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Short-Term Energy Outlook

Quarterly Projections

October 1985

Energy Information Administration
Washington, D C

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Energy Information Administration
Office of Energy Markets and End Use
U.S. Department of Energy
Washington, DC 20585

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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 1986.

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.

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.

This *Outlook* is the first issue published using EIA's new automated composition system. The table formats have been designed to be consistent with the conventions that are followed in the EIA petroleum publications.

1. HIGHLIGHTS

The projections in this *Short-Term Energy Outlook (Outlook)* extend from the fourth quarter of 1985 through the end of 1986. (The base case assumptions and projections are summarized in Table 1.) Total U.S. petroleum demand is expected to remain near the 1984 level at about 15.7 million barrels per day in 1985 and 1986. Decreased demand for motor gasoline and residual fuel oil in 1986 are projected to be balanced by increased demand for other petroleum products. A key conclusion from this forecast is that the upward effect on petroleum demand from lower world oil prices and continued economic growth is not expected to exceed the downward effect on demand as a result of automobile efficiency improvements and the continued move away from heavy fuel oil. The demand for total energy is expected to grow by slightly more than 1 percent between 1984 and 1985 and by about the same percentage between 1985 and 1986. The increased demand for total energy in 1986 is expected to be met by higher levels of coal and nuclear power use.

The highlights from the base case are as follows:

- Despite continued economic growth assumed for this year, U.S. petroleum demand in 1985 is projected to remain near the year-earlier level (about 15.7 million barrels per day) and then remain at about that level in 1986.
- Net oil imports are expected to average nearly 4.2 million barrels per day in 1985, a drop from the 4.7 million barrels per day in 1984, and then increase to nearly 4.4 million barrels per day in 1986. This forecast assumes a zero fill rate for the Strategic Petroleum Reserve beginning in the first quarter of 1986. The price of imported crude oil to the United States is assumed to fall to $26 per barrel (in nominal terms) by the end of this year and then decline further to $25 per barrel by the last quarter of 1986.
- Retail heating oil prices are projected to increase by 4 cents per gallon between the third and fourth quarters of 1985 and by an additional 2 cents per gallon between the fourth quarter of 1985 and the first quarter of 1986. For the 1985-1986 winter as a whole (fourth quarter 1985 and first quarter 1986), average heating oil prices are projected to be about 2 cents per gallon above year-earlier levels, despite the fact that crude oil prices are projected to be almost 5 cents per gallon lower for the same period. This price increase is expected because of the current historically low levels of heating oil stocks and the relatively high heating oil prices in Europe. These factors already have resulted in rapid increases in spot prices for heating oil.
- Consumption of natural gas is projected to rise to almost 17.8 trillion cubic feet in 1985, assuming no significant increase in natural gas prices, with the increase in total new supply largely from Canadian imports. Natural gas consumption is projected to remain at that level in 1986. Natural gas imports are projected to increase by 6 percent between 1985 and 1986.
- Domestic coal consumption is expected to increase to 818 million tons in 1985 (about 3 percent higher than the 1984 level), with coal production at 886 million tons (about 1 percent lower than the year-earlier level). Coal consumption and production in 1986 are forecast to rise by about 2 percent and 3 percent, respectively, from year-earlier levels.
- An increase of almost 2 percent in total electricity generation is projected from 1984 to 1985, followed by an additional increase of nearly 2 percent between 1985 and 1986. Generation levels from coal and nuclear power are projected to rise between 1984 and 1985, while natural gas-fired and petroleum-fired generation levels are expected to decline. These trends are expected to continue in 1986. Net imports of electricity are expected to be about 44 billion kilowatthours in 1986, an increase of about 7 percent from the estimated 1985 level.
- Total U.S. energy consumption (as measured by gross energy consumption) is projected to rise by about 1 percent in 1985 to 74.8 quadrillion Btu and then increase by an additional 1 percent, to 75.9 quadrillion Btu, in 1986. The energy intensity of U.S. economic activity is projected to be 44.6 thousand Btu per 1972 dollar of real GNP in 1985 (down 1 percent from year-earlier levels), declining to 44.3 thousand Btu per 1972 dollar of real GNP in 1986 (an additional drop of nearly 1 percent).

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 110,000 barrels per day (approximately 0.7 percent and 2.2 percent, respectively).
- For each $1-per-barrel (approximately 3.9 percent) decline in the price of imported crude oil, petroleum consumption and total imports in 1986 would increase by 125,000 barrels per day (approximately 0.8 percent and 2.5 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 250,000 barrels per day (approximately 1.6 percent and 5.1 percent, respectively).

Assuming that the impacts of prices, income, and weather on petroleum demand are symmetrical, the above estimates would also hold for changes in the opposite direction. However, some published studies comparing higher versus lower price effects suggest that the effect of price increases on consumption could be larger.

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
Assumptions							
Real Gross National Product (billion 1972 dollars)	**1,535**	**1,639**	*1,679*	*1,714*	**6.8**	*2.4*	*2.1*
Index of Industrial Production (Mfg.) (index, 1977: 100)	**110.2**	**123.9**	*126.9*	*128.4*	**12.4**	*2.4*	*1.2*
Average Cost of Imported Crude Oil (nominal dollars per barrel)	**29.30**	**28.88**	*26.75*	*25.50*	**-1.4**	*-7.4*	*-4.7*
Price Projections (nominal values)[a]							
Motor Gasoline[b] (dollars per gallon)	**1.22**	**1.20**	*1.19*	*1.15*	**-1.6**	*-.8*	*-3.4*
Retail No. 2 Heating Oil (dollars per gallon)	**1.08**	**1.09**	*1.04*	*1.04*	**.9**	*-4.6*	*.0*
Residential Natural Gas (dollars per thousand cubic feet)	**6.06**	**6.12**	*6.22*	*6.30*	**1.0**	*1.6*	*1.3*
Residential Electricity (cents per kilowatthour)	**7.18**	**7.56**	*7.88*	*8.20*	**5.3**	*4.2*	*4.1*
Consumption Projections							
Total Market Economies Petroleum Consumption (million barrels per day)	**45.5**	**46.2**	*45.6*	*45.6*	**1.5**	*-1.3*	*.0*
U.S. Total Petroleum Consumption (million barrels per day)	**15.23**	**15.73**	*15.70*	*15.72*	**3.3**	*-.2*	*.1*
Motor Gasoline	**6.62**	**6.69**	*6.80*	*6.76*	**1.1**	*1.6*	*-.6*
Distillate Fuel Oil	**2.69**	**2.84**	*2.88*	*2.89*	**5.6**	*1.4*	*.3*
Residual Fuel Oil	**1.42**	**1.37**	*1.20*	*1.15*	**-3.5**	*-12.4*	*-4.2*
Other Petroleum[c]	**4.50**	**4.82**	*4.82*	*4.92*	**7.1**	*.0*	*2.1*
Net Petroleum Imports (million barrels per day, including SPR[d])	**4.31**	**4.72**	*4.17*	*4.38*	**9.5**	*-11.7*	*5.0*
Coal Consumption (million short tons)	**737**	**791**	*818*	*833*	**7.3**	*3.4*	*1.8*
Natural Gas Consumption (trillion cubic feet)	**16.83**	**17.64**	*17.77*	*17.77*	**4.8**	*.7*	*.0*
Electricity Generation (billion kilowatthours)	**2,310.3**	**2,416.3**	*2,457.1*	*2,502.9*	**4.6**	*1.7*	*1.9*
Total Energy Consumption[e] (quadrillion Btu)	**70.50**	**74.03**	*74.83*	*75.85*	**5.0**	*1.1*	*1.4*
Thousand Btu/1972 Dollar of GNP	**45.93**	**45.17**	*44.57*	*44.25*	**-1.7**	*-1.3*	*-.7*

[a] All prices include taxes, except retail no. 2 heating oil prices.
[b] Average for all grades and services.
[c] Includes crude oil, pentanes plus, other hydrocarbons and alcohol, unfinished oil, and gasoline blending components.
[d] SPR: Strategic Petroleum Reserve.
[e] 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(85/07), *1983 International Energy Annual* DOE/EIA-0219(83), *Petroleum Marketing Monthly* , DOE/EIA-0380(85/07), *Petroleum Supply Monthly* , DOE/EIA-0109(85/08), *Petroleum Supply Annual, 1984*, DOE/EIA-0340(85)/1, *Natural Gas Monthly* , DOE/EIA-0130(85/08), *Electric Power Monthly* , DOE/EIA-0226(85/08), and *Quarterly Coal Report* , DOE/EIA-0121(85/2Q); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, First Quarter 1985* ; Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand* , April 1985. Macroeconomic projections are based on modifications to Data Resources, Inc., forecast CONTROL1085.

2. THE OUTLOOK

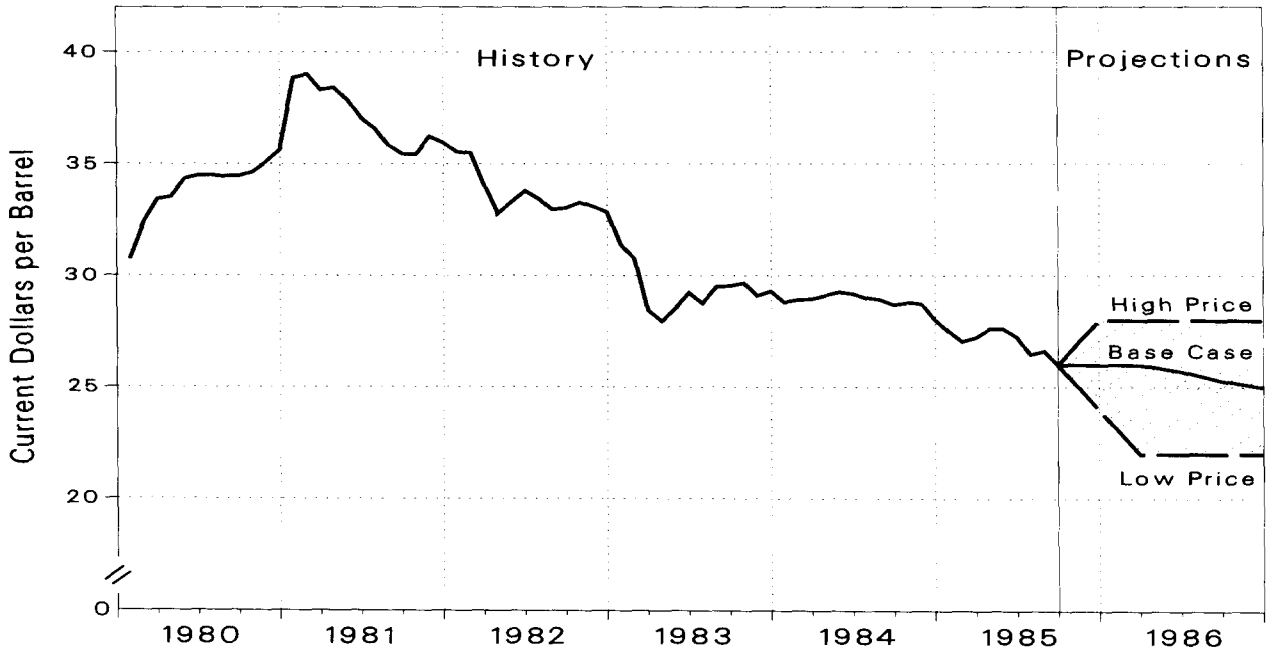
Forecast Assumptions

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 by the beginning of the fourth quarter of 1985, remain at that level through the end of the first quarter of 1986, and then decline to $25 by the last quarter of 1986 (Figure 1) for the following reasons:

- 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 (1) the continued substitution of other fuels for oil, (2) the projected increase in production from non-OPEC countries, and (3) the attempts of the members of the Organization of Petroleum Exporting Countries (OPEC) to maintain or increase their respective shares of the market.
- The trend by the OPEC members and other oil exporters toward pricing rules that are related to market forces is expected to continue.
- OPEC is assumed to be unable to reach a workable agreement on policies that would sufficiently restrain production to a level necessary to maintain higher official prices. OPEC's production rate is assumed to be adjusted to meet projected demand.

Figure 1. Imported Crude Oil Prices



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/07) (Washington, DC, 1985). • Projections: Table 2.

World Oil Prices: Further Declines?

There is considerable speculation by oil analysts, traders, and others about the future path of world oil prices. Some believe that the floor under oil prices will collapse, falling to as low as $15 to $24 per barrel by next spring. The basis for this speculation is the significant amount of excess oil production capacity in the Organization of Petroleum Exporting Countries (OPEC), the increase in non-OPEC production, and the fact that the market value of refined products has been below both the official and spot prices of crude oil, leading to large refinery losses in Europe and elsewhere. The combination of these factors in the face of shrinking demands could result in major oil price declines.

Demand for OPEC oil generally increases in the summer (May or June) when petroleum inventory building normally begins in preparation for the next winter. This year, however, with worldwide supply/demand imbalances, talk of OPEC price collapses, and the depreciation of the dollar relative to major currencies, refiners seemed to take a cautious position, continuing to draw down stocks through the summer and import less oil than usual. Due to the high cost of holding oil inventories at a time of falling prices, both crude oil and total commercial stock levels in the United States have been lower than at any time since 1980.

World oil prices did decline between the second and third quarters of 1985. A major factor that kept oil prices from falling even further this summer was the tremendous cutback in Saudi oil production. Normally, Saudi production is high during the summer. In May through August of 1984, for example, Saudi oil production averaged 5 million barrels per day. However, in an effort to maintain the marker price of crude oil this summer in the face of low demand and high supply, Saudi Arabia cut back its production drastically to between 2.3 and 2.7 million barrels per day. This reduction probably was the key action preventing a price collapse in 1985. Instead of a price collapse, the spot prices of crude oil firmed and actually increased during August and September.

Although demand for petroleum has dropped in the United States and in Western Europe, which would tend to weaken world oil prices further, forces such as lower production in the Soviet Union, maintenance work in the North Sea, and attacks on Iran's export terminal at Kharg Island worked to strengthen oil prices. With increased demands for heating oil this winter and low stock levels worldwide, oil prices will probably remain firm for the next few months. However, demand is expected to decline again next spring, resulting in renewed downward pressure on oil prices.

The U.S. refiner acquisition cost of imported crude oil fell slightly during the past summer (from $27.60 per barrel in April to $26.46 per barrel in July). This decline could have been more significant as a result of OPEC's indecision over production quotas and weaknesses in demand, which were exacerbated by industry's decision to hold lower stocks. The fact that industry did draw down rather than build stocks through the summer could lead to a tighter petroleum market as demand increases this winter. This situation could keep oil prices from falling much further through the remainder of 1985.

In addition to the base case, two alternative forecasts are presented in this *Outlook* incorporating differing economic growth and price assumptions in order 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 $22 per barrel by the first quarter of 1986 and to remain at that level through 1986.

- 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 $28 per barrel through 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 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 1986, but at a lower rate than in the recent past. Based on the Data Resources, Inc., forecast (DRI CONTROL1085), as modified to reflect EIA's imported crude oil price assumptions, growth in real gross national product (GNP) between 1984 and 1985 is assumed to be 2.4 percent, considerably lower than the 6.8 percent growth experienced between 1983 and 1984. Growth in real disposable personal income is projected to be 2.3 percent in 1985, while manufacturing growth is expected to be 2.4 percent for the year. Slower growth this year is expected to be the result of less expansion in both consumption and investment, as well as lower contributions of government purchases and net exports to overall growth. (Assumptions pertaining to the price of imported crude oil, the economy, and the weather are shown in Table 2.)

Growth in real GNP between 1985 and 1986 is projected to be 2.1 percent. Real disposable income growth is also projected to be 2.1 percent over this interval. Manufacturing growth is assumed to slow in 1986, increasing by 1.2 percent from year-earlier levels.

The possibility of either significantly faster or slower growth in economic aggregates 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 assumed between 1984 and 1985 and between 1985 and 1986 are as follows: high growth, 2.6 percent and 4.5 percent, respectively; low growth, 2.4 percent and 0.2 percent, respectively. The high growth case assumes a more robust growth than the base case throughout the forecast period, while the low growth case assumes a recession lasting from the second quarter of 1986 through the remainder of that year. High and low economic growth alternatives are based on DRI forecasts OPTIM1085 and PESSIM1085, respectively, modified to reflect oil prices lower and higher than those assumed in the base case.

