June 8, 1999

Highlights

World Oil Markets/Prices

Prices. Despite some weakening in near-term contract prices for crude oil in recent weeks (Figure 1), we are not inclined to change the essential features of our crude price forecast for this update. Recent data indicate that, if anything; we have been underestimating oil prices slightly. As a result we have raised the projected level of our benchmark price (cost of imported oil to U.S. refiners) by a small amount (Figure 2). The story is essentially the same: the combination of demand and supply changes will probably prevent even a normal seasonal increase in world oil inventories this year, resulting in a net inventory draw averaging about one million barrels per day for all of 1999. Prices are expected to remain more or less flat until the end of the summer when world demand begins to exhibit some of the larger year-over-year increases expected for 1999. From that point, we see prices rising gradually through 2000 as world oil inventories continue to decline toward more "normal" levels. By the end of 2000, prices would be expected to be about \$17.25 per barrel (which would translate into a WTI crude price of about \$19.25-\$19.75 per barrel). Our normal uncertainty range for crude prices suggest that expected end-2000 prices would be within about \$3-\$4 of the \$17.25 level with a high degree of probability (Figure 3).

Demand. EIA estimates that world oil demand will grow by about 1.1 million barrels per day in 1999, and another 1.6 million barrels per day in 2000 (Figure 4). This is essentially the same as projected in last month's forecast, despite some important new revisions to historical (1998) demand for the United States (see U.S. Petroleum Demand section below). The forecast assumes that Asian oil demand begins recovering this year from the sharp slowdown seen in 1998, and that recovery continues through 2000. It is not expected that petroleum demand growth in Asia will return to rates seen prior to the recent regional economic crisis.

Supply. By our calculations, OPEC compliance with the previous 3 agreements (the one on March 23, 1999 and the 2 in 1998) would peak at about 75 percent of the total 4.3 million barrels per day of agreed OPEC cuts, before declining towards the later half of 1999 as higher prices increase the incentive for countries to increase production. Initial estimates of compliance for the first month of the latest agreement (April 1999) range from 65-85 percent. EIA, along with other analysts, has predicted compliance would most likely peak in May or June. 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

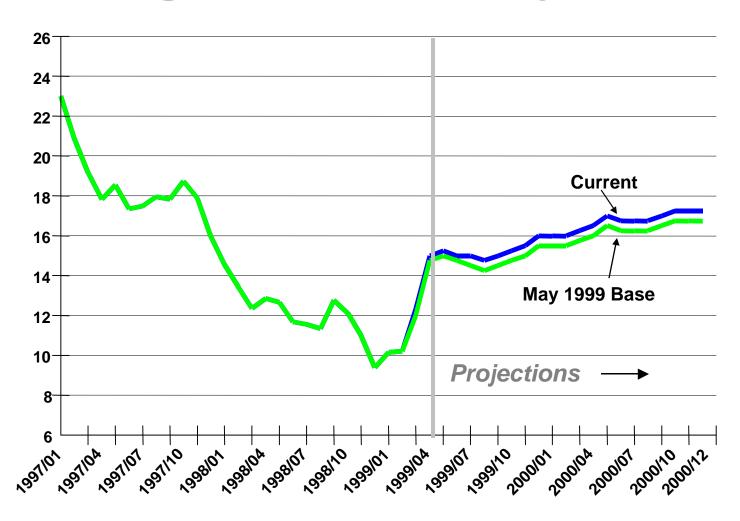
Figure 1. WTI Daily Spot Prices: 1999



Sources: History: EIA; Weekly Petroleum Status Report



Figure 2. Oil Price* Projections



^{*} U.S. refiner cost of imported oil.



