3</sup> The current projections imply a slight decline in plant utilization in 1986 to just under 53 percent. Utilization rates for coal plants should improve slightly in the first half of 1987, contributing to a growth rate of approximately 3 percent in utility coal consumption between first-half 1986 and first-half 1987.

Coking coal consumption in 1985 is estimated at 42 million tons, a 5-percent drop from its 1984 level. Estimated raw steel production in 1985 fell by about 4 million tons from the 1984 level of 92.5 million tons.<sup>4</sup> In 1986, coking coal consumption is expected to fall to about 41 million tons because of the weak overall performance expected for the domestic steel industry. However, this forecast tends to discount any significant impact from possible tightening of steel import quotas and therefore may be somewhat pessimistic for 1986. Aside from quotas, continued declines in the value of the dollar may weaken imported steel demand in the United States, leading to higher domestic steel production and thus higher coking coal demand.

It is estimated that coal consumption by the retail and general industry sector remained flat between 1984 and 1985. Despite a projected increase of nearly 2 percent in industrial output between 1985 and 1986, a slight decline in coal consumption for this sector is expected for 1986. This projection mainly reflects the large drop in coal consumption in synfuels manufacturing. The largest commercial user of coal in the manufacture of synfuels has been the Great Plains Coal Gasification Project in Beulah, North Dakota. This project, the victim of high costs of production in a time of falling oil prices and a surplus of natural gas, has been slated for abandonment by the partnership that has been managing it up until now. Production of synthetic natural gas from Great Plains should continue until an orderly shutdown of the plant can be arranged. For this *Outlook*, Great Plains is assumed to continue operations at full capacity until March 31, 1986, at which time shutdown is assumed to occur. Aside from the loss of Great Plains, however, industrial coal use is projected to improve during the first half of 1987, with projections of greater than 2-percent growth from year-earlier levels.

**Coal Exports.** Coal exports were an estimated 89 million tons in 1985, or nearly 10 percent higher than in 1984, but are projected to fall by about 5 million tons per year between 1985 and 1986. The increase in 1985 primarily reflected increased shipments of bituminous steam coal to Europe and the Pacific Rim. Bituminous metallurgical coal exports in 1985 are estimated to have been about flat compared with year-earlier levels.

Despite projected economic expansion in Europe and elsewhere, continued reductions in Canadian steam coal requirements and expanded competition from Colombia in European steam coal markets are expected to result in reduced U.S. coal exports in 1986. In addition, attempts to boycott South African coal may fail if prices fall far enough, and this possibility tends to limit market expansion for U.S. exporters. Assuming that metallurgical coal exports remain at current levels throughout the forecast, total U.S. exports are projected to fall to 84 million tons in 1986, and remain flat for the first half of 1987 compared with the year-earlier level.

## Electric Power

Electricity generation is expected to increase by more than 1 percent between 1985 and 1986 and by about 2 percent between the first half of 1986 and the first half of 1987 (Table 16). These increases are primarily attributable to the growth assumed for economic activity over this period. Growth in electricity generation between 1984 and 1985 is now estimated to have been about 2 percent, slightly higher than the projection published in the October 1985 *Outlook* because of the very cold weather during December.

The real price of electricity is expected to experience little change over the forecast period. The timing of electricity price changes remains difficult to forecast because the inclusion of the costs of using new generating capacity in determining the price of electricity depends on State regulatory review. (See Electricity Pricing box.)

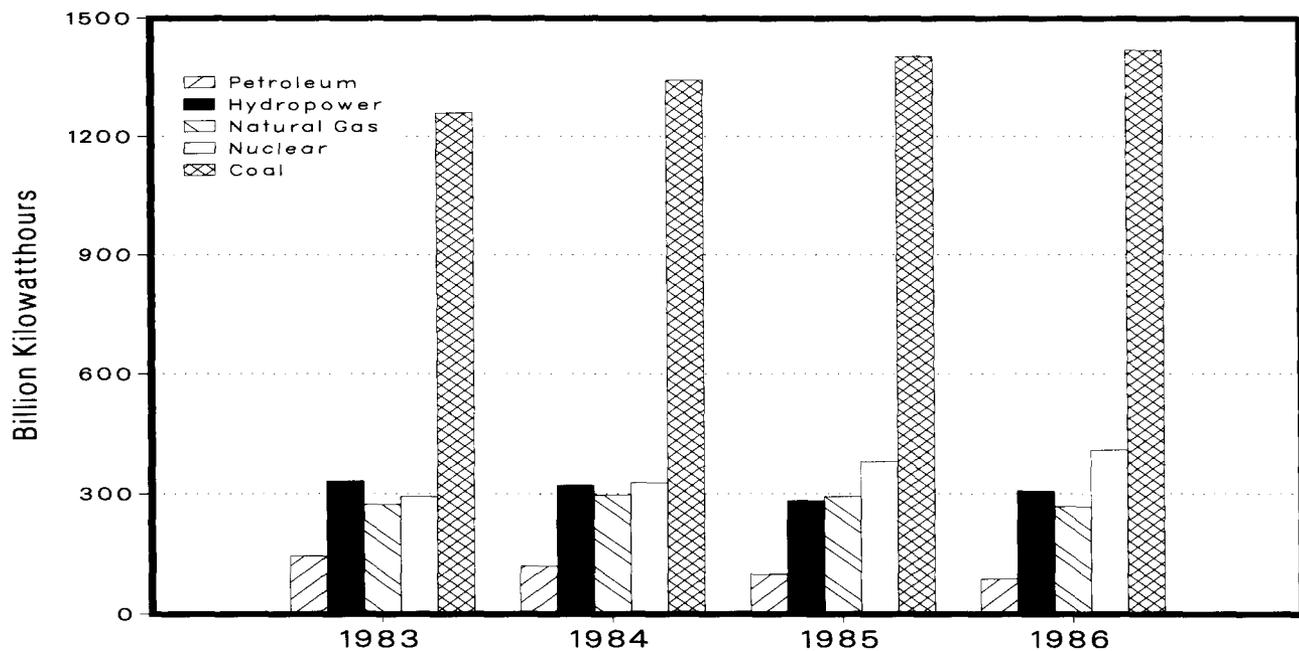
**Generation by Energy Source.** Fuel shares of electricity generation in 1986 are projected to be: 57 percent coal, 16 percent nuclear power, 12 percent hydroelectric power, 11 percent natural gas, 4 percent petroleum, and less than 1 percent for other energy sources (Figure 8). These figures represent slight increases in the nuclear and hydroelectric shares and a decrease in the natural gas share compared with the shares in 1985. The trend toward nuclear power and away from natural gas generation is expected to continue in the first half of 1987. The projected increase in total generation of 32 billion kilowatthours between 1985 and 1986 is expected to be supplied by increases in generation from coal, nuclear power, and hydropower.

Nuclear generation is projected to increase by more than 7 percent between 1985 and 1986, to 410 billion kilowatthours, following the estimated increase of 16 percent between 1984 and 1985. Nuclear generation in

<sup>3</sup>Electric plant utilization is defined as monthly generation (kilowatts) divided by capacity, which is defined as the estimated nameplate capacity (kilowatts) times the number of hours in the month. The utilization figures are based on estimated monthly capacity numbers which are derived from the same data source used in the Energy Information Administration, *Inventory of Power Plants in the United States*, DOE/EIA-0095(83) (Washington, DC, 1984).

<sup>4</sup>The estimate of steel production in 1984 is based on data from the American Iron and Steel Institute Form AIS-7.

**Figure 8. Electricity Generation by Fuel Source**



Sources: o History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) (Washington, DC, 1985). o Projections: Table 16.

the first half of 1987 is projected to be 12 percent above year-earlier levels. Output from new capacity is the major reason for the increase in nuclear generation expected over the forecast period. Nine new reactors (Catawba 1, Byron 1, Waterford 3, Wolf Creek, Palo Verde 1, Diablo Canyon 2, Limerick 1, River Bend 1, and Fermi 2) totaling nearly 10 gigawatts reached full-power operation in 1985. This forecast assumes the addition of eight new units (Shoreham, Perry 1, Millstone 3, Palo Verde 2, Watts Bar 1, Hope Creek 1, Catawba 2, and Harris 1) totaling nearly 9 gigawatts in 1986, and three additional reactors (Clinton 1, Nine Mile Point 2, and Seabrook 1) totaling 3 gigawatts during the first half of 1987. Based on these additions, a total of 106 nuclear reactors are expected to be operating in the United States by mid-1987, with 20 of these units having begun operation since the beginning of 1985. The forecast of nuclear generation in 1986 is below that published in the previous edition of the *Outlook* as a result of lowered assumptions about future capacity factors for nuclear units.

Coal-fired generation is expected to increase by 1 percent between 1985 to 1986 and by about 3 percent between first-half 1986 and first-half 1987. The relatively low increase in 1986 is mainly attributed to the slow rate of growth in overall electricity demand in 1986 and to some regional displacement of some coal-fired generation by the expected rebound in hydroelectric generation this year. Additional factors are the

continued growth expected in the share of nuclear generation and, to some extent, the flattening out of coal-fired capacity additions. More than 6 gigawatts of coal capacity are expected to be added in 1986, and almost 2 additional gigawatts are expected during the first half of 1987. Increases in coal generating capacity, increases in utilization rates, and lower availability of hydroelectric generation during 1985 led to an estimated record-level coal share of nearly 57 percent of total generation. Coal is expected to maintain this share of total generation throughout the forecast period despite the return to higher availability of hydroelectricity mainly because of the additions of new coal-fired capacity during that period.

Hydroelectric generation in 1986 is projected to be 307 billion kilowatt-hours, an increase of almost 9 percent from the 1985 level. The low level of hydroelectric generation in 1985 is attributed to below-normal water levels. However, the estimated level of hydroelectric generation for 1985 is slightly higher than the projection published in the previous *Outlook* because of improved water conditions (particularly in the West) at the end of the year. Higher-than-normal levels of generation are expected to continue into the first quarter of 1986, followed by assumed normal levels of precipitation and hydroelectric generation for the remainder of 1986 and the first half of 1987.

The combined amount of oil- and natural gas-fired generation is projected to drop in 1986 and in the first half of 1987, continuing the downward trend experienced between 1984 and 1985. Because oil and natural gas are considered the swing fuels for electricity generation, the actual contribution from each of these fuels is dependent on the level of total generation, as well as the relative prices of the two fuels, the availability of these fuels, and the displacement of these fuels by new coal and nuclear capacity. The projected levels of oil- and natural gas-fired generation are based, in part, on an analysis of new capacity additions expected in those States that are major consumers of these fuels at electric utilities. Because the fuel costs for nuclear and coal generating units are lower than those for oil and gas, it is likely that the opening of new capacity will result in displacement of oil and gas use. A major reason for the projected decline in natural gas-fired generation in this forecast is the large amount of coal and nuclear capacity expected to be added in the natural gas-using States (Texas, California, Louisiana, Oklahoma, Florida, and New York). The decline in utility consumption of residual fuel oil could slow in the future, both because of the decline expected in the fuel oil price and because coal and nuclear capacity additions in the oil-using States (New York, Massachusetts, Florida, Connecticut, and Pennsylvania) are expected to be lower than in the past 2 years.

**Net Electricity Imports.** Electricity imports have experienced a significant upward trend since the late 1970's. A decade of rising oil prices in the United States has encouraged areas dependent on oil-fired generation, such as the Northeast, to purchase electricity from Canada, which currently has a surplus of hydroelectric power. (The New England area alone accounts for

over two-thirds of net electricity imports into the United States.) In addition, a small amount of electricity was imported from Mexico in 1984 by the southwestern area of the country.

Net electricity imports are projected to rise to 44 billion kilowatthours in 1986, an increase of 3 billion kilowatthours over the 1985 estimate (Table 16). This increase is expected to result from the improvement of transmission capability within the United States and to the anticipated opening of a major transmission line between Canada and New England in the first half of 1986. Net electricity imports are expected to increase by more than 1 billion kilowatthours between first-half 1986 and first-half 1987, mainly due to the full-service operation of the transmission line between New England and Hydro-Quebec of Canada.

## Total Domestic Energy Balance

Total energy consumption in 1985 is estimated at 74.0 quadrillion Btu, with an increase of more than 1 percent, to 75.1 quadrillion Btu, forecast for 1986 (Table 17). Based on the higher economic growth assumed for 1987, total energy consumption is projected to increase by more than 2 percent between first-half 1986 and first-half 1987. The energy/GNP ratio in 1985 is estimated to have been 44.0 thousand Btu per 1972 dollar of real GNP, dropping to 43.8 thousand Btu per 1972 dollar of real GNP in 1986 (Table 1).

**Table 2. Macroeconomic, Price, and Weather Data Assumptions for Low, Base, and High Economic Growth Cases**

Assumptions	1985				Economic Growth Case	1986				1987		Year		
	1st	2nd	3rd	4th		1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Macroeconomic<sup>a</sup></b>														
Real Gross National Product (billion 1972 dollars) .....	<b>1,664</b>	<b>1,671</b>	<b>1,686</b>	<b>1,699</b>	High	1,711	1,733	1,753	1,776	1,803	1,827	-	-	1,743
					Base	1,696	1,709	1,723	1,734	1,750	1,766	<b>1,639</b>	1,680	1,716
					Low	1,689	1,675	1,665	1,673	1,685	1,699	-	-	1,676
Percent Change from Prior Year .....	<b>3.3</b>	<b>2.0</b>	<b>2.5</b>	<b>2.2</b>	High	2.8	3.7	4.0	4.5	5.4	5.4	-	-	3.8
					Base	1.9	2.3	2.2	2.1	3.2	3.3	<b>6.8</b>	2.5	2.1
					Low	1.5	.2	-1.2	-1.5	-2	1.4	-	-	-2
GNP Implicit Price Deflator (index, 1972: 100) .....	<b>229.1</b>	<b>230.6</b>	<b>232.3</b>	<b>234.3</b>	High	235.8	236.8	238.1	240.0	242.2	244.7	-	-	237.7
					Base	236.2	237.8	239.4	241.4	243.8	246.2	<b>223.4</b>	231.6	238.7
					Low	236.4	238.6	240.7	242.9	245.3	247.7	-	-	239.7
Percent Change from Prior Year .....	<b>3.9</b>	<b>3.7</b>	<b>3.4</b>	<b>3.6</b>	High	2.9	2.7	2.5	2.4	2.7	3.3	-	-	2.6
					Base	3.1	3.1	3.1	3.0	3.2	3.5	<b>3.8</b>	3.7	3.1
					Low	3.2	3.5	3.6	3.7	3.8	3.8	-	-	3.5
Real Disposable Personal Income <sup>b</sup> (billion 1972 dollars) .....	<b>1,182</b>	<b>1,205</b>	<b>1,192</b>	<b>1,192</b>	High	1,204	1,214	1,223	1,234	1,252	1,265	-	-	1,219
					Base	1,200	1,208	1,214	1,219	1,232	1,240	<b>1,169</b>	1,193	1,210
					Low	1,199	1,199	1,199	1,205	1,216	1,222	-	-	1,201
Percent Change from Prior Year .....	<b>3.0</b>	<b>3.4</b>	<b>1.3</b>	<b>.4</b>	High	1.9	.7	2.6	3.5	4.0	4.2	-	-	2.2
					Base	1.5	.2	1.8	2.3	2.7	2.6	<b>6.8</b>	2.1	1.4
					Low	1.4	-5	.6	1.1	1.4	1.9	-	-	.7
Index of Industrial Production (Mfg.) (index, 1977: 100) .....	<b>126.0</b>	<b>126.6</b>	<b>127.7</b>	<b>128.0</b>	High	130.7	132.8	135.2	138.1	141.5	144.1	-	-	134.2
					Base	127.8	128.4	130.0	130.6	132.3	133.8	<b>123.9</b>	127.1	129.2
					Low	126.3	123.2	121.7	122.5	124.0	125.2	-	-	123.4
Percent Change from Prior Year .....	<b>4.2</b>	<b>2.6</b>	<b>1.7</b>	<b>1.7</b>	High	3.7	4.9	5.9	8.0	8.3	8.5	-	-	5.6
					Base	1.4	1.4	1.8	2.1	3.5	4.2	<b>12.4</b>	2.6	1.7
					Low	.2	-2.7	-4.7	-4.2	-1.8	1.6	-	-	-2.9
<b>Oil Price</b>														
Imported Crude Oil Price <sup>c</sup> (U.S. dollars/barrel) .....	<b>27.26</b>	<b>27.50</b>	<b>26.56</b>	<b>26.50</b>	High	23.00	20.00	20.00	20.00	20.00	20.00	-	-	20.80
					Base	26.10	25.00	24.00	24.00	24.00	24.00	<b>28.88</b>	27.00	24.80
					Low	27.00	27.00	27.00	27.00	27.00	27.00	-	-	27.00
U.S. Refiners' Cost <sup>d</sup> (U.S. dollars/barrel) .....	<b>26.77</b>	<b>26.95</b>	<b>26.52</b>	<b>26.20</b>	High	22.60	19.60	19.60	19.60	19.60	19.60	-	-	20.40
					Base	25.50	24.10	23.60	23.60	23.60	23.60	<b>28.63</b>	26.60	24.20
					Low	26.60	26.60	26.60	26.60	26.60	26.60	-	-	26.60
<b>Weather<sup>e</sup></b>														
Heating Degree Days .....	<b>2,491</b>	<b>446</b>	<b>110</b>	<b>1,738</b>		2,401	538	88	1,668	2,401	538	<b>4,643</b>	4,785	4,695
Cooling Degree Days .....	<b>22</b>	<b>319</b>	<b>723</b>	<b>79</b>		28	328	754	62	28	328	<b>1,208</b>	1,143	1,172