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

Assumptions	1984		1985			Economic Growth Case	1985	1986				Year		
	3rd	4th	1st	2nd	3rd		4th	1st	2nd	3rd	4th	1984	1985	1986
Macroeconomic[a]														
Real Gross National Product (billion 1972 dollars)	**1,645**	**1,662**	**1,664**	**1,671**	**1,685**	High	*1,704*	*1,726*	*1,745*	*1,766*	*1,788*	-	*1,681*	*1,756*
						Base	*1,696*	*1,702*	*1,708*	*1,717*	*1,729*	**1,639**	*1,679*	*1,714*
						Low	*1,692*	*1,697*	*1,691*	*1,672*	*1,662*	-	*1,678*	*1,681*
Percent Change from Prior Year	6.1	5.7	3.3	2.0	2.4	High	*2.5*	*3.7*	*4.4*	*4.8*	*4.9*	-	*2.6*	*4.5*
						Base	*2.0*	*2.3*	*2.2*	*1.9*	*1.9*	**6.8**	*2.4*	*2.1*
						Low	*1.8*	*2.0*	*1.2*	*-.8*	*-1.8*	-	*2.4*	*.2*
GNP Implicit Price Deflator (index, 1972: 100)	**224.6**	**226.1**	**229.1**	**230.6**	**232.4**	High	*233.9*	*235.0*	*236.4*	*238.4*	*240.7*	-	*231.5*	*237.6*
						Base	*234.1*	*235.9*	*237.7*	*239.6*	*241.9*	**223.4**	*231.6*	*238.8*
						Low	*234.4*	*236.5*	*238.6*	*240.9*	*243.4*	-	*231.6*	*239.9*
Percent Change from Prior Year	**4.0**	**3.6**	**3.9**	**3.7**	**3.5**	High	*3.4*	*2.6*	*2.5*	*2.6*	*2.9*	-	*3.6*	*2.6*
						Base	*3.5*	*3.0*	*3.1*	*3.1*	*3.3*	**3.8**	*3.7*	*3.1*
						Low	*3.7*	*3.2*	*3.5*	*3.7*	*3.8*	-	*3.7*	*3.6*
Real Disposable Personal Income[b] ..... (billion 1972 dollars)	**1,177**	**1,187**	**1,182**	**1,205**	**1,193**	High	*1,208*	*1,220*	*1,231*	*1,244*	*1,258*	-	*1,197*	*1,238*
						Base	*1,204*	*1,212*	*1,218*	*1,223*	*1,229*	**1,169**	*1,196*	*1,221*
						Low	*1,203*	*1,212*	*1,215*	*1,212*	*1,208*	-	*1,196*	*1,212*
Percent Change from Prior Year	**6.8**	**5.6**	**3.0**	**3.4**	**1.4**	High	*1.8*	*3.2*	*2.2*	*4.3*	*4.1*	-	*2.4*	*3.4*
						Base	*1.4*	*2.5*	*1.1*	*2.5*	*2.1*	**6.8**	*2.3*	*2.1*
						Low	*1.3*	*2.5*	*.8*	*1.6*	*.4*	-	*2.3*	*1.3*
Index of Industrial Production (Mfg.) ..... (index, 1977: 100)	**125.6**	**125.8**	**126.0**	**126.6**	**127.4**	High	*129.6*	*131.9*	*133.8*	*136.8*	*140.0*	-	*127.4*	*135.6*
						Base	*127.7*	*127.6*	*127.7*	*128.5*	*129.8*	**123.9**	*126.9*	*128.4*
						Low	*126.4*	*126.4*	*124.8*	*122.3*	*120.4*	-	*126.6*	*123.5*
Percent Change from Prior Year	**11.0**	**8.2**	**4.2**	**2.6**	**1.4**	High	*3.0*	*4.7*	*5.7*	*7.4*	*8.0*	-	*2.8*	*6.4*
						Base	*1.5*	*1.3*	*.9*	*.9*	*1.6*	**12.4**	*2.4*	*1.2*
						Low	*.5*	*.3*	*-1.4*	*-4.0*	*-4.7*	-	*2.2*	*-2.4*
Oil Price														
Imported Crude Oil Price[c] (U.S. dollars/barrel)	**28.87**	**28.52**	**27.26**	**27.50**	**26.23**	High	*24.00*	*22.00*	*22.00*	*22.00*	*22.00*	-	*26.25*	*22.00*
						Base	*26.00*	*26.00*	*25.71*	*25.29*	*25.00*	**28.88**	*26.75*	*25.50*
						Low	*28.00*	*28.00*	*28.00*	*28.00*	*28.00*	-	*27.25*	*28.00*
U.S. Refiners' Cost[d] (U.S. dollars/barrel)	**28.69**	**28.28**	**26.77**	**26.95**	**26.00**	High	*23.58*	*21.58*	*21.58*	*21.58*	*21.58*	-	*25.83*	*21.58*
						Base	*25.58*	*25.58*	*25.29*	*24.86*	*24.58*	**28.63**	*26.33*	*25.08*
						Low	*27.58*	*27.58*	*27.58*	*27.58*	*27.58*	-	*26.83*	*27.58*
Weather[e]														
Heating Degree Days	**107**	**1,525**	**2,491**	**435**	**110**		*1,668*	*2,401*	*538*	*88*	*1,668*	**4,643**	*4,704*	*4,695*
Cooling Degree Days	**749**	**82**	**22**	**319**	**723**		*62*	*28*	*328*	*754*	*62*	**1,208**	*1,126*	*1,172*

[a] 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.

[b] Seasonally adjusted at annual rates.

[c] Cost of imported crude oil to U.S. refiners.

[d] U.S. Refiner Acquisition Cost of foreign and domestic crude oil.

[e] Population-weighted average degree days, revised December 1981. A degree day indicates the temperature variation from 65 degrees Farenheit (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(85/07); Bureau of Economic Analysis, U.S. Department of Commerce, *Survey of Current Business* , as revised, September 1985; National Oceanic and Atmospheric Administration, U.S. Department of Commerce, *Monthly State, Regional, and National Heating/Cooling Degree Days Weighted by Population,* September 1985; Federal Reserve System, *Statistical Release G.12.3,* October 1985. Macroeconomic projections are based on modifications to Data Resources, Inc., forecasts CONTROL1085, OPTIM1085, and PESSIM1085.

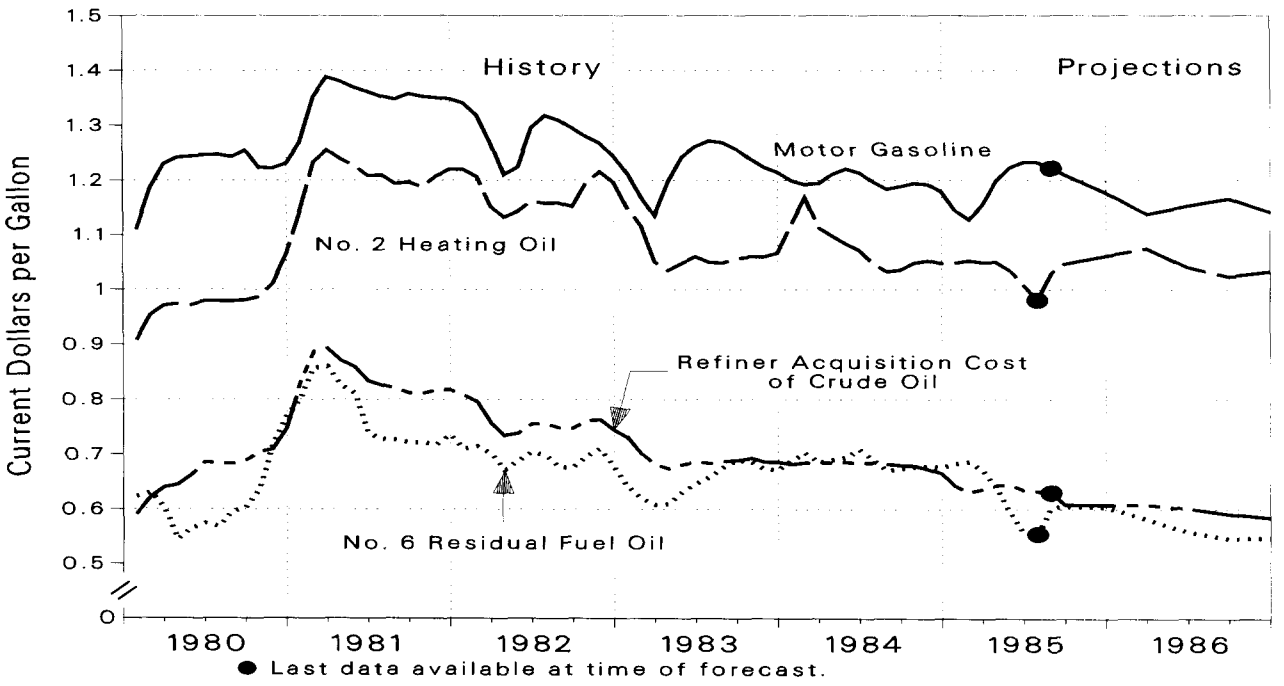
Energy Product Prices

Prices of petroleum products generally are projected to continue to decline in nominal terms through 1986, following the expected decrease in world oil prices (Figure 2 and Table 3). The notable exception is heating oil where prices are projected to be higher in the winter of 1985-1986 than year-earlier levels as a result of record low stocks at the beginning of the heating season. The prices of natural gas, coal, and electricity all are expected to increase by less than the rate of inflation between 1985 and 1986.

The average price of motor gasoline increased by 8 cents per gallon between the first and third quarters of this year. Unseasonably low gasoline stock levels this spring pushed gasoline prices up and permitted refiners to restore margins to the levels of 1 year ago. In addition, the lead phase-down ruling from the Environmental Protection Agency (EPA) accounted for about 1 cent of the increase in the average price of gasoline. This ruling is expected to add an additional 1 to 2 cents per gallon when stringent requirements go into effect in 1986. However, projected falling world oil prices and the adequate level of gasoline stocks are expected to more than offset these increases. As the world oil price falls toward $25 per barrel, gasoline prices are projected to fall by 4 cents per gallon between 1985 and 1986.

Despite projections of lower crude oil prices, the price of residential heating oil is projected to be higher during the upcoming winter (fourth-quarter 1985 and first-quarter 1986) relative to the year-earlier level. Heating oil prices are projected to increase by 4 cents per gallon between the third quarter and fourth quarter of 1985 in response to record low heating oil stocks held in primary storage. Prices then are projected to increase by another 2 cents per gallon between the fourth quarter of 1985 and the first quarter of 1986. On average, heating oil prices for this upcoming winter are projected to be about 2 cents per gallon higher than year-earlier levels despite a projected drop in crude prices of about 5 cents per gallon over this period. At the end of the third quarter of 1985, heating oil stocks were about 115 million barrels, or 20 percent below last year's level, and 25 percent below ending third quarter 1983 levels. This low level of stocks already has resulted in increases in spot heating oil prices and futures prices which should lead to higher residential prices over the coming winter. The low stock levels are

Figure 2. Retail Prices for Petroleum Products



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/07) (Washington, DC, 1985). • Projections: Table 3.

the result of a number of factors, the most important being the expectation that crude oil prices would be falling over the next several months. These expectations led refiners to minimize stock levels which they felt would lose value as crude oil prices fell.

The British coal strike of 1984-1985 resulted in an increase in the world price of residual fuel which caused prices in the United States to increase in 1984 and in the first quarter of 1985. With the ending of the strike in March 1985, the price of residual fuel began to decline considerably, and is expected to have fallen by 7 cents per gallon by the end of the year. The effects of lower world oil prices are expected to result in a further price decrease of 6 cents per gallon in 1986.

Beginning with this issue of the *Outlook*, a new price series for diesel fuel, shown in Table 3 as "Number 2 diesel oil, retail", will be reported. Because this series is the pump price, Federal and estimated State taxes are included. In 1985, the price of diesel oil is projected to increase by 1 cent from year-earlier levels, with most of the increase occurring in the second half of the year as a result of low stock levels. The price of diesel fuel is expected to increase by 2 cents per gallon between 1985 and 1986, with higher prices during the first half of the year and lower prices by the end of the year.

The residential price of electricity in nominal terms is projected to increase by about 0.32 cents per kilowatthour, or 4 percent, between 1984 and 1985 (slightly above the rate of inflation) and by the same amount between 1985 and 1986. Lower fuel costs and interest rates are expected to be more than offset by increases in the rate base, leading to price increases slightly above the rate of inflation.

The Energy Information Administration has replaced its former price series for residential natural gas with a new series that is reflected in the historical data and projections shown on Table 3. The former series was based on data from the Bureau of Labor Statistics Consumer Price Index for all urban consumers and on annual data from the Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." The new series is published in the *Natural Gas Monthly* based on data from the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." The annual prices for both series are very similar, although the new series shows much more seasonality. This increased seasonality is the major reason for the difference in the quarterly forecasts for natural gas prices between this *Outlook* and the July 1985 edition.

The residential price of natural gas (in nominal terms) is projected to increase by less than 2 percent between 1984 and 1985 and by about 1 percent between 1985 and 1986. The reason for this slowing in the rate of increase in natural gas prices is the expected continuation of downward pressure on wellhead prices. Recent quotes for spot natural gas prices to most major pipeline companies during early October were down by 15 cents to 88 cents per thousand cubic feet (depending on the source of the gas) from the level in January 1985. Recent price projections from Purchased Gas Adjustments (PGA) filings also show natural gas prices falling at the wellhead. Declining residual fuel oil prices, along with a projected flat demand for natural gas, are expected to keep natural gas wellhead prices from rising.

International Petroleum Markets

Current Situation

The international oil market is in a state of flux, with most evidence pointing to a decline in the world crude oil price despite the recent rise in the spot crude oil price. (See World Oil Price Box.) The major reason for the expectation of falling oil prices is the decision by Saudi Arabia not to continue as the swing producer, adjusting its output to maintain the marker crude oil price. Saudi crude oil production is expected to gradually rise in the near future to 4.3 million barrels per day (its quota under OPEC).

To regain its market share, Saudi Arabia decided to sell oil at a discount from its official prices by entering into net-back sales agreements with Exxon, Texaco, and Mobil in September, and other oil companies more recently. This action reverses the Saudis' previously strong support of official OPEC prices. Under a net-back sales agreement, the price of crude oil is equal to the market value of the refined products, minus transportation and refining costs. The net-back price for Saudi Arabia crude oil at the time of the original agreement was estimated to be about $2 per barrel below the official price. One consequence of the Saudis' decision is that other OPEC members have a strong incentive to use market-related formulas in setting their prices in order to maintain their market shares.

Adding to the uncertainty in the international oil market were the decisions of the oil ministers at the early October OPEC meeting to maintain the production ceiling (which does not include natural gas liquids and condensates) at 16 million barrels per day, and to postpone until their December 1985 meeting any consideration of the requests for increased quotas by several countries. Thus, the issues of overproduction and widespread price discounting were not resolved. With Saudi Arabia moving toward a more nationalistic policy as other OPEC countries have done, and with the revenue needs of Nigeria, Venezuela, and other nations, the recent increases in crude oil spot prices are not expected to continue.

The normal seasonal increase in commercial refined product and crude oil inventories in the second and third quarters of 1985 did not occur mainly because of an anticipated drop in crude oil prices, high carrying costs, excess operable refinery capacity, and a decrease in the value of the dollar relative to the major currencies. At the same time, the ratio of production to operating capacity of refineries has ranged between 50 to 60 percent in Europe and 70 to 80 percent in the United States. Such low operating ratios, combined with the current shut-in production, permit considerable expansion in production if demand for refined products should turn out to be higher than expected in the winter months. This flexibility allows for the holding of smaller inventory levels.

The petroleum market continues to be affected by the changing level of the dollar on foreign exchange markets. Because the price of internationally traded crude oil is denominated in dollars, a change in the dollar exchange rate with respect to given currencies is equivalent to a change in the local currency cost of imported crude oil. The rising dollar was responsible for increases in the local currency cost of imported crude oil since the spring of 1983, for the major oil importing and consuming nations. The deutsche mark cost of imported crude oil in West Germany, for example, increased by 25 percent between the second quarter of 1983 and the first quarter of 1985; the 5-percent decline in the world price of crude oil over that period was more than offset by the 30-percent rise in the dollar against the mark.

Recently, however, the value of the dollar has depreciated against the major currencies, and further depreciation is expected. This depreciation has had a significant effect on the local currency cost of imported crude oil. According to the Federal Trade Office of West Germany, the July 1985 cost of imported crude oil had dropped by about 13 percent from this year's high in March, with about 12 percent of this drop attributed to the depreciation of the dollar against the mark. This decline in the effective price of crude oil to other major consuming countries has been far more significant than the downward drift in the dollar-denominated oil price to the United States. Given the exchange rates and world oil prices assumed in this forecast, the major oil importing and consuming countries are expected to experience nominal and real declines in the local currency cost of imported crude oil through 1986.

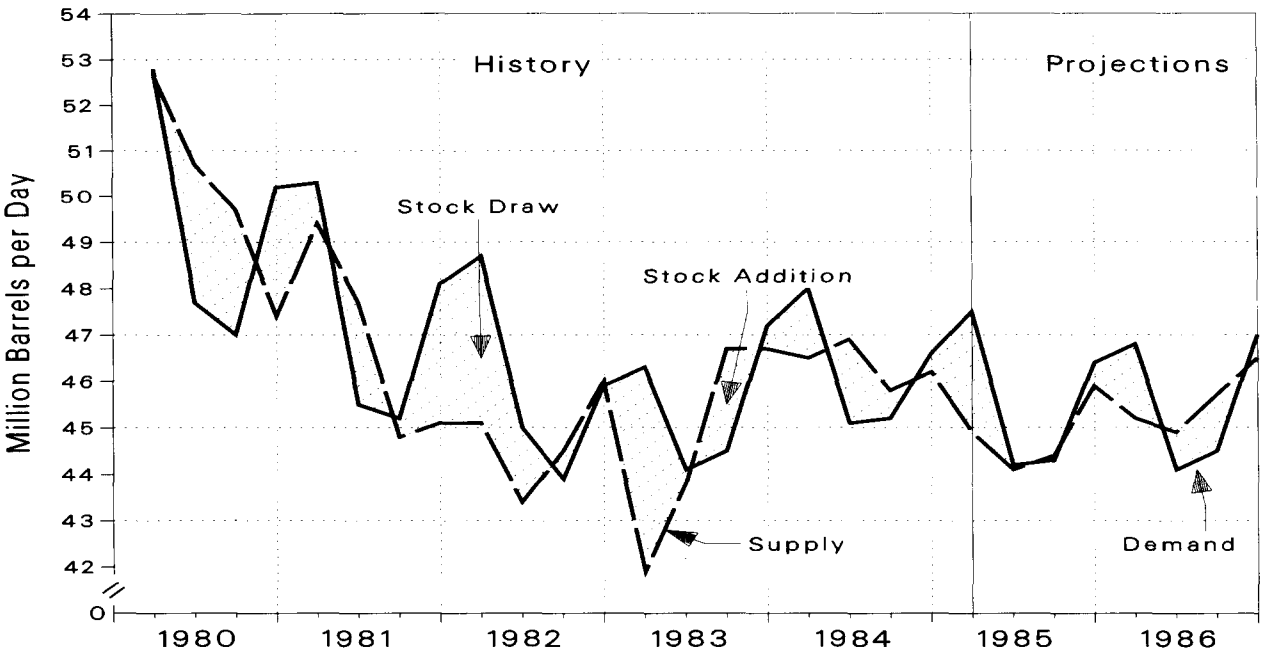
In 1984, oil consumption in the market economies is estimated to have been about 1.5 percent above the 1983 level, due to strong economic growth in the United States and Japan (Tables 1, 4, and 5). This represented the first annual increase in oil consumption in 4 years (Figure 3). Oil supply in the market economies increased by about 1.6 million barrels per day between 1983 and 1984 as a result of a 3.5-percent increase in production. This supply increase is the result of increased production in non-OPEC countries. After producing at higher rates in the first half of 1984, OPEC's production fell in the second half of the year, leaving average daily output from OPEC in 1984 at about the same level as in 1983. However, the first two quarters showed a further weakening of demand in the industrial countries. This weak demand, combined with the lack of seasonal inventory build and continued high levels of non-OPEC production, led to a fall in OPEC production (which includes natural gas liquids) of nearly 14 percent from the year-earlier level, and led to the breakdown of OPEC's usual method of maintaining the official price structure by Saudi Arabia's adjusting its output.