Figure 3. Monthly Crude Oil Price Cases

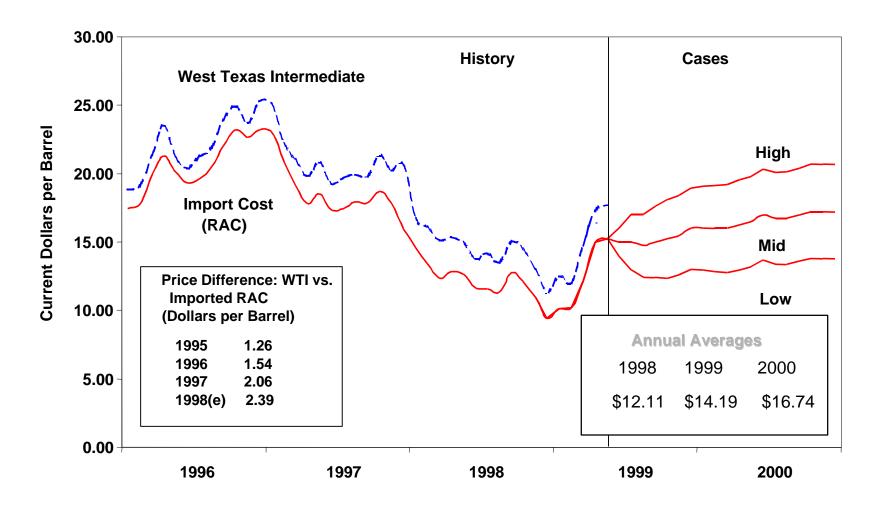
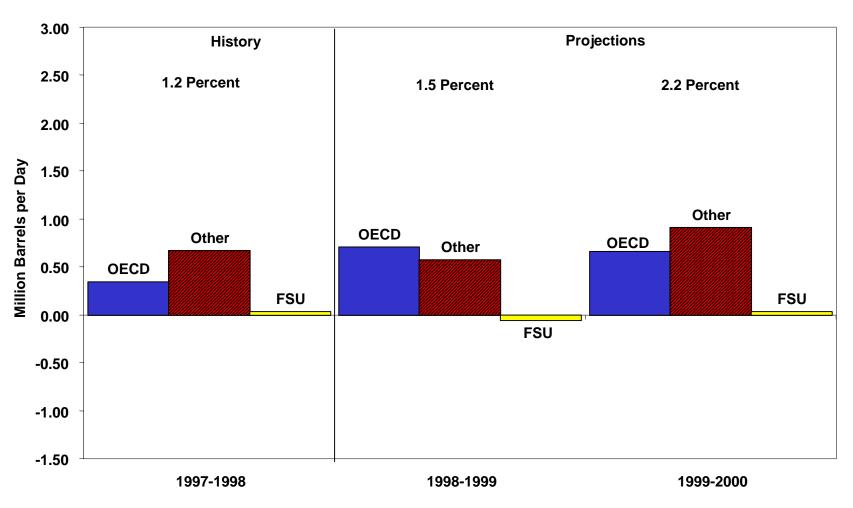




Figure 4. World Oil Demand Changes





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 5).

U.S. Energy Prices

Gasoline. We have adjusted the gasoline price forecast downward from the last report, by about 3 cents per gallon for the next several months since our previous price estimates for the early summer driving season were apparently too high (Figure 6). Refiner gasoline prices throughout the country have recently been easing in response to the more-than-adequate gasoline stock levels and very high volumes of imported gasoline. In fact, refiner margins have been lower than average since January due largely to the high inventories of gasoline (Figure 7). The May and June margins are projected to be unseasonably low. However, these margins are projected to gain in July as the demand for gasoline peaks. Still, for the year as a whole, refiner margins are expected to be lower than average.

The May 1999 motor gasoline price is still expected to be the highest monthly gasoline price for the year as the full effects were observed from rising crude oil costs and refinery problems that occurred in March and April. This driving season (April-September) retail gasoline is expected to cost about 7 cents per gallon more than during last year's driving season. (Figure 8).

Next year, prices at the pump are projected to rise by an average of about 9 cents per gallon (<u>Table 4</u>). Rising crude oil costs should be responsible for 7 cents of the increase, and general inflation is responsible for the remainder of the increase.

Heating Oil. Except for somewhat lower projected prices over the next several months, the heating oil price forecast in this report is similar to the one from the previous report. Last winter we had unusually warm weather and falling crude oil prices which resulted in residential heating oil prices averaging less than 80 cents per gallon. Next winter, assuming normal weather and higher projected crude oil prices, residential heating oil prices are expected to rebound. Residential heating oil consumers can expect pay prices averaging about 92 cents per gallon during the next heating season (Figure 9).

Natural Gas. Our natural gas wellhead price forecast remains essentially unchanged from the last report. Assuming a normal winter, prices at the wellhead are projected to average about 37 percent above last winter's mild-weather-driven low prices (Figure 10). However, these price projections are not quite as bullish as the current futures market suggests since our supply projections are somewhat more optimistic than those of the trade press are.