<sup>a</sup> Macroeconomic projections from three Data Resources, Inc., model forecasts are seasonally adjusted at annual rates and modified as appropriate to the three world oil price cases. The forecast for industrial production is based on the DRI forecast for a 1967-based index of industrial production.

<sup>b</sup> Seasonally adjusted at annual rates.

<sup>c</sup> Cost of imported crude oil to U.S. refiners.

<sup>d</sup> U.S. Refiner Acquisition Cost of foreign and domestic crude oil.

<sup>e</sup> Population-weighted average degree days, revised December 1981. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures).

Note: Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10); Bureau of Economic Analysis, U.S. Department of Commerce, *Survey of Current Business*, as revised, December 1985; National Oceanic and Atmospheric Administration, U.S. Department of Commerce, *Monthly State, Regional, and National Heating/Cooling Degree Days Weighted by Population*; Federal Reserve System, *Statistical Release G.12.3*, January 1986. Macroeconomic projections are based on modifications to Data Resources, Inc., forecasts CONTROL0186, OPTIM0186, and PESSIM0186.

**Table 3. International Petroleum Balance  
(Million Barrels per Day, Except Closing Stocks)**

	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply<sup>a</sup></b>													
<b>Production</b>													
U.S. (50 States) .....	<b>11.0</b>	<b>11.1</b>	<b>11.1</b>	<i>11.2</i>	<i>11.1</i>	<i>11.0</i>	<i>11.1</i>	<i>11.2</i>	<i>11.1</i>	<i>11.2</i>	<b>11.1</b>	<i>11.1</i>	<i>11.1</i>
OPEC .....	<b>17.4</b>	<b>16.1</b>	<b>16.1</b>	<i>19.0</i>	<i>17.0</i>	<i>16.7</i>	<i>17.4</i>	<i>18.1</i>	<i>17.4</i>	<i>17.0</i>	<b>18.6</b>	<i>17.1</i>	<i>17.3</i>
Other Non-OPEC .....	<b>15.3</b>	<b>15.2</b>	<b>15.2</b>	<i>15.5</i>	<i>15.6</i>	<i>15.7</i>	<i>15.8</i>	<i>15.9</i>	<i>16.0</i>	<i>16.0</i>	<b>14.6</b>	<i>15.3</i>	<i>15.8</i>
Total Market Economies .....	<b>43.7</b>	<b>42.4</b>	<b>42.4</b>	<i>45.7</i>	<i>43.7</i>	<i>43.4</i>	<i>44.3</i>	<i>45.2</i>	<i>44.5</i>	<i>44.2</i>	<b>44.4</b>	<i>43.5</i>	<i>44.2</i>
Net Communist Exports .....	<b>1.2</b>	<b>1.8</b>	<b>1.9</b>	<i>1.8</i>	<i>1.4</i>	<i>1.7</i>	<i>1.8</i>	<i>1.8</i>	<i>1.3</i>	<i>1.6</i>	<b>2.0</b>	<i>1.7</i>	<i>1.7</i>
Total Supply .....	<b>44.9</b>	<b>44.2</b>	<b>44.3</b>	<i>47.5</i>	<i>45.1</i>	<i>45.1</i>	<i>46.1</i>	<i>47.0</i>	<i>45.8</i>	<i>45.8</i>	<b>46.3</b>	<i>45.2</i>	<i>45.8</i>
<b>Net Stock Withdrawals or Additions (-)</b>													
U.S. (50 States excl. SPR) .....	<b>1.2</b>	<b>-4</b>	<b>.2</b>	<i>-2</i>	<i>.1</i>	<i>.1</i>	<i>-.1</i>	<i>-.1</i>	<i>.4</i>	<i>.1</i>	<b>-1</b>	<i>-.2</i>	<i>0</i>
U.S. SPR .....	<b>-1</b>	<b>-2</b>	<b>-1</b>	<i>0</i>	<b>-2</b>	<i>-1</i>	<i>0</i>						
Other Market Economies .....	<b>1.3</b>	<b>.6</b>	<b>.3</b>	<i>-.7</i>	<i>1.5</i>	<i>-1.0</i>	<i>-1.1</i>	<i>.6</i>	<i>1.3</i>	<i>-.9</i>	<b>.1</b>	<i>.4</i>	<i>0</i>
Total Stock Withdrawals .....	<b>2.4</b>	<b>0</b>	<b>.4</b>	<i>-.9</i>	<i>1.6</i>	<i>-.8</i>	<i>-1.2</i>	<i>.5</i>	<i>1.7</i>	<i>-.8</i>	<b>-2</b>	<i>.5</i>	<i>0</i>
<b>Product Supplied</b>													
U.S. (50 States) .....	<b>15.8</b>	<b>15.5</b>	<b>15.6</b>	<i>15.8</i>	<i>15.7</i>	<i>15.5</i>	<i>15.8</i>	<i>16.1</i>	<i>16.1</i>	<i>15.8</i>	<b>15.7</b>	<i>15.7</i>	<i>15.8</i>
U.S. Territories .....	<b>.2</b>	<b>.3</b>	<b>.3</b>	<i>.3</i>	<b>.3</b>	<i>.3</i>	<i>.3</i>						
Japan .....	<b>4.9</b>	<b>3.9</b>	<b>4.3</b>	<i>4.7</i>	<i>4.9</i>	<i>4.0</i>	<i>3.9</i>	<i>4.8</i>	<i>4.9</i>	<i>4.0</i>	<b>4.6</b>	<i>4.4</i>	<i>4.4</i>
OECD Europe .....	<b>12.6</b>	<b>10.8</b>	<b>10.6</b>	<i>11.8</i>	<i>11.8</i>	<i>10.7</i>	<i>10.9</i>	<i>12.1</i>	<i>12.1</i>	<i>10.9</i>	<b>11.8</b>	<i>11.4</i>	<i>11.4</i>
Other Market Economies .....	<b>13.8</b>	<b>13.8</b>	<b>13.9</b>	<i>14.0</i>	<i>14.0</i>	<i>13.8</i>	<i>14.0</i>	<i>14.1</i>	<i>14.1</i>	<i>13.9</i>	<b>13.8</b>	<i>13.9</i>	<i>14.0</i>
Total Market Economies .....	<b>47.4</b>	<b>44.2</b>	<b>44.6</b>	<i>46.6</i>	<i>46.8</i>	<i>44.3</i>	<i>44.9</i>	<i>47.5</i>	<i>47.5</i>	<i>45.0</i>	<b>46.2</b>	<i>45.7</i>	<i>45.9</i>
Statistical Discrepancy .....	<b>.1</b>	<b>0</b>	<b>0</b>	<i>0</i>	<b>.1</b>	<i>0</i>	<i>0</i>						
<b>Closing Stocks (billion barrels)</b>													
	<b>4.6</b>	<b>4.6</b>	<b>4.6</b>	<i>4.7</i>	<i>4.5</i>	<i>4.6</i>	<i>4.7</i>	<i>4.7</i>	<i>4.5</i>	<i>4.6</i>	<b>4.8</b>	<i>4.7</i>	<i>4.7</i>

<sup>a</sup> Includes production of crude oil and natural gas liquids, other hydrogen and hydrocarbons for refinery feedstock, refinery gains, alcohol, liquids produced from coal and other sources, and net exports from Communist countries

SPR: Strategic Petroleum Reserve

Notes: Minor discrepancies with other published EIA historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) and *International Energy Annual, 1984* DOE/EIA-0219(84); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, Second Quarter 1985*; and Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand*, October 1985.

**Table 4. International Economic Growth  
(Percent Change from Previous Period)**

	Annual Average 1970-1984	1985 <sup>a</sup>	1986	First Half 1987
OECD Total <sup>b</sup> .....	<b>2.9</b>	<b>2.7</b>	<i>2.5</i>	<i>2.7</i>
United States <sup>c</sup> .....	<b>3.0</b>	<b>2.5</b>	<i>2.1</i>	<i>3.3</i>
Western Europe .....	<b>2.4</b>	<b>2.4</b>	<i>2.6</i>	<i>2.3</i>
Japan <sup>d</sup> .....	<b>4.6</b>	<b>3.8</b>	<i>2.7</i>	<i>2.9</i>
Other OECD <sup>d</sup> .....	<b>3.3</b>	<b>4.0</b>	<i>3.5</i>	<i>3.7</i>

<sup>a</sup> Preliminary estimates for Organization for Economic Cooperation and Development (OECD) countries.

<sup>b</sup> Gross domestic product.

<sup>c</sup> Gross national product.

<sup>d</sup> Canada, Australia, and New Zealand.

Note: Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Organization for Economic Cooperation and Development, *Main Economic Indicators*, December 1985. Forecasts: Wharton Economic Forecasting Associates, *World Economic Outlook* December 1985; Data Resources, Inc., Canadian Forecast, CONTROL20985, European Forecast CONTROL20985, and Japanese Forecast, JPCONTROL1185.

**Table 5. Quarterly Energy Prices (Nominal), History and Projections**

Product	1985				Price <sup>a</sup>	1986				1987		Year		
	1st	2nd	3rd	4th		1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Petroleum</b>														
Gasoline <sup>b</sup> (dollars per gallon) .....	<b>1.14</b>	<b>1.22</b>	<b>1.22</b>	<b>1.20</b>	Low	-	<i>1.12</i>	<i>1.04</i>	<i>0.98</i>	<i>0.96</i>	<i>0.99</i>	-	-	<i>1.05</i>
					Base	<i>1.16</i>	<i>1.16</i>	<i>1.14</i>	<i>1.11</i>	<i>1.09</i>	<i>1.12</i>	<b>1.20</b>	<i>1.20</i>	<i>1.14</i>
					High	-	<i>1.21</i>	<i>1.23</i>	<i>1.21</i>	<i>1.18</i>	<i>1.22</i>	-	-	<i>1.20</i>
No. 2 Heating Oil, Wholesale (dollars per gallon) .....	<b>.76</b>	<b>.76</b>	<b>.73</b>	<b>.81</b>	Low	-	<i>.60</i>	<i>.58</i>	<i>.60</i>	<i>.60</i>	<i>.59</i>	-	-	<i>.64</i>
					Base	<i>.76</i>	<i>.71</i>	<i>.69</i>	<i>.72</i>	<i>.71</i>	<i>.69</i>	<b>.82</b>	<i>.77</i>	<i>.71</i>
					High	-	<i>.75</i>	<i>.75</i>	<i>.78</i>	<i>.78</i>	<i>.76</i>	-	-	<i>.76</i>
No. 2 Heating Oil, Retail (dollars per gallon) .....	<b>1.05</b>	<b>1.03</b>	<b>.98</b>	<b>1.05</b>	Low	-	<i>.85</i>	<i>.81</i>	<i>.85</i>	<i>.85</i>	<i>.83</i>	-	-	<i>.89</i>
					Base	<i>1.05</i>	<i>.98</i>	<i>.94</i>	<i>.98</i>	<i>.97</i>	<i>.95</i>	<b>1.09</b>	<i>1.03</i>	<i>.99</i>
					High	-	<i>1.04</i>	<i>1.03</i>	<i>1.07</i>	<i>1.07</i>	<i>1.04</i>	-	-	<i>1.05</i>
No. 6 Residual Fuel Oil <sup>c</sup> (dollars per gallon) .....	<b>.68</b>	<b>.60</b>	<b>.56</b>	<b>.58</b>	Low	-	<i>.45</i>	<i>.46</i>	<i>.47</i>	<i>.47</i>	<i>.46</i>	-	-	<i>.49</i>
					Base	<i>.59</i>	<i>.55</i>	<i>.55</i>	<i>.56</i>	<i>.56</i>	<i>.54</i>	<b>.69</b>	<i>.61</i>	<i>.56</i>
					High	-	<i>.61</i>	<i>.62</i>	<i>.63</i>	<i>.61</i>	<i>.62</i>	-	-	<i>.61</i>
No. 2 Diesel Oil, Retail (dollars per gallon) .....	<b>1.14</b>	<b>1.15</b>	<b>1.12</b>	<b>1.17</b>	Low	-	<i>1.01</i>	<i>1.00</i>	<i>.99</i>	<i>.99</i>	<i>1.00</i>	-	-	<i>1.04</i>
					Base	<i>1.16</i>	<i>1.13</i>	<i>1.11</i>	<i>1.10</i>	<i>1.10</i>	<i>1.11</i>	<b>1.15</b>	<i>1.15</i>	<i>1.12</i>
					High	-	<i>1.19</i>	<i>1.19</i>	<i>1.18</i>	<i>1.18</i>	<i>1.19</i>	-	-	<i>1.18</i>
<b>Other</b>														
Coal, Delivered to Utilities (dollars per million Btu)	<b>1.66</b>	<b>1.67</b>	<b>1.66</b>	<b>1.67</b>	Low	-	<i>1.64</i>	<i>1.63</i>	<i>1.62</i>	<i>1.62</i>	<i>1.62</i>	-	-	<i>1.64</i>
					Base	<i>1.66</i>	<i>1.66</i>	<i>1.66</i>	<i>1.66</i>	<i>1.66</i>	<i>1.66</i>	<b>1.66</b>	<i>1.66</i>	<i>1.66</i>
					High	-	<i>1.68</i>	<i>1.70</i>	<i>1.72</i>	<i>1.74</i>	<i>1.76</i>	-	-	<i>1.69</i>
Natural Gas, Residential (dollars per 1,000 cu. ft.)	<b>5.93</b>	<b>6.42</b>	<b>7.10</b>	<b>6.35</b>	Low	-	<i>6.23</i>	<i>6.80</i>	<i>6.01</i>	<i>5.70</i>	<i>6.04</i>	-	-	<i>6.03</i>
					Base	<i>5.99</i>	<i>6.41</i>	<i>7.09</i>	<i>6.33</i>	<i>6.05</i>	<i>6.47</i>	<b>6.12</b>	<i>6.18</i>	<i>6.16</i>
					High	-	<i>6.48</i>	<i>7.21</i>	<i>6.47</i>	<i>6.23</i>	<i>6.68</i>	-	-	<i>6.25</i>
Natural Gas, to Utilities (dollars per million Btu)	<b>3.62</b>	<b>3.52</b>	<b>3.43</b>	<b>3.44</b>	Low	-	<i>3.37</i>	<i>3.48</i>	<i>3.31</i>	<i>3.34</i>	<i>3.31</i>	-	-	<i>3.45</i>
					Base	<i>3.62</i>	<i>3.52</i>	<i>3.42</i>	<i>3.43</i>	<i>3.68</i>	<i>3.62</i>	<b>3.58</b>	<i>3.50</i>	<i>3.50</i>
					High	-	<i>3.56</i>	<i>3.48</i>	<i>3.51</i>	<i>3.73</i>	<i>3.75</i>	-	-	<i>3.55</i>
Electricity, Residential (cents per kilowatthour)	<b>7.32</b>	<b>7.95</b>	<b>8.20</b>	<b>7.86</b>	Low	-	<i>8.24</i>	<i>8.46</i>	<i>8.05</i>	<i>7.82</i>	<i>8.45</i>	-	-	<i>8.09</i>
					Base	<i>7.62</i>	<i>8.28</i>	<i>8.54</i>	<i>8.17</i>	<i>7.98</i>	<i>8.67</i>	<b>7.56</b>	<i>7.83</i>	<i>8.15</i>
					High	-	<i>8.32</i>	<i>8.63</i>	<i>8.29</i>	<i>8.14</i>	<i>8.89</i>	-	-	<i>8.22</i>