International Petroleum Forecast

Economic growth in the industrial countries is expected to be 2.8 percent between 1984 and 1985 and 2.3 percent between 1985 and 1986, down from 4.6 percent between 1983 and 1984 (Table 5). Total petroleum demand (product supplied) in the market economies is projected to decline by about 0.6 million barrels per day during 1985, attributable to decreases in Japan and Europe and flat demand in the United States and other market economies. Petroleum demand in the developing countries is not expected to increase in 1986. In 1986, petroleum demand in the market economies is expected to remain the same as year- earlier levels, as continued substitution of other fuels for oil essentially offsets the effect of decreases in real oil prices.

OPEC's average crude oil production is expected to be below its latest production quota (of 16 million barrels per day) by about 0.4 million barrels per day in 1985. Total OPEC oil production (including natural gas liquids) is forecast to decrease by more than 10 percent between 1984 and 1985, but to increase by nearly 2 percent (about 0.3 million barrels per day) in 1986. Non-OPEC production (including liquids production from natural gas, coal, and other sources) is expected to increase by about 700,000 barrels per day in 1985, tapering to an increase of 500,000 barrels per day in 1986 because of slower increases in production from the North Sea, Brazil, and India. The large increase expected in 1985 is the result of incremental production in many different countries, the increased use of alcohol fuel, and the production of liquids from coal. Net exports of oil from the Communist countries are assumed to decrease by about 300,000 barrels per day between 1984 and 1985, and to remain at that level in 1986, when falling production from the Union of Soviet Socialist Republics is expected to be offset by expansion in China. Consequently, a decrease of more than 3 percent in the total supply of oil to the market economies is expected between 1984 and 1985, compared with the nearly 3.5-percent increase observed between 1983 and 1984. This decline in supply is expected to be reversed by a nearly 2-percent increase between 1985 and 1986.

Figure 3. Market Economies Supply and Demand



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/07) and *1984 International Energy Annual* DOE/EIA-0219(84) (Washington, DC); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, First Quarter 1985*; Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand*, April 1985. • Projections: Table 4.

World petroleum stocks in the market economies at the end of 1985 are projected to be about 300 million barrels lower than the year-earlier level, and to remain at that level through 1986. The decline in petroleum stocks expected in 1985 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 fourth quarter of 1985, total petroleum stocks (including strategic petroleum reserves) in the market economies are projected to be at a level equivalent to about 96 days of forward consumption (at the average consumption rate of 46.8 million barrels per day during the first quarter of 1986), which is still above the 88 days of forward consumption during the market turbulence in 1979.

U.S. Petroleum Outlook

Overview

U.S. petroleum product supplied in 1986 is projected to remain near the 1985 level of 15.7 million barrels per day, with conservation and efficiency improvements offsetting the effects of lower prices and modest economic growth. Net petroleum imports are projected to average almost 4.4 million barrels per day in 1986, 5 percent above the projected 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.) Total petroleum demand is estimated to remain about flat in 1985: Growth in the economy in 1985 is projected to induce some growth in petroleum demand, but not enough to offset the declines associated with continued efficiency improvements, conservation, and fuel switching at electric utilities.

Motor Gasoline

Motor gasoline product supplied is projected to average 6.8 million barrels per day in 1985, less than 2 percent above the year-earlier level (Table 9). Increases in demand resulting from a higher level of vehicle travel are projected to be partly offset by decreases in demand attributable to improvements in vehicle efficiency. Between 1985 and 1986, increases in travel demand are expected to be more than offset by efficiency increases, resulting in a slight decline in gasoline demand.

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

travel data published by the Federal Highway Administration,[1] growth in average gasoline-powered vehicle-miles per gallon (average for all cars) was an estimated 3.5 percent per year between 1978 and 1984. However, in recent years, the trend has been toward noticeably slower rates of growth in average miles per gallon (MPG). It is estimated that overall average MPG increased by about 2.7 percent per year between 1982 and 1984.

Automobile efficiency is expected to improve by 1.4 percent between 1984 and 1985 and by 2.5 percent between 1985 and 1986. A recent change in the Corporate Average Fuel Economy (CAFE) standard[2] for 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, somewhat less efficient automobiles. Growth in motor vehicle travel is expected to average about 3.0 percent for 1985 and 1.9 percent for 1986, compared with the 4.1-percent growth in 1984. Combined, these projections imply moderate growth in fuel consumption for motor vehicle travel in 1985 and a slight decline in 1986.

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, real disposable personal income growth for 1984 to 1985 and for 1985 to 1986 is expected to be 2.3 percent and 2.1 percent, respectively, compared to 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 persistent declines in real gasoline prices, at least on an annual basis. Annual average real gasoline prices are expected to decline by about 5 percent between 1984 and 1986.

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 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. This flat trend follows a small increase expected in 1985.

Assumed normal weather during the fourth quarter of 1985 (in contrast to warm weather at the end of 1984) contributes to the expected increase in distillate consumption for space heating in that quarter relative to year-earlier levels. A slight increase in the demand for diesel fuel also is expected in the fourth quarter of 1985 because of lower real prices and because of an unusually low demand during the fourth quarter of 1984.

Residual Fuel Oil

Total consumption of residual fuel oil has declined steadily since 1977, reaching a level in 1984 that was less than half the amount used in 1977. This fuel has shown the largest rate of decrease of any of the petroleum products. Total consumption of residual fuel oil is expected to drop by 12 percent between 1984 and 1985 and by an additional 4 percent between 1985 and 1986 (Table 11). The lower expected drop next year is attributable to the fact that lower residual fuel oil prices make this fuel more competitive with natural gas in some areas of the country, bolstering demand somewhat.

Nonutility demand for residual fuel oil is projected to decrease by almost 7 percent between 1984 and 1985, mainly because of slower economic growth, continued conservation, and industrial fuel switching to natural gas. In 1986, nonutility demand is projected to decrease by an additional 4 percent due to continued conservation and slow economic activity. Consumption of residual fuel oil at electric utilities is projected to decline by more than 17 percent in 1985 and by an additional 12 percent in 1986. 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.

[1]U.S. Department of Transportation, Federal Highway Administration, Highway Statistics Division, *Highway Statistics* (Annual), Table VM-1 (Washington, DC), various issues. These estimates of MPG trends 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.

[2]The change by the U.S. Department of Transportation's Motor Vehicle Requirements Division is for the 1986 model year.

Winter Outlook for Distillate Fuel Oil

Primary stocks of distillate fuel oil were about 115 million barrels at the beginning of the 1985-1986 heating season (Figure 4), the lowest pre-winter level in 34 years. Assuming that inventories are drawn down to about 103 million barrels by the end of the heating season, the proportion of demand met from domestic production and imports will be much higher this winter than in recent years. Although available refinery capacity and plentiful supplies of crude oil should avert any major supply problems, it is expected that price increases will be necessary to bring forth these supplies, as has been the case in the past few heating seasons.

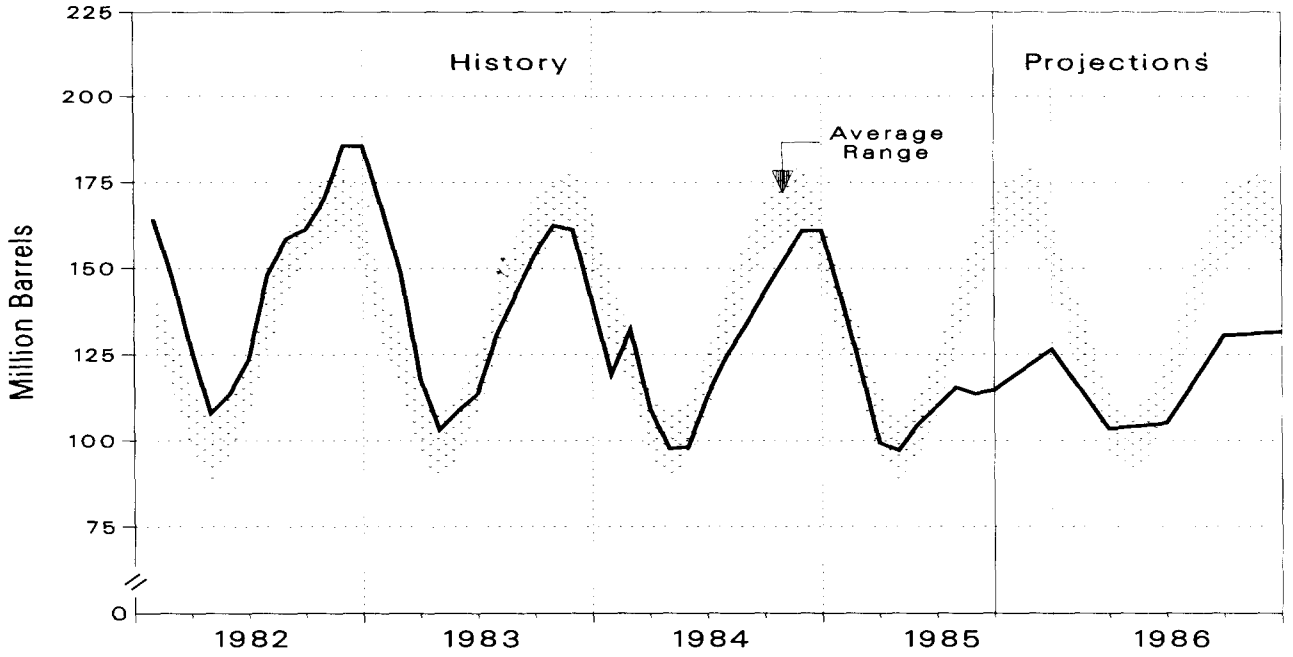
Projected demand for distillate fuel in the fourth quarter of 1985 is 3.02 million barrels per day, 7 percent above the rate a year ago. The main reason for the projected increase is the assumption of normal winter weather this year, compared with the warmer-than-normal weather last winter. Weather in the fourth quarter of 1984 was unusually mild, with population-weighted heating degree-days almost 9 percent below normal. Demand for distillate fuel in the first quarter of 1986 is expected to average 3.07 million barrels per day, about 6 percent below the level in the first quarter of 1985. Again, a key determinant in the change is the weather assumption, as the first quarter of 1985 was almost 4 percent colder than normal. In addition, relatively low economic growth is not expected to offset the continued efficiency and conservation improvements that have characterized distillate markets in recent years.

On average, a sustained 10-percent colder-than-normal winter would increase demand for distillate fuel by about 150,000 barrels per day for the two winter quarters. If this cold weather did occur, the most likely source of incremental supply would be domestic production. By increasing refinery utilization from the current 75 percent of capacity to 80 percent, and increasing distillate yields to just over 23 percent, the required additional distillate could be produced. However, this increase would imply both a higher utilization rate and a higher yield than has been typical in recent winters. Another source of additional supply is imports, which averaged 250,000 barrels per day last winter, and could be higher this winter given low worldwide demand. Increased imports, however, could also imply higher prices: the spot price of distillate in Rotterdam harbor was over $35 per barrel at the end of September, higher than at any time since early 1984.

Prices of heating oil to the residential sector are expected to average $1.07 per gallon this winter, compared with $1.05 per gallon during the winter of 1984-1985. This 2-cent increase in nominal terms implies a reduction in real heating oil prices, after adjusting for inflation, of 1.3 percent. The relatively small increase in nominal prices is due to assumed lower world oil prices ($27.89 per barrel last winter versus a projected $26.00 per barrel this winter). Margins (the difference between the retail price of heating oil and the crude oil price) are projected to increase by about 6.5 cents per gallon from last year because of low initial stock levels. Depending on the level of crude oil costs, the price of heating oil this winter could range between 99 cents per gallon (in the low-price scenario) and $1.12 per gallon (in the high-price scenario). In the base case, heating oil prices are projected to increase by about 4 cents per gallon between the third and fourth quarters of 1985 and by an additional 2 cents per gallon between the fourth quarter of 1985 and the first quarter of 1986.

Short-term, localized price fluctuations even greater than these ranges, always are a possibility, however, particularly in response to abnormally cold weather. A consequence of relying on supplies from production and imports (as opposed to stock withdrawals) is that spot prices could have a stronger effect on delivered prices. Spot prices may reflect temporary conditions (such as abnormally cold weather) in either the United States or Europe. As a result, the reliance on imports could mean that such transient conditions on either side of the Atlantic could affect the price of heating oil to consumers. Although prices were relatively stable last winter, previous winters have seen price increases of 10 cents per gallon or more over the course of the heating season. With low stock levels, the potential for temporarily higher prices exists if there is early or lengthy cold weather in the distillate-consuming areas of the Northeast and Midwest.

Figure 4. Primary Stock Levels of Distillate Fuel Oil



Sources: ● History: Energy Information Administration, *Petroleum Supply Annual* (1982-1984), DOE/EIA-0340(82-84)/1, *Petroleum Supply Monthly*, DOE/EIA-0109(85/08), and *Weekly Petroleum Status Report*, DOE/EIA-0208(85-41,42) (Washington, DC).
● Projections: Table 10.

Other Petroleum Products

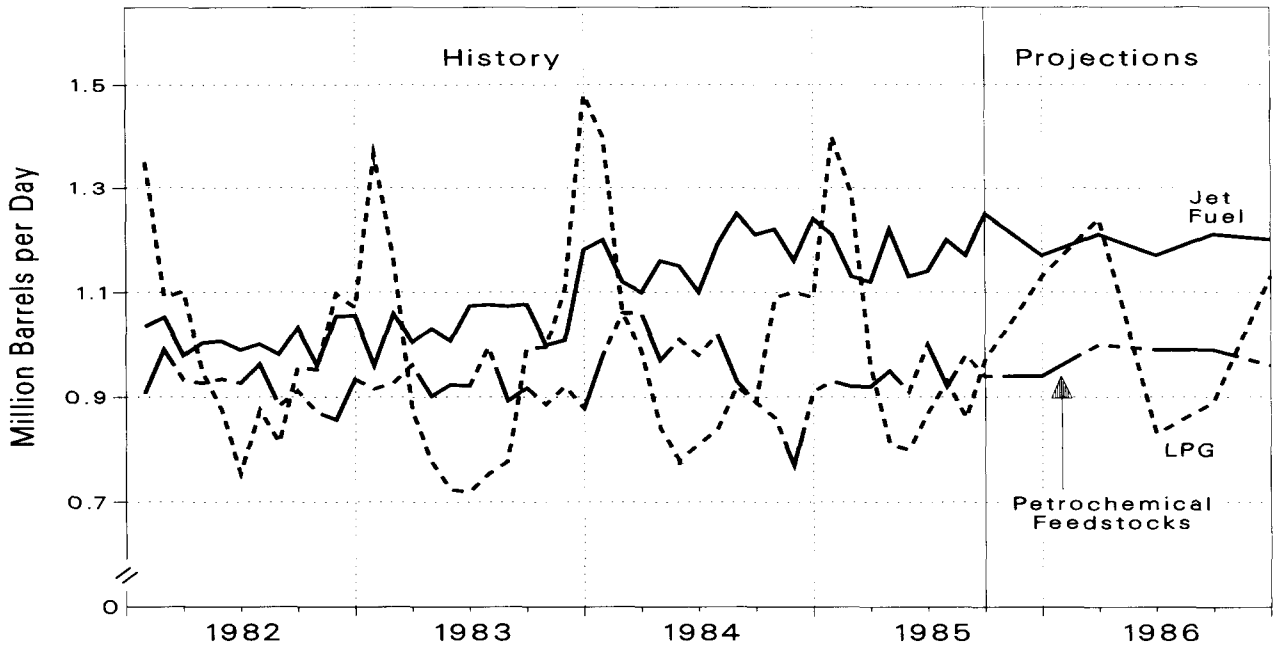
Other petroleum products supplied is projected to remain constant between 1984 and 1985 and to increase slightly in 1986. Jet fuel, petrochemical feedstocks, and liquefied petroleum gases (LPG) are the principal components of the other products category, accounting for 3.1 million barrels per day out of a total of 4.6 million barrels per day during the first 6 months of 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 is projected to increase by nearly 4 percent from 1984 levels (Figure 5). This increase is mainly attributable to colder weather experienced during January and February of this year, along with the fact that the fourth quarter of 1984 was unually warm. Demands are expected to remain fairly constant in 1986, despite continued declines in oil prices.

Jet fuel demands rose to more than 1.2 million barrels per day during the third quarter of 1985, up nearly 3 percent from the year-earlier level. However, on an annual basis, jet fuel demand is expected to average slightly under 1.2 million barrels per day in both 1985 and 1986, essentially unchanged from the level in 1984.

The use of petroleum to produce petrochemicals remains depressed relative to 1984 levels. Demands for feedstocks are expected to recover within the near future, however, as activity in the chemical sector continues to grow. Furthermore, inventories of the basic petrochemicals (ethylene and benzene) have been drawn down well below year-earlier levels, and further reductions are not expected. Feedstock use in 1986 is expected to average just under 1 million barrels per day.