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 considerably next year. (Figure 11) Historically, natural gas has tended to be the cheaper of the two fuels. Falling world oil prices over the last several years gave an advantage to oil, but we project much of that advantage will diminish with

Figure 5. World Oil Production Changes

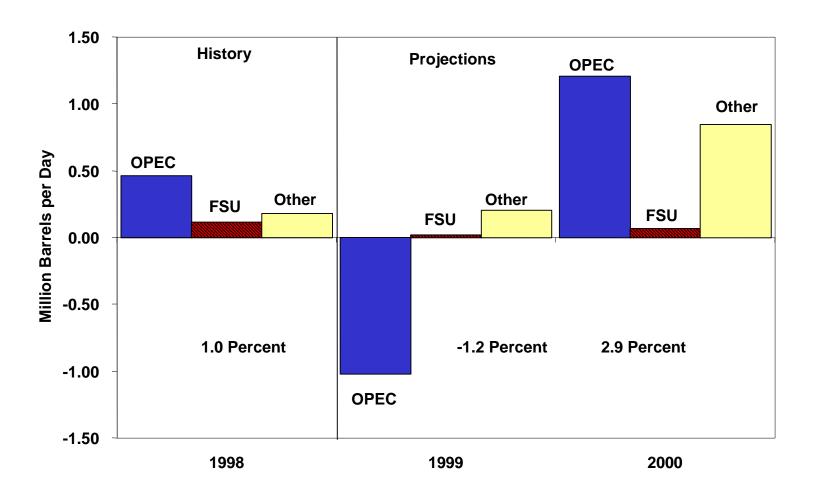




Figure 6. Retail Gasoline Prices (Current vs Previous Outlook)