<sup>a</sup> The low prices are used with the high economic growth assumptions and the high prices are used with the low economic growth assumptions referred to in Table 2.

<sup>b</sup> Average for all grades and services.

<sup>c</sup> Retail residual fuel oil--average, all sulfur contents.

Notes: Fourth quarter 1985 estimated for all fuels, except gasoline. All prices exclude taxes, except gasoline, residential natural gas, and diesel. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10) and *Petroleum Marketing Monthly*, DOE/EIA-0380(85/10).

**Table 6. Quarterly Supply and Disposition of Petroleum: Base Case  
(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Crude Oil Supply													
Domestic Production <sup>a</sup>	<b>8.93</b>	<b>8.93</b>	<b>8.89</b>	<b>8.95</b>	<i>8.94</i>	<i>8.93</i>	<i>8.96</i>	<i>9.00</i>	<i>9.01</i>	<i>9.01</i>	<b>8.88</b>	<b>8.92</b>	<i>8.96</i>
Alaska	<b>1.79</b>	<b>1.79</b>	<b>1.80</b>	<b>1.82</b>	<i>1.82</i>	<i>1.82</i>	<i>1.84</i>	<i>1.85</i>	<i>1.88</i>	<i>1.88</i>	<b>1.72</b>	<b>1.80</b>	<i>1.83</i>
Lower 48	<b>7.14</b>	<b>7.14</b>	<b>7.09</b>	<b>7.13</b>	<i>7.12</i>	<i>7.11</i>	<i>7.12</i>	<i>7.15</i>	<i>7.13</i>	<i>7.13</i>	<b>7.16</b>	<b>7.12</b>	<i>7.12</i>
Net Imports (Including SPR) <sup>b</sup>	<b>2.38</b>	<b>3.20</b>	<b>2.98</b>	<b>3.51</b>	<i>3.48</i>	<i>3.40</i>	<i>3.50</i>	<i>3.41</i>	<i>3.36</i>	<i>3.35</i>	<b>3.25</b>	<b>3.02</b>	<i>3.45</i>
Gross Imports (Excluding SPR)	<b>2.44</b>	<b>3.27</b>	<b>3.03</b>	<b>3.64</b>	<i>3.65</i>	<i>3.62</i>	<i>3.67</i>	<i>3.59</i>	<i>3.55</i>	<i>3.57</i>	<b>3.23</b>	<b>3.10</b>	<i>3.63</i>
SPR Imports	<b>.12</b>	<b>.16</b>	<b>.14</b>	<b>.05</b>	<i>.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>.20</b>	<b>.12</b>	<i>.00</i>
Exports	<b>.18</b>	<b>.24</b>	<b>.19</b>	<b>.18</b>	<i>.19</i>	<i>.22</i>	<i>.17</i>	<i>.18</i>	<i>.19</i>	<i>.22</i>	<b>.18</b>	<b>.20</b>	<i>.19</i>
SPR Stock Withdrawn or Added (-)	<b>-.12</b>	<b>-.16</b>	<b>-.14</b>	<b>-.04</b>	<i>-.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>-.20</b>	<b>-.12</b>	<i>.00</i>
Other Stock Withdrawn or Added (-)	<b>.18</b>	<b>-.15</b>	<b>.29</b>	<b>-.09</b>	<i>.00</i>	<i>-.01</i>	<i>.04</i>	<i>-.07</i>	<i>.01</i>	<i>.01</i>	<b>.00</b>	<b>.06</b>	<i>-.01</i>
Products Supplied and Losses	<b>-.07</b>	<b>-.06</b>	<b>-.06</b>	<b>-.06</b>	<i>-.06</i>	<i>-.07</i>	<i>-.06</i>	<i>-.07</i>	<i>-.07</i>	<i>-.07</i>	<b>-.07</b>	<b>-.06</b>	<i>-.06</i>
Unaccounted-for Crude	<b>.13</b>	<b>.36</b>	<b>.21</b>	<b>.11</b>	<i>.17</i>	<i>.12</i>	<i>.06</i>	<i>.25</i>	<i>.14</i>	<i>.11</i>	<b>.18</b>	<b>.20</b>	<i>.15</i>
Crude Oil Input to Refineries	<b>11.42</b>	<b>12.11</b>	<b>12.17</b>	<b>12.38</b>	<i>12.51</i>	<i>12.37</i>	<i>12.50</i>	<i>12.52</i>	<i>12.46</i>	<i>12.41</i>	<b>12.04</b>	<b>12.02</b>	<i>12.47</i>
Other Supply													
NGL Production	<b>1.63</b>	<b>1.61</b>	<b>1.60</b>	<b>1.63</b>	<i>1.63</i>	<i>1.57</i>	<i>1.54</i>	<i>1.63</i>	<i>1.61</i>	<i>1.58</i>	<b>1.63</b>	<b>1.61</b>	<i>1.59</i>
Other Hydrocarbon and Alcohol Inputs	<b>.04</b>	<b>.04</b>	<b>.06</b>	<b>.07</b>	<i>.04</i>	<i>.05</i>	<i>.06</i>	<i>.05</i>	<i>.05</i>	<i>.05</i>	<b>.05</b>	<b>.05</b>	<i>.05</i>
Crude Oil Product Supplied	<b>.07</b>	<b>.06</b>	<b>.06</b>	<b>.06</b>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<b>.06</b>	<b>.06</b>	<i>.06</i>
Processing Gain	<b>.43</b>	<b>.51</b>	<b>.58</b>	<b>.57</b>	<i>.48</i>	<i>.48</i>	<i>.54</i>	<i>.52</i>	<i>.49</i>	<i>.50</i>	<b>.55</b>	<b>.52</b>	<i>.50</i>
Net Product Imports <sup>c</sup>	<b>1.19</b>	<b>1.37</b>	<b>1.14</b>	<b>1.28</b>	<i>.89</i>	<i>.85</i>	<i>1.28</i>	<i>1.39</i>	<i>1.09</i>	<i>1.10</i>	<b>1.47</b>	<b>1.25</b>	<i>1.11</i>
Gross Product Imports <sup>c</sup>	<b>1.78</b>	<b>1.85</b>	<b>1.69</b>	<b>1.93</b>	<i>1.44</i>	<i>1.37</i>	<i>1.79</i>	<i>1.96</i>	<i>1.65</i>	<i>1.63</i>	<b>2.01</b>	<b>1.81</b>	<i>1.64</i>
Product Exports	<b>.59</b>	<b>.48</b>	<b>.55</b>	<b>.65</b>	<i>.55</i>	<i>.52</i>	<i>.51</i>	<i>.57</i>	<i>.56</i>	<i>.53</i>	<b>.54</b>	<b>.57</b>	<i>.54</i>
Product Stock Withdrawn or Added (-) <sup>d</sup>	<b>1.02</b>	<b>-.24</b>	<b>-.04</b>	<b>-.14</b>	<i>.11</i>	<i>.13</i>	<i>-.14</i>	<i>-.07</i>	<i>.36</i>	<i>.10</i>	<b>-.08</b>	<b>.15</b>	<i>.01</i>
Total Product Supplied, Domestic Use	<b>15.80</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>15.73</i>	<i>15.52</i>	<i>15.84</i>	<i>16.11</i>	<i>16.11</i>	<i>15.81</i>	<b>15.73</b>	<b>15.66</b>	<i>15.80</i>
<b>Disposition</b>													
Motor Gasoline	<b>6.49</b>	<b>6.98</b>	<b>6.96</b>	<b>6.78</b>	<i>6.44</i>	<i>7.03</i>	<i>7.10</i>	<i>6.95</i>	<i>6.65</i>	<i>7.20</i>	<b>6.69</b>	<b>6.80</b>	<i>6.88</i>
Jet Fuel	<b>1.16</b>	<b>1.16</b>	<b>1.19</b>	<b>1.29</b>	<i>1.21</i>	<i>1.18</i>	<i>1.23</i>	<i>1.21</i>	<i>1.24</i>	<i>1.20</i>	<b>1.18</b>	<b>1.20</b>	<i>1.21</i>
Distillate Fuel Oil	<b>3.28</b>	<b>2.65</b>	<b>2.56</b>	<b>2.94</b>	<i>3.02</i>	<i>2.72</i>	<i>2.61</i>	<i>3.05</i>	<i>3.09</i>	<i>2.79</i>	<b>2.84</b>	<b>2.86</b>	<i>2.85</i>
Residual Fuel Oil	<b>1.36</b>	<b>1.15</b>	<b>1.05</b>	<b>1.19</b>	<i>1.39</i>	<i>1.06</i>	<i>1.03</i>	<i>1.15</i>	<i>1.42</i>	<i>1.03</i>	<b>1.37</b>	<b>1.19</b>	<i>1.16</i>
Other Oils Supplied <sup>e</sup>	<b>3.52</b>	<b>3.51</b>	<b>3.80</b>	<b>3.64</b>	<i>3.66</i>	<i>3.54</i>	<i>3.87</i>	<i>3.76</i>	<i>3.71</i>	<i>3.58</i>	<b>3.64</b>	<b>3.62</b>	<i>3.71</i>
Total Product Supplied	<b>15.81</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>15.73</i>	<i>15.52</i>	<i>15.84</i>	<i>16.11</i>	<i>16.11</i>	<i>15.81</i>	<b>15.73</b>	<b>15.67</b>	<i>15.80</i>
Total Petroleum Net Imports	<b>3.56</b>	<b>4.57</b>	<b>4.12</b>	<b>4.79</b>	<i>4.37</i>	<i>4.25</i>	<i>4.78</i>	<i>4.80</i>	<i>4.45</i>	<i>4.45</i>	<b>4.72</b>	<b>4.26</b>	<i>4.55</i>
<b>Closing Stocks (million barrels)</b>													
Crude Oil (Excluding SPR) <sup>f</sup>	<b>329.1</b>	<b>342.9</b>	<b>316.6</b>	<b>325.0</b>	<i>324.8</i>	<i>325.9</i>	<i>322.0</i>	<i>328.5</i>	<i>327.8</i>	<i>327.0</i>	<b>345.4</b>	<b>325.0</b>	<i>328.5</i>
Total Motor Gasoline	<b>220.1</b>	<b>219.8</b>	<b>224.2</b>	<b>225.1</b>	<i>236.7</i>	<i>215.4</i>	<i>215.1</i>	<i>219.3</i>	<i>225.9</i>	<i>205.3</i>	<b>243.3</b>	<b>225.1</b>	<i>219.3</i>
Finished Motor Gasoline	<b>186.4</b>	<b>186.3</b>	<b>187.2</b>	<b>190.3</b>	<i>199.3</i>	<i>181.7</i>	<i>184.0</i>	<i>186.0</i>	<i>191.6</i>	<i>175.7</i>	<b>205.2</b>	<b>190.3</b>	<i>186.0</i>
Blending Components	<b>33.7</b>	<b>33.5</b>	<b>37.0</b>	<b>34.8</b>	<i>37.4</i>	<i>33.7</i>	<i>31.0</i>	<i>33.3</i>	<i>34.3</i>	<i>29.6</i>	<b>38.1</b>	<b>34.8</b>	<i>33.3</i>
Jet Fuel	<b>44.1</b>	<b>42.4</b>	<b>42.1</b>	<b>40.8</b>	<i>48.3</i>	<i>47.3</i>	<i>43.9</i>	<i>44.5</i>	<i>45.5</i>	<i>45.7</i>	<b>42.0</b>	<b>40.8</b>	<i>44.5</i>
Distillate Fuel Oil	<b>99.4</b>	<b>110.0</b>	<b>117.1</b>	<b>144.6</b>	<i>110.3</i>	<i>112.0</i>	<i>140.3</i>	<i>148.9</i>	<i>112.4</i>	<i>113.3</i>	<b>161.1</b>	<b>144.6</b>	<i>148.9</i>
Residual Fuel Oil	<b>46.3</b>	<b>40.2</b>	<b>42.8</b>	<b>49.9</b>	<i>49.9</i>	<i>46.2</i>	<i>48.2</i>	<i>53.6</i>	<i>50.6</i>	<i>51.4</i>	<b>53.0</b>	<b>49.9</b>	<i>53.6</i>
Other Oils <sup>g</sup>	<b>258.7</b>	<b>278.1</b>	<b>267.8</b>	<b>246.9</b>	<i>252.4</i>	<i>264.7</i>	<i>251.0</i>	<i>238.8</i>	<i>238.7</i>	<i>248.4</i>	<b>261.0</b>	<b>246.9</b>	<i>238.8</i>
Total Stocks (Excluding SPR)	<b>997.7</b>	<b>1033.4</b>	<b>1010.6</b>	<b>1032.3</b>	<i>1022.5</i>	<i>1011.5</i>	<i>1020.4</i>	<i>1033.6</i>	<i>1000.8</i>	<i>991.0</i>	<b>1105.7</b>	<b>1032.3</b>	<i>1033.6</i>
Crude Oil in SPR	<b>461.6</b>	<b>476.6</b>	<b>489.3</b>	<b>493.1</b>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<b>450.5</b>	<b>493.1</b>	<i>494.7</i>
Total Stocks (Including SPR)	<b>1459.3</b>	<b>1510.0</b>	<b>1499.9</b>	<b>1525.5</b>	<i>1517.1</i>	<i>1506.2</i>	<i>1515.1</i>	<i>1528.3</i>	<i>1495.5</i>	<i>1485.7</i>	<b>1556.2</b>	<b>1525.5</b>	<i>1528.3</i>

<sup>a</sup> Includes lease condensate.