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(85/08), and *Weekly Petroleum Status Report*, DOE/EIA-0208(85-41) (Washington, DC).
• Projections: Table 12.

Miscellaneous product supplied is projected to remain level through 1985 and then increase slightly in 1986 to 1.7 million barrels per day. Only demand for kerosene is projected to decline throughout the forecast period, corresponding to the historical evidence that kerosene demand declines as income increases. Asphalt and road oil product supplied is projected to grow the most rapidly of the miscellaneous products through 1986.

Domestic Crude Oil Production

Domestic crude oil production (including lease condensate) is projected to be more than 8.9 million barrels per day in 1985, up slightly from the 1984 level. Domestic production is projected to increase only slightly between 1985 and 1986. Production from Alaska is expected to increase by less than 5 percent between 1984 and 1985, to 1.8 million barrels per day, as additional production comes on line from the Kuparuk River field. Alaskan production during 1986 is expected to be about 1.7 percent higher than the production during 1985 as the Milne Point Unit comes on stream and as production from the Kuparuk River field increases. Oil production in the lower 48 States is expected to remain essentially unchanged over the forecast period, with increased production from California and Louisiana projected to offset declines in production from most of the other lower 48 States.

Petroleum Inventories

Total primary petroleum stocks were drawn down by about 29.5 million barrels in the third quarter of 1985, closing the quarter at 1,004 million barrels. This is 77.8 million barrels below the closing third quarter 1984 level, with distillate fuel accounting for 28 million barrels of this difference. Total fourth-quarter 1985 demand is expected to increase by 380,000 barrels per day over the year-earlier level, meaning that primary stock holders are carrying 6.5 days of supply less than at the end of September 1984 (calculated using the next quarter's anticipated rate of product supplied).

At the end of the third quarter of 1985, inventories of the major petroleum products (motor gasoline, distillate fuel oil, residual fuel oil, and jet fuel) and crude oil were below year-earlier levels, with distillate fuel oil stocks significantly below the 1984 level. Distillate stocks remained level during the third quarter, normally a period in which stocks are built in preparation for the winter demand. Primary distillate stocks are now at 38 days of supply, compared to almost 51 days at this point last year and almost 43 days at the end of June 1985.

The fill rate for the Strategic Petroleum Reserve (SPR) for the fourth quarter of 1985 (the beginning of fiscal year 1986) is projected to be 50,000 barrels per day. The quarterly fill rates for the calendar year 1986 are assumed to be zero, as proposed in the Administration's budget.

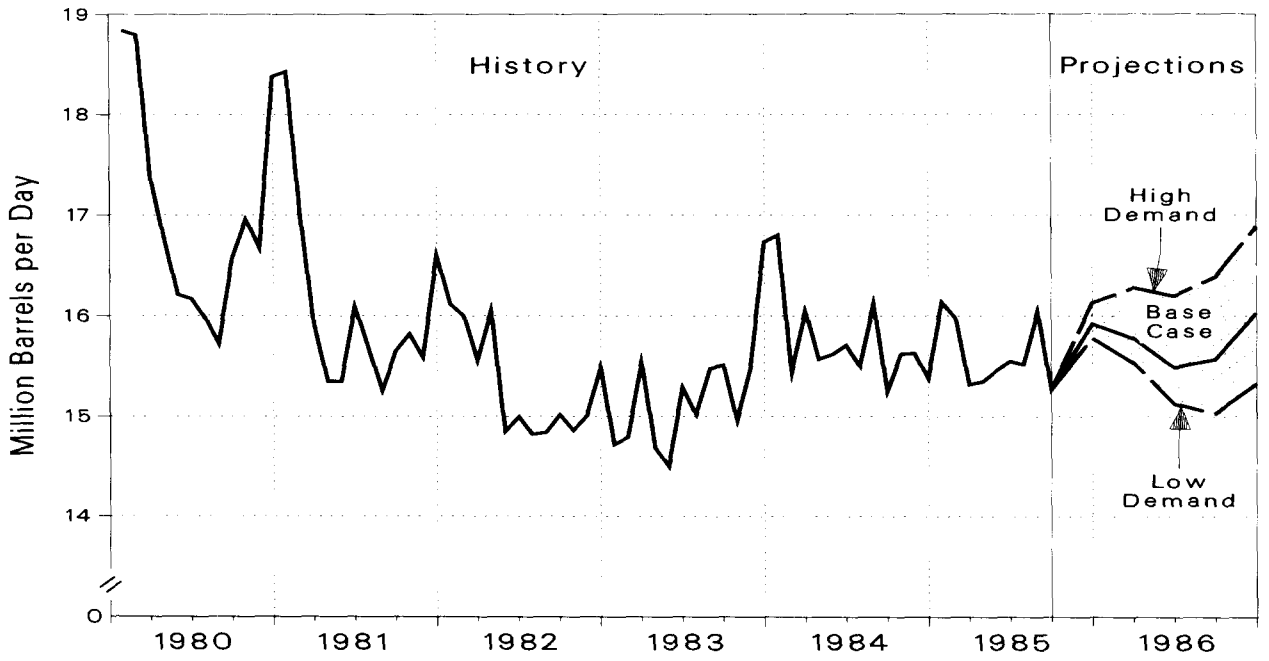
Petroleum Demand Sensitivities

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 3, 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.

The range of petroleum demand projected for the fourth quarter of 1985 is about 640,000 barrels per day, with the largest source of uncertainty being weather. During 1986, prices are expected to contribute most to the uncertainty range, which averages about 1.3 million barrels per day overall. The uncertainty attributable to income in 1986 also is projected to be significant, with a range of 440,000 barrels per day resulting from income variations above and below the base case level.

Figure 6. Total Petroleum Demand



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/07) (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 1984 and 1985, to nearly 17.8 trillion cubic feet, and to remain virtually constant between 1985 and 1986. Decreases in natural gas demand at electric utilities are expected to be balanced by increases in the all other uses category of gas demand. The projection for natural gas demand reflects the assumed continuation of economic growth and only moderate increases in natural gas prices during 1985 and 1986. No substantial changes in the nominal price of natural gas are anticipated from the partial deregulation that went into effect in January of this year. The level of natural gas in underground storage is projected to remain constant over the forecast period.

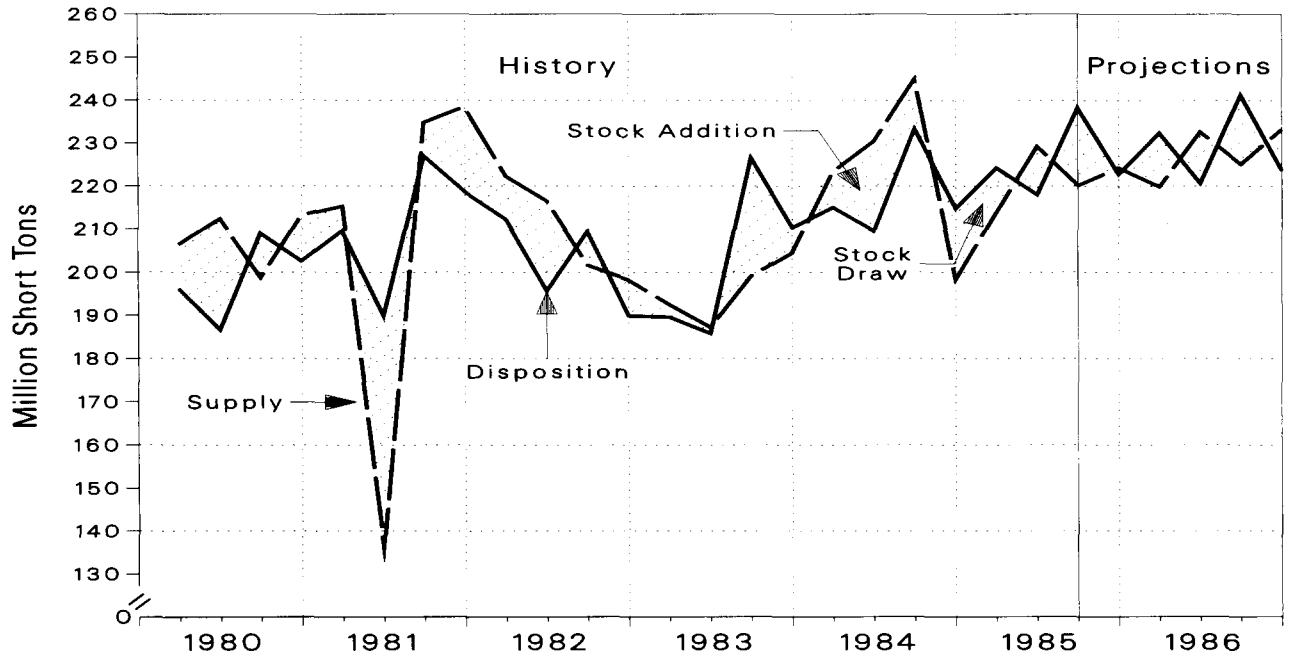
A lower price floor on Canadian pipeline exports of natural gas to the United States is expected to lead to an increase in U.S. imports of natural gas in 1985 and 1986 and to the stabilization of U.S. prices. Net pipeline imports of natural gas were 0.8 trillion cubic feet in 1984 and are projected to increase to about 1 trillion cubic feet per year in 1985 and 1986.

Coal

Coal Production. Coal production in 1985 is expected to be about 886 million tons, 1 percent below the 1984 level (Table 15). Despite significant increases in demand for U.S. coal this year, production has been depressed because of excess stocks left over from the massive stockpiling that occurred in 1984 in anticipation of a coal strike (Figure 7). With considerably tightened stock levels expected by the end of 1985, coal production should experience moderate growth in 1986, to about 909 million tons.

Domestic Coal Consumption. Total coal consumption is expected to increase by more than 3 percent in 1985, led mainly by increases in the electric utility market, and by about 2 percent between 1985 and 1986 (Figure 7). Increases projected for coal consumption at electric utilities reflect the increase in electricity expected to be generated from coal-fired plants. Average utiliza-

Figure 7. Coal Supply and Disposition



Sources: • History: Energy Information Administration, *Quarterly Coal Report*, DOE/EIA-0121(85/2Q) (Washington, DC, 1985). • Projections: Table 15.

tion rates at coal-fired generating plants are estimated to have exceeded 52 percent in 1984.[3] The current projections assume an increase in coal plant utilization to almost 53 percent in 1985 and 1986.

Coking coal consumption is expected to fall to 40 million tons in 1985, a 9-percent drop from its 1984 level. Behind this forecast is the expectation that raw steel production in 1985 will fall by about 6 million tons from the 1984 level of 92.5 million tons.[4] Preliminary data indicate that domestic raw steel production was down by about 10 pecent through August 1985 compared to 1984 levels. Also, net reductions in coke stocks are assumed to depress the demand for coking coal. For 1986, coking coal consumption is expected to remain at about 40 million tons, as a weak overall performance is expected for the domestic steel industry.

It is expected that coal consumption by the retail and general industry sector will show a 2-percent increase between 1984 and 1985. This increase can be attributed to the increase in synfuels-related activity, a category of coal consumption that is included in the "other industrial" portion of retail and general industry coal consumption. 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, essentially has been slated for abandonment by the partnership that has been managing it up until now. The Administration, through Energy Secretary John Herrington, rejected a plan for deferring payments on $673 million in government guaranteed loans and also rejected proposals for a estimated $720 million in price supports, which would have been spread over approximately 10 years. Production of synthetic natural gas from Great Plains will continue until an orderly plant shutdown can be arranged, probably in early 1986. 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. The assumed loss of lignite consumption from Great Plains is responsible for the projected decline of nearly 4 percent in retail and general industry coal consumption between 1985 and 1986.

Coal Exports. Coal exports remained strong through the first 8 months of 1985, primarily reflecting increased shipments of bituminous steam coal to Europe and the Pacific Rim. Bituminous metallurgical coal exports through August 1985 were up slightly compared with year-earlier levels. Partial data for the third quarter of 1985 suggest that at least 24 million tons of coal were exported from July through September, prompting the conservative judgment that coal exports will reach 85 million tons for all of 1985. Expected lower exports of metallurgical coal to Canada and Europe and lower steam coal shipments to Canada could be offset by higher steam coal shipments to Europe and the Pacific Rim, resulting in 1986 exports at about the 1985 level.

Through March of 1985, metallurgical coal exports to Europe were 32 percent above the 1984 levels, although by August, the increase over year-earlier levels had dropped to 2 percent.[5] Exports of metallurgical coal to Canada and all of Asia for the first 8 months of 1985 were 27 percent and 8 percent lower, respectively, compared to 1984 levels.[6] Assuming that Canadian and Japanese demands for U.S. metallurgical coal remain flat in 1986, overall metallurgical coal exports should remain flat or decline slightly, so long as the first-quarter surge in European demand seen in 1985 is not repeated.

Steam coal exports to Europe and Asia for the first 8 months of 1985 were 92 percent and 97 percent, repectively, higher than year-earlier levels.[7] Italy and Taiwan combined accounted for 2.1 million tons, or 54 percent, of the increase in steam coal exports through August of 1985 compared with the level in 1984.[8] In addition, with the exception of Canada, all major foreign buyers of U.S. steam coal also posted increases in purchases so far this year. Continued strength in this sector could make total coal exports of 85 million tons a conservative estimate for 1986 as well.

Electric Power

Electricity generation is expected to increase by almost 2 percent between 1985 and 1986, following growth of the same percentage estimated between 1984 and 1985. This growth reflects a continuation in the upward trend in total generation in response to economic expansion.

The nominal price of residential electricity is forecast to increase by about 4 percent between 1984 and 1985 and between 1985 and 1986 (Table 3).

[3]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).

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

[5]See Energy Information Administration, *Weekly Coal Production*, DOE/EIA-0218 (various weekly issues in 1985).

[6]Energy Information Administration, *Weekly Coal Production,*, Table 14.

[7]Energy Information Administration, *Weekly Coal Production,* Table 16.

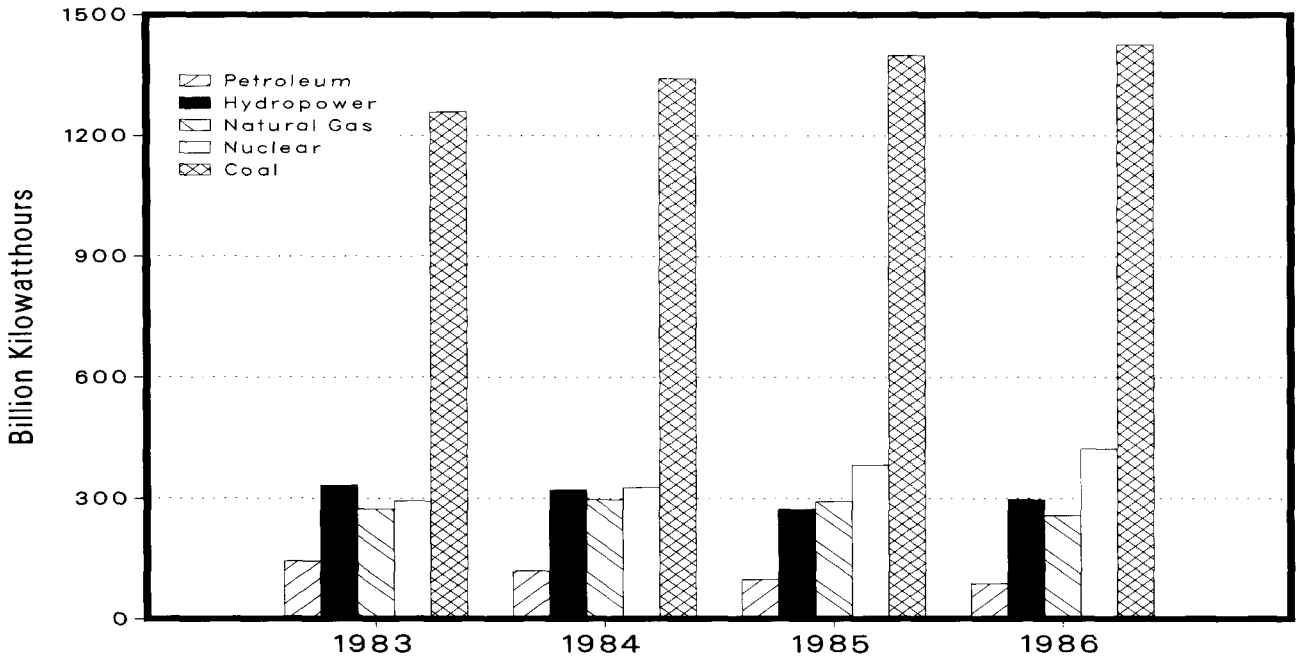
[8]Energy Information Administration, *Weekly Coal Production, Table 16.*

Generation by Energy Source. Fuel shares of electricity generation in 1986 are projected to be: 57 percent coal, 17 percent nuclear power, 10 percent natural gas, 4 percent petroleum, 12 percent hydroelectric power, and less than 1 percent for other energy sources (Figure 8). These figures represent a slight increase in the nuclear and hydroelectric shares and a decrease in the natural gas share compared with the shares in 1985. The projected increase in total generation of nearly 46 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 10 percent between 1985 and 1986, to more than 423 billion kilowatthours, following the expected increase of about 17 percent between 1984 and 1985. Output from new capacity is the major reason for the increase in nuclear generation expected next year. This forecast assumes full power operation of 8 new reactors (Catawba 1, Byron 1, Waterford 3, Wolf Creek, Palo Verde 1, Diablo Canyon 2, Limerick 1, and Fermi 2), plus the restart of Three Mile Island 1, for a total of nearly 10 gigawatts in 1985, and 12 additional reactors (River Bend, Shoreham, Perry 1, Millstone 3, Palo Verde 2, Watts Bar 1, Hope Creek 1, Comanche Peak 1, Catawba 2, Braidwood 1, Harris 1, and Byron 2) totaling almost 13 gigawatts during 1986. Because the average capacity factor during the first half of 1985 was higher than the year-earlier value (despite the continuation of pipe replacement work at several units), this forecast assumes a higher capacity factor for 1985 relative to the 1984 level. The 1986 capacity factor is assumed to be lower than in 1985 due to the large amounts of new nameplate capacity (which generally operates at a lower capacity level) expected next year.

