EIA Energy Information Administration Short-Term Energy Outlook

May 6, 1999

Highlights

World Oil Markets/Prices

Prices. We have slightly modified our near-term world oil price projections since our last forecast, which was released on April 8, 1999 (Figure 1). Partly to reflect current price trends, which have resulted in crude oil prices that are higher than expected in our forecast last month, we are now projecting a slightly higher cost of crude oil in the United States for the remainder of 1999. However, our price forecast for 2000 remains the same as last month's projections. The average price U.S. refiners pay for imported crude oil is expected to increase slightly in May as refiners gear up for the gasoline season, before showing a slight drop during the summer. The price is expected to end the year at about \$15.50 per barrel (add about \$2.25-\$2.50 to get an equivalent price for West Texas Intermediate crude oil). Our normal uncertainty range for crude prices suggest that expected year-end prices would be within about \$3-\$4 of the \$15.50 level with a high degree of probability (Figure 2).

Demand. EIA estimates that world oil demand will grow by about 1.1 million barrels per day in 1999, and another 1.65 million barrels per day in 2000 (Figure 3). This is slightly less than projected for 1999 in last month's forecast, and nearly identical to last month's forecast for 2000. The forecast assumes that Asian oil demand begins recovering this year, with a continual recovery in 2000, albeit less growth than was seen prior to the Asian economic crisis.

Supply. EIA's estimates of world oil supply are almost identical to last month's forecast. EIA continues to forecast OPEC compliance with previous cuts to peak in the second quarter of 1999, followed by a gradual increase in OPEC production, as higher prices encourage increased production. Non-OPEC production is expected to remain relatively flat in 1999 as historically low oil prices in 1998 delayed the development of some oil projects, while causing some oil production to be shut in. However, EIA is projecting that non-OPEC oil production will increase in 2000 as higher oil prices counteract some of the same forces that caused oil production to lag in 1999 (Figure 4).

U.S. Energy Prices

Gasoline. Our forecast for pump prices for motor gasoline has not changed by much from the previous forecast. We still expect 1999 prices to peak this month as the full effects are felt from the recently rising crude oil costs, the refinery problems on the West Coast and elsewhere, and the normal seasonal uptick in demand. This driving season

Figure 1. Crude Oil Price Forecasts





Figure 2. U.S. Monthly Crude Oil Prices



Cigor www.eia.doe.gov

Figure 3. International Oil Demand by Region





Figure 4. International Oil Production by Region





(April-September) retail gasoline is expected to cost about 9 cents per gallon more than during last year's driving season (Figure 5 and Table 4).

Although retail gasoline prices throughout the country have been rising, the increase was particularly pronounced in California, which requires a specialized cleaner and more expensive motor fuel. The Los Angeles (LA) harbor spot prices for reformulated gasoline jumped over 40 cents per gallon in a period of just a few weeks, from the mid-March to the beginning of April, as several major local refineries shut down or were partially disabled. Retail price increases soon followed on the West Coast, gaining about 40 cents per gallon from the early April high, as the major West Coast supply problems have been ameliorated. Pump prices on the West Coast have been dipping slightly over the several weeks following the drop in spot prices and are expected to continue to ease. Assuming that further crude oil prices increases are flat to moderate in the near term, the rest of the nation should also see retail gasoline prices dip slowly starting in June.

For the year 2000, prices at the pump are projected to rise by an average of about 7 cents per gallon (<u>Table 4</u>). Crude oil cost increases are responsible for 6 cents of the increase, and general inflation is responsible for the remainder of the increase.

Diesel. Diesel fuel oil prices will also rise this driving season, but not nearly to the extent of the motor gasoline price increase. Crude oil price increases will account for all of the higher diesel prices. Pump prices this driving season are projected to be about 4 cents per gallon higher than the same period one year ago (Figure 6 and Table 4). Although diesel fuel is also a motor fuel, a somewhat different set of circumstances drives these prices. First of all, the production problems that existed with motor gasoline generally did not effect diesel fuel. In addition, stocks for distillate fuel (including diesel) are considerably above normal levels.

Heating Oil. Heating oil prices were unusually low last winter, about 13 cents per gallon or 14 percent less than the prices for the winter of 1997-1998, because of the mild weather and the falling crude oil prices (Figure 7 and Table 4). Next winter, we assume normal weather and project higher crude oil prices. Therefore, the price residential heating oil consumers can expect to pay should be considerably above year-ago levels, about 93 cents per gallon next season compared to 80 cents per gallon last winter.

Natural Gas. We have revised our natural gas wellhead price projections substantially upward for this *Outlook*, particularly for the remainder of 1999 (Figure 8). A tighter supply and demand situation (declining storage and increased demand), higher crude oil prices, cool spring weather, and a diminishing natural gas rig count are all factors contributing to the expected higher prices. The composite spot wellhead price, for example, increased by about 18 percent from March to April due n part to expected strength in gas demand for power generation during the cooling (air conditioning) season. We are now projecting prices over \$2.00 per thousand cubic feet throughout the forecast period. Next year, assuming normal weather, natural gas prices at the wellhead are

Figure 5. Quarterly Retail Motor Gasoline Prices*





eig www.eia.doe.gov

Figure 6. Quarterly Retail Diesel Fuel Oil Prices



Figure 7. Quarterly Retail Heating Oil Prices

(Percent Change from Year Ago)



Figure 8. Natural Gas Wellhead Prices (Current vs Previous Outlook)





projected to continue to increase (by about 9 percent) as the supply/demand balance is projected to become even tighter.

Electric Utility Fuels. Residual fuel prices to electric utilities are projected to maintain their price advantage over natural gas prices throughout the forecast period, though this difference should narrow next year (Figure 9). Natural gas has traditionally been the cheaper of the two fuels. The general decline in world oil prices over the last several years gave an advantage to oil, but we believe much of that advantage has been eroded with rising world oil prices this spring. Coal, of course, remains by far the cheapest of the fossil fuels. The price of coal is projected to continue to decline as mining productivity keeps increasing.

U.S. Petroleum Demand

Total Petroleum. Compared to last year's small 0.8 percent increase, total petroleum demand is projected to increase by a more robust 420,000 barrels per day, or 2.2 percent, in the current year. Because of last year's warmer-than-normal weather and weakness in jet-fuel markets, that growth is broadly distributed among petroleum products. In 2000, petroleum demand is expected to climb a further 330,000 barrels per day or 1.7 percent (Figure 10). There are still some pending revisions to the 1998 data, however, which may ultimately reduce the disparity in growth rates between 1998 and 1999 from the preliminary view expressed here. The final 1998 data will be published in the next edition of EIA's *Petroleum Supply Annual* later this spring.

Gasoline. Motor gasoline demand is projected to increase by 2.4 percent this year, buoyed by a 2.8-percent rise in highway travel. For the third consecutive year, however, highway travel growth is expected to trail that of real disposable income, projected to be 3.6 percent. In 2000, a slowing economy and continued increase in motor gasoline prices are expected to moderate growth in demand to 1.9 percent as highway travel growth slows to a projected 2.2 percent (Figure 11).

Jet Fuel. Following last year's apparent weakness, brought about in part by declines in overseas markets, jet fuel demand is projected to exhibit annual growth of about 2 percent per year during the forecast interval. In the current year, the projected increase in capacity (4 percent) is expected to trail that of utilization (5 percent), resulting in a recovery of load factors from last year's depressed levels. In 2000, capacity and utilization growth, projected to be 4 percent, is expected to be in balance.

Fuel Oil. Boosted by a return to normal weather as well as continued economic growth, distillate demand growth is projected to average 2.4 percent for the forecast period. Growth in transportation demand, which accounts for more than two thirds of the distillate market, is expected to average more than 3 percent. In contrast to last year's decline, combined residential/commercial demand is expected to remain flat for the forecast interval as continued declines in commercial demand offset a weather-related increase in residential demand.

Figure 9. Fuel Prices to Electric Utilities



Figure 10. Petroleum Demand Growth

(Change from Year Ago)



Figure 11. Motor Gasoline Demand Indicators

(Percent Change from Year Ago)



Having staged a recovery in 1998, residual fuel oil demand in 1999 is projected to decline 3.2 percent and remain flat in the following year. Throughout the forecast period, electric utility demand dominates the heavy fuel oil market. During the current year, shifts in relative prices are expected to favor natural gas generation, resulting in an almost 7-percent drop in electric utility demand. In 2000, the decline in electric utility consumption is expected to stop, but natural gas generation is expected to continue to grow, precluding any sizable growth in utility demand for heavy fuel oil during the forecast interval.

U.S. Petroleum Supply

Production. The domestic crude oil production outlook has improved only slightly from last month's Short-Term Energy Outlook (Figure 12). Average domestic oil production is expected to decrease by 370,000 barrels per day or 5.9 percent in 1999 to a level of 5.87 million barrels of oil per day. For 2000, a further 2.4 percent decline is expected and results in a production rate of 5.73 million barrels of oil per day average for the year. Lower-48 States oil production is expected to decrease by 291,000 barrels per day to a rate of 4.78 million barrels per day in 1999 followed by a decrease of 58,000 barrels per day in 2000.

Oil production from the Auger, Ram Powell, Troika, Ursa, Mars, Baldpate, and Diana-Hoover Federal Offshore fields is expected to account for about 12.23 percent of the lower-48 oil production by the 4th quarter of 2000. Shell's Auger platform has been cut back to 70,000 barrels per day in the forth quarter of 1998 due to a MMS forced cut back for high GOR production. After the installation of additional gas treatment facilities the production will go back to 100,000 barrels per day in the third quarter of 1999. The Ram-Powell production began in the third quarter 1997, with an accompanying increase of 60,000 barrels per day in early 1998. Shell estimates that this will increase another 5,000 barrels per day in 1999. British Petroleum has purchased Marathon's Troika sub-sea project and has accelerated production to Shell's Bulwinkle platform. This production will add 70,000 to 80,000 barrels per day to the OCS in 1998. Shell has started production in March 1999 in their Ursa field and will peak in production in the year 2000 at 150,000 barrels of condensate per day. Shell also estimates that the Mars platform will increase by another 40,000 barrels per day in 1999. The Baldpate Platform was included in this forecast due to its revised production rate. This field has started production in August and Amerada Hess estimates a production rate of 50,000 barrels per day in the first quarter of 1999. Exxon's Diana-Hoover fields will produce together and will start production in mid 2000 at a rate of 30,000 barrels per day increasing to 100,000 barrels per day in early 2001.