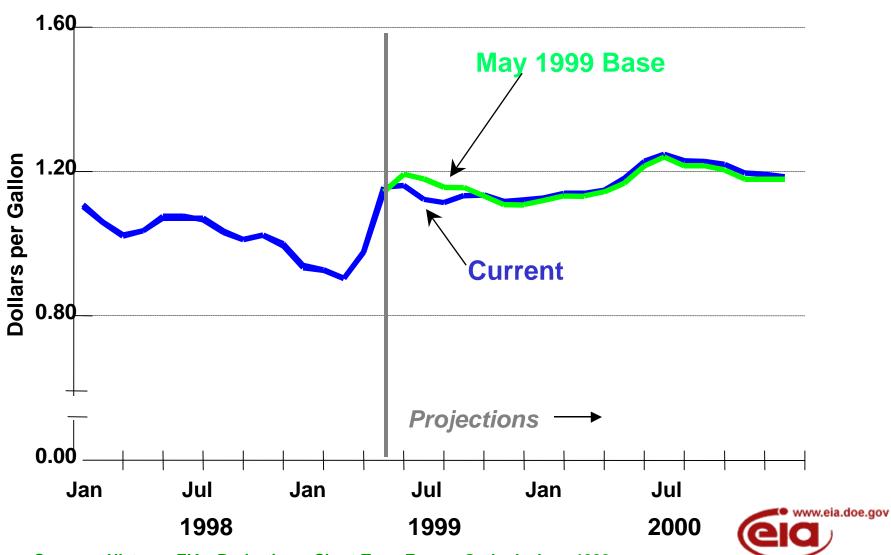


Figure 7. Refiner Motor Gasoline Margins

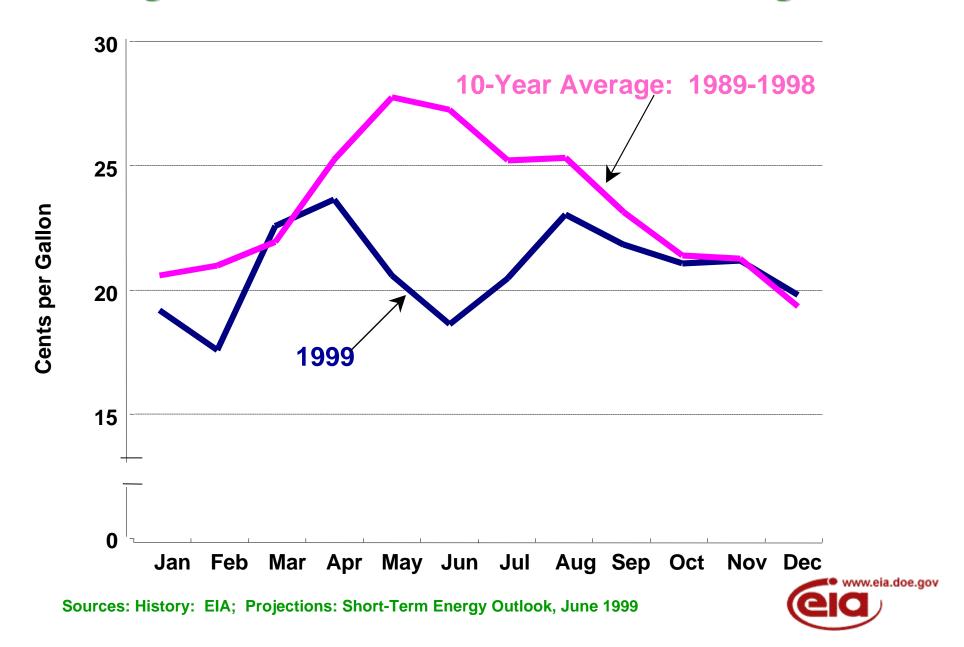


Figure 8. Quarterly Retail Motor Gasoline Prices*

(Change from Year Ago)

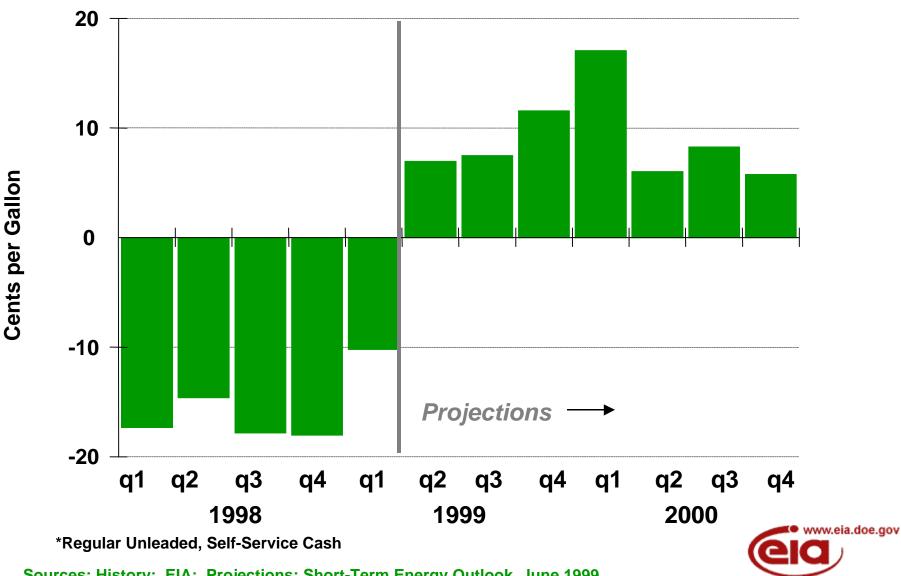


Figure 9. Quarterly Retail Heating Oil Prices (Change from Year Ago)