Coal-fired generation of electricity is expected to increase by less than 2 percent between 1985 to 1986, with the relatively low increase attributable largely to the increased displacement of some coal-fired generation by the expected rebound in hydroelectric generation in 1986. Additional factors are the continued growth expected in the share of nuclear generation and a flattening of coal-fired capacity additions. In comparison, growth in coal generation is forecast to be more than 4 percent between 1984 and 1985. More than 6 gigawatts of coal-fired capacity are projected to be added in 1985, with an additional 6 gigawatts of coal capacity expected in 1986. In terms of billions of kilowatthours of net dependable coal capacity available, growth between 1985 and 1986 is projected to be about 2.1 percent, compared with the 2.8-percent growth between 1984 and 1985. In terms of the share of total generation, increases in coal generating capacity and lower availability of hydroelectric generation during 1985 have helped to spur the coal share of

Figure 8. Electricity Generation by Fuel Source



Sources: • History: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(85/07) (Washington, DC, 1985). • Projections: Table 16.

electricity generation to record levels this year. It is projected that the coal share will have increased from 55.5 percent in 1984 to 56.9 percent for the year 1985. For the fourth quarter of 1985, the coal share is projected to reach a record level of 58 percent, again due to lower hydroelectric generation during that quarter and to assumed normal weather (implying a substantially colder quarter than the fourth quarter of 1984).

Hydroelectric generation in 1985 is projected to be only 274 billion kilowatthours, a decline of almost 15 percent from the year-earlier level and the lowest yearly total since 1981. This forecast is based on abnormally low precipitation conditions that have existed so far this year. Assuming a return to normal precipitation and normal levels of water storage in 1986, an increase in hydropower generation is projected in 1986.

The combined amount of oil- and natural gas-fired generation is projected to drop in 1986, following the trend experienced between 1984 and 1985. Because oil and natural gas are considered the swing fuels for electricity generation, the actual contributions from these fuels are 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. Most of the increase in total generation not supplied by coal, nuclear power, or hydroelectric power is assumed to be from natural gas, although the lower residual fuel oil prices could slow the decline in utility consumption of residual oil over the forecast period.

Net Electricity Imports. Electricity imports have increased significantly in recent years and are becoming an important source of electricity for some regions of the country. 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. In addition, small net amounts of electricity were imported from Mexico for the first time in 1984.

Net electricity imports are projected to reach 41 billion kilowatthours in 1985, an increase of more than 1 billion kilowatthours from the year-earlier level (Table 16). This increase results from the combination of increased purchases over existing transmission lines and the opening of a transmission line between Vermont and Canada expected in the second half of 1985. Another major transmission line between New England and Canada is expected to come into service in the first half of 1986. Transmission capability also is being improved within the United States to increase the ability of the electrical system to move purchased power. Net electricity imports are forecast to reach 44 billion kilowatthours in 1986, almost 2 percent of total U.S. electricity supply.

Total Domestic Energy Balance

Total energy consumption is projected to increase by 1 percent between 1984 and 1985, to 74.8 quadrillion Btu, and by the same percentage between 1985 and 1986, to 75.9 quadrillion Btu (Table 17). The energy/GNP ratio is expected to fall from the 1984 level of 45.2 thousand Btu per 1972 dollar to 44.6 thousand Btu per 1972 dollar of real GNP in 1985 and to decline further to 44.3 thousand Btu per 1972 dollar of real GNP in 1986 (Table 1). The drop in 1986 would be the 16th consecutive yearly decline in the energy/GNP ratio.

Table 3. Quarterly Energy Prices (Nominal), History and Projections

Product	1984		1985					1986				Year		
	3rd	4th	1st	2nd	3rd	Price[a]	4th	1st	2nd	3rd	4th	1984	1985	1986
Petroleum														
Gasoline[b]						Low	*1.15*	*1.05*	*1.04*	*1.05*	*1.03*	-	*1.18*	*1.04*
(dollars per gallon)	**1.19**	**1.19**	**1.14**	**1.22**	**1.22**	Base	*1.18*	*1.14*	*1.15*	*1.17*	*1.14*	**1.20**	*1.19*	*1.15*
						High	*1.21*	*1.19*	*1.22*	*1.25*	*1.23*	-	*1.20*	*1.22*
No. 2 Heating Oil, Wholesale						Low	*.73*	*.68*	*.67*	*.66*	*.67*	-	*.77*	*.67*
(dollars per gallon)	**.82**	**.81**	**.80**	**.79**	**.77**	Base	*.78*	*.78*	*.77*	*.75*	*.75*	**.83**	*.78*	*.76*
						High	*.83*	*.84*	*.83*	*.82*	*.83*	-	*.79*	*.83*
No. 2 Heating Oil, Retail						Low	*1.02*	*.96*	*.92*	*.92*	*.93*	-	*1.03*	*.93*
(dollars per gallon)	**1.04**	**1.05**	**1.05**	**1.03**	**1.02**	Base	*1.06*	*1.08*	*1.04*	*1.02*	*1.03*	**1.09**	*1.04*	*1.04*
						High	*1.11*	*1.14*	*1.11*	*1.10*	*1.13*	-	*1.05*	*1.12*
No. 6 Residual Fuel Oil[c]						Low	*.57*	*.51*	*.49*	*.49*	*.49*	-	*.61*	*.49*
(dollars per gallon)	**.68**	**.68**	**.68**	**.60**	**.59**	Base	*.61*	*.58*	*.56*	*.55*	*.55*	**.69**	*.62*	*.56*
						High	*.64*	*.62*	*.60*	*.60*	*.60*	-	*.63*	*.61*
No. 2 Diesel Oil, Retail						Low	*1.15*	*1.09*	*1.09*	*1.09*	*1.09*	-	*1.15*	*1.09*
(dollars per gallon)	**1.17**	**1.18**	**1.14**	**1.15**	**1.17**	Base	*1.19*	*1.19*	*1.19*	*1.18*	*1.17*	**1.15**	*1.16*	*1.18*
						High	*1.22*	*1.24*	*1.25*	*1.25*	*1.25*	-	*1.17*	*1.25*
Other														
Coal, Delivered to Utilities						Low	*1.65*	*1.66*	*1.66*	*1.66*	*1.66*	-	*1.66*	*1.66*
(dollars per million Btu)	**1.66**	**1.67**	**1.66**	**1.67**	**1.67**	Base	*1.69*	*1.70*	*1.72*	*1.73*	*1.74*	**1.66**	*1.67*	*1.72*
						High	*1.70*	*1.72*	*1.75*	*1.77*	*1.78*	-	*1.67*	*1.76*
Natural Gas, Residential[d]						Low	*6.25*	*5.88*	*6.23*	*7.05*	*6.10*	-	*6.10*	*6.05*
(dollars per 1,000 cu. ft.)	**7.16**	**6.25**	**5.93**	**6.36**	**7.27**	Base	*6.35*	*6.02*	*6.45*	*7.37*	*6.44*	**6.12**	*6.22*	*6.30*
						High	*6.43*	*6.13*	*6.60*	*7.59*	*6.68*	-	*6.24*	*6.46*
Natural Gas, to Utilities						Low	*3.60*	*3.43*	*3.46*	*3.57*	*3.41*	-	*3.56*	*3.47*
(dollars per million Btu)	**3.69**	**3.58**	**3.62**	**3.52**	**3.63**	Base	*3.52*	*3.51*	*3.57*	*3.72*	*3.59*	**3.58**	*3.57*	*3.60*
						High	*3.56*	*3.57*	*3.66*	*3.82*	*3.71*	-	*3.59*	*3.69*
Electricity, Residential						Low	*7.74*	*7.43*	*7.97*	*8.32*	*7.95*	-	*7.81*	*7.95*
(cents per kilowatthour)	**8.03**	**7.59**	**7.32**	**7.95**	**8.33**	Base	*7.90*	*7.68*	*8.25*	*8.62*	*8.24*	**7.56**	*7.88*	*8.20*
						High	*8.07*	*7.87*	*8.46*	*8.83*	*8.45*	-	*7.95*	*8.40*

[a] 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.
[b] Average for all grades and services.
[c] Retail residual fuel oil--average, all sulfur contents.
[d] New historical series (see text).

Notes: *Third 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(85/07) and *Petroleum Marketing Monthly* , DOE/EIA-0380(85/07).

Table 4. International Petroleum Balance (Million Barrels per Day, Except Closing Stocks)

	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply[a]													
Production													
U.S. (50 States)	**11.1**	**11.2**	**11.0**	*11.1*	*11.1*	*11.2*	*11.2*	*11.1*	*11.1*	*11.3*	**11.1**	*11.1*	*11.2*
OPEC	**18.2**	**17.8**	**17.4**	*16.1*	*16.1*	*17.3*	*16.9*	*16.5*	*17.0*	*17.5*	**18.6**	*16.7*	*17.0*
Other Non-OPEC	**14.5**	**15.2**	**15.3**	*15.2*	*15.3*	*15.6*	*15.7*	*15.6*	*15.8*	*15.9*	**14.6**	*15.3*	*15.8*
Total Market Economies	**43.8**	**44.2**	**43.7**	*42.3*	*42.5*	*44.1*	*43.8*	*43.2*	*43.9*	*44.7*	**44.4**	*43.2*	*43.9*
Net Communist Exports	**2.0**	**2.0**	**1.2**	*1.8*	*1.9*	*1.8*	*1.4*	*1.7*	*1.8*	*1.8*	**2.0**	*1.7*	*1.7*
Total Supply	**45.8**	**46.2**	**44.9**	*44.1*	*44.4*	*45.9*	*45.2*	*44.9*	*45.7*	*46.5*	**46.3**	*44.8*	*45.6*
Net Stock Withdrawals or Additions (-)													
U.S. (50 States excl. SPR)	**.1**	**-.3**	**1.2**	*-.4*	*.3*	*.0*	*.3*	*.0*	*-.3*	*.1*	**-.1**	*.3*	*.0*
U.S. SPR	**-.2**	**-.2**	**-.1**	*-.2*	*-.1*	*-.1*	*.0*	*.0*	*.0*	*.0*	**-.2**	*-.1*	*.0*
Other Market Economies	**-.1**	**.3**	**1.8**	*.6*	*-.3*	*.4*	*1.3*	*-.8*	*-.9*	*.3*	**.1**	*.6*	*.0*
Total Stock Withdrawals	**-.2**	**-.2**	**2.9**	*.1*	*-.1*	*.5*	*1.6*	*-.8*	*-1.2*	*.5*	**-.2**	*.8*	*.0*
Product Supplied													
U.S. (50 States)	**15.6**	**15.5**	**15.8**	*15.5*	*15.6*	*15.9*	*15.8*	*15.5*	*15.6*	*16.0*	**15.7**	*15.7*	*15.7*
U.S. Territories	**.3**	**.4**	**.2**	*.3*	*.3*	*.3*	*.3*	*.3*	*.3*	*.3*	**.3**	*.3*	*.3*
Japan	**4.2**	**4.7**	**5.0**	*3.9*	*4.0*	*4.6*	*4.9*	*3.9*	*4.0*	*4.7*	**4.6**	*4.4*	*4.4*
OECD Europe	**11.3**	**12.1**	**12.7**	*10.8*	*10.6*	*11.8*	*12.0*	*10.7*	*10.9*	*12.0*	**11.8**	*11.4*	*11.4*
Other Market Economies	**13.8**	**13.9**	**13.7**	*13.7*	*13.7*	*13.9*	*13.8*	*13.6*	*13.8*	*13.9*	**13.8**	*13.8*	*13.8*
Total Market Economies	**45.2**	**46.6**	**47.5**	*44.2*	*44.3*	*46.4*	*46.8*	*44.1*	*44.5*	*47.0*	**46.2**	*45.6*	*45.6*
Statistical Discrepancy	**-.4**	**.5**	**-.3**	*.0*	*.0*	*.0*	*.0*	*.0*	*.0*	*.0*	**.1**	*-.1*	*.0*
Closing Stocks (billion barrels)	**4.8**	**4.8**	**4.6**	*4.6*	*4.6*	*4.5*	*4.4*	*4.5*	*4.6*	*4.5*	**4.8**	*4.5*	*4.5*

[a] 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(85/07) and *International Energy Annual, 1984* , DOE/EIA-0219(84); Organization for Economic Cooperation and Development, *Quarterly Oil Statistics, First Quarter 1985* ; and Petroleum Economics Limited, *World Quarterly Primary Energy and Supply/Demand*, April 1985.

Table 5. International Economic Growth (Percent Change from Previous Period)

	Annual Average 1970-1983	1984[a]	1985	1986
OECD Total[b]	**2.8**	**4.6**	*2.8*	*2.3*
United States[c]	**2.7**	**6.8**	*2.4*	*2.1*
Western Europe	**2.4**	**2.2**	*2.3*	*2.2*
Japan[c]	**4.5**	**5.7**	*4.9*	*3.0*
Other OECD[d]	**3.1**	**5.5**	*4.0*	*2.5*

[a] Preliminary estimates for Organization for Economic Cooperation and Development (OECD) countries.

[b] Gross domestic product.

[c] Gross national product.

[d] 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*, September 1985. Forecasts: Wharton Economic Forecasting Associates, *World Economic Outlook* October 1985; Data Resources, Inc., Canadian Forecast, CONTROL092085, European Forecast CONTROL092085, and Japanese Forecast, JPCONTROL0885.

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Crude Oil Supply													
Domestic Production [a]	**8.89**	**8.93**	**8.93**	**8.93**	**8.89**	*8.93*	*8.93*	*8.96*	*8.96*	*8.99*	**8.88**	*8.92*	*8.96*
Alaska	**1.73**	**1.74**	**1.79**	**1.79**	**1.80**	*1.82*	*1.82*	*1.83*	*1.83*	*1.83*	**1.72**	*1.80*	*1.83*
Lower 48	**7.17**	**7.18**	**7.14**	**7.14**	**7.09**	*7.11*	*7.11*	*7.13*	*7.14*	*7.17*	**7.16**	*7.12*	*7.14*
Net Imports (Including SPR)[b]	**3.26**	**3.31**	**2.38**	**3.20**	**2.98**	*2.90*	*2.46*	*2.76*	*3.10*	*2.80*	**3.25**	*2.87*	*2.78*
Gross Imports (Excluding SPR)	**3.22**	**3.28**	**2.44**	**3.27**	**3.03**	*3.02*	*2.63*	*2.91*	*3.23*	*2.94*	**3.23**	*2.94*	*2.93*
SPR Imports	**.19**	**.21**	**.12**	**.16**	**.14**	*.00*	*.00*	*.00*	*.00*	*.00*	**.20**	*.11*	*.00*
Exports	**.15**	**.18**	**.18**	**.24**	**.19**	*.16*	*.17*	*.15*	*.13*	*.14*	**.18**	*.19*	*.15*
SPR Stock Withdrawn or Added (-)	**-.19**	**-.21**	**-.12**	**-.16**	**-.14**	*-.05*	*.00*	*.00*	*.00*	*.00*	**-.20**	*-.12*	*.00*
Other Stock Withdrawn or Added (-)	**.30**	**-.22**	**.18**	**-.15**	**.30**	*.00*	*.02*	*-.05*	*-.01*	*-.01*	**.00**	*.08*	*-.01*
Products Supplied and Losses	**-.07**	**-.07**	**-.07**	**-.06**	**-.06**	*-.10*	*.00*	*-.07*	*-.15*	*-.16*	**-.07**	*-.07*	*-.10*
Unaccounted-for Crude	**.01**	**.20**	**.13**	**.36**	**.22**	*.26*	*.34*	*.22*	*.00*	*.20*	**.18**	*.24*	*.19*
Crude Oil Input to Refineries	**12.21**	**11.95**	**11.42**	**12.11**	**12.19**	*11.95*	*11.74*	*11.81*	*11.90*	*11.83*	**12.04**	*11.92*	*11.82*
Other Supply													
NGL Production	**1.64**	**1.66**	**1.63**	**1.61**	**1.57**	*1.71*	*1.69*	*1.59*	*1.54*	*1.70*	**1.63**	*1.63*	*1.63*
Other Hydrocarbon and Alcohol Inputs	**.05**	**.04**	**.04**	**.04**	**.06**	*.05*	*.04*	*.05*	*.05*	*.05*	**.05**	*.05*	*.05*
Crude Oil Product Supplied	**.06**	**.07**	**.07**	**.06**	**.06**	*.06*	*.06*	*.06*	*.06*	*.06*	**.06**	*.06*	*.06*
Processing Gain	**.55**	**.57**	**.43**	**.51**	**.57**	*.51*	*.51*	*.50*	*.56*	*.52*	**.55**	*.51*	*.52*
Net Product Imports[c]	**1.33**	**1.30**	**1.19**	**1.37**	**1.15**	*1.50*	*1.49*	*1.42*	*1.77*	*1.73*	**1.47**	*1.30*	*1.60*
Gross Product Imports [c]	**1.82**	**1.94**	**1.78**	**1.85**	**1.64**	*2.04*	*2.04*	*1.94*	*2.26*	*2.28*	**2.01**	*1.83*	*2.13*
Product Exports	**.49**	**.64**	**.59**	**.48**	**.49**	*.54*	*.55*	*.52*	*.50*	*.54*	**.54**	*.53*	*.53*
Product Stock Withdrawn or Added (-)[d]	**-.22**	**-.04**	**1.02**	**-.24**	**.02**	*.13*	*.24*	*.05*	*-.32*	*.14*	**-.08**	*.23*	*.03*
Total Product Supplied, Domestic Use	**15.62**	**15.54**	**15.80**	**15.45**	**15.61**	*15.92*	*15.78*	*15.49*	*15.57*	*16.03*	**15.73**	*15.70*	*15.72*
Disposition													
Motor Gasoline	**6.84**	**6.69**	**6.49**	**6.98**	**6.96**	*6.74*	*6.40*	*6.91*	*6.93*	*6.79*	**6.69**	*6.80*	*6.76*
Jet Fuel	**1.21**	**1.21**	**1.16**	**1.16**	**1.20**	*1.17*	*1.21*	*1.17*	*1.21*	*1.20*	**1.18**	*1.17*	*1.19*
Distillate Fuel Oil	**2.57**	**2.82**	**3.28**	**2.65**	**2.58**	*3.02*	*3.07*	*2.80*	*2.59*	*3.09*	**2.84**	*2.88*	*2.89*
Residual Fuel Oil	**1.21**	**1.20**	**1.36**	**1.15**	**1.08**	*1.23*	*1.43*	*1.05*	*.97*	*1.14*	**1.37**	*1.20*	*1.15*
Other Oils Supplied [e]	3.79	3.62	3.52	3.51	3.78	*3.75*	*3.68*	*3.55*	*3.87*	*3.81*	**3.64**	*3.64*	*3.73*
Total Product Supplied	**15.62**	**15.54**	**15.81**	**15.45**	**15.61**	*15.92*	*15.78*	*15.49*	*15.57*	*16.03*	**15.73**	*15.70*	*15.72*
Closing Stocks (million barrels)													
Crude Oil (Excluding SPR) [f]	**325.2**	**345.4**	**329.1**	**342.9**	**315.1**	*314.8*	*313.1*	*317.8*	*318.9*	*319.6*	**345.4**	*314.8*	*319.6*
Total Motor Gasoline	**234.1**	**243.3**	**220.1**	**219.8**	**221.8**	*212.7*	*221.0*	*204.9*	*209.1*	*210.3*	**243.3**	*212.7*	*210.3*
Finished Motor Gasoline	**194.1**	**205.2**	**186.4**	**186.3**	**186.7**	*177.3*	*185.3*	*172.7*	*177.8*	*177.4*	**205.2**	*177.3*	*177.4*
Blending Components	**40.0**	**38.1**	**33.7**	**33.5**	**35.1**	*35.4*	*35.7*	*32.2*	*31.3*	*32.9*	**38.1**	*35.4*	*32.9*
Jet Fuel	**45.0**	**42.0**	**44.1**	**42.4**	**41.6**	*43.7*	*43.4*	*42.2*	*39.6*	*39.7*	**42.0**	*43.7*	*39.7*
Distillate Fuel Oil	**142.9**	**161.1**	**99.4**	**110.0**	**114.7**	*126.5*	*103.4*	*105.0*	*130.6*	*131.6*	**161.1**	*126.5*	*131.6*
Residual Fuel Oil	**46.8**	**53.0**	**46.3**	**40.2**	**42.6**	*45.5*	*41.4*	*39.5*	*44.5*	*46.3*	**53.0**	*45.5*	*46.3*
Other Oils [g]	**287.6**	**261.0**	**258.7**	**278.1**	**268.1**	*248.5*	*246.3*	*259.0*	*256.2*	*239.2*	**261.0**	*248.5*	*239.2*
Total Stocks (Excluding SPR)	**1081.7**	**1105.7**	**997.7**	**1033.4**	**1003.9**	*991.7*	*968.6*	*968.6*	*998.9*	*986.7*	**1105.7**	*991.7*	*986.7*
Crude Oil in SPR	**431.1**	**450.5**	**461.6**	**476.6**	**489.3**	*493.9*	*493.9*	*493.9*	*493.9*	*493.9*	**450.5**	*493.9*	*493.9*
Total Stocks (Including SPR)	**1512.8**	**1556.2**	**1459.3**	**1510.0**	**1493.1**	*1485.6*	*1462.4*	*1462.4*	*1492.7*	*1480.6*	**1556.2**	*1485.6*	*1480.6*