Alaska is expected to account for 17.66 percent of the total U.S. oil production in 2000. Its oil production is expected to decrease by 7.60 percent in 1999 and again by 6.80 percent in 2000. A substantial portion of the oil production from Alaska comes from the giant Prudhoe Bay Field. Other then the routine maintenance, no major investments are planned for this field during the forecast period. Therefore, the field is expected to follow a steeper decline during this period. Oil production from recent discoveries such as Sambuca and Midnight Sun are expected to partially offset the decline in oil production from the Prudhoe

Figure 12. U.S. Total Crude Oil Production





Bay and other fields in the North Slope in 1999. A large-scale enhanced oil recovery (LSEOR) project was initiated in September 1996 in the Kuparuk River field, the second largest producing field in the U.S. The field's production plus like production from West Sak, Tabasco and Tarn is expected to stay at an average of about 290,000 barrels per day in the forecast period.

Net Imports. Almost 52 percent of total U.S. petroleum demand was met by net imports of crude oil and finished petroleum products in 1998 (Figure 13). That percentage is expected to continue to grow in 1999 and 2000 because of the decline in domestic crude oil production. Import dependence may reach 53.6 percent in 2000 if the expected continued decline in domestic oil production occurs, if weather conditions are normal and modest economic growth continues.

U.S. Natural Gas Supply/Demand

Production/Prices. We still expect domestic gas production to decline in 1999 despite the strong turnaround in gas wellhead prices since March. On the other hand, the decline this year is expected to be minimal (about 0.5 percent - Figure 14). This modest view of the domestic production slowdown for the current year is bolstered by the recent upsurge in wellhead prices in April. Much of the support for gas prices now stems from the sharp increase in oil prices since the winter. Gas prices generally drifted downward after a sharp peak in late 1997, along with crude oil prices (Figure 15). With crude oil prices now expected to be about 20 percent higher than year-earlier levels this summer (Figure 16), a much smaller propensity for power generators to substitute oil for other fuels (including gas) this summer is anticipated than was the case 2 months ago. This development, in addition to the expectation that the next heating season will most likely bring with it substantially higher gas demand for heating than was the case this past season has elevated the current market value of gas. In this context, the "surplus" of gas in storage is seen as less significant restraint to higher gas prices. Also, because of the low drilling rig activity in North America, uncertainty about the potential for more significant declines in gas production than expected here may be adding to the pressure on current and expected wellhead prices.

Storage. Total gas in storage was still almost 300 billion cubic feet above year-ago levels at the end of the withdrawal season (March 31, 1999), by EIA estimates (Figure 17). The current estimate for end-of-month storage is a significant upward revision from our estimate provided last month (up about 140 billion cubic feet), based on revised February data and more complete withdrawal estimates in March. We see year-over-year increases disappearing by June and storage levels rapidly returning to more normal levels quickly thereafter. To the extent North American gas production falls behind the numbers implied here, our base case demand scenario would imply sharply increased pressure on inventories and prices by this fall. Avoiding a supply shortfall and sharply higher prices next year requires a fairly rapid return to increases in gas production in the U.S. and Canada, in our estimation, unless a warm winter intervenes once again.

Figure 13. U.S. Petroleum Net Imports





Figure 14. U.S. Dry Gas Production

(Percent Change from Year Ago)





Figure 15. U.S. Oil and Gas Price Movements



Figure 16. Quarterly U.S. Crude Oil Costs*

(Percent Change from Year Ago)





Figure 17. Gas in Storage (Change from Year Ago)





Demand. Our latest estimates, based on one month of actual data and 2 months of model-based estimates, indicate that gas demand was up by about 220 billion cubic feet (3.2 percent) in Q1 1999 compared to the same period in 1998 (Figure 18). We see total gas demand increasing by about 610 billion cubic feet (2.9 percent) for all of 1999. That would just about undo the demand slump in 1998 and return U.S. consumption to close to 1997 levels. Much of the annual increase could materialize in the fourth quarter, during which period we expect to see a significant increase in gas-related heating demand compared to last year (Figure 19). Since we are currently still assuming that traditional "normal" values for temperature measures (such as heating degree-days) serve as appropriate expected values, we would see ample room for additional growth in gas demand in 2000. Although heating degree-days increased noticeably in Q1 1999 (up about 8 percent on a gas-weighted basis), it would take at least as great an increase in Q1 2000 to reach "normal." To the extent that some evidence begins to accumulate that these normal values are higher than true expected values for heating degree-days, expected demand increases reported here are probably on the high side. We note that the latest ten-year average (1990-1999) for Q1 gas-weighted heating degree-days is about 8 percent lower than our assumed normal. In our view, it would be extreme to substitute this particular ten-year average because it is conditioned by two extreme warming events (El Niño patterns of 1992-1994 and 1997-1998). Still, it is probably safe to say that the risk of our current gas demand outlook for 2000 is on the low side. Expected for our July 1999 Outlook is a special analysis of weather assumptions and possible trends in expected or normal patterns of heating (and cooling) degree-days.

U.S. Electricity Markets

Demand. Slightly lower projections of total demand for electricity in 1999 and 2000 in part reflect revisions to the 1998 demand data that was published in the April issue of EIA's *Electric Power Monthly* (Figure 20). Due to the revisions, total electricity demand (including nonutility own-use) in 1998 is now estimated to have been 3,383.7 billion kilowatt-hours compared to 3401.3 billion reported last month. Thus, we see electricity demand growth at 1.5 percent this year compared to a 2.5 percent increase reported for 1998. Growth in 2000 should be higher overall (about 2.2 percent) as winter demand projections continue to be influenced by expected higher heating degree-days.

Supply. Forecasts of oil-fired electricity generation in 1999 and 2000 have been revised downwards due to rising prices of crude oil and fuel oil (Figure 21). Partly as a result of this, total residual fuel demand projections have been accordingly reduced from last month's Outlook.

Figure 18. U.S. Total Gas Demand

(Change from year Ago)





Figure 19. Gas-Weighted Heating Degree-Days (Change from Year Ago)





Figure 20. U.S. Total Electricity Demand (Current Outlook vs April 1999 Outlook) 0.0 -0.5 **Billion Kilowatt-hours** -1.0 -1.5 -2.0 Revisions to 1998 Data **Projections**_ -2.5 98/04 98/10 99/04 99/10 00/04 00/10 98/01 98/07 99/01 99/07 00/01 00/07



Figure 21. Oil-Fired Electricity Generation





Table HL1. U.S. Energy Supply and Demand

		Year			Ann	ual Percentage	Change
	1997	1998	1999	2000	1997-1998	1998-1999	1999-2000
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	7270	7552	7825	7960	3.9	3.6	1.7
Imported Crude Oil Price ^a (nominal dollars per barrel)	18.50	12.13	13.85	16.24	-34.4	14.2	17.3
Petroleum Supply (million barrels per day) Crude Oil Production ^b	6.45	6.24	5.87	5.73	-3.3	-5.9	-2.4
Total Petroleum Net Imports (including SPR)	9.16	9.69	10.00	10.46	5.8	3.2	4.6
Energy Demand							
World Petroleum (million barrels per day)	73.0	73.9	75.0	76.6	1.2	1.5	2.1
Petroleum (million barrels per day)	18.62	18.77	19.19	19.52	0.8	2.2	1.7
Natural Gas (trillion cubic feet)	21.97	21.33	21.94	22.60	-2.9	2.9	3.0
Coal (million short tons)	1029	1045	1073	1109	1.6	2.7	3.4
Electricity (billion kilowatthours) Utility Sales ^c Nonutility Own Use ^d Total	3140 161 3301	3220 164 3384	3267 166 3433	3339 168 3507	2.5 1.9 2.5	1.5 1.2 1.4	2.2 1.2 2.2
Total Energy Demand ^e (quadrillion Btu)	94.3	94.4	96.4	98.5	0.1	2.2	2.1
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	12.97	12.50	12.32	12.37	-3.6	-1.4	0.4
Renewable Energy as Percent of Total ^f	7.5	7.1	6.9	6.7			

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

^bIncludes lease condensate.

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

Report," reported in several EIA publications, but match alternate annual totals reported in EIA's *Electric Power Monthly*, DOE/EIA-0226. ^dDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1998 are estimates.