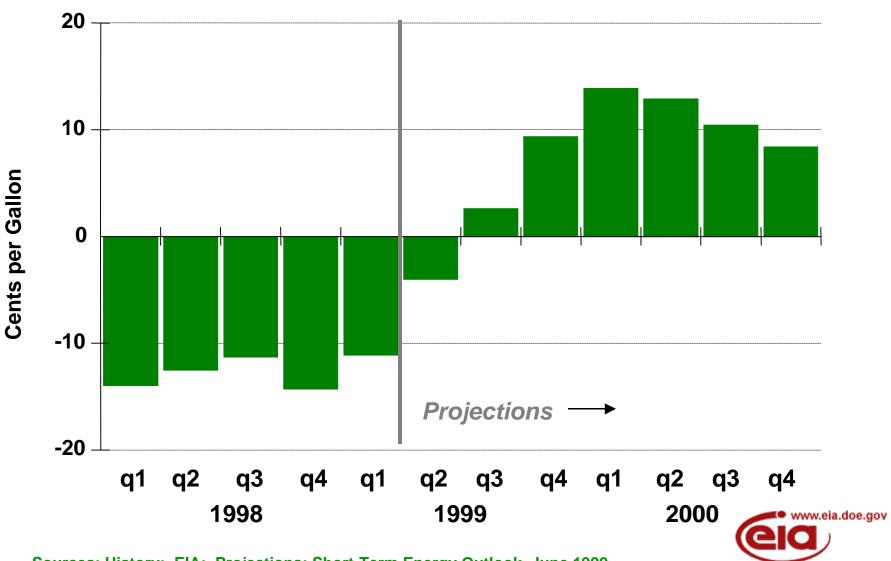


Figure 10. Natural Gas Wellhead Prices: Composite and Spot

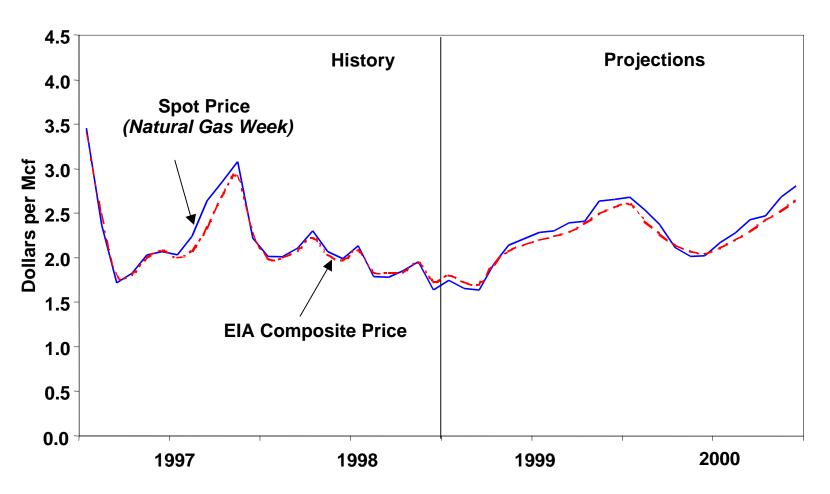
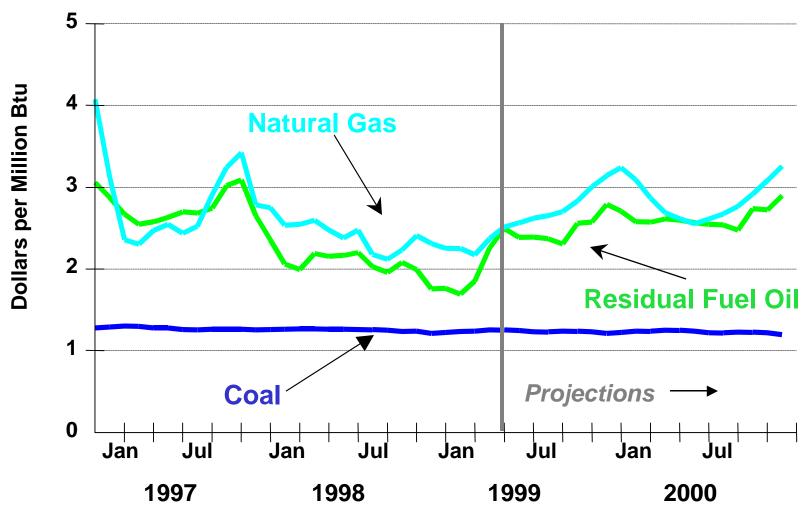




Figure 11 Fuel Prices to Electric Utilities





rising world oil prices. Coal still remains by far the cheapest of the fossil fuels. The price of coal keeps declining as mining productivity keeps increasing.

U.S. Petroleum

Revisions. For this Outlook we have again adjusted historical (1998) domestic petroleum data to reflect accumulated revisions to the data received or compiled by EIA to date. The final 1998 annual values will be published later this month, followed by the publication of the detailed monthly data later this summer. The interim estimates reported here do not include all of the details that will ultimately be reported by EIA and therefore will not exactly match expected final estimates. The attached <u>revisions table</u> summarizes the 1998 changes for this report relative to what we had been reporting since April and relative to what we originally reported for 1998, based on the February 1999 issue of the *Petroleum Supply Monthly*.

Total Petroleum Demand. Given the revisions, U.S. petroleum demand apparently grew by about 1.4 percent in 1998. Although this growth rate is significantly greater than previous estimates (without incorporating known resubmissions the growth rate was reported as 0.3 percent as recently as our March Outlook), a basic feature of our view of 1999 petroleum demand remains qualitatively the same: demand growth in 1999 should noticeably exceed that in 1998 due to weather factors and the continued strength in the U.S. economy (Figure 12). However, the 1998 demand revisions have in effect reduced the projected U.S. petroleum demand growth for 1999 somewhat since the revisions for 1998 do not result in any strict upward shift in expected 1999 levels. Currently we see a 2.1 percent growth rate likely for 1999, which translates into an average demand increase of about 400,000 barrels per day. In 2000, petroleum demand is expected to climb an additional 260,000 barrels per day (1.3 percent) as slower economic growth and smaller weather factors increase the likelihood that the rate of growth domestic oil use will moderate.