[a] Includes lease condensate.
[b] Net Imports equals Gross Imports plus SPR Imports minus Exports.
[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.
[d] Includes an estimate of minor product stock change based on monthly data.
[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.
[f] Includes crude oil in transit to refineries.
[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve
NGL: Natural Gas Liquids
Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical 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, Apr. 1985 to Oct. 1985; and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85/41).

Table 7. Quarterly Supply and Disposition of Petroleum: High Economic Growth Case

(Million Barrels per Day, Except Stocks)

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Crude Oil Supply													
Domestic Production [a]	**8.89**	**8.93**	**8.93**	**8.93**	**8.89**	*8.93*	*8.93*	*8.96*	*8.96*	*8.99*	**8.88**	*8.92*	*8.96*
Alaska	**1.73**	**1.74**	**1.79**	**1.79**	**1.80**	*1.82*	*1.82*	*1.83*	*1.83*	*1.83*	**1.72**	*1.80*	*1.83*
Lower 48	**7.17**	**7.18**	**7.14**	**7.14**	**7.09**	*7.11*	*7.11*	*7.13*	*7.14*	*7.17*	**7.16**	*7.12*	*7.14*
Net Imports (Including SPR)[b]	**3.26**	**3.31**	**2.38**	**3.20**	**2.98**	*2.95*	*2.56*	*2.90*	*3.25*	*2.95*	**3.25**	*2.88*	*2.92*
Gross Imports (Excluding SPR)	**3.22**	**3.28**	**2.44**	**3.27**	**3.03**	*3.06*	*2.73*	*3.05*	*3.38*	*3.10*	**3.23**	*2.95*	*3.06*
SPR Imports	**.19**	**.21**	**.12**	**.16**	**.14**	*.00*	*.00*	*.00*	*.00*	*.00*	**.20**	*.11*	*.00*
Exports	**.15**	**.18**	**.18**	**.24**	**.19**	*.16*	*.17*	*.15*	*.13*	*.14*	**.18**	*.19*	*.15*
SPR Stock Withdrawn or Added (-)	**-.19**	**-.21**	**-.12**	**-.16**	**-.14**	*-.05*	*.00*	*.00*	*.00*	*.00*	**-.20**	*-.12*	*.00*
Other Stock Withdrawn or Added (-)	**.30**	**-.22**	**.18**	**-.15**	**.30**	*-.03*	*-.02*	*-.09*	*-.03*	*-.01*	**.00**	*.08*	*-.04*
Products Supplied and Losses	**-.07**	**-.07**	**-.07**	**-.06**	**-.06**	*-.05*	*.10*	*.07*	*.00*	*.00*	**-.07**	*-.06*	*.04*
Unaccounted-for Crude	**.01**	**.20**	**.13**	**.36**	**.22**	*.30*	*.44*	*.36*	*.16*	*.35*	**.18**	*.25*	*.33*
Crude Oil Input to Refineries	**12.21**	**11.95**	**11.42**	**12.11**	**12.19**	*12.05*	*12.01*	*12.20*	*12.34*	*12.29*	**12.04**	*11.94*	*12.21*
Other Supply													
NGL Production	**1.64**	**1.66**	**1.63**	**1.61**	**1.57**	*1.71*	*1.69*	*1.59*	*1.55*	*1.70*	**1.63**	*1.63*	*1.63*
Other Hydrocarbon and Alcohol Inputs	**.05**	**.04**	**.04**	**.04**	**.06**	*.05*	*.04*	*.05*	*.05*	*.05*	**.05**	*.05*	*.05*
Crude Oil Product Supplied	**.06**	**.07**	**.07**	**.06**	**.06**	*.06*	*.06*	*.06*	*.06*	*.06*	**.06**	*.06*	*.06*
Processing Gain	**.55**	**.57**	**.43**	**.51**	**.57**	*.52*	*.52*	*.52*	*.57*	*.53*	**.55**	*.51*	*.53*
Net Product Imports[c]	**1.33**	**1.30**	**1.19**	**1.37**	**1.15**	*1.57*	*1.68*	*1.72*	*2.16*	*2.11*	**1.47**	*1.32*	*1.92*
Gross Product Imports [c]	**1.82**	**1.94**	**1.78**	**1.85**	**1.64**	*2.10*	*2.23*	*2.24*	*2.66*	*2.65*	**2.01**	*1.84*	*2.45*
Product Exports	**.49**	**.64**	**.59**	**.48**	**.49**	*.54*	*.55*	*.52*	*.50*	*.54*	**.54**	*.53*	*.53*
Product Stock Withdrawn or Added (-)[d]	**-.22**	**-.04**	**1.02**	**-.24**	**.02**	*.17*	*.28*	*.06*	*-.35*	*.15*	**-.08**	*.24*	*.03*
Total Product Supplied, Domestic Use	**15.62**	**15.54**	**15.80**	**15.45**	**15.61**	*16.13*	*16.28*	*16.20*	*16.39*	*16.89*	**15.73**	*15.75*	*16.44*
Disposition													
Motor Gasoline	**6.84**	**6.69**	**6.49**	**6.98**	**6.96**	*6.82*	*6.64*	*7.25*	*7.30*	*7.16*	**6.69**	*6.82*	*7.09*
Jet Fuel	**1.21**	**1.21**	**1.16**	**1.16**	**1.20**	*1.18*	*1.22*	*1.19*	*1.23*	*1.23*	**1.18**	*1.18*	*1.22*
Distillate Fuel Oil	**2.57**	**2.82**	**3.28**	**2.65**	**2.58**	*3.07*	*3.19*	*2.96*	*2.76*	*3.29*	**2.84**	*2.89*	*3.05*
Residual Fuel Oil	**1.21**	**1.20**	**1.36**	**1.15**	**1.08**	*1.28*	*1.50*	*1.13*	*1.05*	*1.24*	**1.37**	*1.22*	*1.23*
Other Oils Supplied [e]	**3.79**	**3.62**	**3.52**	**3.51**	**3.78**	*3.78*	*3.74*	*3.66*	*4.03*	*3.99*	**3.64**	*3.65*	*3.86*
Total Product Supplied	**15.62**	**15.54**	**15.81**	**15.45**	**15.61**	*16.13*	*16.28*	*16.20*	*16.39*	*16.89*	**15.73**	*15.75*	*16.44*
Stocks (million barrels)													
Crude Oil (Excluding SPR) [f]	**325.2**	**345.4**	**329.1**	**342.9**	**315.1**	*317.6*	*319.3*	*327.8*	*330.3*	*331.3*	**345.4**	*317.6*	*331.3*
Total Motor Gasoline	**234.1**	**243.3**	**220.1**	**219.8**	**221.8**	*209.9*	*214.5*	*195.9*	*200.1*	*200.7*	**243.3**	*209.9*	*200.7*
Finished Motor Gasoline	**194.1**	**205.2**	**186.4**	**186.3**	**186.7**	*174.7*	*179.0*	*164.3*	*169.3*	*168.7*	**205.2**	*174.7*	*168.7*
Blending Components	**40.0**	**38.1**	**33.7**	**33.5**	**35.1**	*35.2*	*35.5*	*31.6*	*30.8*	*32.0*	**38.1**	*35.2*	*32.0*
Jet Fuel	**45.0**	**42.0**	**44.1**	**42.4**	**41.6**	*43.4*	*42.6*	*41.3*	*38.4*	*38.3*	**42.0**	*43.4*	*38.3*
Distillate Fuel Oil	**142.9**	**161.1**	**99.4**	**110.0**	**114.7**	*125.8*	*101.8*	*104.9*	*133.2*	*136.2*	**161.1**	*125.8*	*136.2*
Residual Fuel Oil	**46.8**	**53.0**	**46.3**	**40.2**	**42.6**	*44.7*	*39.7*	*37.7*	*42.6*	*44.0*	**53.0**	*44.7*	*44.0*
Other Oils [g]	**287.6**	**261.0**	**258.7**	**278.1**	**268.1**	*249.7*	*249.7*	*263.2*	*261.0*	*242.1*	**261.0**	*249.7*	*242.1*
Total Stocks (Excluding SPR)	**1081.7**	**1105.7**	**997.7**	**1033.4**	**1003.9**	*991.1*	*967.6*	*970.8*	*1005.6*	*992.6*	**1105.7**	*991.1*	*992.6*
Crude Oil in SPR	**431.1**	**450.5**	**461.6**	**476.6**	**489.3**	*493.9*	*493.9*	*493.9*	*493.9*	*493.9*	**450.5**	*493.9*	*493.9*
Total Stocks (Including SPR)	**1512.8**	**1556.2**	**1459.3**	**1510.0**	**1493.1**	*1484.9*	*1461.4*	*1464.7*	*1499.4*	*1486.5*	**1556.2**	*1484.9*	*1486.5*

[a] Includes lease condensate.
[b] Net Imports equals Gross Imports plus SPR Imports minus Exports.
[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.
[d] Includes an estimate of minor product stock change based on monthly data.
[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.
[f] Includes crude oil in transit to refineries.
[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve
NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical 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, Apr. 1985 to Oct. 1985; and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85/41).

Table 8. Quarterly Supply and Disposition of Petroleum: Low Economic Growth Case

(Million Barrels per Day, Except Stocks)

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Crude Oil Supply													
Domestic Production [a]	**8.89**	**8.93**	**8.93**	**8.93**	**8.89**	*8.93*	*8.93*	*8.96*	*8.96*	*8.99*	**8.88**	*8.92*	*8.96*
Alaska	**1.73**	**1.74**	**1.79**	**1.79**	**1.80**	*1.82*	*1.82*	*1.83*	*1.83*	*1.83*	**1.72**	*1.80*	*1.83*
Lower 48	**7.17**	**7.18**	**7.14**	**7.14**	**7.09**	*7.11*	*7.11*	*7.13*	*7.14*	*7.17*	**7.16**	*7.12*	*7.14*
Net Imports (Including SPR)[b]	**3.26**	**3.31**	**2.38**	**3.20**	**2.98**	*2.88*	*2.42*	*2.69*	*2.99*	*2.67*	**3.25**	*2.86*	*2.69*
Gross Imports (Excluding SPR)	**3.22**	**3.28**	**2.44**	**3.27**	**3.03**	*2.99*	*2.58*	*2.83*	*3.12*	*2.81*	**3.23**	*2.94*	*2.84*
SPR Imports	**.19**	**.21**	**.12**	**.16**	**.14**	*.00*	*.00*	*.00*	*.00*	*.00*	**.20**	*.11*	*.00*
Exports	**.15**	**.18**	**.18**	**.24**	**.19**	*.16*	*.17*	*.15*	*.13*	*.14*	**.18**	*.19*	*.15*
SPR Stock Withdrawn or Added (-)	**-.19**	**-.21**	**-.12**	**-.16**	**-.14**	*-.05*	*.00*	*.00*	*.00*	*.00*	**-.20**	*-.12*	*.00*
Other Stock Withdrawn or Added (-)	**.30**	**-.22**	**.18**	**-.15**	**.30**	*.02*	*.03*	*-.03*	*.01*	*.02*	**.00**	*.09*	*.01*
Products Supplied and Losses	**-.07**	**-.07**	**-.07**	**-.06**	**-.06**	*-.12*	*-.05*	*-.14*	*-.26*	*-.28*	**-.07**	*-.08*	*-.18*
Unaccounted-for Crude	**.01**	**.20**	**.13**	**.36**	**.22**	*.23*	*.30*	*.15*	*-.10*	*.07*	**.18**	*.23*	*.10*
Crude Oil Input to Refineries	**12.21**	**11.95**	**11.42**	**12.11**	**12.19**	*11.89*	*11.63*	*11.63*	*11.61*	*11.47*	**12.04**	*11.90*	*11.58*
Other Supply													
NGL Production	**1.64**	**1.66**	**1.63**	**1.61**	**1.57**	*1.71*	*1.69*	*1.58*	*1.54*	*1.69*	**1.63**	*1.63*	*1.63*
Other Hydrocarbon and Alcohol Inputs	**.05**	**.04**	**.04**	**.04**	**.06**	*.05*	*.04*	*.05*	*.05*	*.05*	**.05**	*.05*	*.05*
Crude Oil Product Supplied	**.06**	**.07**	**.07**	**.06**	**.06**	*.06*	*.06*	*.06*	*.06*	*.06*	**.06**	*.06*	*.06*
Processing Gain	**.55**	**.57**	**.43**	**.51**	**.57**	*.52*	*.52*	*.51*	*.54*	*.51*	**.55**	*.51*	*.52*
Net Product Imports[c]	**1.33**	**1.30**	**1.19**	**1.37**	**1.15**	*1.41*	*1.38*	*1.33*	*1.48*	*1.46*	**1.47**	*1.28*	*1.41*
Gross Product Imports [c]	**1.82**	**1.94**	**1.78**	**1.85**	**1.64**	*1.95*	*1.93*	*1.85*	*1.98*	*2.00*	**2.01**	*1.81*	*1.94*
Product Exports	**.49**	**.64**	**.59**	**.48**	**.49**	*.54*	*.55*	*.52*	*.50*	*.54*	**.54**	*.53*	*.53*
Product Stock Withdrawn or Added (-)[d]	**-.22**	**-.04**	**1.02**	**-.24**	**.02**	*.14*	*.22*	*-.03*	*-.25*	*.09*	**-.08**	*.23*	*.00*
Total Product Supplied, Domestic Use	**15.62**	**15.54**	**15.80**	**15.45**	**15.61**	*15.78*	*15.54*	*15.13*	*15.03*	*15.33*	**15.73**	*15.66*	*15.26*
Disposition													
Motor Gasoline	**6.84**	**6.69**	**6.49**	**6.98**	**6.96**	*6.67*	*6.29*	*6.74*	*6.70*	*6.50*	**6.69**	*6.78*	*6.56*
Jet Fuel	**1.21**	**1.21**	**1.16**	**1.16**	**1.20**	*1.17*	*1.20*	*1.16*	*1.19*	*1.17*	**1.18**	*1.17*	*1.18*
Distillate Fuel Oil	**2.57**	**2.82**	**3.28**	**2.65**	**2.58**	*2.98*	*3.01*	*2.72*	*2.46*	*2.91*	**2.84**	*2.87*	*2.78*
Residual Fuel Oil	**1.21**	**1.20**	**1.36**	**1.15**	**1.08**	*1.22*	*1.39*	*1.01*	*.91*	*1.06*	**1.37**	*1.20*	*1.09*
Other Oils Supplied [e]	**3.79**	**3.62**	**3.52**	**3.51**	**3.78**	*3.74*	*3.65*	*3.50*	*3.77*	*3.68*	**3.64**	*3.64*	*3.65*
Total Product Supplied	**15.62**	**15.54**	**15.81**	**15.45**	**15.61**	*15.78*	*15.54*	*15.13*	*15.03*	*15.33*	**15.73**	*15.66*	*15.26*
Stocks (million barrels)													
Crude Oil (Excluding SPR) [f]	**325.2**	**345.4**	**329.1**	**342.9**	**315.1**	*313.4*	*310.4*	*312.8*	*311.9*	*310.3*	**345.4**	*313.4*	*310.3*
Total Motor Gasoline	**234.1**	**243.3**	**220.1**	**219.8**	**221.8**	*214.9*	*224.0*	*209.7*	*215.8*	*218.3*	**243.3**	*214.9*	*218.3*
Finished Motor Gasoline	**194.1**	**205.2**	**186.4**	**186.3**	**186.7**	*179.4*	*188.2*	*177.0*	*183.6*	*184.4*	**205.2**	*179.4*	*184.4*
Blending Components	**40.0**	**38.1**	**33.7**	**33.5**	**35.1**	*35.5*	*35.8*	*32.6*	*32.2*	*33.9*	**38.1**	*35.5*	*33.9*
Jet Fuel	**45.0**	**42.0**	**44.1**	**42.4**	**41.6**	*43.8*	*43.5*	*42.5*	*40.4*	*40.7*	**42.0**	*43.8*	*40.7*
Distillate Fuel Oil	**142.9**	**161.1**	**99.4**	**110.0**	**114.7**	*122.3*	*99.9*	*105.3*	*119.3*	*123.0*	**161.1**	*122.3*	*123.0*
Residual Fuel Oil	**46.8**	**53.0**	**46.3**	**40.2**	**42.6**	*46.2*	*42.0*	*40.5*	*46.2*	*48.3*	**53.0**	*46.2*	*48.3*
Other Oils [g]	**287.6**	**261.0**	**258.7**	**278.1**	**268.1**	*249.0*	*247.1*	*261.3*	*260.9*	*244.1*	**261.0**	*249.0*	*244.1*
Total Stocks (Excluding SPR)	**1081.7**	**1105.7**	**997.7**	**1033.4**	**1003.9**	*989.6*	*966.9*	*972.1*	*994.5*	*984.8*	**1105.7**	*989.6*	*984.8*
Crude Oil in SPR	**431.1**	**450.5**	**461.6**	**476.6**	**489.3**	*493.9*	*493.9*	*493.9*	*493.9*	*493.9*	**450.5**	*493.9*	*493.9*
Total Stocks (Including SPR)	**1512.8**	**1556.2**	**1459.3**	**1510.0**	**1493.1**	*1483.5*	*1460.7*	*1466.0*	*1488.3*	*1478.7*	**1556.2**	*1483.5*	*1478.7*