<sup>b</sup> Net Imports equals Gross Imports plus SPR Imports minus Exports.

<sup>c</sup> Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

<sup>d</sup> Includes an estimate of minor product stock change based on monthly data.

<sup>e</sup> Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.

<sup>f</sup> Includes crude oil in transit to refineries.

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(84/1); *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 7. Quarterly Supply and Disposition of Petroleum: High Economic Growth Case**  
(Million Barrels per Day, Except Stocks)

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
<b>Crude Oil Supply</b>													
Domestic Production <sup>a</sup> .....	<b>8.93</b>	<b>8.93</b>	<b>8.89</b>	<b>8.95</b>	<i>8.94</i>	<i>8.93</i>	<i>8.96</i>	<i>9.00</i>	<i>9.01</i>	<i>9.01</i>	<b>8.88</b>	<b>8.92</b>	<i>8.96</i>
Alaska .....	<b>1.79</b>	<b>1.79</b>	<b>1.80</b>	<b>1.82</b>	<i>1.82</i>	<i>1.82</i>	<i>1.84</i>	<i>1.85</i>	<i>1.88</i>	<i>1.88</i>	<b>1.72</b>	<b>1.80</b>	<i>1.83</i>
Lower 48 .....	<b>7.14</b>	<b>7.14</b>	<b>7.09</b>	<b>7.13</b>	<i>7.12</i>	<i>7.11</i>	<i>7.12</i>	<i>7.15</i>	<i>7.13</i>	<i>7.13</i>	<b>7.16</b>	<b>7.12</b>	<i>7.12</i>
Net Imports (Including SPR) <sup>b</sup> .....	<b>2.38</b>	<b>3.20</b>	<b>2.98</b>	<b>3.51</b>	<i>3.52</i>	<i>3.47</i>	<i>3.52</i>	<i>3.39</i>	<i>3.36</i>	<i>3.34</i>	<b>3.25</b>	<b>3.02</b>	<i>3.47</i>
<b>Gross Imports</b>													
(Excluding SPR) .....	<b>2.44</b>	<b>3.27</b>	<b>3.03</b>	<b>3.64</b>	<i>3.69</i>	<i>3.69</i>	<i>3.70</i>	<i>3.57</i>	<i>3.55</i>	<i>3.56</i>	<b>3.23</b>	<b>3.10</b>	<i>3.66</i>
SPR Imports .....	<b>.12</b>	<b>.16</b>	<b>.14</b>	<b>.05</b>	<i>.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>.20</b>	<b>.12</b>	<i>.00</i>
Exports .....	<b>.18</b>	<b>.24</b>	<b>.19</b>	<b>.18</b>	<i>.19</i>	<i>.22</i>	<i>.17</i>	<i>.18</i>	<i>.19</i>	<i>.22</i>	<b>.18</b>	<b>.20</b>	<i>.19</i>
SPR Stock Withdrawn or Added (-) .....	<b>-.12</b>	<b>-.16</b>	<b>-.14</b>	<b>-.04</b>	<i>-.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>-.20</b>	<b>-.12</b>	<i>.00</i>
Other Stock Withdrawn or Added (-) .....	<b>.18</b>	<b>-.15</b>	<b>.29</b>	<b>-.09</b>	<i>.03</i>	<i>-.02</i>	<i>.02</i>	<i>-.04</i>	<i>.00</i>	<i>.00</i>	<b>.00</b>	<b>.06</b>	<i>.00</i>
Products Supplied and Losses .....	<b>-.07</b>	<b>-.06</b>	<b>-.06</b>	<b>-.06</b>	<i>-.06</i>	<i>-.07</i>	<i>-.07</i>	<i>-.07</i>	<i>-.07</i>	<i>-.07</i>	<b>-.07</b>	<b>-.06</b>	<i>-.07</i>
Unaccounted-for Crude .....	<b>.13</b>	<b>.36</b>	<b>.21</b>	<b>.11</b>	<i>.17</i>	<i>.15</i>	<i>.09</i>	<i>.25</i>	<i>.18</i>	<i>.16</i>	<b>.18</b>	<b>.20</b>	<i>.16</i>
Crude Oil Input to Refineries .....	<b>11.42</b>	<b>12.11</b>	<b>12.17</b>	<b>12.38</b>	<i>12.58</i>	<i>12.45</i>	<i>12.52</i>	<i>12.54</i>	<i>12.49</i>	<i>12.45</i>	<b>12.04</b>	<b>12.02</b>	<i>12.52</i>
<b>Other Supply</b>													
NGL Production .....	<b>1.63</b>	<b>1.61</b>	<b>1.60</b>	<b>1.63</b>	<i>1.63</i>	<i>1.58</i>	<i>1.54</i>	<i>1.64</i>	<i>1.62</i>	<i>1.59</i>	<b>1.63</b>	<b>1.61</b>	<i>1.60</i>
Other Hydrocarbon and Alcohol Inputs .....	<b>.04</b>	<b>.04</b>	<b>.06</b>	<b>.07</b>	<i>.04</i>	<i>.05</i>	<i>.06</i>	<i>.06</i>	<i>.05</i>	<i>.06</i>	<b>.05</b>	<b>.05</b>	<i>.05</i>
Crude Oil Product Supplied .....	<b>.07</b>	<b>.06</b>	<b>.06</b>	<b>.06</b>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<b>.06</b>	<b>.06</b>	<i>.06</i>
Processing Gain .....	<b>.43</b>	<b>.51</b>	<b>.58</b>	<b>.57</b>	<i>.43</i>	<i>.50</i>	<i>.62</i>	<i>.56</i>	<i>.55</i>	<i>.58</i>	<b>.55</b>	<b>.52</b>	<i>.53</i>
Net Product Imports <sup>c</sup> .....	<b>1.19</b>	<b>1.37</b>	<b>1.14</b>	<b>1.28</b>	<i>.97</i>	<i>1.54</i>	<i>2.09</i>	<i>2.00</i>	<i>1.61</i>	<i>2.21</i>	<b>1.47</b>	<b>1.25</b>	<i>1.65</i>
Gross Product Imports <sup>c</sup> .....	<b>1.78</b>	<b>1.85</b>	<b>1.69</b>	<b>1.93</b>	<i>1.53</i>	<i>2.06</i>	<i>2.60</i>	<i>2.57</i>	<i>2.17</i>	<i>2.73</i>	<b>2.01</b>	<b>1.81</b>	<i>2.19</i>
Product Exports .....	<b>.59</b>	<b>.48</b>	<b>.55</b>	<b>.65</b>	<i>.55</i>	<i>.52</i>	<i>.51</i>	<i>.57</i>	<i>.56</i>	<i>.53</i>	<b>.54</b>	<b>.57</b>	<i>.54</i>
Product Stock Withdrawn or Added (-) <sup>d</sup> .....	<b>1.02</b>	<b>-.24</b>	<b>-.04</b>	<b>-.14</b>	<i>.28</i>	<i>-.08</i>	<i>-.37</i>	<i>.04</i>	<i>.63</i>	<i>-.13</i>	<b>-.08</b>	<b>.15</b>	<i>-.04</i>
Total Product Supplied, Domestic Use .....	<b>15.80</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>16.00</i>	<i>16.10</i>	<i>16.52</i>	<i>16.90</i>	<i>17.01</i>	<i>16.81</i>	<b>15.73</b>	<b>15.66</b>	<i>16.38</i>
<b>Disposition</b>													
Motor Gasoline .....	<b>6.49</b>	<b>6.98</b>	<b>6.96</b>	<b>6.78</b>	<i>6.56</i>	<i>7.31</i>	<i>7.44</i>	<i>7.34</i>	<i>7.05</i>	<i>7.66</i>	<b>6.69</b>	<b>6.80</b>	<i>7.16</i>
Jet Fuel .....	<b>1.16</b>	<b>1.16</b>	<b>1.19</b>	<b>1.29</b>	<i>1.22</i>	<i>1.19</i>	<i>1.24</i>	<i>1.23</i>	<i>1.27</i>	<i>1.23</i>	<b>1.18</b>	<b>1.20</b>	<i>1.22</i>
Distillate Fuel Oil .....	<b>3.28</b>	<b>2.65</b>	<b>2.56</b>	<b>2.94</b>	<i>3.09</i>	<i>2.86</i>	<i>2.77</i>	<i>3.23</i>	<i>3.29</i>	<i>3.01</i>	<b>2.84</b>	<b>2.86</b>	<i>2.99</i>
Residual Fuel Oil .....	<b>1.36</b>	<b>1.15</b>	<b>1.05</b>	<b>1.19</b>	<i>1.44</i>	<i>1.14</i>	<i>1.11</i>	<i>1.23</i>	<i>1.52</i>	<i>1.13</i>	<b>1.37</b>	<b>1.19</b>	<i>1.23</i>
Other Oils Supplied <sup>e</sup> .....	<b>3.52</b>	<b>3.51</b>	<b>3.80</b>	<b>3.64</b>	<i>3.69</i>	<i>3.60</i>	<i>3.97</i>	<i>3.87</i>	<i>3.88</i>	<i>3.78</i>	<b>3.64</b>	<b>3.62</b>	<i>3.78</i>
Total Product Supplied .....	<b>15.81</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>16.00</i>	<i>16.10</i>	<i>16.52</i>	<i>16.90</i>	<i>17.01</i>	<i>16.81</i>	<b>15.73</b>	<b>15.67</b>	<i>16.38</i>
Total Petroleum Net Imports .....	<b>3.56</b>	<b>4.57</b>	<b>4.12</b>	<b>4.79</b>	<i>4.50</i>	<i>5.00</i>	<i>5.61</i>	<i>5.39</i>	<i>4.96</i>	<i>5.54</i>	<b>4.72</b>	<b>4.26</b>	<i>5.13</i>
<b>Stocks (million barrels)</b>													
Crude Oil (Excluding SPR) <sup>f</sup> .....	<b>329.1</b>	<b>342.9</b>	<b>316.6</b>	<b>325.0</b>	<i>322.4</i>	<i>324.3</i>	<i>322.8</i>	<i>326.3</i>	<i>326.3</i>	<i>326.1</i>	<b>345.4</b>	<b>325.0</b>	<i>326.3</i>
Total Motor Gasoline .....	<b>220.1</b>	<b>219.8</b>	<b>224.2</b>	<b>225.1</b>	<i>232.8</i>	<i>217.4</i>	<i>222.2</i>	<i>223.6</i>	<i>225.4</i>	<i>209.7</i>	<b>243.3</b>	<b>225.1</b>	<i>223.6</i>
Finished Motor Gasoline .....	<b>186.4</b>	<b>186.3</b>	<b>187.2</b>	<b>190.3</b>	<i>196.8</i>	<i>186.0</i>	<i>192.3</i>	<i>191.7</i>	<i>194.4</i>	<i>183.5</i>	<b>205.2</b>	<b>190.3</b>	<i>191.7</i>
Blending Components .....	<b>33.7</b>	<b>33.5</b>	<b>37.0</b>	<b>34.8</b>	<i>36.0</i>	<i>31.3</i>	<i>29.8</i>	<i>31.9</i>	<i>31.1</i>	<i>26.2</i>	<b>38.1</b>	<b>34.8</b>	<i>31.9</i>
Jet Fuel .....	<b>44.1</b>	<b>42.4</b>	<b>42.1</b>	<b>40.8</b>	<i>47.0</i>	<i>46.5</i>	<i>43.2</i>	<i>42.3</i>	<i>43.1</i>	<i>43.7</i>	<b>42.0</b>	<b>40.8</b>	<i>42.3</i>
Distillate Fuel Oil .....	<b>99.4</b>	<b>110.0</b>	<b>117.1</b>	<b>144.6</b>	<i>104.9</i>	<i>117.7</i>	<i>152.6</i>	<i>159.3</i>	<i>110.6</i>	<i>122.9</i>	<b>161.1</b>	<b>144.6</b>	<i>159.3</i>
Residual Fuel Oil .....	<b>46.3</b>	<b>40.2</b>	<b>42.8</b>	<b>49.9</b>	<i>50.3</i>	<i>44.0</i>	<i>44.4</i>	<i>51.2</i>	<i>46.1</i>	<i>46.9</i>	<b>53.0</b>	<b>49.9</b>	<i>51.2</i>
Other Oils <sup>g</sup> .....	<b>258.7</b>	<b>278.1</b>	<b>267.8</b>	<b>246.9</b>	<i>247.4</i>	<i>264.5</i>	<i>261.9</i>	<i>244.3</i>	<i>238.3</i>	<i>252.5</i>	<b>261.0</b>	<b>246.9</b>	<i>244.3</i>
Total Stocks (Excluding SPR) .....	<b>997.7</b>	<b>1033.4</b>	<b>1010.6</b>	<b>1032.3</b>	<i>1004.8</i>	<i>1014.4</i>	<i>1047.1</i>	<i>1046.9</i>	<i>989.8</i>	<i>1001.8</i>	<b>1105.7</b>	<b>1032.3</b>	<i>1046.9</i>
Crude Oil in SPR .....	<b>461.6</b>	<b>476.6</b>	<b>489.3</b>	<b>493.1</b>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<b>450.5</b>	<b>493.1</b>	<i>494.7</i>
Total Stocks (Including SPR) .....	<b>1459.3</b>	<b>1510.0</b>	<b>1499.9</b>	<b>1525.5</b>	<i>1499.5</i>	<i>1509.0</i>	<i>1541.8</i>	<i>1541.6</i>	<i>1484.5</i>	<i>1496.5</i>	<b>1556.2</b>	<b>1525.5</b>	<i>1541.6</i>

<sup>a</sup> Includes lease condensate.

<sup>b</sup> Net Imports equals Gross Imports plus SPR Imports minus Exports.

<sup>c</sup> Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

<sup>d</sup> Includes an estimate of minor product stock change based on monthly data.

<sup>e</sup> Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.

<sup>f</sup> Includes crude oil in transit to refineries.