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

^fRenewable energy includes minor components of non-marketed renewable energy, which is renewable energy that is neither bought nor sold, either directly or indirectly as inputs to marketed energy. The Energy Information Administration does not estimate or project total consumption of non-marketed renewable energy. SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

Table 1. 0.5. Macroeconomic and weather Assumptions															
		1998	1	1		1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic [®]															
Real Gross Domestic Product (billion chained 1992 dollars - SAAR)	7465	7499	7566	7679	7755	7809	7855	7883	7895	7933	7982	8028	7552	7825	7960
Percentage Change from Prior Year	4.2	3.6	3.5	4.3	3.9	4.1	3.8	2.7	1.8	1.6	1.6	1.8	3.9	3.6	1.7
Annualized Percent Change from Prior Quarter	5.4	1.8	3.6	5.9	4.0	2.8	2.4	1.4	0.6	1.9	2.5	2.3			
GDP Implicit Price Deflator (Index, 1992=1.000)	1.123	1.126	1.129	1.131	1.134	1.137	1.140	1.143	1.148	1.151	1.155	1.159	1.127	1.139	1.153
Percentage Change from Prior Year	1.2	1.0	1.0	0.9	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.0	1.0	1.3
Real Disposable Personal Income (billion chained 1992 Dollars - SAAR)	5287	5322	5364	5420	5478	5517	5562	5596	5637	5677	5710	5728	5348	5538	5688
Percentage Change from Prior Year	3.0	3.0	3.2	3.5	3.6	3.7	3.7	3.3	2.9	2.9	2.7	2.4	3.2	3.6	2.7
Manufacturing Production (Index, 1992=1.000)	1.338	1.347	1.348	1.364	1.369	1.385	1.396	1.400	1.398	1.404	1.417	1.429	1.349	1.387	1.412
Percentage Change from Prior Year	6.0	5.0	3.1	2.5	2.3	2.8	3.5	2.6	2.1	1.4	1.5	2.1	4.1	2.8	1.8
OECD Economic Growth (percent) ^b													3.0	2.6	2.4
Weather ^c															
Heating Degree-Days U.S New England Middle Atlantic U.S. Gas-Weighted Cooling Degree-Days (U.S.)	1984 2768 2406 2078 29	481 770 570 548 386	42 104 57 66 948	1444 2038 1779 1555 93	2114 3103 2801 2246 28	524 915 716 539 334	89 171 105 81 758	1636 2269 2026 1686 72	2354 3306 3028 2454 30	524 915 716 539 334	89 171 105 81 758	1636 2269 2026 1686 72	3951 5680 4812 4247 1456	4363 6457 5648 4552 1191	4603 6660 5875 4760 1193

Table 1. U.S. Macroeconomic and Weather Assumptions

^aMacroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case. ^bOECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland,

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

^cPopulation-weighted degree days. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 1990 population. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

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

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic ^a															
Real Fixed Investment															
(billion chained 1992 dollars-SAAR)	1225	1264	1271	1314	1348	1362	1368	1372	1375	1376	1379	1387	1269	1362	1379
Real Exchange Rate															
(index)	1.142	1.161	1.182	1.118	1.123	1.129	1.138	1.130	1.121	1.112	1.104	1.096	1.151	1.130	1.108
Business Inventory Change															
(billion chained 1992 dollars-SAAR)	30.1	23.9	19.2	6.8	10.9	13.1	13.7	12.8	-4.0	-7.0	-3.3	-0.9	20.0	12.6	-3.8
Producer Price Index															
(index, 1982=1.000)	1.251	1.249	1.243	1.234	1.234	1.238	1.241	1.247	1.254	1.258	1.261	1.267	1.244	1.240	1.260
Consumer Price Index															
(index, 1982-1984=1.000)	1.621	1.628	1.635	1.642	1.648	1.657	1.666	1.675	1.687	1.696	1.705	1.716	1.631	1.662	1.701
Petroleum Product Price Index															
(index, 1982=1.000)	0.541	0.536	0.503	0.477	0.465	0.579	0.569	0.559	0.589	0.611	0.612	0.600	0.514	0.543	0.603
Non-Farm Employment															
(millions)	124.8	125.5	126.1	126.8	127.6	128.7	129.2	129.5	129.6	129.8	130.0	130.4	125.8	128.7	130.0
Commercial Employment	_														
(millions)	85.7	86.3	87.0	87.7	88.5	89.5	90.1	90.4	90.5	90.7	91.0	91.5	86.7	89.6	90.9
Total Industrial Production															
(index, 1992=1.000)	1.303	1.312	1.316	1.324	1.329	1.343	1.353	1.358	1.357	1.363	1.375	1.386	1.314	1.346	1.370
Housing Stock	440 7				4450		445.0	1100	440 5	440.0	4474	4474		445 7	4470
(millions)	113.7	114.0	114.4	114.8	115.2	115.5	115.9	116.2	116.5	116.8	117.1	117.4	114.2	115.7	117.0
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1992=1.000)	1.175	1.171	1.158	1.155	1.164	1.163	1.170	1.171	1.166	1.171	1.181	1.189	1.165	1.167	1.177
Vehicle Miles Traveled ^b															
(million miles/day)	6629	7424	7602	7031	6875	7579	7758	7282	7050	7742	7922	7436	7174	7376	7538
Vehicle Fuel Efficiency															
(index, 1997=1.0)	0.992	1.004	0.992	0.993	1.001	1.000	0.995	1.004	0.998	1.004	1.000	1.008	0.996	1.000	1.003
Real Vehicle Fuel Cost															
(cents per mile)	3.34	3.17	3.08	3.11	2.93	3.38	3.28	3.33	3.35	3.36	3.32	3.39	3.17	3.23	3.36
Air Travel Capacity															
(mill. available ton-miles/day)	423.2	438.8	441.8	436.2	433.6	452.2	466.2	458.3	452.4	470.4	487.3	476.0	435.1	452.7	471.6
Aircraft Utilization															
(mill. revenue ton-miles/day)	237.5	258.9	261.4	254.4	249.6	267.7	282.4	266.1	260.1	277.1	292.4	277.5	253.1	266.5	276.8
Airline Ticket Price Index	_	_											_		
(index, 1982-1984=1.000)	2.058	2.053	2.070	2.029	2.070	2.101	2.130	2.171	2.217	2.233	2.248	2.281	2.053	2.118	2.245
Raw Steel Production						<u> </u>	00.55	07.55		070 ·	000 <i>i</i>	o च ==		(00.0-	100.00
(millions tons)	28.75	27.87	26.57	24.40	27.08	26.87	26.56	27.53	27.36	27.21	26.91	27.55	107.28	108.05	109.03

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

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

Table 3. International Petroleum Supply and Demand: Mid World Oil Price Case

(Million Barrels per Day, Except OECD Commercial Stocks)

	1998			1999				2000				Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Demand ^a															·
OECD															
U.S. (50 States)	18.4	18.6	19.1	18.9	19.0	18.8	19.3	19.6	19.5	19.2	19.5	19.9	18.8	19.2	19.5
U.S. Territories	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Canada	1.9	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0
Europe	14.9	14.1	14.6	15.1	14.9	14.2	14.6	15.2	15.1	14.3	15.0	15.3	14.7	14.7	14.9
Japan	6.2	5.0	5.2	5.7	6.1	5.0	5.2	5.7	6.2	5.1	5.2	5.8	5.5	5.5	5.6
Australia and New Zealand	0.9	0.9	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0
Total OECD	42.5	40.8	42.1	42.9	43.3	41.1	42.4	43.7	44.2	41.8	43.0	44.4	42.1	42.6	43.3
Non-OECD															
Former Soviet Union	4.5	4.1	4.1	4.5	4.5	4.0	4.0	4.4	4.5	4.1	4.1	4.4	4.3	4.2	4.3
Europe	1.6	1.4	1.4	1.5	1.7	1.5	1.5	1.6	1.8	1.5	1.5	1.7	1.5	1.6	1.6
China	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3	4.3	4.4	4.4	4.5	4.0	4.2	4.4
Other Asia	8.9	8.6	8.4	9.6	9.0	8.8	8.5	9.7	9.4	9.1	8.9	10.0	8.9	9.0	9.4
Other Non-OECD	13.0	13.3	13.1	13.4	13.2	13.5	13.3	13.5	13.5	13.8	13.6	13.8	13.2	13.4	13.7
Total Non-OECD	32.0	31.4	31.0	33.0	32.5	31.9	31.5	33.5	33.4	32.9	32.5	34.5	31.9	32.4	33.3
Total World Demand	74.4	72.2	73.1	75.9	75.8	73.0	73.9	77.3	77.6	74.7	75.5	78.8	73.9	75.0	76.6
Supply ^b															
OECD															
U.S. (50 States)	9.5	9.4	9.0	9.1	8.9	8.8	8.8	8.9	8.8	8.8	8.7	8.7	9.2	8.8	8.7
Canada	2.7	2.6	2.8	2.7	2.8	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.8	2.8
North Sea ^c	6.4	6.2	5.9	6.3	6.3	6.1	6.2	6.7	6.8	6.5	6.7	7.0	6.2	6.3	6.7
Other OECD	1.6	1.6	1.6	1.4	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.7	1.6	1.6	1.6
Total OECD	20.1	19.8	19.3	19.5	19.5	19.2	19.4	20.0	20.0	19.7	19.9	20.2	19.7	19.5	19.9
Non-OECD															
OPEC	30.9	30.7	30.0	29.9	30.2	28.9	29.1	29.5	29.9	30.3	30.7	31.1	30.4	29.4	30.5
Former Soviet Union	7.3	7.2	7.2	7.3	7.3	7.2	7.3	7.4	7.4	7.3	7.3	7.4	7.2	7.3	7.3
China	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3
Mexico	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.6
Other Non-OECD	10.7	10.8	10.8	11.0	10.9	11.0	11.1	11.3	11.3	11.3	11.4	11.4	10.8	11.1	11.4
Total Non-OECD	55.7	55.4	54.7	54.8	55.1	53.7	54.2	54.9	55.4	55.7	56.2	56.9	55.1	54.5	56.0
Total World Supply	75.8	75.2	74.0	74.4	74.6	72.9	73.5	74.9	75.3	75.4	76.1	77.1	74.8	74.0	76.0
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	-0.3	-0.7	0.0	0.1	0.3	-0.4	-0.2	0.6	0.6	-0.5	-0.3	0.5	-0.2	0.1	0.1
Other	-1.0	-2.3	-0.9	1.5	0.9	0.5	0.6	1.8	1.6	-0.1	-0.3	1.2	-0.7	1.0	0.6
Total Stock Withdrawals	-1.4	-3.0	-0.9	1.6	1.2	0.1	0.4	2.4	2.3	-0.7	-0.6	1.7	-0.9	1.0	0.7
OECD Comm. Stocks, End (bill. bbls.)	2.7	2.9	2.9	2.9	2.8	2.8	2.8	2.7	2.6	2.6	2.7	2.6	2.9	2.7	2.6
Non-OPEC Supply	44.9	44.5	44.0	44.5	44.4	44.0	44.4	45.4	45.4	45.1	45.4	45.9	44.5	44.5	45.5
Net Exports from Former Soviet Union	2.7	3.1	3.1	2.8	2.8	3.2	3.2	3.0	2.8	3.2	3.2	3.0	3.0	3.0	3.1