[a] Includes lease condensate.
[b] Net Imports equals Gross Imports plus SPR Imports minus Exports.
[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.
[d] Includes an estimate of minor product stock change based on monthly data.
[e] Includes crude oil product supplied, natural gas liquids, liquefied refinery gases, other liquids, and all finished petroleum products except motor gasoline, jet fuels, and distillate and residual fuel oils.
[f] Includes crude oil in transit to refineries.
[g] Includes stocks of all other oils such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve
NGL: Natural Gas Liquids
Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical 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, Apr. 1985 to Oct. 1985; and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85/41).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Domestic Production[a]	**6.46**	**6.52**	**5.94**	**6.54**	**6.65**	*6.31*	*6.15*	*6.35*	*6.50*	*6.37*	**6.45**	*6.36*	*6.34*
Imports	**.28**	**.30**	**.34**	**.45**	**.33**	*.34*	*.35*	*.44*	*.49*	*.42*	**.30**	*.36*	*.42*
Exports	**.00**	**.01**	**.00**	**.01**	**.01**	*.01*	*.01*	*.01*	*.01*	*.01*	**.01**	*.01*	*.01*
Net Imports	**.27**	**.29**	**.34**	**.44**	**.32**	*.33*	*.34*	*.43*	*.48*	*.41*	**.29**	*.36*	*.42*
Net Withdrawals	**.11**	**-.12**	**.21**	**.00**	**.00**	*.10*	*-.09*	*.14*	*-.05*	*.00*	**-.05**	*.08*	*.00*
Total Primary Supply	**6.84**	**6.69**	**6.49**	**6.98**	**6.96**	*6.74*	*6.40*	*6.91*	*6.93*	*6.79*	**6.69**	*6.80*	*6.76*
Disposition													
Leaded	**2.73**	**2.53**	**2.41**	**2.56**	**2.38**	*2.20*	*1.98*	*2.03*	*1.91*	*1.75*	**2.71**	*2.38*	*1.92*
Unleaded	**4.11**	**4.17**	**4.09**	**4.42**	**4.59**	*4.54*	*4.42*	*4.89*	*5.02*	*5.04*	**3.99**	*4.41*	*4.84*
Total Product Supplied	**6.84**	**6.69**	**6.49**	**6.98**	**6.96**	*6.74*	*6.40*	*6.91*	*6.93*	*6.79*	**6.69**	*6.80*	*6.76*
Stocks													
Primary Finished Stock Levels[b] (million barrels)													
Opening	**204.14**	**194.10**	**205.19**	**186.38**	**186.32**	*186.71*	*177.27*	*185.29*	*172.71*	*177.76*	**185.50**	*205.19*	*177.27*
Closing	**194.10**	**205.19**	**186.38**	**186.32**	**186.71**	*177.27*	*185.29*	*172.71*	*177.76*	*177.42*	**205.19**	*177.27*	*177.42*

[a] Refinery Production plus production at natural gas processing plants.
[b] 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, Apr. 1985 to Oct. 1985; and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85-27).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Refinery Output	**2.70**	**2.77**	**2.45**	**2.60**	**2.60**	*2.82*	*2.56*	*2.61*	*2.67*	*2.83*	**2.68**	*2.62*	*2.67*
Imports	**.25**	**.31**	**.19**	**.20**	**.12**	*.36*	*.31*	*.24*	*.24*	*.31*	**.27**	*.22*	*.27*
Exports	**.05**	**.06**	**.05**	**.03**	**.09**	*.04*	*.05*	*.03*	*.04*	*.04*	**.05**	*.05*	*.04*
Net Imports	**.20**	**.24**	**.14**	**.17**	**.03**	*.32*	*.25*	*.21*	*.20*	*.27*	**.22**	*.17*	*.23*
Net Withdrawals	**-.33**	**-.20**	**.69**	**-.12**	**-.05**	*-.13*	*.26*	*-.02*	*-.28*	*-.01*	**-.06**	*.09*	*-.01*
Disposition													
Electric Utility Consumption	**.04**	**.04**	**.05**	**.03**	**.04**	*.04*	*.05*	*.03*	*.04*	*.04*	**.04**	*.04*	*.04*
Utility Stock Additions	**-.01**	**.00**	**-.01**	**-.01**	**.00**	*.00*	*.00*	*.00*	*.00*	*.00*	**.00**	*-.01*	*.00*
Electric Utility Shipments	**.03**	**.04**	**.04**	**.02**	**.04**	*.05*	*.05*	*.03*	*.03*	*.04*	**.04**	*.04*	*.04*
Nonutility Shipments	**2.54**	**2.78**	**3.24**	**2.63**	**2.55**	*2.97*	*3.02*	*2.77*	*2.55*	*3.05*	**2.80**	*2.84*	*2.85*
Total Product Supplied	**2.57**	**2.82**	**3.28**	**2.65**	**2.58**	*3.02*	*3.07*	*2.80*	*2.59*	*3.09*	**2.84**	*2.88*	*2.89*
Stocks													
Electric Utility Stock Levels (million barrels)													
Opening	**19.81**	**18.92**	**19.12**	**17.80**	**17.09**	*16.72*	*16.99*	*16.91*	*17.11*	*16.66*	**18.80**	*19.12*	*16.99*
Closing	**18.92**	**19.12**	**17.80**	**17.09**	**16.72**	*16.99*	*16.91*	*17.11*	*16.66*	*16.88*	**19.12**	*16.99*	*16.88*
Primary Stock Levels (million barrels)													
Opening	**112.85**	**142.94**	**161.07**	**99.38**	**109.98**	*114.74*	*126.54*	*103.39*	*105.04*	*130.56*	**140.26**	*161.07*	*126.54*
Closing	**142.94**	**161.07**	**99.38**	**109.98**	**114.74**	*126.54*	*103.39*	*105.04*	*130.56*	*131.57*	**161.07**	*126.54*	*131.57*

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, Apr. 1985 to Oct. 1985; the *Monthly Energy Review*, DOE/EIA-0035(85/07); the *Electric Power Monthly*, DOE/EIA-0226(85/08); and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85-27).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Refinery Output	**0.81**	**0.96**	**0.99**	**0.78**	**0.77**	*0.95*	*1.01*	*0.78*	*0.74*	*0.86*	**0.89**	*0.87*	*0.85*
Imports	**.59**	**.56**	**.57**	**.45**	**.44**	*.51*	*.56*	*.42*	*.43*	*.50*	**.68**	*.49*	*.48*
Exports	**.19**	**.25**	**.27**	**.16**	**.10**	*.20*	*.19*	*.17*	*.14*	*.20*	**.19**	*.18*	*.18*
Net Imports	**.40**	**.30**	**.29**	**.29**	**.34**	*.31*	*.37*	*.25*	*.28*	*.30*	**.49**	*.31*	*.30*
Net Withdrawals	**.00**	**-.07**	**.07**	**.07**	**-.03**	*-.03*	*.05*	*.02*	*-.05*	*-.02*	**-.01**	*.02*	*.00*
Disposition													
Electric Utility Consumption	**.53**	**.43**	**.50**	**.36**	**.45**	*.41*	*.50*	*.30*	*.36*	*.37*	**.52**	*.43*	*.38*
Utility Stock Additions	**-.01**	**.01**	**-.07**	**-.03**	**-.02**	*.02*	*-.02*	*.00*	*-.02*	*.00*	**-.01**	*-.03*	*-.01*
Electric Utility Shipments	**.52**	**.44**	**.43**	**.33**	**.42**	*.43*	*.48*	*.30*	*.34*	*.37*	**.51**	*.40*	*.37*
Nonutility Shipments	**.68**	**.76**	**.93**	**.82**	**.65**	*.80*	*.95*	*.75*	*.63*	*.78*	**.86**	*.80*	*.78*
Total Product Supplied	**1.21**	**1.20**	**1.36**	**1.15**	**1.08**	*1.23*	*1.43*	*1.05*	*.97*	*1.14*	**1.37**	*1.20*	*1.15*
Stocks													
Electric Utility Stock Levels (million barrels)													
Opening	**68.10**	**67.37**	**68.50**	**62.56**	**59.61**	*57.60*	*59.15*	*57.13*	*57.24*	*55.78*	**70.57**	*68.50*	*59.15*
Closing	**67.37**	**68.50**	**62.56**	**59.61**	**57.60**	*59.15*	*57.13*	*57.24*	*55.78*	*55.72*	**68.50**	*59.15*	*55.72*
Primary Stock Levels (million barrels)													
Opening	**46.88**	**46.84**	**53.00**	**46.30**	**40.21**	*42.60*	*45.54*	*41.39*	*39.53*	*44.55*	**48.50**	*53.00*	*45.54*
Closing	**46.84**	**53.00**	**46.30**	**40.21**	**42.60**	*45.54*	*41.39*	*39.53*	*44.55*	*46.33*	**53.00**	*45.54*	*46.33*

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, Apr. 1985 to Oct. 1985; the*Monthly Energy Review*, DOE/EIA-0035(85/07); the *Electric Power Monthly*, DOE/EIA-0226(85/08); and September data, *Weekly Petroleum Status Report*, DOE/EIA-0208(85-27).

Table 12. Quarterly Supply and Disposition of Other Petroleum Products: Base Case[a]
(Million Barrels per Day, Except Stocks)

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Net Refinery Output[b]	**2.81**	**2.26**	**2.47**	**2.70**	**2.74**	*2.38*	*2.53*	*2.58*	*2.55*	*2.29*	**2.57**	*2.57*	*2.49*
Natural Gas Plant Output	**1.64**	**1.66**	**1.63**	**1.61**	**1.57**	*1.71*	*1.69*	*1.58*	*1.54*	*1.69*	**1.63**	*1.63*	*1.63*
Other Domestic[c]	**.05**	**.04**	**.04**	**.04**	**.06**	*.05*	*.04*	*.05*	*.05*	*.05*	**.05**	*.05*	*.05*
Net Imports	**.45**	**.46**	**.41**	**.46**	**.46**	*.54*	*.53*	*.53*	*.80*	*.75*	**.47**	*.47*	*.65*
Net Withdrawals	**-.01**	**.34**	**.05**	**-.19**	**.10**	*.19*	*.02*	*-.09*	*.07*	*.17*	**.04**	*.04*	*.04*
Total Primary Supply	**4.94**	**4.76**	**4.61**	**4.61**	**4.93**	*4.86*	*4.82*	*4.66*	*5.01*	*4.94*	**4.76**	*4.75*	*4.86*
Disposition													
Jet Fuel	**1.21**	**1.21**	**1.16**	**1.16**	**1.20**	*1.17*	*1.21*	*1.17*	*1.21*	*1.20*	**1.18**	*1.17*	*1.19*
Liquefied Petroleum Gas[d]	**.88**	**1.09**	**1.21**	**.83**	**.92**	*1.13*	*1.24*	*.83*	*.89*	*1.13*	**.98**	*1.02*	*1.02*
Petrochemical Feedstocks[e]	**.95**	**.85**	**.92**	**.95**	**.95**	*.94*	*1.00*	*.99*	*.99*	*.96*	**.95**	*.94*	*.98*
Miscellaneous[f]	**1.90**	**1.61**	**1.32**	**1.67**	**1.86**	*1.62*	*1.37*	*1.66*	*1.93*	*1.66*	**1.64**	*1.62*	*1.66*
Total Product Supplied	**4.94**	**4.76**	**4.61**	**4.61**	**4.93**	*4.86*	*4.82*	*4.66*	*5.01*	*4.94*	**4.76**	*4.76*	*4.86*
Stock													
Primary Stocks (million barrels)													
Opening	**372.12**	**372.62**	**341.08**	**336.56**	**354.04**	*344.76*	*327.59*	*325.38*	*333.49*	*327.15*	**356.43**	*341.08*	*327.59*
Closing	**372.62**	**341.08**	**336.56**	**354.04**	**344.76**	*327.59*	*325.38*	*333.49*	*327.15*	*311.84*	**341.08**	*327.59*	*311.84*

[a] 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.

[b] Includes refinery production of all other products less natural gas liquids, liquefied refinery gases, and "other liquids" input to refineries.

[c] Field production of other hydrocarbons and alcohol.

[d] Includes propane, normal butane, and isobutane.

[e] Includes ethane plus naphtha and other oils designated for petrochemical feedstock use.

[f] 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(85/08), and *Weekly Petroleum Status Report*, DOE/EIA-0208(85-41). Data For September 1985 are preliminary.

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

Sensitivities	1985	1986				Year	
	4th	1st	2nd	3rd	4th	1985	1986
Demand in 50 States							
Low Price	*16.04*	*16.13*	*15.97*	*16.06*	*16.47*	*15.73*	*16.16*
Base Case	*15.92*	*15.78*	*15.49*	*15.57*	*16.03*	*15.70*	*15.72*
High Price	*15.80*	*15.58*	*15.24*	*15.26*	*15.68*	*15.67*	*15.44*
Weather Sensitivity							
Adverse Weather	*.19*	*.31*	*.02*	*.00*	*.19*	*.05*	*.13*
Favorable Weather	*-.20*	*-.32*	*-.02*	*.00*	*-.20*	*-.05*	*-.13*
Economic Sensitivity							
High Economic Activity	*.05*	*.13*	*.22*	*.32*	*.39*	*.01*	*.27*
Low Economic Activity	*-.04*	*-.04*	*-.09*	*-.21*	*-.34*	*-.01*	*-.17*
Combined Sensitivity Differentials[a] (excl. price)							
Upper Range	*.20*	*.34*	*.22*	*.32*	*.43*	*.05*	*.33*
Lower Range	*.20*	*.32*	*.09*	*.21*	*.39*	*.05*	*.25*
Range of Projected Demand							
High Demand[b]	*16.24*	*16.47*	*16.19*	*16.38*	*16.90*	*15.78*	*16.49*
Low Demand[c]	*15.60*	*15.26*	*15.15*	*15.05*	*15.29*	*15.62*	*15.18*

[a] 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.

[b] Low Price demand plus the combined effects of adverse weather and high economic activity.