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(84/1); *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 8. Quarterly Supply and Disposition of Petroleum: Low Economic Growth Case**  
**(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Crude Oil Supply	-												
Domestic Production <sup>a</sup>	<b>8.93</b>	<b>8.93</b>	<b>8.89</b>	<b>8.95</b>	<i>8.94</i>	<i>8.93</i>	<i>8.96</i>	<i>9.00</i>	<i>9.01</i>	<i>9.01</i>	<b>8.88</b>	<b>8.92</b>	<i>8.96</i>
Alaska	<b>1.79</b>	<b>1.79</b>	<b>1.80</b>	<b>1.82</b>	<i>1.82</i>	<i>1.82</i>	<i>1.84</i>	<i>1.85</i>	<i>1.88</i>	<i>1.88</i>	<b>1.72</b>	<b>1.80</b>	<i>1.83</i>
Lower 48	<b>7.14</b>	<b>7.14</b>	<b>7.09</b>	<b>7.13</b>	<i>7.12</i>	<i>7.11</i>	<i>7.12</i>	<i>7.15</i>	<i>7.13</i>	<i>7.13</i>	<b>7.16</b>	<b>7.12</b>	<i>7.12</i>
Net Imports (Including SPR) <sup>b</sup>	<b>2.38</b>	<b>3.20</b>	<b>2.98</b>	<b>3.51</b>	<i>2.58</i>	<i>2.86</i>	<i>3.31</i>	<i>2.93</i>	<i>2.57</i>	<i>2.85</i>	<b>3.25</b>	<b>3.02</b>	<i>2.92</i>
Gross Imports													
(Excluding SPR)	<b>2.44</b>	<b>3.27</b>	<b>3.03</b>	<b>3.64</b>	<i>2.75</i>	<i>3.08</i>	<i>3.48</i>	<i>3.11</i>	<i>2.75</i>	<i>3.07</i>	<b>3.23</b>	<b>3.10</b>	<i>3.11</i>
SPR Imports	<b>.12</b>	<b>.16</b>	<b>.14</b>	<b>.05</b>	<i>.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>.20</b>	<b>.12</b>	<i>.00</i>
Exports	<b>.18</b>	<b>.24</b>	<b>.19</b>	<b>.18</b>	<i>.19</i>	<i>.22</i>	<i>.17</i>	<i>.18</i>	<i>.19</i>	<i>.22</i>	<b>.18</b>	<b>.20</b>	<i>.19</i>
SPR Stock Withdrawn													
or Added (-)	<b>-.12</b>	<b>-.16</b>	<b>-.14</b>	<b>-.04</b>	<i>-.02</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<i>.00</i>	<b>-.20</b>	<b>-.12</b>	<i>.00</i>
Other Stock Withdrawn													
or Added (-)	<b>.18</b>	<b>-.15</b>	<b>.29</b>	<b>-.09</b>	<i>.28</i>	<i>-.11</i>	<i>-.07</i>	<i>.03</i>	<i>.12</i>	<i>-.09</i>	<b>.00</b>	<b>.06</b>	<i>.03</i>
Products Supplied and Losses	<b>-.07</b>	<b>-.06</b>	<b>-.06</b>	<b>-.06</b>	<i>-.06</i>	<i>-.06</i>	<i>-.06</i>	<i>-.06</i>	<i>-.06</i>	<i>-.06</i>	<b>-.07</b>	<b>-.06</b>	<i>-.06</i>
Unaccounted-for Crude	<b>.13</b>	<b>.36</b>	<b>.21</b>	<b>.11</b>	<i>.29</i>	<i>.24</i>	<i>.09</i>	<i>.36</i>	<i>.29</i>	<i>.24</i>	<b>.18</b>	<b>.20</b>	<i>.25</i>
Crude Oil Input to Refineries	<b>11.42</b>	<b>12.11</b>	<b>12.17</b>	<b>12.38</b>	<i>12.01</i>	<i>11.85</i>	<i>12.23</i>	<i>12.25</i>	<i>11.92</i>	<i>11.95</i>	<b>12.04</b>	<b>12.02</b>	<i>12.09</i>
<b>Other Supply</b>													
NGL Production	<b>1.63</b>	<b>1.61</b>	<b>1.60</b>	<b>1.63</b>	<i>1.63</i>	<i>1.57</i>	<i>1.53</i>	<i>1.63</i>	<i>1.61</i>	<i>1.58</i>	<b>1.63</b>	<b>1.61</b>	<i>1.59</i>
Other Hydrocarbon and													
Alcohol Inputs	<b>.04</b>	<b>.04</b>	<b>.06</b>	<b>.07</b>	<i>.04</i>	<i>.05</i>	<i>.06</i>	<i>.05</i>	<i>.04</i>	<i>.05</i>	<b>.05</b>	<b>.05</b>	<i>.05</i>
Crude Oil Product Supplied	<b>.07</b>	<b>.06</b>	<b>.06</b>	<b>.06</b>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<i>.06</i>	<b>.06</b>	<b>.06</b>	<i>.06</i>
Processing Gain	<b>.43</b>	<b>.51</b>	<b>.58</b>	<b>.57</b>	<i>.51</i>	<i>.52</i>	<i>.52</i>	<i>.45</i>	<i>.48</i>	<i>.49</i>	<b>.55</b>	<b>.52</b>	<i>.50</i>
Net Product Imports <sup>c</sup>	<b>1.19</b>	<b>1.37</b>	<b>1.14</b>	<b>1.28</b>	<i>.91</i>	<i>1.05</i>	<i>1.21</i>	<i>.94</i>	<i>.77</i>	<i>1.06</i>	<b>1.47</b>	<b>1.25</b>	<i>1.03</i>
Gross Product Imports <sup>d</sup>	<b>1.78</b>	<b>1.85</b>	<b>1.69</b>	<b>1.93</b>	<i>1.46</i>	<i>1.57</i>	<i>1.72</i>	<i>1.50</i>	<i>1.33</i>	<i>1.59</i>	<b>2.01</b>	<b>1.81</b>	<i>1.56</i>
Product Exports	<b>.59</b>	<b>.48</b>	<b>.55</b>	<b>.65</b>	<i>.55</i>	<i>.52</i>	<i>.51</i>	<i>.57</i>	<i>.56</i>	<i>.53</i>	<b>.54</b>	<b>.57</b>	<i>.54</i>
Product Stock Withdrawn													
or Added (-) <sup>e</sup>	<b>1.02</b>	<b>-.24</b>	<b>-.04</b>	<b>-.14</b>	<i>.43</i>	<i>.00</i>	<i>-.44</i>	<i>.04</i>	<i>.61</i>	<i>-.06</i>	<b>-.08</b>	<b>.15</b>	<i>.01</i>
Total Product Supplied													
Domestic Use	<b>15.80</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>15.61</i>	<i>15.11</i>	<i>15.17</i>	<i>15.42</i>	<i>15.49</i>	<i>15.13</i>	<b>15.73</b>	<b>15.66</b>	<i>15.33</i>
<b>Disposition</b>													
Motor Gasoline	<b>6.49</b>	<b>6.98</b>	<b>6.96</b>	<b>6.78</b>	<i>6.39</i>	<i>6.82</i>	<i>6.77</i>	<i>6.63</i>	<i>6.36</i>	<i>6.88</i>	<b>6.69</b>	<b>6.80</b>	<i>6.66</i>
Jet Fuel	<b>1.16</b>	<b>1.16</b>	<b>1.19</b>	<b>1.29</b>	<i>1.21</i>	<i>1.17</i>	<i>1.21</i>	<i>1.19</i>	<i>1.22</i>	<i>1.18</i>	<b>1.18</b>	<b>1.20</b>	<i>1.19</i>
Distillate Fuel Oil	<b>3.28</b>	<b>2.65</b>	<b>2.56</b>	<b>2.94</b>	<i>2.99</i>	<i>2.62</i>	<i>2.46</i>	<i>2.88</i>	<i>2.93</i>	<i>2.62</i>	<b>2.84</b>	<b>2.86</b>	<i>2.74</i>
Residual Fuel Oil	<b>1.36</b>	<b>1.15</b>	<b>1.05</b>	<b>1.19</b>	<i>1.37</i>	<i>1.01</i>	<i>.96</i>	<i>1.07</i>	<i>1.34</i>	<i>.96</i>	<b>1.37</b>	<b>1.19</b>	<i>1.10</i>
Other Oils Supplied <sup>f</sup>	<b>3.52</b>	<b>3.51</b>	<b>3.80</b>	<b>3.64</b>	<i>3.65</i>	<i>3.49</i>	<i>3.77</i>	<i>3.65</i>	<i>3.64</i>	<i>3.49</i>	<b>3.64</b>	<b>3.62</b>	<i>3.64</i>
Total Product Supplied	<b>15.81</b>	<b>15.45</b>	<b>15.56</b>	<b>15.84</b>	<i>15.61</i>	<i>15.11</i>	<i>15.17</i>	<i>15.42</i>	<i>15.49</i>	<i>15.13</i>	<b>15.73</b>	<b>15.67</b>	<i>15.33</i>
Total Petroleum Net Imports	<b>3.56</b>	<b>4.57</b>	<b>4.12</b>	<b>4.79</b>	<i>3.49</i>	<i>3.90</i>	<i>4.52</i>	<i>3.86</i>	<i>3.33</i>	<i>3.92</i>	<b>4.72</b>	<b>4.26</b>	<i>3.95</i>
<b>Stocks (million barrels)</b>													
Crude Oil (Excluding SPR) <sup>g</sup>	<b>329.1</b>	<b>342.9</b>	<b>316.6</b>	<b>325.0</b>	<i>299.5</i>	<i>309.5</i>	<i>315.9</i>	<i>313.0</i>	<i>302.1</i>	<i>310.4</i>	<b>345.4</b>	<b>325.0</b>	<i>313.0</i>
Total Motor Gasoline	<b>220.1</b>	<b>219.8</b>	<b>224.2</b>	<b>225.1</b>	<i>228.8</i>	<i>210.7</i>	<i>216.5</i>	<i>217.0</i>	<i>219.4</i>	<i>203.1</i>	<b>243.3</b>	<b>225.1</b>	<i>217.0</i>
Finished Motor Gasoline	<b>186.4</b>	<b>186.3</b>	<b>187.2</b>	<b>190.3</b>	<i>192.9</i>	<i>177.5</i>	<i>182.7</i>	<i>181.4</i>	<i>184.3</i>	<i>172.1</i>	<b>205.2</b>	<b>190.3</b>	<i>181.4</i>
Blending Components	<b>33.7</b>	<b>33.5</b>	<b>37.0</b>	<b>34.8</b>	<i>35.8</i>	<i>33.2</i>	<i>33.7</i>	<i>35.6</i>	<i>35.1</i>	<i>31.0</i>	<b>38.1</b>	<b>34.8</b>	<i>35.6</i>
Jet Fuel	<b>44.1</b>	<b>42.4</b>	<b>42.1</b>	<b>40.8</b>	<i>46.2</i>	<i>46.1</i>	<i>44.4</i>	<i>45.3</i>	<i>45.1</i>	<i>45.7</i>	<b>42.0</b>	<b>40.8</b>	<i>45.3</i>
Distillate Fuel Oil	<b>99.4</b>	<b>110.0</b>	<b>117.1</b>	<b>144.6</b>	<i>101.2</i>	<i>106.0</i>	<i>134.9</i>	<i>143.4</i>	<i>99.2</i>	<i>106.2</i>	<b>161.1</b>	<b>144.6</b>	<i>143.4</i>
Residual Fuel Oil	<b>46.3</b>	<b>40.2</b>	<b>42.8</b>	<b>49.9</b>	<i>49.0</i>	<i>45.6</i>	<i>49.7</i>	<i>55.6</i>	<i>51.8</i>	<i>51.8</i>	<b>53.0</b>	<b>49.9</b>	<i>55.6</i>
Other Oils <sup>h</sup>	<b>258.7</b>	<b>278.1</b>	<b>267.8</b>	<b>246.9</b>	<i>243.4</i>	<i>260.1</i>	<i>263.7</i>	<i>244.1</i>	<i>234.9</i>	<i>249.2</i>	<b>261.0</b>	<b>246.9</b>	<i>244.1</i>
Total Stocks (Excluding SPR)	<b>997.7</b>	<b>1033.4</b>	<b>1010.6</b>	<b>1032.3</b>	<i>968.0</i>	<i>978.1</i>	<i>1025.1</i>	<i>1018.5</i>	<i>952.5</i>	<i>966.4</i>	<b>1105.7</b>	<b>1032.3</b>	<i>1018.5</i>
Crude Oil in SPR	<b>461.6</b>	<b>476.6</b>	<b>489.3</b>	<b>493.1</b>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<i>494.7</i>	<b>450.5</b>	<b>493.1</b>	<i>494.7</i>
Total Stocks (Including SPR)	<b>1459.3</b>	<b>1510.0</b>	<b>1499.9</b>	<b>1525.5</b>	<i>1462.7</i>	<i>1472.7</i>	<i>1519.8</i>	<i>1513.1</i>	<i>1447.2</i>	<i>1461.0</i>	<b>1556.2</b>	<b>1525.5</b>	<i>1513.1</i>

<sup>a</sup> Includes lease condensate.

<sup>b</sup> Net Imports equals Gross Imports plus SPR Imports minus Exports.

<sup>c</sup> Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

<sup>d</sup> Includes an estimate of minor product stock change based on monthly data.

<sup>e</sup> Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.

<sup>f</sup> Includes crude oil in transit to refineries.

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(84/1); *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 9. Quarterly Supply and Disposition of Motor Gasoline: Base Case  
(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Domestic Production <sup>a</sup> .....	<b>5.94</b>	<b>6.54</b>	<b>6.63</b>	<b>6.48</b>	<i>6.31</i>	<i>6.57</i>	<i>6.78</i>	<i>6.63</i>	<i>6.43</i>	<i>6.68</i>	<b>6.45</b>	<b>6.40</b>	<i>6.58</i>
Imports .....	<b>.34</b>	<b>.45</b>	<b>.35</b>	<b>.35</b>	<i>.23</i>	<i>.27</i>	<i>.35</i>	<i>.34</i>	<i>.29</i>	<i>.35</i>	<b>.30</b>	<b>.37</b>	<i>.30</i>
Exports .....	<b>.00</b>	<b>.01</b>	<b>.01</b>	<b>.02</b>	<i>.01</i>	<i>.01</i>	<i>.01</i>	<i>.01</i>	<i>.01</i>	<i>.01</i>	<b>.01</b>	<b>.01</b>	<i>.01</i>
Net Imports .....	<b>.34</b>	<b>.44</b>	<b>.34</b>	<b>.33</b>	<i>.23</i>	<i>.27</i>	<i>.34</i>	<i>.34</i>	<i>.28</i>	<i>.34</i>	<b>.29</b>	<b>.36</b>	<i>.29</i>
Net Withdrawals .....	<b>.21</b>	<b>.00</b>	<b>-.01</b>	<b>-.03</b>	<i>-.10</i>	<i>.19</i>	<i>-.03</i>	<i>-.02</i>	<i>-.06</i>	<i>.17</i>	<b>-.05</b>	<b>.04</b>	<i>.01</i>
Total Primary Supply .....	<b>6.49</b>	<b>6.98</b>	<b>6.96</b>	<b>6.78</b>	<i>6.44</i>	<i>7.03</i>	<i>7.10</i>	<i>6.95</i>	<i>6.65</i>	<i>7.20</i>	<b>6.69</b>	<b>6.80</b>	<i>6.88</i>
<b>Disposition</b>													
Leaded .....	<b>2.41</b>	<b>2.56</b>	<b>2.40</b>	<b>2.28</b>	<i>1.99</i>	<i>2.06</i>	<i>1.95</i>	<i>1.79</i>	<i>1.63</i>	<i>1.67</i>	<b>2.71</b>	<b>2.41</b>	<i>1.95</i>
Unleaded .....	<b>4.09</b>	<b>4.42</b>	<b>4.56</b>	<b>4.50</b>	<i>4.45</i>	<i>4.97</i>	<i>5.14</i>	<i>5.16</i>	<i>5.02</i>	<i>5.53</i>	<b>3.99</b>	<b>4.39</b>	<i>4.93</i>
Total Product Supplied .....	<b>6.49</b>	<b>6.98</b>	<b>6.96</b>	<b>6.78</b>	<i>6.44</i>	<i>7.03</i>	<i>7.10</i>	<i>6.95</i>	<i>6.65</i>	<i>7.20</i>	<b>6.69</b>	<b>6.80</b>	<i>6.88</i>
<b>Stocks</b>													
Primary Finished Stock Levels <sup>b</sup> (million barrels)													
Opening .....	<b>205.19</b>	<b>186.38</b>	<b>186.32</b>	<b>187.22</b>	<i>190.31</i>	<i>199.31</i>	<i>181.72</i>	<i>184.04</i>	<i>185.97</i>	<i>191.57</i>	<b>185.50</b>	<b>205.19</b>	<i>190.31</i>
Closing .....	<b>186.38</b>	<b>186.32</b>	<b>187.22</b>	<b>190.31</b>	<i>199.31</i>	<i>181.72</i>	<i>184.04</i>	<i>185.97</i>	<i>191.57</i>	<i>175.65</i>	<b>205.19</b>	<b>190.31</b>	<i>185.97</i>

<sup>a</sup> Refinery Production plus production at natural gas processing plants.