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

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

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

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

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

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

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

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

	1998			1999				2000				Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Imported Crude Oil ^a (dollars per barrel)	13.45	12.40	11.87	10.86	10.81	14.84	14.42	15.08	15.58	16.25	16.33	16.75	12.13	13.85	16.24
Natural Gas Wellhead (dollars per thousand cubic feet)	2.02	2.07	1.92	1.83	1.74	2.01	2.16	2.41	2.39	2.07	2.19	2.52	1.96	2.08	2.29
Petroleum Products															
Gasoline Retail ^b (dollars per gallon) All Grades Regular Unleaded	1.10 1.05	1.10 1.05	1.07 1.03	1.03 0.99	0.99 0.95	1.19 1.15	1.16 1.13	1.13 1.10	1.15 1.11	1.21 1.18	1.21 1.18	1.19 1.15	1.07 1.03	1.12 1.08	1.19 1.15
No. 2 Diesel Oil, Retail (dollars per gallon)	1.08	1.05	1.02	1.00	0.97	1.07	1.06	1.11	1.12	1.13	1.13	1.17	1.04	1.06	1.14
No. 2 Heating Oil, Wholesale (dollars per gallon)	0.47	0.43	0.39	0.38	0.36	0.44	0.45	0.51	0.53	0.55	0.55	0.59	0.42	0.44	0.55
No. 2 Heating Oil, Retail (dollars per gallon)	0.91	0.85	0.77	0.79	0.80	0.81	0.81	0.90	0.95	0.94	0.90	0.98	0.85	0.83	0.95
No. 6 Residual Fuel Oil, Retail ^c (dollars per barrel)	13.58	13.27	12.32	11.78	11.36	13.06	12.75	14.73	15.77	14.82	14.38	15.97	12.74	12.98	15.30
Electric Utility Fuels															
Coal (dollars per million Btu)	1.26	1.26	1.25	1.23	1.23	1.25	1.23	1.23	1.23	1.24	1.22	1.21	1.25	1.24	1.23
Heavy Fuel Oil ^d (dollars per million Btu)	2.12	2.17	2.07	1.93	1.78	2.13	2.08	2.46	2.47	2.41	2.34	2.67	2.07	2.10	2.47
Natural Gas (dollars per million Btu)	2.61	2.46	2.28	2.31	2.38	2.52	2.60	2.92	3.02	2.59	2.67	3.07	2.38	2.60	2.78
Other Residential															
Natural Gas (dollars per thousand cubic feet)	6.39	7.33	8.90	6.64	6.24	6.89	8.79	6.89	7.06	7.76	9.08	7.47	6.82	6.71	7.42
Electricity (cents per kilowatthour) ^a Refiner acquisition cost (RAC) of imported	7.96	8.43	8.55	8.09	7.59	8.15	8.46	8.00	7.43	8.05	8.32	7.86	8.28	8.06	7.92

^bAverage self-service cash prices.

^cAverage for all sulfur contents.

^dIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices. Notes: Data are estimated for the first quarter of 1999. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Marketing Monthly*, DOE/EIA-0380; *Natural Gas Monthly*, DOE/EIA-0130; *Monthly Energy Review*, DOE/EIA-0035; *Electric Power Monthly*, DOE/EIA-0226.

Table 5. U.S. Petroleum Supply and Demand: Mid World Oil Price Case

(Million Barrels per Day, Except Closing Stocks)

		1998			1999		2000				Year				
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Crude Oil Supply															
Domestic Production ^a	6.45	6.37	6.10	6.05	5.95	5.84	5.83	5.87	5.78	5.76	5.72	5.68	6.24	5.87	5.73
Alaska	1.23	1.17	1.13	1.18	1.14	1.09	1.06	1.10	1.02	1.02	1.01	1.01	1.17	1.10	1.01
Lower 48	5.23	5.20	4.98	4.88	4.80	4.75	4.77	4.78	4.76	4.74	4.71	4.68	5.07	4.78	4.72
Net Imports (including SPR) ^b	8.12	8.89	9.05	8.43	8.33	9.09	9.46	8.87	8.69	9.50	9.72	9.14	8.63	8.94	9.26
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.05	0.00
SPR Stock Withdrawn or Added (-)	0.00	0.00	0.00	-0.09	-0.01	-0.03	-0.08	0.02	0.00	0.00	0.00	0.00	-0.02	-0.02	0.00
Other Stock Withdrawn or Added (-)	-0.35	0.04	0.25	-0.15	-0.23	0.10	0.10	0.01	0.03	-0.04	0.05	0.05	-0.05	0.00	0.02
Product Supplied and Losses	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	-0.01	-0.01
Unaccounted-for Crude Oil	0.10	-0.15	-0.06	0.28	0.39	0.30	0.23	0.22	0.22	0.23	0.24	0.23	0.04	0.29	0.23
Total Crude Oil Supply	14.33	15.24	15.38	14.53	14.43	15.31	15.53	14.99	14.71	15.44	15.71	15.09	14.87	15.07	15.24
Other Supply															
NGL Production	1.85	1.80	1.67	1.70	1.71	1.75	1.76	1.76	1.77	1.78	1.77	1.77	1.75	1.75	1.77
Other Hydrocarbon and Alcohol Inputs	0.34	0.36	0.38	0.39	0.37	0.34	0.34	0.37	0.36	0.35	0.36	0.38	0.37	0.36	0.36
Crude Oil Product Supplied	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01
Processing Gain	0.83	0.84	0.89	0.94	0.88	0.85	0.88	0.86	0.85	0.89	0.91	0.87	0.88	0.87	0.88
Net Product Imports ^c	0.97	1.13	1.06	1.09	1.12	1.01	1.03	1.07	1.15	1.21	1.16	1.27	1.06	1.06	1.20
Product Stock Withdrawn or Added (-) ^d	0.03	-0.75	-0.24	0.29	0.53	-0.46	-0.26	0.55	0.61	-0.48	-0.37	0.49	-0.17	0.09	0.06
Total Supply	18.36	18.62	19.13	18.94	19.05	18.81	19.30	19.61	19.47	19.19	19.54	19.88	18.77	19.19	19.52
Demand															
Motor Gasoline	7.78	8.32	8.51	8.32	8.00	8.53	8.66	8.52	8.23	8.69	8.79	8.66	8.24	8.43	8.59
Jet Fuel	1.57	1.57	1.58	1.65	1.69	1.60	1.62	1.64	1.66	1.61	1.67	1.70	1.59	1.63	1.66
Distillate Fuel Oil	3.59	3.40	3.41	3.43	3.67	3.36	3.40	3.65	3.89	3.49	3.44	3.69	3.46	3.52	3.63
Residual Fuel Oil	0.82	0.83	0.92	0.76	0.89	0.69	0.77	0.87	0.97	0.72	0.72	0.83	0.83	0.81	0.81
Other Oils ^e	4.62	4.49	4.71	4.78	4.79	4.62	4.86	4.93	4.73	4.67	4.92	5.00	4.65	4.80	4.83
Total Demand	18.38	18.62	19.13	18.94	19.05	18.81	19.30	19.61	19.47	19.19	19.54	19.88	18.77	19.19	19.52
otal Petroleum Net Imports	9.10	10.02	10.11	9.52	9.45	10.10	10.49	9.94	9.84	10.71	10.88	10.40	9.69	10.00	10.46
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	336	333	310	323	343	334	325	324	322	326	321	316	323	324	316
Total Motor Gasoline	215	221	207	216	216	213	209	210	212	209	206	205	216	210	205
Finished Motor Gasoline	166	178	165	172	168	168	163	164	166	165	162	162	172	164	162
Blending Components	49	44	43	44	49	46	46	46	46	43	44	43	44	46	43
Jet Fuel	43	44	46	45	42	44	47	46	42	44	46	46	45	46	46
Distillate Fuel Oil	124	139	153	156	126	136	148	147	109	118	136	140	156	147	140
Residual Fuel Oil	41	40	40	44	38	40	39	42	33	37	38	40	44	42	40
Other Oils ^e	265	313	334	292	282	314	328	276	267	300	315	265	292	276	265
Total Stocks (excluding SPR)	1025	1090	1089	1076	1048	1080	1095	1044	985	1033	1062	1012	1076	1044	1012
Crude Oil in SPR	563	563	563	571	572	574	582	580	580	580	580	580	571	580	580
Total Stocks (including SPR)	1588	1654	1653	1647	1620	1655	1677	1623	1565	1612	1642	1592	1647	1623	1592

^aIncludes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

		+ 10	0% Prices	+ 10	% Weather ^e
Demand Sector	+1% GDP	Crude Oil ^c	N.Gas Wellhead ^d	Fall/Winter ^f	Spring/Summer ^f
Petroleum					
Total	0.6%	-0.3%	0.1%	1.1%	0.1%
Motor Gasoline	0.1%	-0.3%	0.0%	0.0%	0.0%
Distillate Fuel	0.8%	-0.2%	0.0%	2.7%	0.1%
Residual Fuel	1.6%	-3.4%	2.6%	2.0%	2.7%
Natural Gas					
Total	1.1%	0.3%	-0.4%	4.4%	1.0%
Residential	0.1%	0.0%	0.0%	8.2%	0.0%
Commercial	0.9%	0.0%	0.0%	7.3%	0.0%
Industrial	1.7%	0.2%	-0.5%	1.3%	0.0%
Electric Utility	1.8%	1.6%	-1.5%	1.0%	4.0%
Coal					
Total	0.7%	0.0%	0.0%	1.7%	1.7%
Electric Utility	0.6%	0.0%	0.0%	1.9%	1.9%
Electricity					
Total	0.6%	0.0%	0.0%	1.5%	1.7%
Residential	0.1%	0.0%	0.0%	3.2%	3.6%
Commercial	0.9%	0.0%	0.0%	1.0%	1.4%
Industrial	0.8%	0.0%	0.0%	0.3%	0.2%

Table 6. Approximate Energy Demand Sensitivities^a for the STIFS^b Model

(Percent Deviation Base Case)

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

^bShort-Term Integrated Forecasting System.