[c] 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	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Total Dry Gas Production[a]	**4.17**	**4.35**	**4.35**	**4.05**	**4.02**	*4.53*	*4.38*	*4.15*	*4.07*	*4.48*	**17.23**	*16.95*	*17.08*
Net Imports	**.15**	**.23**	**.28**	**.20**	**.19**	*.26*	*.29*	*.22*	*.21*	*.27*	**.79**	*.92*	*.99*
Supplemental Gaseous Fuels	**.03**	**.04**	**.04**	**.04**	**.04**	*.04*	*.04*	*.03*	*.03*	*.04*	**.14**	*.15*	*.15*
Total New Supply	**4.35**	**4.62**	**4.67**	**4.29**	**4.24**	*4.83*	*4.71*	*4.40*	*4.31*	*4.79*	**18.16**	*18.03*	*18.21*
Underground Working Gas Storage													
Opening	**2.14**	**3.00**	**2.88**	**1.75**	**2.35**	*3.08*	*2.86*	*1.73*	*2.31*	*3.14*	**2.60**	*2.88*	*2.86*
Closing	**3.00**	**2.88**	**1.75**	**2.35**	**3.08**	*2.86*	*1.73*	*2.31*	*3.14*	*2.88*	**2.88**	*2.86*	*2.88*
Net Withdrawals[b]	**-.85**	**.16**	**1.13**	**-.61**	**-.74**	*.22*	*1.13*	*-.58*	*-.83*	*.26*	**-.21**	*.00*	*-.02*
Total Primary Supply[a]	**3.50**	**4.77**	**5.80**	**3.68**	**3.50**	*5.05*	*5.84*	*3.82*	*3.48*	*5.05*	**17.94**	*18.02*	*18.19*
Disposition													
Electric Utilities	**.99**	**.73**	**.63**	**.75**	**.98**	*.69*	*.57*	*.71*	*.85*	*.58*	**3.11**	*3.05*	*2.71*
Refinery Fuel	**.15**	**.14**	**.13**	**.15**	**.16**	*.15*	*.14*	*.14*	*.15*	*.15*	**.57**	*.59*	*.58*
All Other Uses[c]	**2.29**	**3.82**	**4.96**	**2.70**	**2.31**	*4.16*	*5.03*	*2.87*	*2.37*	*4.22*	**13.96**	*14.13*	*14.49*
Subtotal	**3.42**	**4.70**	**5.72**	**3.60**	**3.45**	*5.00*	*5.74*	*3.72*	*3.37*	*4.95*	**17.64**	*17.77*	*17.77*
Total Disposition	**3.50**	**4.77**	**5.80**	**3.68**	**3.50**	*5.05*	*5.84*	*3.82*	*3.48*	*5.05*	**17.94**	*18.02*	*18.19*
Unaccounted for	**.07**	**.08**	**.08**	**.07**	**.05**	*.05*	*.11*	*.11*	*.11*	*.10*	**.30**	*.25*	*.42*

[a] Excludes nonhydrocarbon gases removed.
[b] 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.
[c] Includes residential, commercial, and industrial uses other than refinery fuel, plus use of supplemental gas.
LNG: Liquefied Natural 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(85/07); *Natural Gas Monthly* , DOE/EIA-0130(85/08); and *Electric Power Monthly*, DOE/EIA-0226(85/08).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Production	**245**	**198**	[b] **214**	[b] **229**	[b] **220**	*224*	*219*	*232*	*225*	*233*	**896**	*886*	*909*
Primary Stock Levels[a]													
Opening	**31**	**30**	**34**	**35**	**35**	*33*	*32*	*30*	*30*	*30*	**34**	*34*	*32*
Closing	**30**	**34**	**35**	**35**	[b] **33**	*32*	*30*	*30*	*30*	*30*	**34**	*32*	*30*
Net Withdrawals	**1**	**-4**	**-1**	**0**	[b] **2**	*1*	*2*	*0*	*0*	*0*	**0**	*2*	*2*
Imports	**0**	**0**	**0**	**1**	[b] **1**	*1*	*1*	*1*	*1*	*1*	**1**	*2*	*2*
Exports	**25**	**17**	**19**	**24**	[b] **24**	*18*	*20*	*21*	*25*	*19*	**81**	*85*	*85*
Total New Domestic Supply	**221**	**177**	[b] **194**	[b] **205**	[b] **198**	*207*	*202*	*212*	*200*	*214*	**816**	*804*	*828*
Secondary Stock Levels[c]													
Opening	**194**	**208**	**197**	**179**	**188**	*169*	*172*	*161*	*173*	*157*	**169**	*197*	*172*
Closing	**208**	**197**	**179**	**188**	[b] **169**	*172*	*161*	*173*	*157*	*167*	**197**	*172*	*167*
Net Withdrawals	**-14**	**11**	**18**	**-9**	[b] **19**	*-3*	*11*	*-12*	*16*	*-10*	**-29**	*26*	*5*
Total Indicated Consumption	**207**	**187**	[b] **212**	[b] **196**	[b] **217**	*204*	*213*	*200*	*216*	*204*	**787**	*830*	*833*
Disposition													
Coke Plants	**11**	**10**	**10**	**11**	[b] **10**	*10*	*10*	*11*	*9*	*9*	**44**	*40*	*40*
Electric Utilities	**178**	**166**	**174**	**163**	[b] **185**	*172*	*179*	*170*	*188*	*173*	**664**	*693*	*711*
Retail and General Industry[d]	**19**	**22**	**22**	**20**	[b] **20**	*23*	*23*	*19*	*18*	*22*	**83**	*85*	*82*
Total Domestic Consumption	**208**	**197**	**206**	**194**	[b] **214**	*204*	*213*	*200*	*216*	*204*	**791**	*818*	*833*
Discrepancy[e]	**-1**	**-10**	[b] **6**	[b] **2**	[b] **3**	*0*	*0*	*0*	*0*	*0*	**-4**	*12*	*0*

[a] Primary stocks are held at the mines, preparation plants, and distribution points.
[b] Estimated.
[c] Secondary stocks are held by users. Most of the secondary stocks are held by electric utilities.
[d] Included in retail and general industry coal consumption is consumption at coal gasification plants of 1.7 million tons for 1984, and an estimated 3.7 million tons for the first three quarters of 1985. For the forecast, synfuels account for 1.4 million tons for the fourth quarter of 1985 and the first quarter of 1986. Gasification plant coal consumption for the last three quarters of 1986 is assumed to drop off to 0.1 million tons per quarter because of the assumed shutdown in March of Great Plains.
[e] 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(85/07); and *Quarterly Coal Report*, DOE/EIA-0121(85/2Q).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd[c]	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Generation													
Coal	**357.7**	**334.2**	**352.3**	**331.4**	**370.3**	*345.0*	*360.0*	*342.4*	*376.4*	*346.5*	**1341.7**	*1398.9*	*1425.3*
Petroleum	**30.9**	**25.0**	**28.5**	**20.4**	**25.8**	*24.0*	*28.5*	*17.2*	*20.9*	*21.3*	**119.8**	*98.6*	*88.0*
Natural Gas	**94.5**	**70.4**	**61.2**	**71.6**	**93.9**	*66.1*	*54.4*	*67.4*	*81.4*	*55.2*	**297.4**	*292.8*	*258.4*
Nuclear Power	**86.9**	**80.2**	**98.0**	**86.0**	**103.1**	*96.1*	*101.2*	*95.7*	*114.9*	*111.7*	**327.6**	*383.2*	*423.4*
Hydropower	**73.5**	**69.0**	**78.0**	**74.6**	**59.4**	*61.5*	*78.0*	*81.5*	*69.6*	*68.5*	**321.2**	*273.5*	*297.6*
Geothermal Power and Other[a]	**2.2**	**2.5**	**2.6**	**2.4**	**2.6**	*2.5*	*2.4*	*2.4*	*2.7*	*2.7*	**8.6**	*10.1*	*10.2*
Total Generation	**645.7**	**581.3**	**620.6**	**586.4**	**655.0**	*595.2*	*624.5*	*606.6*	*665.9*	*605.9*	**2416.3**	*2457.1*	*2502.9*
Net Imports	**11.6**	**10.3**	**9.5**	**8.8**	**11.4**	*11.2*	*10.1*	*9.4*	*12.2*	*12.3*	**39.7**	*41.0*	*44.0*
Total Supply	**657.4**	**591.6**	**630.1**	**595.2**	**666.4**	*606.4*	*634.7*	*616.0*	*678.1*	*618.2*	**2456.0**	*2498.1*	*2546.9*
T & D Loss[b]	**46.9**	**45.0**	**42.7**	**51.1**	**45.5**	*42.0*	*45.8*	*44.0*	*50.2*	*46.9*	**177.6**	*181.3*	*186.9*
Total Consumption (sales)	**610.5**	**546.6**	**587.3**	**544.1**	**620.9**	*564.5*	*588.9*	*571.9*	*627.9*	*571.3*	**2278.4**	*2316.9*	*2360.1*

[a] Includes wind, wood, and waste.
[b] Transmission and distribution losses through the power network, calculated as total supply minus total sales.
[c] 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(85/07); and *Electric Power Monthly*, DOE/EIA-0226(85/08).

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

Supply and Disposition	1984		1985				1986				Year		
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1984	1985	1986
Supply													
Production													
Petroleum[a]	**5.34**	**5.37**	**5.24**	**5.29**	**5.32**	*5.39*	*5.26*	*5.30*	*5.34*	*5.42*	**21.21**	*21.24*	*21.33*
Natural Gas[b]	**4.30**	**4.48**	**4.48**	**4.18**	**4.14**	*4.67*	*4.52*	*4.28*	*4.20*	*4.62*	**17.77**	*17.47*	*17.61*
Coal	**5.41**	**4.38**	**4.72**	**5.06**	**4.86**	*4.95*	*4.85*	*5.14*	*4.97*	*5.15*	**19.82**	*19.60*	*20.11*
Nuclear Power	**.95**	**.87**	**1.07**	**.94**	**1.12**	*1.05*	*1.10*	*1.04*	*1.25*	*1.22*	**3.57**	*4.18*	*4.62*
Hydropower[c]	**.78**	**.73**	**.82**	**.79**	**.63**	*.65*	*.82*	*.86*	*.73*	*.72*	**3.39**	*2.89*	*3.14*
Geothermal Power and Other[d]	**.05**	**.05**	**.06**	**.05**	**.06**	*.05*	*.05*	*.05*	*.06*	*.06*	**.18**	*.22*	*.22*
Subtotal	**16.82**	**15.89**	**16.40**	**16.30**	**16.13**	*16.76*	*16.61*	*16.67*	*16.55*	*17.18*	**65.94**	*65.59*	*67.02*
Net Imports													
Crude Oil	**1.75**	**1.78**	**1.24**	**1.70**	**1.60**	*1.56*	*1.29*	*1.46*	*1.66*	*1.50*	**6.92**	*6.09*	*5.91*
Other Petroleum	**.68**	**.67**	**.59**	**.69**	**.59**	*.77*	*.75*	*.72*	*.91*	*.89*	**3.00**	*2.65*	*3.27*
Natural Gas (Dry)	**.17**	**.24**	**.29**	**.21**	**.20**	*.27*	*.30*	*.23*	*.22*	*.28*	**.82**	*.96*	*1.02*
Liquefied Natural Gas	**-.01**	**.00**	**.00**	**.00**	**-.01**	*.00*	*.00*	*.00*	*.00*	*-.01*	**-.02**	*-.01*	*-.01*
Coal and Coke	**-.66**	**-.46**	**-.48**	**-.63**	**-.62**	*-.48*	*-.51*	*-.55*	*-.66*	*-.50*	**-2.14**	*-2.22*	*-2.21*
Electricity	**.12**	**.11**	**.10**	**.09**	**.12**	*.12*	*.11*	*.10*	*.13*	*.13*	**.41**	*.43*	*.46*
Subtotal	**2.05**	**2.33**	**1.74**	**2.05**	**1.87**	*2.24*	*1.93*	*1.96*	*2.26*	*2.29*	**9.00**	*7.90*	*8.44*
Primary Stocks													
Net Withdrawals	**-.81**	**-.11**	**1.69**	**-.81**	**-.53**	*.34*	*1.33*	*-.62*	*-1.02*	*.34*	**-.39**	*.70*	*.02*
SPR Fill Rate Additions(-)	**-.10**	**-.11**	**-.06**	**-.09**	**-.07**	*-.03*	*.00*	*.00*	*.00*	*.00*	**-.41**	*-.25*	*.00*
Secondary Stocks[e]													
Net Withdrawals	**-.30**	**.25**	**.44**	**-.17**	**.42**	*-.07*	*.24*	*-.26*	*.35*	*-.20*	**-.61**	*.63*	*.13*
Total Supply[f]	**17.66**	**18.24**	**20.20**	**17.30**	**17.82**	*19.25*	*20.11*	*17.75*	*18.14*	*19.61*	**73.53**	*74.56*	*75.61*
Disposition													
Nonutility Uses													
Petroleum	**7.44**	**7.46**	**7.39**	**7.38**	**7.49**	*7.66*	*7.37*	*7.43*	*7.52*	*7.74*	**29.85**	*29.92*	*30.07*
Natural Gas[g]	**2.51**	**4.09**	**5.25**	**2.94**	**2.55**	*4.44*	*5.33*	*3.11*	*2.60*	*4.51*	**14.98**	*15.18*	*15.54*
Coal	**.74**	**.77**	**.78**	**.74**	**.81**	*.81*	*.83*	*.73*	*.73*	*.79*	**3.06**	*3.14*	*3.08*
Subtotal	**10.69**	**12.32**	**13.41**	**11.06**	**10.85**	*12.91*	*13.53*	*11.27*	*10.85*	*13.04*	**47.89**	*48.23*	*48.69*
Electric Utility Inputs													
Petroleum	**.33**	**.27**	**.31**	**.22**	**.28**	*.26*	*.31*	*.19*	*.23*	*.23*	**1.29**	*1.08*	*.96*
Natural Gas	**1.02**	**.75**	**.65**	**.77**	**1.01**	*.71*	*.59*	*.73*	*.88*	*.60*	**3.20**	*3.15*	*2.79*
Coal	**3.77**	**3.51**	**3.68**	**3.46**	**3.90**	*3.63*	*3.78*	*3.60*	*3.96*	*3.64*	**14.10**	*14.67*	*14.98*
Nuclear Power	**.95**	**.87**	**1.07**	**.94**	**1.12**	*1.05*	*1.10*	*1.04*	*1.25*	*1.22*	**3.57**	*4.18*	*4.62*
Hydropower[h]	**.90**	**.83**	**.92**	**.88**	**.75**	*.77*	*.93*	*.96*	*.86*	*.85*	**3.80**	*3.32*	*3.60*
Geothermal Power and Other	**.05**	**.05**	**.06**	**.05**	**.06**	*.05*	*.05*	*.05*	*.06*	*.06*	**.18**	*.22*	*.22*
Subtotal	**7.02**	**6.30**	**6.69**	**6.32**	**7.11**	*6.47*	*6.77*	*6.57*	*7.23*	*6.59*	**26.14**	*26.60*	*27.16*
Gross Energy Consumption[i]	**17.71**	**18.61**	**20.11**	**17.39**	**17.97**	*19.37*	*20.30*	*17.84*	*18.08*	*19.63*	**74.03**	*74.83*	*75.85*
Electric Utility Adjustments													
Conversion Loss[i]	**4.93**	**4.43**	**4.69**	**4.46**	**4.99**	*4.54*	*4.75*	*4.61*	*5.09*	*4.64*	**18.36**	*18.68*	*19.10*
Total Net Energy	**12.78**	**14.18**	**15.42**	**12.92**	**12.97**	*14.83*	*15.54*	*13.23*	*12.99*	*14.99*	**55.68**	*56.15*	*56.75*
Total Disposition	**17.66**	**18.24**	**20.20**	**17.30**	**17.82**	*19.25*	*20.11*	*17.75*	*18.14*	*19.61*	**73.53**	*74.56*	*75.61*
Unaccounted for	**-.05**	**-.38**	**.09**	**-.09**	**-.15**	*-.12*	*-.19*	*-.08*	*.06*	*-.03*	**-.50**	*-.27*	*-.24*

[a] Includes crude oil and lease condensate, natural gas liquids, hydrogen, etc., input to oil refineries.
[b] Total dry gas production excluding nonhydrocarbon gases removed.
[c] Includes industrial production.
[d] Includes wood and waste used to generate electricity.
[e] Primarily electric utility stocks.
[f] This total excludes approximately 2 quadrillion Btu of wood.
[g] Includes natural gas used as refinery fuel.
[h] Includes industrial hydroelectric production and net imports of electricity.
[i] 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
Thermal Content of Fuels and Energy		
Crude Oil Production	barrel	5,800,000
Crude Oil Imports	barrel	5,823,000
Unfinished Oils	barrel	5,825,000
Total Petroleum Consumed	barrel	5,393,000
Total Petroleum Imports	barrel	5,659,000
Total Petroleum Exports	barrel	5,871,000
Motor Gasoline	barrel	5,253,000
Jet Fuel	barrel	5,608,000
Distillate Fuel Oil	barrel	5,825,000
Refinery Fuel (liquids)	barrel	5,595,000
All Refinery Inputs	barrel	5,769,000
Residual Fuel Oil	barrel	6,287,000
LPG and LRG	barrel	3,599,000
Ethane	barrel	3,082,000
Natural Gas Liquids (production)	barrel	3,960,000
Natural Gas Consumption (dry)	cubic foot	1,031
Natural Gas Production (dry)	cubic foot	1,031
Natural Gas Imports	cubic foot	1,024
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	1,030
Bituminous Coal and Lignite Prod.	short ton	22,122,000
Bituminous Coal & Lignite Consumed	short ton	21,698,000
Coal to Electric Utilities	short ton	21,213,000
General Industry and Retail Coal	short ton	22,763,000
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	26,445,000
Efficiency of Conversion Processes		
Electric Power Generation Fuel or Power Source:		Btu/kWh (heat rate)
Coal		10,508
Crude Oil		10,724
Distillate Fuel Oil		13,501
Residual Fuel Oil		10,720
Geothermal and Other Energy		21,303
Nuclear Energy		10,905
Natural Gas		10,796
Hydropower		10,445
Other Conversion Processes		Btu Out/Btu In
Coke		0.69
Synthetic Gas		0.95

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