<sup>b</sup> Includes stocks at natural gas processing plants. Excludes stocks of reclassified motor gasoline blending components.

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1; *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 10. Quarterly Supply and Disposition of Distillate Fuel Oil: Base Case  
(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Refinery Output .....	<b>2.45</b>	<b>2.60</b>	<b>2.62</b>	<b>3.03</b>	<i>2.64</i>	<i>2.62</i>	<i>2.77</i>	<i>2.92</i>	<i>2.69</i>	<i>2.68</i>	<b>2.68</b>	<b>2.67</b>	<i>2.74</i>
Imports .....	.19	.20	.13	.30	.06	.15	.20	.27	.05	.16	.27	.21	.17
Exports .....	.05	.03	.11	.08	.05	.03	.04	.05	.05	.03	.05	.07	.04
Net Imports .....	.14	.17	.02	.21	.00	.11	.16	.22	.00	.13	.22	.14	.13
Net Withdrawals .....	.69	-.12	-.08	-.30	.38	-.02	-.31	-.09	.41	-.01	-.06	.05	-.01
<b>Disposition</b>													
Electric Utility Consumption .....	.05	.03	.04	.04	.05	.03	.04	.04	.05	.03	.04	.04	.04
Utility Stock Additions .....	-.01	-.01	-.01	.00	.00	.00	-.01	.00	.00	.00	.00	-.01	.00
Electric Utility Shipments .....	.04	.02	.03	.04	.05	.03	.03	.04	.05	.03	.04	.03	.04
Nonutility Shipments .....	<b>3.24</b>	<b>2.63</b>	<b>2.53</b>	<b>2.91</b>	<i>2.97</i>	<i>2.69</i>	<i>2.59</i>	<i>3.01</i>	<i>3.04</i>	<i>2.76</i>	<b>2.80</b>	<b>2.82</b>	<i>2.81</i>
Total Product Supplied .....	<b>3.28</b>	<b>2.65</b>	<b>2.56</b>	<b>2.94</b>	<i>3.02</i>	<i>2.72</i>	<i>2.61</i>	<i>3.05</i>	<i>3.09</i>	<i>2.79</i>	<b>2.84</b>	<b>2.86</b>	<i>2.85</i>
<b>Stocks</b>													
Electric Utility Stock Levels (million barrels)													
Opening .....	<b>19.12</b>	<b>17.80</b>	<b>17.09</b>	<b>16.41</b>	<i>16.20</i>	<i>16.02</i>	<i>15.92</i>	<i>15.17</i>	<i>15.09</i>	<i>14.82</i>	<b>18.80</b>	<b>19.12</b>	<i>16.20</i>
Closing .....	<b>17.80</b>	<b>17.09</b>	<b>16.41</b>	<b>16.20</b>	<i>16.02</i>	<i>15.92</i>	<i>15.17</i>	<i>15.09</i>	<i>14.82</i>	<i>14.72</i>	<b>19.12</b>	<b>16.20</b>	<i>15.09</i>
Primary Stock Levels (million barrels)													
Opening .....	<b>161.07</b>	<b>99.38</b>	<b>109.98</b>	<b>117.13</b>	<i>144.59</i>	<i>110.34</i>	<i>112.00</i>	<i>140.27</i>	<i>148.91</i>	<i>112.37</i>	<b>140.26</b>	<b>161.07</b>	<i>144.59</i>
Closing .....	<b>99.38</b>	<b>109.98</b>	<b>117.13</b>	<b>144.59</b>	<i>110.34</i>	<i>112.00</i>	<i>140.27</i>	<i>148.91</i>	<i>112.37</i>	<i>113.32</i>	<b>161.07</b>	<b>144.59</b>	<i>148.91</i>

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.  
Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1; *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; the *Monthly Energy Review*, DOE/EIA-0035(85/10); the *Electric Power Monthly*, DOE/EIA-0226(85/11); and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 11. Quarterly Supply and Disposition of Residual Fuel Oil: Base Case  
(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Refinery Output .....	<b>0.99</b>	<b>0.78</b>	<b>0.75</b>	<b>0.94</b>	<i>1.00</i>	<i>0.81</i>	<i>0.80</i>	<i>0.91</i>	<i>0.96</i>	<i>0.82</i>	<b>0.89</b>	<b>0.87</b>	<i>0.88</i>
Imports .....	<b>.57</b>	<b>.45</b>	<b>.45</b>	<b>.56</b>	<i>.59</i>	<i>.38</i>	<i>.41</i>	<i>.50</i>	<i>.62</i>	<i>.39</i>	<b>.68</b>	<b>.51</b>	<i>.47</i>
Exports .....	<b>.27</b>	<b>.16</b>	<b>.12</b>	<b>.23</b>	<i>.19</i>	<i>.17</i>	<i>.15</i>	<i>.21</i>	<i>.19</i>	<i>.17</i>	<b>.19</b>	<b>.20</b>	<i>.18</i>
Net Imports .....	<b>.29</b>	<b>.29</b>	<b>.33</b>	<b>.32</b>	<i>.39</i>	<i>.21</i>	<i>.26</i>	<i>.30</i>	<i>.42</i>	<i>.22</i>	<b>.49</b>	<b>.31</b>	<i>.29</i>
Net Withdrawals .....	<b>.07</b>	<b>.07</b>	<b>-.03</b>	<b>-.08</b>	<i>.00</i>	<i>.04</i>	<i>-.02</i>	<i>-.06</i>	<i>.03</i>	<i>-.01</i>	<b>-.01</b>	<b>.01</b>	<i>-.01</i>
<b>Disposition</b>													
Electric Utility Consumption .....	<b>.50</b>	<b>.36</b>	<b>.45</b>	<b>.43</b>	<i>.50</i>	<i>.30</i>	<i>.36</i>	<i>.37</i>	<i>.49</i>	<i>.29</i>	<b>.52</b>	<b>.43</b>	<i>.38</i>
Utility Stock Additions .....	<b>-.07</b>	<b>-.03</b>	<b>-.03</b>	<b>.00</b>	<i>-.05</i>	<i>.00</i>	<i>.01</i>	<i>-.04</i>	<i>-.01</i>	<i>-.02</i>	<b>-.01</b>	<b>-.03</b>	<i>-.02</i>
Electric Utility Shipments .....	<b>.43</b>	<b>.33</b>	<b>.41</b>	<b>.43</b>	<i>.45</i>	<i>.30</i>	<i>.37</i>	<i>.33</i>	<i>.48</i>	<i>.27</i>	<b>.51</b>	<b>.40</b>	<i>.36</i>
Nonutility Shipments .....	<b>.93</b>	<b>.82</b>	<b>.64</b>	<b>.76</b>	<i>.94</i>	<i>.76</i>	<i>.67</i>	<i>.82</i>	<i>.94</i>	<i>.76</i>	<b>.86</b>	<b>.79</b>	<i>.80</i>
Total Product Supplied .....	<b>1.36</b>	<b>1.15</b>	<b>1.05</b>	<b>1.19</b>	<i>1.39</i>	<i>1.06</i>	<i>1.03</i>	<i>1.15</i>	<i>1.42</i>	<i>1.03</i>	<b>1.37</b>	<b>1.19</b>	<i>1.16</i>
<b>Stocks</b>													
Electric Utility Stock Levels (million barrels)													
Opening .....	<b>68.50</b>	<b>62.56</b>	<b>59.61</b>	<b>56.46</b>	<i>56.55</i>	<i>52.16</i>	<i>51.99</i>	<i>52.78</i>	<i>49.37</i>	<i>48.90</i>	<b>70.57</b>	<b>68.50</b>	<i>56.55</i>
Closing .....	<b>62.56</b>	<b>59.61</b>	<b>56.46</b>	<b>56.55</b>	<i>52.16</i>	<i>51.99</i>	<i>52.78</i>	<i>49.37</i>	<i>48.90</i>	<i>47.08</i>	<b>68.50</b>	<b>56.55</b>	<i>49.37</i>
Primary Stock Levels (million barrels)													
Opening .....	<b>53.00</b>	<b>46.30</b>	<b>40.21</b>	<b>42.75</b>	<i>49.93</i>	<i>49.93</i>	<i>46.20</i>	<i>48.18</i>	<i>53.56</i>	<i>50.61</i>	<b>48.50</b>	<b>53.00</b>	<i>49.93</i>
Closing .....	<b>46.30</b>	<b>40.21</b>	<b>42.75</b>	<b>49.93</b>	<i>49.93</i>	<i>46.20</i>	<i>48.18</i>	<i>53.56</i>	<i>50.61</i>	<i>51.38</i>	<b>53.00</b>	<b>49.93</b>	<i>53.56</i>

Note: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.  
Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1; *Petroleum Supply Monthly*, DOE/EIA-0109, Jan. 1985 to Nov. 1985; the *Monthly Energy Review*, DOE/EIA-0035(85/10); the *Electric Power Monthly*, DOE/EIA-0226(85/11); and December data, *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02).

**Table 12. Quarterly Supply and Disposition of Other Petroleum Products: Base Case<sup>a</sup>**  
**(Million Barrels per Day, Except Stocks)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Net Refinery Output <sup>b</sup> .....	<b>2.47</b>	<b>2.70</b>	<b>2.74</b>	<b>2.50</b>	<i>3.04</i>	<i>2.85</i>	<i>2.70</i>	<i>2.58</i>	<i>2.86</i>	<i>2.73</i>	<b>2.57</b>	<b>2.60</b>	<i>2.79</i>
Natural Gas Plant Output .....	<b>1.63</b>	<b>1.61</b>	<b>1.59</b>	<b>1.63</b>	<i>1.63</i>	<i>1.57</i>	<i>1.53</i>	<i>1.63</i>	<i>1.61</i>	<i>1.58</i>	<b>1.63</b>	<b>1.61</b>	<i>1.59</i>
Other Domestic .....	<b>.04</b>	<b>.04</b>	<b>.06</b>	<b>.07</b>	<i>.04</i>	<i>.05</i>	<i>.06</i>	<i>.05</i>	<i>.05</i>	<i>.05</i>	<b>.05</b>	<b>.05</b>	<i>.05</i>
Net Imports .....	<b>.41</b>	<b>.46</b>	<b>.45</b>	<b>.41</b>	<i>.27</i>	<i>.26</i>	<i>.53</i>	<i>.54</i>	<i>.39</i>	<i>.41</i>	<b>.47</b>	<b>.44</b>	<i>.40</i>
Net Withdrawals .....	<b>.05</b>	<b>-.19</b>	<b>.08</b>	<b>.27</b>	<i>-.17</i>	<i>-.08</i>	<i>.22</i>	<i>.10</i>	<i>-.02</i>	<i>-.06</i>	<b>.04</b>	<b>.05</b>	<i>.02</i>
<b>Total Primary Supply</b> .....	<b>4.61</b>	<b>4.61</b>	<b>4.93</b>	<b>4.87</b>	<i>4.81</i>	<i>4.65</i>	<i>5.03</i>	<i>4.90</i>	<i>4.89</i>	<i>4.72</i>	<b>4.76</b>	<b>4.76</b>	<i>4.85</i>
<b>Disposition</b>													
Jet Fuel .....	<b>1.16</b>	<b>1.16</b>	<b>1.19</b>	<b>1.29</b>	<i>1.21</i>	<i>1.18</i>	<i>1.23</i>	<i>1.21</i>	<i>1.24</i>	<i>1.20</i>	<b>1.18</b>	<b>1.20</b>	<i>1.21</i>
Liquefied Petroleum Gas <sup>d</sup> .....	<b>1.21</b>	<b>.83</b>	<b>.93</b>	<b>1.14</b>	<i>1.24</i>	<i>.83</i>	<i>.90</i>	<i>1.13</i>	<i>1.25</i>	<i>.83</i>	<b>.98</b>	<b>1.02</b>	<i>1.03</i>
Petrochemical Feedstocks <sup>e</sup> .....	<b>.92</b>	<b>.95</b>	<b>.95</b>	<b>.91</b>	<i>.97</i>	<i>.95</i>	<i>.94</i>	<i>.89</i>	<i>.99</i>	<i>.97</i>	<b>.95</b>	<b>.93</b>	<i>.94</i>
Miscellaneous <sup>f</sup> .....	<b>1.32</b>	<b>1.67</b>	<b>1.87</b>	<b>1.53</b>	<i>1.39</i>	<i>1.69</i>	<i>1.97</i>	<i>1.67</i>	<i>1.40</i>	<i>1.71</i>	<b>1.64</b>	<b>1.60</b>	<i>1.68</i>
<b>Total Product Supplied</b> .....	<b>4.61</b>	<b>4.61</b>	<b>4.93</b>	<b>4.87</b>	<i>4.81</i>	<i>4.65</i>	<i>5.03</i>	<i>4.90</i>	<i>4.89</i>	<i>4.72</i>	<b>4.76</b>	<b>4.76</b>	<i>4.85</i>
<b>Stock</b>													
Primary Stocks (million barrels)													
Opening .....	<b>341.08</b>	<b>336.56</b>	<b>354.04</b>	<b>346.92</b>	<i>322.49</i>	<i>338.03</i>	<i>345.68</i>	<i>325.86</i>	<i>316.65</i>	<i>318.46</i>	<b>356.43</b>	<b>341.08</b>	<i>322.49</i>
Closing .....	<b>336.56</b>	<b>354.04</b>	<b>346.92</b>	<b>322.49</b>	<i>338.03</i>	<i>345.68</i>	<i>325.86</i>	<i>316.65</i>	<i>318.46</i>	<i>323.66</i>	<b>341.08</b>	<b>322.49</b>	<i>316.65</i>

<sup>a</sup> Excludes crude oil product supplied and other components of the crude oil supply/demand balance, all of which are accounted for under the total petroleum supply and disposition table.