^cRefiner acquisitions cost of imported crude oil.

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

eRefers to percent changes in degree-days.

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

Table 7. Forecast Components for U.S. Crude Oil Production

(Million Barrels per Day)

				Difference	
	High Price Case	Low Price Case	Total	Uncertainty	Price Impact
United States	6.11	5.37	0.74	0.09	0.66
Lower 48 States	5.09	4.37	0.72	0.07	0.64
Alaska	1.02	1.00	0.03	0.01	0.01

Note: Components provided are for the fourth quarter 2000. Totals may not add to sum of components due to independent rounding. Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

Table 8. U.S. Natural Gas Supply and Demand: Mid world Oil Price Case

(Trillion cubic Feet)

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Total Dry Gas Production	4.72	4.72	4.74	4.76	4.69	4.69	4.71	4.73	4.76	4.71	4.73	4.75	18.93	18.83	18.95
Net Imports	0.75	0.71	0.75	0.77	0.79	0.71	0.72	0.78	0.80	0.76	0.77	0.84	2.98	3.00	3.17
Supplemental Gaseous Fuels	0.03	0.02	0.03	0.03	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.12	0.13	0.13
Total New Supply	5.50	5.45	5.51	5.56	5.51	5.43	5.46	5.55	5.60	5.50	5.53	5.62	22.02	21.95	22.25
Underground Working Gas Storage															
Opening	6.52	5.52	6.44	7.28	7.04	5.82	6.49	7.31	6.81	5.36	6.19	7.11	6.52	7.04	6.81
Closing	5.52	6.44	7.28	7.04	5.82	6.49	7.31	6.81	5.36	6.19	7.11	6.70	7.04	6.81	6.70
Net Withdrawals	1.00	-0.92	-0.84	0.24	1.23	-0.67	-0.83	0.50	1.46	-0.83	-0.93	0.41	-0.52	0.23	0.11
Total Supply	6.49	4.53	4.67	5.80	6.73	4.76	4.64	6.05	7.05	4.67	4.60	6.03	21.50	22.19	22.36
Balancing Item ^a	0.16	0.18	-0.05	-0.46	0.13	0.12	-0.10	-0.40	0.33	0.29	-0.02	-0.35	-0.17	-0.25	0.24
Total Primary Supply	6.65	4.71	4.63	5.34	6.87	4.88	4.53	5.66	7.38	4.96	4.59	5.68	21.33	21.94	22.60
Demand															
Lease and Plant Fuel	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.31	0.31	0.31	0.32	1.24	1.26	1.25
Pipeline Use	0.23	0.16	0.16	0.18	0.23	0.16	0.15	0.19	0.24	0.16	0.15	0.19	0.73	0.74	0.75
Residential	2.13	0.78	0.37	1.20	2.29	0.81	0.33	1.39	2.49	0.82	0.33	1.41	4.48	4.82	5.05
Commercial	1.21	0.58	0.45	0.81	1.28	0.64	0.46	0.91	1.45	0.65	0.46	0.92	3.05	3.29	3.48
Industrial (Incl. Cogenerators)	2.23	1.98	2.01	2.17	2.16	2.00	1.97	2.16	2.27	2.02	1.96	2.14	8.38	8.27	8.39
Cogenerators	0.51	0.49	0.54	0.60	0.53	0.50	0.55	0.61	0.54	0.51	0.56	0.63	2.14	2.19	2.23
Electricity Production															
Electric Utilities	0.50	0.86	1.29	0.61	0.55	0.92	1.27	0.64	0.57	0.95	1.32	0.65	3.26	3.37	3.49
Nonutilities (Excl. Cogen.)	0.04	0.04	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.04	0.05	0.05	0.18	0.18	0.19
Total Demand	6.65	4.71	4.63	5.34	6.87	4.88	4.53	5.66	7.38	4.96	4.59	5.68	21.33	21.94	22.60

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

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

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

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

Table 9. U.S. Coal Supply and Demand: Mid World Oil Price Case

(Million Short Tons)

X	1998			1999				2000				Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Production	281.6	275.4	279.1	282.6	271.1	277.9	283.0	289.2	297.0	279.2	279.7	290.8	1118.7	1121.2	1146.8
Appalachia	119.5	114.0	113.2	113.6	113.4	118.1	112.5	119.1	122.4	116.5	108.9	117.9	460.4	463.1	465.7
Interior	43.1	42.4	41.5	41.4	39.8	38.8	40.2	41.9	41.9	37.2	37.9	40.2	168.4	160.7	157.1
Western	119.0	119.0	124.4	127.6	117.9	121.0	130.3	128.2	132.7	125.5	132.9	132.8	489.9	497.4	523.9
Primary Stock Levels ^a															
Opening	34.0	41.0	38.3	34.2	34.1	42.4	41.4	39.0	36.6	42.7	43.0	32.9	34.0	34.1	36.6
Closing	41.0	38.3	34.2	34.1	42.4	41.4	39.0	36.6	42.7	43.0	32.9	32.6	34.1	36.6	32.6
Net Withdrawals	-7.0	2.7	4.2	(S)	-8.2	1.0	2.4	2.4	-6.0	-0.3	10.1	0.3	-0.2	-2.5	4.1
Imports	1.8	2.2	2.1	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	8.7	8.9	9.0
Exports	18.3	20.5	19.7	18.6	14.9	18.8	19.0	19.0	17.5	17.8	18.0	17.9	77.2	71.7	71.3
Total Net Domestic Supply	258.1	259.8	265.7	266.5	250.2	262.3	268.5	274.9	275.7	263.4	274.0	275.5	1050.1	1055.9	1088.6
Secondary Stock Levels ^b															
Opening	101.4	114.7	124.2	111.3	128.1	122.3	134.1	117.8	121.5	119.4	124.6	110.5	101.4	128.1	121.5
Closing	114.7	124.2	111.3	128.1	122.3	134.1	117.8	121.5	119.4	124.6	110.5	111.7	128.1	121.5	111.7
Net Withdrawals	-13.3	-9.6	12.9	-16.8	5.8	-11.8	16.4	-3.7	2.1	-5.2	14.0	-1.1	-26.7	6.6	9.8
Waste Coal Supplied to IPPs ^c	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	9.6	10.1	10.6
Total Supply	247.2	252.6	281.0	252.1	258.5	253.0	287.4	273.7	280.4	260.8	290.7	277.0	1033.0	1072.6	1109.0
Demand															
Coke Plants	7.3	7.2	7.3	6.7	7.3	6.9	6.9	7.3	7.3	7.1	7.0	7.3	28.5	28.4	28.8
Electricity Production															
Electric Utilities	220.4	218.4	252.3	219.7	221.6	218.7	252.7	235.8	242.5	226.0	255.6	238.8	910.9	928.8	963.0
Nonutilities (Excl. Cogen.) ^d	6.4	6.5	7.8	8.8	9.4	9.2	9.6	9.7	9.8	9.7	10.0	10.1	29.5	37.9	39.6
Retail and General Industry e	20.1	18.3	18.1	19.8	20.3	18.2	18.2	20.9	20.7	18.1	18.1	20.8	76.3	77.6	77.6
Total Demand	254.2	250.4	285.4	255.0	258.5	253.0	287.4	273.7	280.4	260.8	290.7	277.0	1045.1	1072.6	1109.0
Discrepancy ^f	-7.0	2.2	-4.4	-2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-12.1	0.0	0.0

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

^bSecondary stocks are held by users.

^cEstimated independent power producers (IPPs) consumption of waste coal for 1994 is 7.9 million tons, 8.5 million tons in 1995, and 8.8 million tons in 1996.

^dConsumption of coal by IPPs. In 1995, IPP consumption was estimated to be 5.290 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Data for first quarter 1999 are estimates.

^eSynfuels plant demand in 1993 was 1.7 million tons per quarter and is assumed to remain at that level in 1994, 1995, 1996, 1997 and 1998.

The discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period.

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

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

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

Table 10. U.S. Electricity Supply and Demand: Mid World Oil Price Case

(Billion Kilowatt-hours)

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Net Utility Generation															
Coal	437.6	435.0	500.3	434.5	438.7	434.6	500.3	467.4	485.6	451.7	507.2	474.7	1807.5	1841.0	1919.2
Petroleum	20.8	28.5	37.2	23.7	28.8	20.3	28.1	25.7	30.4	22.3	26.0	25.0	110.2	103.0	103.7
Natural Gas	48.0	80.8	121.1	59.3	52.4	87.5	121.5	60.9	54.4	91.1	126.3	61.8	309.2	322.4	333.6
Nuclear	162.6	154.7	179.1	177.3	177.0	168.3	181.2	163.4	172.9	157.0	184.3	165.5	673.7	689.9	679.7
Hydroelectric	86.5	88.1	69.6	60.2	77.4	77.9	65.6	64.0	74.9	77.2	64.5	63.7	304.4	285.0	280.3
Geothermal and Other ^a	1.9	1.4	1.9	2.0	1.6	1.5	2.0	2.1	1.7	1.5	2.0	2.1	7.2	7.2	7.2
Subtotal	757.3	788.6	909.3	757.0	776.0	790.2	898.8	783.5	820.0	800.7	910.2	792.8	3212.2	3248.5	3323.6
Nonutility Generation ^b															
Coal	14.9	14.3	15.5	17.4	15.1	14.4	15.7	17.6	15.3	14.6	15.9	17.8	62.0	62.8	63.7
Petroleum	3.9	3.8	4.1	4.6	4.0	3.9	4.2	4.7	4.1	4.0	4.3	4.8	16.4	16.8	17.2
Natural Gas	49.8	47.7	51.9	58.1	50.9	48.7	53.0	59.4	51.9	49.8	54.1	60.6	207.6	212.0	216.5
Other Gaseous Fuels ^c	3.0	2.9	3.1	3.5	2.9	2.8	3.1	3.4	2.9	2.7	3.0	3.3	12.5	12.2	11.9
Hydroelectric	4.2	4.0	4.3	4.9	4.3	4.1	4.5	5.0	4.5	4.3	4.7	5.2	17.4	18.0	18.7
Geothermal and Other ^d	17.9	17.1	18.6	20.8	17.8	17.0	18.5	20.8	17.7	17.0	18.5	20.7	74.4	74.1	73.9
Subtotal	93.6	89.7	97.6	109.3	95.0	91.0	99.1	110.9	96.4	92.4	100.5	112.6	390.3	396.0	401.9
Total Generation	851.0	878.3	1006.9	866.3	871.0	881.2	997.9	894.4	916.4	893.1	1010.7	905.3	3602.5	3644.5	3725.5
Net Imports ^e	5.8	6.9	10.9	5.2	6.8	7.9	11.2	7.8	7.1	8.4	11.3	8.1	28.8	33.7	34.8
Total Supply	856.8	885.2	1017.8	871.5	877.8	889.1	1009.1	902.2	923.5	901.5	1022.1	913.4	3631.3	3678.1	3760.4
Losses and Unaccounted for ^f	54.1	80.8	59.8	52.9	43.1	73.5	64.0	64.6	48.1	74.5	64.9	65.4	247.6	245.1	252.9
Demand															
Electric Utility Sales															
Residential	273.5	248.9	346.6	255.0	293.2	253.1	328.2	265.3	311.7	259.4	335.7	270.8	1124.0	1139.8	1177.7
Commercial	216.5	230.2	271.9	230.2	226.9	234.8	272.3	235.4	238.0	236.7	273.8	236.7	948.9	969.4	985.1
Industrial	249.7	263.6	271.6	262.4	250.9	265.6	276.1	265.2	259.5	266.9	277.7	267.3	1047.3	1057.8	1071.4
Other	23.6	24.1	27.0	25.1	23.9	24.0	27.0	25.2	25.8	25.1	27.9	26.0	99.9	100.1	104.8
Subtotal	763.4	766.9	917.1	772.7	794.9	777.5	903.6	791.1	835.0	788.2	915.1	800.8	3220.1	3267.1	3339.0
Nonutility Gener. for Own Use ^b	39.2	37.6	40.9	45.8	39.8	38.1	41.5	46.5	40.4	38.7	42.1	47.2	163.6	166.0	168.5
Total Demand	802.7	804.5	958.0	818.6	834.8	815.6	945.1	837.6	875.4	826.9	957.2	848.0	3383.7	3433.0	3507.5
Memo:															
Nonutility Sales to															
Electric Utilities ^b	54.4	52.1	56.7	63.5	55.2	52.9	57.5	64.4	56.0	53.7	58.4	65.4	226.7	230.1	233.4
a				'		'		-	'						

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

^bElectricity from nonutility sources, including cogenerators and small power producers. Quarterly estimates and projections for nonutility net sales, own use, and

generation by fuel source supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867, "Annual Nonutility Power Producer Report."

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

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

^eData for 1998 are estimates.

^tBalancing item, mainly transmission and distribution losses.

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

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

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

(Quadrillion Btu)

		Year			Annua	l Percentage C	Change
	1997	1998	1999	2000	1997-1998	1998-1999	1999-2000
Electric Utilities							
Hydroelectric Power ^a	3.530	3.186	2.983	2.934	-9.7	-6.4	-1.6
Geothermal, Solar and Wind Energy ^b	0.115	0.109	0.109	0.109	-5.2	0.0	0.0
Biofuels ^c	0.021	0.021	0.021	0.021	0.0	0.0	0.0
Total	3.665	3.316	3.112	3.064	-9.5	-6.2	-1.5
Nonutility Power Generators							
Hydroelectric Power ^a	0.185	0.179	0.186	0.193	-3.2	3.9	3.8
Geothermal, Solar and Wind Energy ^b	0.235	0.253	0.254	0.255	7.7	0.4	0.4
Biofuels ^c	0.578	0.585	0.582	0.579	1.2	-0.5	-0.5
Total	0.998	1.018	1.022	1.027	2.0	0.4	0.5
Total Power Generation	4.663	4.334	4.134	4.091	-7.1	-4.6	-1.0
Other Sectors ^d							
Residential and Commercial ^e	0.553	0.568	0.574	0.583	2.7	1.1	1.6
Industrial ^f	1.498	1.515	1.542	1.569	1.1	1.8	1.8
Transportation ^g	0.087	0.094	0.095	0.095	8.0	1.1	0.0
Total	2.138	2.178	2.211	2.247	1.9	1.5	1.6
Net Imported Electricity h	0.297	0.234	0.274	0.283	-21.2	17.1	3.3
Total Renewable Energy Demand	7.098	6.745	6.619	6.621	-5.0	-1.9	0.0

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

^bAlso includes photovoltaic and solar thermal energy.

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

^dRenewable energy includes minor components of non-marketed renewable energy, which is renewable energy that is neither bought nor sold, either directly or indirectly as inputs to marketed energy. The Energy Information Administration does not estimate or project total consumption of non-marketed renewable energy. SPR: Strategic Petroleum Reserve. ^eIncludes biofuels and solar energy consumed in the residential and commercial sectors.

fonsists primarily of biofuels for use other than in electricity cogeneration.

^gEthanol blended into gasoline.

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

(S) Less than 500 billion Btu.

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

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

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

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Real Gross Domestic Product (GDP)															
(billion chained 1992 dollars)	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	7552	7825	7960
Imported Crude Oil Price ^a															
(nominal dollars per barrel)	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.13	13.85	16.24
Petroleum Supply															
Crude Oil Production ^b															
(million barrels per day)	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.24	5.87	5.73
(million barrels per day)	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.69	10.00	10.46
Energy Demand															
World Petroleum															
(million barrels per day)	61.8	63.1	64.9	65.9	66.0	66.6	66.8	67.0	68.3	69.9	71.3	73.0	73.9	75.0	76.6
(million barrels per day)	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.77	19.19	19.52
Natural Gas										- ·					
(trillion cubic feet)	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.33	21.94	22.60
(million short tons)	797	830	877	891	897	898	907	944	951	962	1006	1029	1045	1073	1109
Electricity (billion kilowatthours)	2260	2457	2570	2647	2742	2762	2762	2064	2025	2012	2000	2140	2220	2267	2220
	2309	2457	2570	2047	2/13	2/02	2/03	2001	2935	3013	3090	3140	3220	3207	3339
Nonutility Own Use	NA	NA	NA	97	113	122	137	138	150	158	158	101	164	100	768
	2369	2457	2578	2744	2826	2884	2901	2999	3085	3171	3256	3301	3384	3433	3507
Total Energy Demand															
(quadrillion Btu)	NA	NA	NA	NA	84.2	84.3	85.6	87.4	89.3	90.9	93.9	94.3	94.4	96.4	98.5
Total Energy Demand per Dollar of GDP									_	_			_		
(thousand Btu per 1992 Dollar)	NA	NA	NA	NA	13.72	13.86	13.71	13.68	13.50	13.45	13.43	12.97	12.50	12.32	12.37

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

^bIncludes lease condensate.

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

^d Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1998 are estimates.

^e "Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, Annual Energy Review, 1997, DOE/EIA-0384(97) (AER), Table 1.1. Prior to 1990, some components of renewable energy consumption, particularly relating to consumption at nonutility electric generating facilities, were not available. For those years, a less compehensive measure of total energy demand can be found in EIA's AER. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, Monthly Energy Review (MER). Consequently, the historical data may not precisely match those published in the MER or the AER.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520; Weekly Petroleum Status Report DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