<sup>b</sup> Includes refinery production of all other products less natural gas liquids, liquefied refinery gases, and "other liquids" input to refineries.

<sup>c</sup> Field production of other hydrocarbons and alcohol.

<sup>d</sup> Includes propane, normal butane, and isobutane.

<sup>e</sup> Includes ethane plus naphtha and other oils designated for petrochemical feedstock use.

<sup>f</sup> Includes all petroleum products supplied except motor gasoline, distillate, residual fuel, liquefied petroleum gases, petrochemical feedstocks, and jet fuel.

Note: Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1, *Petroleum Supply Monthly*, DOE/EIA-0109(85/11), and *Weekly Petroleum Status Report*, DOE/EIA-0208(86-02). Data For December 1985 are preliminary.

**Table 13. Petroleum Demand Sensitivity Differentials  
(Million Barrels per Day)**

Sensitivities	1986				1987		Year
	1st	2nd	3rd	4th	1st	2nd	1986
<b>Demand in 50 States</b>							
Low Price .....	<i>15.90</i>	<i>15.93</i>	<i>16.31</i>	<i>16.58</i>	<i>16.55</i>	<i>16.28</i>	<i>16.18</i>
Base Case .....	<i>15.73</i>	<i>15.52</i>	<i>15.84</i>	<i>16.11</i>	<i>16.11</i>	<i>15.81</i>	<i>15.80</i>
High Price .....	<i>15.66</i>	<i>15.30</i>	<i>15.51</i>	<i>15.77</i>	<i>15.81</i>	<i>15.49</i>	<i>15.56</i>
<b>Weather Sensitivity</b>							
Adverse Weather .....	.31	.02	.01	.20	.31	.02	.13
Favorable Weather .....	-.32	-.01	.00	-.19	-.32	-.01	-.13
<b>Economic Sensitivity</b>							
High Economic Activity .....	.09	.17	.21	.31	.43	.51	.20
Low Economic Activity .....	-.04	-.18	-.32	-.34	-.31	-.35	-.22
<b>Combined Sensitivity Differentials<sup>a</sup> (excl. price)</b>							
Upper Range .....	.32	.17	.21	.37	.53	.51	.27
Lower Range .....	.32	.18	.32	.39	.45	.35	.30
<b>Range of Projected Demand</b>							
High Demand <sup>b</sup> .....	<i>16.22</i>	<i>16.10</i>	<i>16.52</i>	<i>16.95</i>	<i>17.08</i>	<i>16.79</i>	<i>16.45</i>
Low Demand <sup>c</sup> .....	<i>15.34</i>	<i>15.12</i>	<i>15.19</i>	<i>15.38</i>	<i>15.36</i>	<i>15.14</i>	<i>15.26</i>

<sup>a</sup> The upper range of the differentials is calculated by taking the square root of the sum of the squared adverse weather and high economic activity sensitivities. The lower range of differentials is calculated by taking the square root of the sum of squared favorable weather and low economic activity sensitivities.

<sup>b</sup> Low Price demand plus the combined effects of adverse weather and high economic activity.

<sup>c</sup> High Price demand less the combined effects of favorable weather and low economic activity.

Note: Forecast values in *italics*.

**Table 14. Quarterly Supply and Disposition of Natural Gas  
(Trillion Cubic Feet)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Total Dry Gas Production <sup>a</sup> .....	<b>4.40</b>	<b>3.93</b>	<b>3.95</b>	<b>4.30</b>	<i>4.29</i>	<i>4.00</i>	<i>3.93</i>	<i>4.37</i>	<i>4.23</i>	<i>4.01</i>	<b>17.39</b>	<b>16.59</b>	<i>16.59</i>
Net Imports .....	<b>.28</b>	<b>.19</b>	<b>.17</b>	<b>.23</b>	<i>.30</i>	<i>.23</i>	<i>.22</i>	<i>.28</i>	<i>.34</i>	<i>.26</i>	<b>.78</b>	<b>.87</b>	<i>1.03</i>
Supplemental Gaseous Fuels .....	<b>.04</b>	<b>.03</b>	<b>.03</b>	<b>.04</b>	<i>.04</i>	<i>.03</i>	<i>.03</i>	<i>.04</i>	<i>.04</i>	<i>.03</i>	<b>.11</b>	<b>.14</b>	<i>.15</i>
Total New Supply .....	<b>4.72</b>	<b>4.15</b>	<b>4.14</b>	<b>4.57</b>	<i>4.64</i>	<i>4.26</i>	<i>4.18</i>	<i>4.69</i>	<i>4.61</i>	<i>4.30</i>	<b>18.28</b>	<b>17.59</b>	<i>17.77</i>
<b>Underground Working Gas Storage</b>													
Opening .....	<b>2.88</b>	<b>1.74</b>	<b>2.35</b>	<b>3.08</b>	<i>2.86</i>	<i>1.73</i>	<i>2.31</i>	<i>3.14</i>	<i>2.88</i>	<i>1.73</i>	<b>2.60</b>	<b>2.88</b>	<i>2.86</i>
Closing .....	<b>1.74</b>	<b>2.35</b>	<b>3.08</b>	<b>2.86</b>	<i>1.73</i>	<i>2.31</i>	<i>3.14</i>	<i>2.88</i>	<i>1.73</i>	<i>2.31</i>	<b>2.88</b>	<b>2.86</b>	<i>2.88</i>
Net Withdrawals <sup>b</sup> .....	<b>1.13</b>	<b>-.61</b>	<b>-.74</b>	<b>.23</b>	<i>1.13</i>	<i>-.58</i>	<i>-.83</i>	<i>.26</i>	<i>1.15</i>	<i>-.58</i>	<b>-.19</b>	<b>.00</b>	<i>-.02</i>
Total Primary Supply <sup>a</sup> .....	<b>5.85</b>	<b>3.54</b>	<b>3.40</b>	<b>4.80</b>	<i>5.77</i>	<i>3.68</i>	<i>3.35</i>	<i>4.95</i>	<i>5.76</i>	<i>3.72</i>	<b>18.10</b>	<b>17.60</b>	<i>17.75</i>
<b>Disposition</b>													
Electric Utilities .....	<b>.63</b>	<b>.75</b>	<b>.96</b>	<b>.70</b>	<i>.58</i>	<i>.71</i>	<i>.90</i>	<i>.64</i>	<i>.52</i>	<i>.66</i>	<b>3.11</b>	<b>3.04</b>	<i>2.82</i>
Refinery Fuel .....	<b>.13</b>	<b>.15</b>	<b>.16</b>	<b>.16</b>	<i>.15</i>	<i>.15</i>	<i>.15</i>	<i>.15</i>	<i>.15</i>	<i>.15</i>	<b>.57</b>	<b>.60</b>	<i>.61</i>
All Other Uses <sup>c</sup> .....	<b>4.98</b>	<b>2.54</b>	<b>2.18</b>	<b>3.85</b>	<i>4.92</i>	<i>2.72</i>	<i>2.20</i>	<i>4.05</i>	<i>5.00</i>	<i>2.81</i>	<b>14.27</b>	<b>13.56</b>	<i>13.90</i>
Subtotal .....	<b>5.75</b>	<b>3.44</b>	<b>3.31</b>	<b>4.71</b>	<i>5.66</i>	<i>3.58</i>	<i>3.25</i>	<i>4.84</i>	<i>5.66</i>	<i>3.62</i>	<b>17.95</b>	<b>17.21</b>	<i>17.33</i>
Total Disposition .....	<b>5.85</b>	<b>3.54</b>	<b>3.40</b>	<b>4.80</b>	<i>5.77</i>	<i>3.68</i>	<i>3.35</i>	<i>4.95</i>	<i>5.76</i>	<i>3.72</i>	<b>18.10</b>	<b>17.60</b>	<i>17.75</i>
Unaccounted for .....	<b>.10</b>	<b>.09</b>	<b>.10</b>	<b>.10</b>	<i>.11</i>	<i>.10</i>	<i>.10</i>	<i>.10</i>	<i>.10</i>	<i>.10</i>	<b>.15</b>	<b>.39</b>	<i>.42</i>

<sup>a</sup> Excludes nonhydrocarbon gases removed.

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

<sup>c</sup> Includes residential, commercial, and industrial uses other than refinery fuel, plus use of supplemental gas.

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10); *Natural Gas Monthly*, DOE/EIA-0130(85/11); and *Electric Power Monthly*, DOE/EIA-0226(85/11).

**Table 15. Quarterly Supply and Disposition of Coal  
(Million Short Tons)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
Production .....	<sup>b</sup> 214	<sup>b</sup> 229	<sup>b</sup> 223	<sup>c</sup> 220	<i>219</i>	<i>232</i>	<i>225</i>	<i>233</i>	<i>229</i>	<i>238</i>	<b>896</b>	<sup>c</sup> 886	<i>909</i>
Primary Stock Levels <sup>a</sup>													
Opening .....	34	35	35	33	32	30	30	30	30	30	34	34	32
Closing .....	35	35	33	<sup>c</sup> 32	30	30	30	30	30	30	34	<sup>c</sup> 32	30
Net Withdrawals .....	-1	0	2	<sup>c</sup> 0	2	0	0	0	0	0	0	0	2
Imports .....	0	1	1	<sup>c</sup> 1	1	1	1	1	1	1	1	2	2
Exports .....	19	24	26	<sup>c</sup> 21	18	22	24	20	18	22	81	<sup>c</sup> 89	84
Total New Domestic Supply .....	<sup>b</sup> 194	<sup>b</sup> 205	<sup>b</sup> 201	<sup>c</sup> 200	<i>204</i>	<i>211</i>	<i>201</i>	<i>213</i>	<i>211</i>	<i>217</i>	<b>816</b>	<sup>c</sup> 800	<i>829</i>
Secondary Stock Levels <sup>a</sup>													
Opening .....	197	179	188	176	171	165	181	167	174	172	169	197	171
Closing .....	179	188	176	<sup>c</sup> 171	165	181	167	174	172	188	197	<sup>c</sup> 171	174
Net Withdrawals .....	18	-9	12	<sup>c</sup> 5	6	-15	14	-7	2	-16	-29	<sup>c</sup> 26	-3
Total Indicated Consumption .....	<sup>b</sup> 212	<sup>b</sup> 196	<sup>b</sup> 213	<sup>c</sup> 205	<i>210</i>	<i>195</i>	<i>215</i>	<i>206</i>	<i>214</i>	<i>201</i>	<b>787</b>	<sup>c</sup> 826	<i>826</i>
<b>Disposition</b>													
Coke Plants .....	10	11	10	<sup>c</sup> 10	11	11	10	10	10	11	44	<sup>c</sup> 42	41
Electric Utilities .....	174	163	184	<sup>c</sup> 173	176	166	187	174	181	171	664	<sup>c</sup> 694	703
Retail and General Industry <sup>d</sup> .....	22	20	20	<sup>c</sup> 21	23	19	18	22	22	19	83	<sup>c</sup> 83	82
Total Domestic Consumption .....	206	194	214	<sup>c</sup> 205	<i>210</i>	<i>195</i>	<i>215</i>	<i>206</i>	<i>214</i>	<i>201</i>	<b>791</b>	<sup>c</sup> 818	<i>826</i>
Discrepancy <sup>e</sup> .....	<sup>b</sup> 6	<sup>b</sup> 2	<sup>b</sup> -1	<sup>c</sup> 0	0	0	0	0	0	0	-4	<sup>c</sup> 8	0

<sup>a</sup> Primary stocks are held at the mines, preparation plants, and distribution points.

<sup>b</sup> Preliminary.

<sup>c</sup> Estimated.

<sup>d</sup> Secondary stocks are held by users. Most of the secondary stocks are held by electric utilities.

<sup>e</sup> Included in retail and general industry coal consumption is consumption at coal gasification plants of 1.7 million tons for 1984, and an estimated 3.8 for 1985. For the forecast, syntuels account for 1.5 million tons for the first quarter of 1986. Gasification plant coal consumption for the rest of the forecast is assumed to drop off to 0.1 million tons per quarter because of the assumed shutdown in March of Great Plains.

<sup>f</sup> Historical period discrepancy reflects unaccounted for shipper and receiver reporting discrepancies.

Notes: Rows and columns may not add due to independent rounding. Zeros indicate amounts of less than 500,000 tons. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10); and *Quarterly Coal Report*, DOE/EIA-0121(85/3Q).

**Table 16. Quarterly Supply and Disposition of Electricity  
(Billion Kilowatthours)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th <sup>c</sup>	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Generation</b>													
Coal .....	<b>352.3</b>	<b>331.4</b>	<b>370.1</b>	<b>348.8</b>	<i>355.8</i>	<i>335.6</i>	<i>375.4</i>	<i>351.5</i>	<i>365.3</i>	<i>345.6</i>	<b>1341.7</b>	<b>1402.5</b>	<i>1418.3</i>
Petroleum .....	<b>28.5</b>	<b>20.4</b>	<b>25.6</b>	<b>25.0</b>	<i>28.5</i>	<i>17.2</i>	<i>20.9</i>	<i>21.4</i>	<i>27.8</i>	<i>16.9</i>	<b>119.8</b>	<b>99.5</b>	<i>88.0</i>
Natural Gas .....	<b>61.2</b>	<b>71.6</b>	<b>92.3</b>	<b>68.5</b>	<i>55.5</i>	<i>67.1</i>	<i>85.2</i>	<i>60.6</i>	<i>49.0</i>	<i>62.9</i>	<b>297.4</b>	<b>293.5</b>	<i>268.5</i>
Nuclear Power .....	<b>98.0</b>	<b>86.0</b>	<b>104.5</b>	<b>92.7</b>	<i>98.1</i>	<i>93.2</i>	<i>111.8</i>	<i>106.5</i>	<i>110.3</i>	<i>104.4</i>	<b>327.6</b>	<b>381.2</b>	<i>409.6</i>
Hydropower .....	<b>78.0</b>	<b>74.6</b>	<b>60.1</b>	<b>70.0</b>	<i>82.2</i>	<i>87.1</i>	<i>69.6</i>	<i>68.5</i>	<i>79.9</i>	<i>83.5</i>	<b>321.2</b>	<b>282.7</b>	<i>307.4</i>
Geothermal Power and Other <sup>a</sup> .....	<b>2.6</b>	<b>2.4</b>	<b>2.7</b>	<b>2.7</b>	<i>2.5</i>	<i>2.4</i>	<i>2.7</i>	<i>2.8</i>	<i>2.7</i>	<i>2.7</i>	<b>8.6</b>	<b>10.4</b>	<i>10.4</i>
<b>Total Generation</b> .....	<b>620.6</b>	<b>586.4</b>	<b>655.2</b>	<b>607.7</b>	<i>622.6</i>	<i>602.8</i>	<i>665.6</i>	<i>611.1</i>	<i>635.1</i>	<i>615.9</i>	<b>2416.3</b>	<b>2469.9</b>	<i>2502.1</i>
<b>Net Imports</b> .....	<b>9.5</b>	<b>8.8</b>	<b>11.4</b>	<b>11.2</b>	<i>10.1</i>	<i>9.4</i>	<i>12.2</i>	<i>12.3</i>	<i>10.8</i>	<i>10.0</i>	<b>39.7</b>	<b>41.0</b>	<i>44.0</i>
<b>Total Supply</b> .....	<b>630.1</b>	<b>595.2</b>	<b>666.7</b>	<b>618.9</b>	<i>632.7</i>	<i>612.2</i>	<i>677.8</i>	<i>623.4</i>	<i>645.9</i>	<i>625.9</i>	<b>2456.0</b>	<b>2510.9</b>	<i>2546.1</i>
<b>T &amp; D Loss<sup>b</sup></b> .....	<b>42.7</b>	<b>51.1</b>	<b>48.0</b>	<b>40.2</b>	<i>43.8</i>	<i>40.3</i>	<i>49.9</i>	<i>52.1</i>	<i>44.7</i>	<i>42.0</i>	<b>177.6</b>	<b>182.0</b>	<i>186.1</i>
<b>Total Consumption (sales)</b> .....	<b>587.3</b>	<b>544.1</b>	<b>618.6</b>	<b>578.7</b>	<i>588.9</i>	<i>571.9</i>	<i>627.9</i>	<i>571.3</i>	<i>601.2</i>	<i>583.9</i>	<b>2278.4</b>	<b>2328.8</b>	<i>2360.1</i>

<sup>a</sup> Includes wind, wood, and waste.