	Year														
Γ	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Maaraaanamia															
Real Cross Demostic Draduct															
(billion shored 1002 dellars)	E 400	5640	EOCE	6060	6426	6070	6044	6200	6644	6760	COOF	7070	7550	7005	7060
(Dillion chained 1992 dollars)	J400	5049	2002	0002	0130	6079	0244	0390	0011	0/02	0990	1210	7552	7625	7900
GDP Implicit Price Deliator	0.000	0 0 2 4	0.004	0 907	0.026	0 072	1 000	1 000	4 054	4 075	1 005	4 446	4 4 9 7	1 1 2 0	1 150
(Index, 1992=1.000)	0.000	0.031	0.001	0.697	0.930	0.973	1.000	1.020	1.051	1.075	1.095	1.110	1.127	1.139	1.153
(billion obside Personal Income	4077	4455	4005	4440	4400	4404	4005	4007	4770	4000	5040	5400	50.40	5500	5600
(Dillion chained 1992 Dollars)	4077	4155	4325	4412	4490	4484	4605	4007	4//3	4906	5043	5183	5348	0038	2000
Manufacturing Production	0.004	0.000	0.074	0 000	0.005	0.000	4 000	4 007	4 000	4 4 5 0	4 04 4	4 000	4 9 4 9	4 007	4 440
(Index, 1987=1.000)	0.881	0.928	0.971	0.990	0.985	0.962	1.000	1.037	1.099	1.159	1.214	1.296	1.349	1.387	1.412
Real Fixed Investment	005	700	040			744			040		4054	4400	4000	4000	4070
(billion chained 1992 dollars)	805	799	818	832	806	741	783	843	916	966	1051	1138	1269	1362	1379
Keal Exchange Rate	N 1 A	NIA	N 1.A		0.000	4 007	4 0 4 0	4 057	4 000	0.004	4 0 4 7	4 4 0 4	4 454	1 100	4 400
(Index, 1990=1.000)	NA	NA	NA	NA	0.999	1.007	1.013	1.057	1.033	0.961	1.017	1.104	1.151	1.130	1.108
Business inventory Change	4.0	- 4	0.5	40.0	~ ~	C 4	• •	6.4		44.0	40.0	00.4	20.0	10.6	2.0
(billion chained 1992 dollars)	-4.2	5.1	9.5	19.2	0.0	-0.1	-9.2	0.1	11.1	11.2	12.0	20.1	20.0	12.0	-3.0
Producer Price Index	4 000	4 000	4 000	4 4 9 9	4 4 6 9	4 405	4 470	4 4 0 0	4 005	4 0 4 0	4 077	4 070	4.044	1 0 10	4 0 00
(Index, 1982=1.000)	1.002	1.028	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.240	1.260
(index 4000 4004 4 000)	4 007	4 4 9 7	4 4 0 4	4 0 4 0	4 200	4 000	4 404	4.440	4 400	4 505	4 570	4 000	4 004	1 660	1 701
(Index, 1982-1984=1.000)	1.097	1.137	1.184	1.240	1.308	1.303	1.404	1.440	1.483	1.525	1.570	1.606	1.631	1.002	1.701
(index 4000 4 000)	0 500	0 500	0 500	0.040	0 7 4 0	0.074	0.047	0.000	0.504	0.000	0 704	0.000	0 54 4	0 5 4 2	0 600
(Index, 1982=1.000)	0.532	0.568	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.514	0.543	0.003
	00.0	400.0	405.0	407.0	400.4	400.0	400.0	440 7		447.0	440.0	400 7	405.0	100 7	100.0
(millions)	99.3	102.0	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.8	120.7	130.0
	60 0	65 0	67 0	70.0	74.0	70.0	74.0	70.0	70.4	70.0	04.4	00.0	007	00 C	00.0
(Millions)	62.9	65.2	67.8	70.0	71.3	70.8	/1.2	13.2	76.1	78.8	81.1	83.9	86.7	89.0	90.9
(index: 1087, 1000)	0 000	0.024	0.074	0.004	0 000	0 070	1 000	4 024	1 001	4 4 4 4	4 400	4 967	4 24 4	1 246	1 270
(Index, 1987=1.000)	0.690	0.931	0.974	0.991	0.990	0.970	1.000	1.034	1.091	1.144	1.190	1.207	1.314	1.340	1.370
(millione)	00 0	00.0	101 6	102.0	102 E	104 5	105 E	106.0	100 2	100.6	111.0	1125	111 2	115 7	1170
(minions)	90.0	99.0	101.6	102.9	103.5	104.5	105.5	100.0	100.2	109.0	111.0	112.5	114.2	115.7	117.0
Weather ^a															
Heating Degree-Days															
US	4295	4334	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4363	4603
New England	6517	6546	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	5680	6457	6660
Middle Atlantic	5665	5699	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	4812	5648	5875
U.S. Gas-Weighted	4442	4391	4804	4856	4139	4337	4458	4754	4659	4707	5040	4886	4247	4552	4760
Cooling Degree-Days (U.S.)	1249	1269	1283	1156	1260	1331	1040	1218	1220	1293	1180	1156	1456	1191	1193

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

^aPopulation-weighted degree days. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 1990 population. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

Table A3. Annual International Petroleum Supply and Demand Balance

(Millions Barrels per Day, Except OECD Commercial Stocks)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Demand ^a				1	1								•	1	
OECD															
U.S. (50 States)	16.3	16.7	17.3	17.4	17.0	16.8	17.1	17.2	17.7	17.7	18.3	18.6	18.8	19.2	19.5
Europe ^b	12.1	12.3	12.4	12.5	12.6	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.7	14.7	14.9
Japan	4.4	4.5	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.5	5.6
Other OECD	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.3
Total OECD	35.3	36.0	37.1	37.6	37.5	38.1	38.8	39.0	39.9	40.6	41.4	41.8	42.1	42.6	43.3
Non-OECD															
Former Soviet Union	9.0	9.0	8.9	8.7	8.4	8.3	6.8	5.6	4.8	4.6	4.0	4.3	4.3	4.2	4.3
Europe	2.2	2.2	2.2	2.1	1.9	1.4	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6
China	2.0	2.1	2.3	2.4	2.3	2.5	2.7	3.0	3.1	3.3	3.5	3.8	4.0	4.2	4.4
Other Asia	3.8	4.1	4.4	4.9	5.3	5.7	6.2	6.8	7.3	7.9	8.5	8.8	8.9	9.0	9.4
Other Non-OECD	9.5	9.7	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.1	12.4	12.8	13.2	13.4	13.7
Total Non-OECD	26.5	27.1	27.7	28.3	28.5	28.5	28.0	28.1	28.4	29.3	29.9	31.2	31.9	32.4	33.3
Total World Demand	61.8	63.1	64.9	66.0	66.0	66.6	66.8	67.0	68.3	69.9	71.3	73.0	73.9	75.0	76.6
Supply ^c															
OFCD															
U.S. (50 States)	11.0	10.7	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.2	88	87
Canada	1.8	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.8
North Sea ^d	3.8	3.8	3.8	3.7	3.9	4.1	4.5	4.8	5.5	5.9	6.3	6.2	6.2	6.3	6.7
Other OECD	1.4	1.4	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.6	1.6	16	16
Total OECD	17.9	17.9	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.9	19.7	19.5	19.9
Non-OFCD															
OPEC	19.3	19.6	21.5	23.3	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	294	30.5
Former Soviet Union	12.3	12.5	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.3	7.3
China	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	32	3.3
Mexico	2.8	2.9	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.5	3.6
Other Non-OECD	6.8	11.3	7.3	7.7	8.0	8.1	8.4	8.7	9.2	9.9	10.2	10.5	10.8	11 1	11.4
Total Non-OFCD	43.9	44.6	47.0	48.9	49.7	49.1	49.1	49.4	49.6	50.7	52.0	54.2	55.1	54.5	56.0
Total World Supply	61.8	62.5	64.8	65.9	66.8	66.7	67.0	67.4	68.3	69.9	71.8	74.1	74.8	74.0	76.0
Total Stock Withdrawals	0.0	0.6	0.1	0.0	-0.8	-0.1	-0.2	-0.3	0.1	0.0	-0.4	-1.1	-0.9	1.0	0.7
OECD Comm. Stocks, End (bill. bbls.)	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.9	2.7	2.6
Net Exports from Former Soviet Union	3.4	3.5	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.5	3.0	2.9	3.0	3.0	3.1

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

^bOECD Europe includes the former East Germany.

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

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

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

SPR: Strategic Petroleum Reserve

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

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

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

Table A4. Annual Average U. S. Energy Prices

(Nominal Dollars)

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Imported Crude Oil ^a (dollars per barrel)	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.13	13.85	16.24
Natural Gas Wellhead (dollars per thousand cubic feet)	1.94	1.66	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.16	2.32	1.96	2.08	2.29
Petroleum Products Gasoline Retail ^b (dollars per gallon)															
All Grades Regular Unleaded No. 2 Diesel Oil. Retail	0.88 0.88	0.91 0.91	0.92 0.91	1.02 0.99	1.17 1.13	1.15 1.10	1.14 1.09	1.13 1.07	1.13 1.08	1.16 1.11	1.25 1.20	1.24 1.20	1.07 1.03	1.12 1.08	1.19 1.15
(dollars per gallon) No. 2 Heating Oil, Wholesale	0.88	0.93	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.10	1.22	1.19	1.04	1.06	1.14
(dollars per gallon) No. 2 Heating Oil, Retail (dollars per gallon)	0.49	0.53	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.44	0.55
(dollars per gallori) No. 6 Residual Fuel Oil, Retail ^c (dollars per barrel)	0.64	17 76	14 04	16 20	18.66	1.02	0.93	14 00	14 79	16.49	19.01	0.99	0.65	12 98	0.95
	14.40	11.10	14.04	10.20	10.00	14.52	14.21	14.00	14.75	10.45	13.01	17.02	12.14	12.30	10.00
Electric Utility Fuels Coal															
(dollars per million Btu) Heavy Fuel Oil ^d	1.58	1.51	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.24	1.23
(dollars per million Btu) Natural Gas	2.40	2.98	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.10	2.47
(dollars per million Btu)	2.35	2.24	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.60	2.78
Other Residential Natural Gas															
(dollars per thousand cubic feet)	5.83	5.55	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.82	6.71	7.42
(cents per kilowatthour)	7.4	7.4	7.5	7.6	7.8	8.1	8.2	8.3	8.4	8.4	8.4	8.4	8.3	8.1	7.9

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

^bAverage self-service cash prices.

^cAverage for all sulfur contents. ^dIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

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

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

Table A5. Annual U.S. Petroleum Supply and Demand

(Million Barrels per Day, Except Closing Stocks)