<sup>b</sup> Transmission and distribution losses through the power network, calculated as total supply minus total sales.

<sup>c</sup> Estimated

Notes: Minor discrepancies with other EIA published historic data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*.

Sources: Historical data: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/10); and *Electric Power Monthly*, DOE/EIA-0226(85/11).

**Table 17. Quarterly Supply and Disposition of Total Energy  
(Quadrillion Btu)**

Supply and Disposition	1985				1986				1987		Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	1984	1985	1986
<b>Supply</b>													
<b>Production</b>													
Petroleum <sup>a</sup> .....	5.22	5.27	5.30	5.35	5.23	5.26	5.32	5.38	5.26	5.30	21.12	21.14	21.18
Natural Gas <sup>b</sup> .....	4.54	4.05	4.07	4.44	4.43	4.12	4.05	4.51	4.36	4.13	17.93	17.10	17.11
Coal .....	4.70	5.04	4.91	4.85	4.85	5.14	4.97	5.15	5.07	5.28	19.72	19.50	20.11
Nuclear Power .....	1.06	.93	1.13	1.00	1.06	1.01	1.21	1.15	1.19	1.13	3.54	4.12	4.42
Hydropower <sup>c</sup> .....	.82	.78	.63	.73	.86	.91	.73	.72	.84	.87	3.36	2.96	3.22
Geothermal Power and Other <sup>d</sup> .....	.06	.05	.06	.06	.05	.05	.06	.06	.06	.06	.18	.22	.22
Subtotal .....	16.39	16.12	16.11	16.42	16.48	16.49	16.34	16.96	16.77	16.77	65.85	65.04	66.26
<b>Net Imports</b>													
Crude Oil .....	1.24	1.70	1.59	1.88	1.82	1.80	1.87	1.82	1.76	1.78	6.92	6.41	7.32
Other Petroleum .....	.59	.69	.58	.65	.44	.42	.65	.71	.54	.55	2.97	2.50	2.22
Natural Gas .....	.28	.19	.17	.23	.30	.23	.22	.28	.34	.26	.79	.87	1.04
Coal and Coke .....	-.48	-.63	-.67	-.54	-.46	-.58	-.63	-.52	-.47	-.57	-2.13	-2.32	-2.19
Electricity .....	.10	.09	.12	.12	.10	.10	.13	.13	.11	.10	.41	.43	.46
Subtotal .....	1.73	2.04	1.78	2.33	2.20	1.98	2.24	2.42	2.29	2.13	8.95	7.88	8.84
<b>Primary Stocks</b>													
Net Withdrawals .....	1.69	-.81	-.55	.06	1.32	-.55	-.93	.18	1.37	-.57	-.37	.39	.02
SPR Fill Rate Additions(-) .....	-.06	-.09	-.07	-.02	-.01	.00	.00	.00	.00	.00	-.41	-.25	-.01
<b>Secondary Stocks<sup>e</sup></b>													
Net Withdrawals .....	.44	-.17	.29	.10	.15	-.31	.29	-.13	.05	-.32	-.61	.66	-.01
<b>Total Supply<sup>f</sup> .....</b>	<b>20.18</b>	<b>17.09</b>	<b>17.55</b>	<b>18.89</b>	<b>20.14</b>	<b>17.60</b>	<b>17.93</b>	<b>19.43</b>	<b>20.47</b>	<b>18.01</b>	<b>73.42</b>	<b>73.72</b>	<b>75.10</b>
<b>Disposition</b>													
<b>Nonutility Uses</b>													
Petroleum .....	7.37	7.36	7.44	7.59	7.33	7.43	7.63	7.76	7.52	7.58	29.77	29.76	30.16
Natural Gas <sup>g</sup> .....	5.27	2.77	2.42	4.13	5.23	2.96	2.42	4.33	5.30	3.05	15.28	14.59	14.94
Coal .....	.77	.74	.72	.76	.81	.71	.70	.76	.79	.73	3.04	3.00	2.99
Subtotal .....	13.41	10.88	10.59	12.48	13.36	11.10	10.76	12.86	13.61	11.36	48.09	47.35	48.08
<b>Electric Utility Inputs</b>													
Petroleum .....	.31	.22	.28	.27	.31	.19	.23	.23	.30	.18	1.29	1.08	.96
Natural Gas .....	.65	.78	.99	.72	.60	.73	.93	.66	.53	.69	3.22	3.15	2.92
Coal .....	3.67	3.44	3.89	3.65	3.72	3.51	3.92	3.67	3.82	3.61	14.02	14.64	14.82
Nuclear Power .....	1.06	.93	1.13	1.00	1.06	1.01	1.21	1.15	1.19	1.13	3.54	4.12	4.42
Hydropower <sup>h</sup> .....	.92	.87	.75	.85	.97	1.01	.86	.84	.95	.98	3.77	3.39	3.67
Geothermal Power and Other .....	.06	.05	.06	.06	.05	.05	.06	.06	.06	.06	.18	.22	.22
Subtotal .....	6.66	6.29	7.09	6.55	6.71	6.49	7.20	6.62	6.85	6.64	26.02	26.60	27.02
<b>Gross Energy Consumption<sup>i</sup> .....</b>	<b>20.07</b>	<b>17.16</b>	<b>17.68</b>	<b>19.03</b>	<b>20.07</b>	<b>17.59</b>	<b>17.96</b>	<b>19.48</b>	<b>20.47</b>	<b>18.00</b>	<b>74.11</b>	<b>73.95</b>	<b>75.10</b>
<b>Electric Utility Adjustments</b>													
Conversion Loss <sup>j</sup> .....	4.66	4.43	4.98	4.58	4.70	4.54	5.05	4.67	4.80	4.65	18.24	18.64	18.96
<b>Total Net Energy .....</b>	<b>15.42</b>	<b>12.74</b>	<b>12.70</b>	<b>14.46</b>	<b>15.38</b>	<b>13.05</b>	<b>12.91</b>	<b>14.81</b>	<b>15.67</b>	<b>13.35</b>	<b>55.87</b>	<b>55.31</b>	<b>56.14</b>
<b>Total Disposition .....</b>	<b>20.18</b>	<b>17.09</b>	<b>17.55</b>	<b>18.89</b>	<b>20.14</b>	<b>17.60</b>	<b>17.93</b>	<b>19.43</b>	<b>20.47</b>	<b>18.01</b>	<b>73.42</b>	<b>73.72</b>	<b>75.10</b>
Unaccounted for .....	.11	-.08	-.13	-.14	.06	.01	-.03	-.05	.00	.01	-.69	-.23	.00

<sup>a</sup> Includes crude oil and lease condensate, natural gas liquids, hydrogen, etc., input to oil refineries.

<sup>b</sup> Total dry gas production excluding nonhydrocarbon gases removed.

<sup>c</sup> Includes industrial production.

<sup>d</sup> Includes wood and waste used to generate electricity.

<sup>e</sup> Primarily electric utility stocks.

<sup>f</sup> This total excludes approximately 2 quadrillion Btu of wood.

<sup>g</sup> Includes natural gas used as refinery fuel.

<sup>h</sup> Includes industrial hydroelectric production and net imports of electricity.

<sup>i</sup> Includes plant use and T & D losses.

SPR: Strategic Petroleum Reserve.

Notes: The conversion from physical units to Btu is calculated by STIFS using a subset of *Monthly Energy Review* conversion factors. Consequently, the historic data will not precisely match that published in the *Monthly Energy Review*. In addition, minor discrepancies with EIA published historical data are due to rounding. Historical values are printed in **boldface**, forecasts in *italics*

**Table 18. Forecast Conversion Factors Used in STIFS**

Most of the conversion factors used by the Short-Term Integrated Forecasting System (STIFS) are the 1984 EIA standard conversion factors (found in the Monthly Energy Review). Special factors used in STIFS are derived from data in the Monthly Energy Review or from energy data reports such as the Petroleum Supply Monthly.

Product Identification	Unit	Btu/Unit
<b>Thermal Content of Fuels and Energy</b>		
Crude Oil Production .....	barrel .....	5,800,000
Crude Oil Imports .....	barrel .....	5,823,000
Unfinished Oils .....	barrel .....	5,825,000
Petroleum Products Consumption .....	barrel .....	5,395,000
Petroleum Products Imports .....	barrel .....	5,613,000
Petroleum Products Exports .....	barrel .....	5,867,000
Motor Gasoline .....	barrel .....	5,253,000
Jet Fuel .....	barrel .....	5,610,848
Distillate Fuel Oil .....	barrel .....	5,825,000
Refinery Fuel (liquids) .....	barrel .....	5,963,850
All Refinery Inputs .....	barrel .....	5,768,800
Residual Fuel Oil .....	barrel .....	6,287,000
LPG and LRG .....	barrel .....	3,908,000
Ethane .....	barrel .....	3,082,000
Natural Gas Liquids (production) .....	barrel .....	3,812,000
Natural Gas Consumption (dry) .....	cubic foot .....	1,031
Natural Gas Production (dry) .....	cubic foot .....	1,031
Natural Gas Imports .....	cubic foot .....	1,005
Natural Gas Exports .....	cubic foot .....	1,010
Supplemental Gaseous Fuel .....	cubic foot .....	1,031
Natural Gas Refinery Fuel .....	cubic foot .....	1,031
Natural Gas to Utilities .....	cubic foot .....	1,035
Bituminous Coal and Lignite Prod. ....	short ton .....	22,009,000
Bituminous Coal & Lignite Consumed .....	short ton .....	21,574,000
Coal to Electric Utilities .....	short ton .....	21,101,000
General Industry and Retail Coal .....	short ton .....	22,524,000
Coking Coal .....	short ton .....	26,800,000
Coke .....	short ton .....	24,800,000
Bituminous Coal Imports.....	short ton .....	25,000,000
Bituminous Coal and Lignite Exports .....	short ton .....	26,410,000
<b>Efficiency of Conversion Processes</b>		
<b>Electric Power Generation Fuel or Power Source:</b>		
		Btu/kWh (heat rate)
Coal .....		10,452
Distillate Fuel Oil .....		13,501
Residual Fuel Oil .....		10,720
Geothermal and Other Energy .....		21,303
Nuclear Energy .....		10,800
Natural Gas .....		10,845
Hydropower .....		10,369

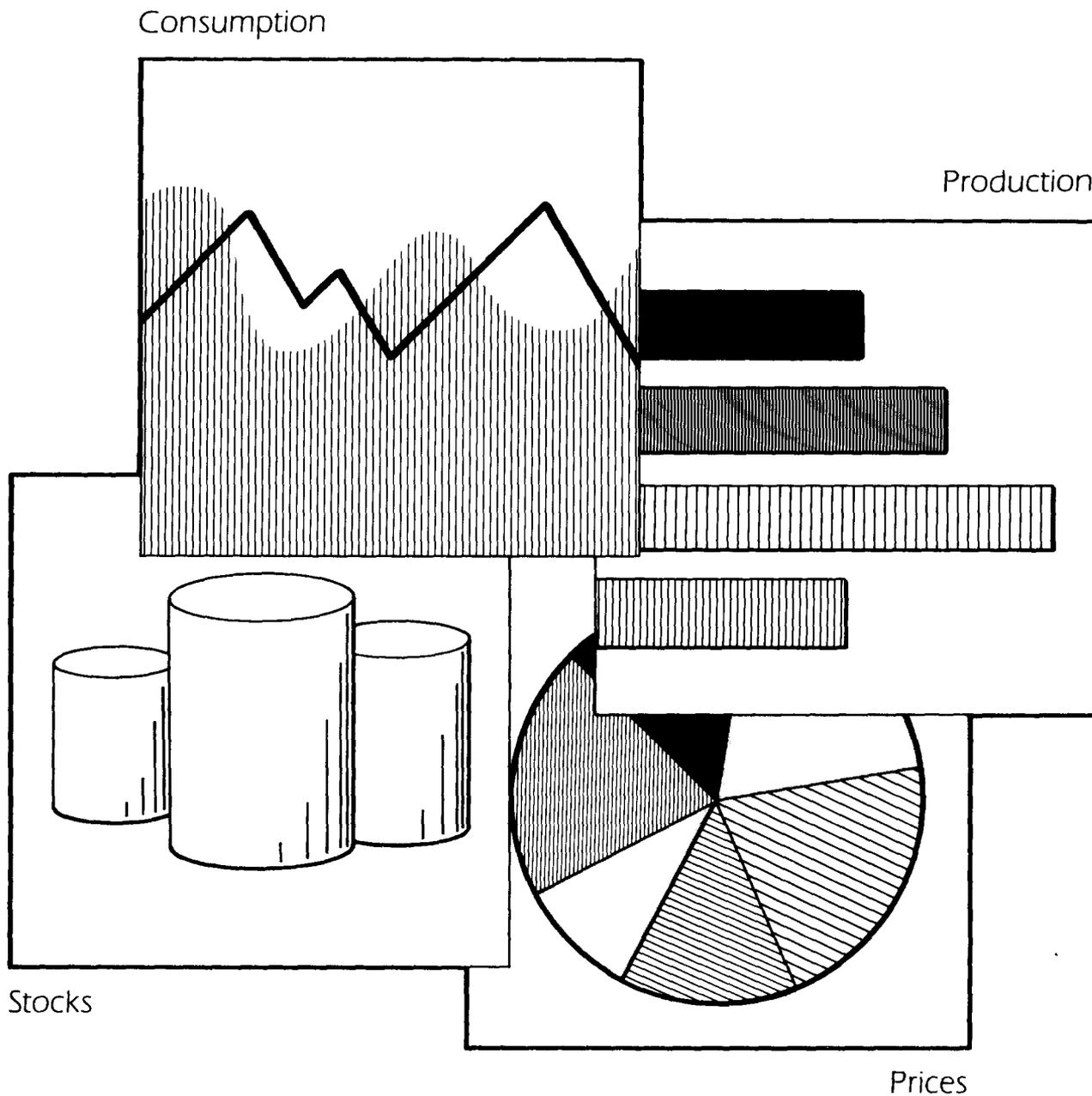






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