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Crude Oil Supply															
Domestic Production ^a	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.24	5.87	5.73
Alaska	1.87	1.96	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.10	1.01
Lower 48	6.81	6.39	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.07	4.78	4.72
Net Imports (including SPR) ^b	4.02	4.52	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.63	8.94	9.26
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
Stock Draw (Including SPR)	-0.08	-0.12	0.00	-0.09	0.02	-0.01	0.01	-0.06	-0.02	0.09	0.05	-0.06	-0.05	0.00	0.02
Product Supplied and Losses	-0.05	-0.03	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	-0.01	-0.01
Linaccounted-for Crude Oil	0 14	0 14	0.20	0.20	0.26	0.20	0.26	0.01	0.27	0.19	0.22	0 14	0.04	0.29	0.23
	0.14	0.14	0.20	0.20	0.20	0.20	0.20	0.17	0.27	0.10	0.22	0.14	0.04	0.20	0.20
Total Crude Oil Supply	12.72	12.85	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.87	15.07	15.24
Other Supply															
NGL Production	1.55	1.59	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.75	1.75	1.77
Other Hvdrocarbon and Alcohol Inputs	0.11	0.12	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.37	0.36	0.36
Crude Oil Product Supplied	0.05	0.03	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01
Processing Gain	0.62	0.64	0.66	0.66	0.70	0.71	0.77	0.76	0.77	0.77	0.84	0.85	0.88	0.87	0.88
Net Product Imports ^c	1.41	1.39	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.06	1.06	1.20
Product Stock Withdrawn	-0.12	0.09	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.09	0.06
Total Supply	16.33	16.72	17.33	17.37	17.05	16.76	17.10	17.25	17.72	17.72	18.31	18.62	18.77	19.19	19.52
Demand															
Motor Gasoline ^d	6 94	7 10	7 36	7 40	7 31	7 23	7 38	7 48	7 60	7 79	7 89	8 02	8 24	8 4 3	8 50
let Fuel	1 31	1 38	1 45	1 /0	1 52	1 47	1.50	1.40	1 53	1 51	1 58	1 60	1 50	1.63	1.66
Distillate Fuel Oil	2 01	2 08	3 1 2	3 16	3.02	2 02	2 0 8	3.04	3 16	3.21	3 37	3.44	3.46	3.52	3.63
Residual Fuel Oil	1 / 2	1 26	1 3 8	1 37	1 23	1 16	1 00	1 08	1 02	0.85	0.85	0.80	0.83	0.81	0.81
Othor Oile ⁶	2.75	2 00	1.30	2.05	2.05	2 00	1.09	1.00	1.02	4.26	1.62	4 77	4.65	1 90	1.07
	3.75	3.90	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.30	4.05	4.77	4.05	4.00	4.05
Total Demand	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.77	19.19	19.52
Total Petroleum Net Imports	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.69	10.00	10.46
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	331	349	330	341	323	325	318	335	337	303	284	305	323	324	316
Total Motor Gasoline	233	226	228	213	220	219	216	226	215	202	195	210	216	210	205
Jet Fuel	50	50	44	41	52	49	43	40	47	40	40	44	45	46	46
Distillate Fuel Oil	155	134	124	106	132	144	141	141	145	130	127	138	156	147	140
Residual Fuel Oil	47	47	45	44	49	50	43	44	42	37	46	40	44	42	40
Other Oils ^f	265	260	267	257	261	267	263	273	275	258	250	259	292	276	265

^aIncludes lease condensate. ^bNet imports equals gross imports plus SPR imports minus exports. ^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing. ^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing. ^cFor years prior to 1993, motor gasoline includes an estimate of fuel ethanol blended into gasoline and certain product reclassifications, not reported elsewhere in EIA. See Appendix B in Energy Information ^cAdministration, *Short-Term Energy Outlook*, EIA/DOE-0202(93/3Q), for details on this adjustment.

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

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

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

Table A6. Annual U.S. Natural Gas Supply and Demand

(Trillion Cubic Feet)

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Total Dry Gas Production	16.06	16.62	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.79	18.90	18.93	18.83	18.95
Net Imports	0.69	0.94	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.98	3.00	3.17
Supplemental Gaseous Fuels	0.11	0.10	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.12	0.13	0.13
Total New Supply	16.86	17.66	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.69	21.84	22.02	21.95	22.25
Total Underground Storage															
Opening	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	7.04	6.81
Closing	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	7.04	6.81	6.70
Net Withdrawals	-0.12	0.02	-0.10	0.33	-0.61	0.16	0.14	-0.01	-0.32	0.46	-0.01	-0.01	-0.52	0.23	0.11
Total Supply	16.74	17.68	18.32	19.02	18.77	19.61	20.02	20.42	21.08	21.86	21.68	21.84	21.50	22.19	22.36
Balancing Item ^a	-0.52	-0.47	-0.29	-0.22	-0.05	-0.58	-0.47	-0.14	-0.37	-0.28	0.29	0.13	-0.17	-0.25	0.24
Total Primary Supply	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.33	21.94	22.60
Demand															
Lease and Plant Fuel	0.92	1.15	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.24	1.26	1.25
Pipeline Use	0.49	0.52	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.73	0.74	0.75
Residential	4.31	4.31	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.48	4.82	5.05
Commercial	2.32	2.43	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.22	3.05	3.29	3.48
Industrial (Incl. Nonutilities)	5.58	5.95	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.84	8.56	8.46	8.58
Cogenerators ^b	NA	NA	NA	NA	1.30	1.41	1.70	1.80	1.98	2.18	2.30	2.16	2.14	2.19	2.23
Other Nonutil. Gen. ^b	NA	NA	NA	NA	0.09	0.16	0.18	0.22	0.16	0.17	0.16	0.18	0.18	0.18	0.19
Electric Utilities	2.60	2.84	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.26	3.37	3.49
Total Demand	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.33	21.94	22.60

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

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

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

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

Table A7. Annual U.S. Coal Supply and Demand

(Million Short Tons)

							Year								
Γ	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply														•	
Production	890.3	918.8	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1118.7	1121.2	1146.8
Appalachia	NA	NA	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	463.1	465.7
Interior	NA	NA	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	160.7	157.1
Western	NA	NA	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	489.9	497.4	523.9
Primary Stock Levels ^a															
Opening	33.1	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	34.1	36.6
Closing	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	34.1	36.6	32.6
Net Withdrawals	1.0	3.8	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-0.2	-2.5	4.1
Imports	2.2	1.7	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	8.9	9.0
Exports	85.5	79.6	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	77.2	71.7	71.3
Total Net Domestic Supply	808.0	844.7	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1050.1	1055.9	1088.6
Secondary Stock Levels ^b															
Opening	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	101.4	128.1	121.5
Closing	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	101.4	128.1	121.5	111.7
Net Withdrawals	-5.0	-10.2	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	21.6	-26.7	6.6	9.8
Waste Coal Supplied to IPPs ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	8.5	8.8	8.1	9.6	10.1	10.6
Total Supply	803.1	834.4	882.3	896.5	899.4	891.4	901.8	930.2	954.0	960.4	1006.7	1038.2	1033.0	1072.6	1109.0
Demand															
Coke Plants	35.9	37.0	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.5	28.4	28.8
Electricity Production															
Electric Utilities	685.1	717.9	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	910.9	928.8	963.0
Nonutilities (Excl. Cogen.)	NA	NA	NA	0.9	1.6	10.2	14.8	17.8	20.9	21.2	22.2	21.6	29.5	37.9	39.6
Retail and General Industry	75.6	75.2	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	76.9	77.1	76.3	77.6	77.6
Total Demand	796.6	830.0	876.5	890.6	897.1	897.8	907.3	943.7	951.1	962.0	1005.6	1029.2	1045.1	1072.6	1109.0
Discrepancy ^f	6.5	4.4	5.8	5.9	2.4	-6.4	-5.4	-13.5	2.9	-1.6	1.2	9.0	-12.1	0.0	0.0

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

^bSecondary stocks are held by users.

^cEstimated independent power producers (IPPs) consumption of waste coal for 1994 is 7.9 million tons, 8.5 million tons in 1995, and 8.8 million tons in 1996.

^dConsumption of coal by IPPs. In 1995, IPP consumption was estimated to be 5.290 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Data for third quarter 1998 are estimates.

eSynfuels plant demand in 1993 was 1.7 million tons per quarter and is assumed to remain at that level in 1994, 1995, 1996, 1997 and 1998.

^fThe discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period. Prior to 1994, discrepancy may include some waste coal supplied to IPPs that has not been specifically identified.

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

Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: Quarterly Coal Report, DOE/EIA-0121, and Electric Power Monthly, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

Table A8. Annual U.S. Electricity Supply and Demand

(Billion Kilowatt-hours)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Net Utility Generation															
Coal	1385.8	1463.8	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	1807.5	1841.0	1919.2
Petroleum	136.6	118.5	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	110.2	103.0	103.7
Natural Gas	248.5	272.6	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	309.2	322.4	333.6
Nuclear	414.0	455.3	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.6	673.7	689.9	679.7
Hydroelectric	290.8	249.7	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	337.2	304.4	285.0	280.3
Geothermal and Other ^a	11.5	12.3	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.5	7.2	7.2	7.2
Subtotal	2487.3	2572.1	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	3212.2	3248.5	3323.6
Nonutility Generation ^b	NA	NA	NA	187.0	221.5	253.3	301.8	325.2	354.9	375.9	382.4	384.7	390.3	396.0	401.9
Total Generation	NA	NA	NA	2971.3	3029.6	3078.3	3099.0	3207.8	3265.6	3370.4	3459.9	3507.2	3602.5	3644.5	3725.5
Net Imports	35.9	46.3	31.8	11.0	2.0	22.3	28.3	28.4	44.6	37.6	38.0	36.6	28.8	33.7	34.8
Total Supply	NA	NA	NA	2982.3	3031.6	3100.6	3127.3	3236.2	3310.3	3408.0	3497.9	3543.8	3631.3	3678.1	3760.4
Losses and Unaccounted for ^c	NA	NA	NA	238.3	205.8	216.9	226.6	237.0	225.5	236.8	242.3	242.8	247.6	245.1	252.9
Demand															
Electric Utility Sales															
Residential	819.1	850.4	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.8	1124.0	1139.8	1177.7
Commercial	630.5	660.4	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.4	948.9	969.4	985.1
Industrial	830.5	858.2	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1030.4	1032.7	1047.3	1057.8	1071.4
Other	88.6	88.2	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	99.9	100.1	104.8
Subtotal	2368.8	2457.3	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3097.8	3139.8	3220.1	3267.1	3339.0
Nonutility Own Use ^b	NA	NA	NA	97.2	113.2	121.7	137.3	137.8	150.2	158.0	157.8	161.2	163.6	166.0	168.5
Total Demand	NA	NA	NA	2744.0	2825.8	2883.7	2900.7	2999.2	3084.8	3171.3	3255.6	3301.0	3383.7	3433.0	3507.5
Memo:															
Nonutility Sales															
to Electric Utilities ^d	39.9	50.0	68.0	89.8	108.2	131.6	164.4	187.5	204.7	217.9	224.6	223.5	226.7	230.1	233.4

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

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

^CBalancing item, mainly transmission and distribution losses.

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

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

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