Gasoline. Motor gasoline demand is projected to continue to increase, but is expected to moderate somewhat during the forecast period. In 1999, demand is expected to increase by 2.2 percent, down from the 2.9 percent growth of 1998. The following year is expected to witness slightly slower growth, projected to be 1.8 percent, brought about by slower disposable income growth and a continued increase in retail pump prices. Reflecting the recent shift in travel behavior, growth in vehicle miles traveled is expected to continue to trail that of disposable income (Figure 13).

Jet Fuel. We now know, thanks to the estimated revisions included in this report, that jet fuel demand grew by about 1.3 percent in 1998, a figure which is much more consistent with reported airline traffic data than earlier 1998 demand estimates. We still think that some acceleration in jet fuel demand is likely this year since the economic situation in Asia is sufficiently improved so that international traffic patterns will not be a negative factor again this year. For 1999 and 2000, jet fuel demand growth of about 2.0 percent is expected. Jet fuel demand, which was approximately 1.62 million barrels per day in

Figure 12. Total Petroleum Demand Growth

(Change from Year Ago)

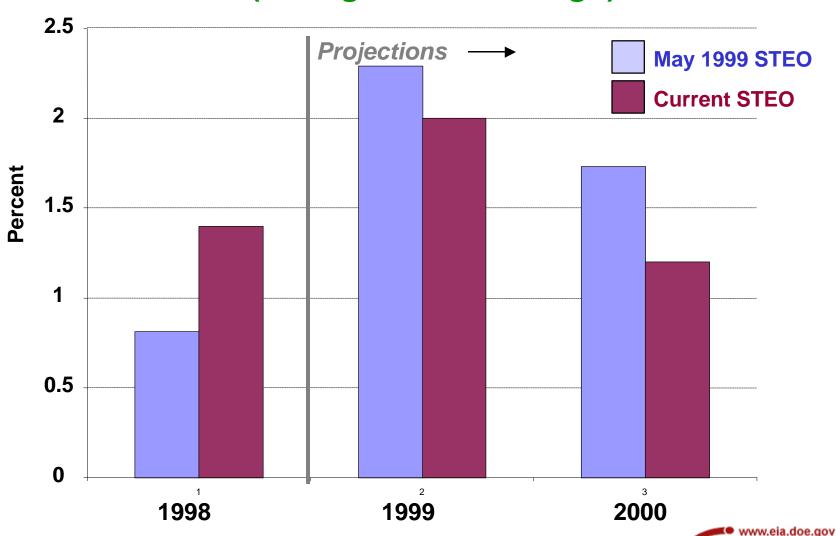
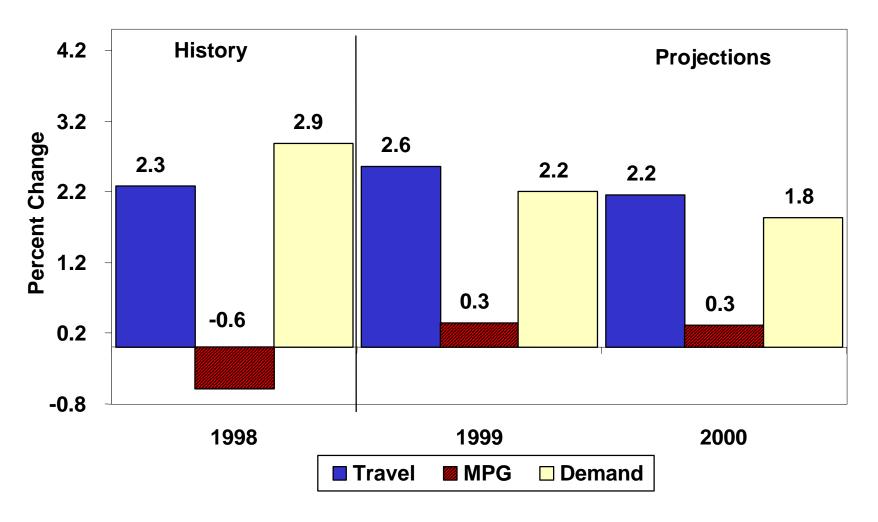


Figure 13. Gasoline Market Indicators





1998, should grow to 1.65 and 1.69 million barrels per day in 1999 and 2000, respectively.

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.

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 and summer air pollution restrictions in the Northeast are expected to favor natural gas generation, resulting in an almost 7-percent drop in electric utility demand for residual fuel oil. 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

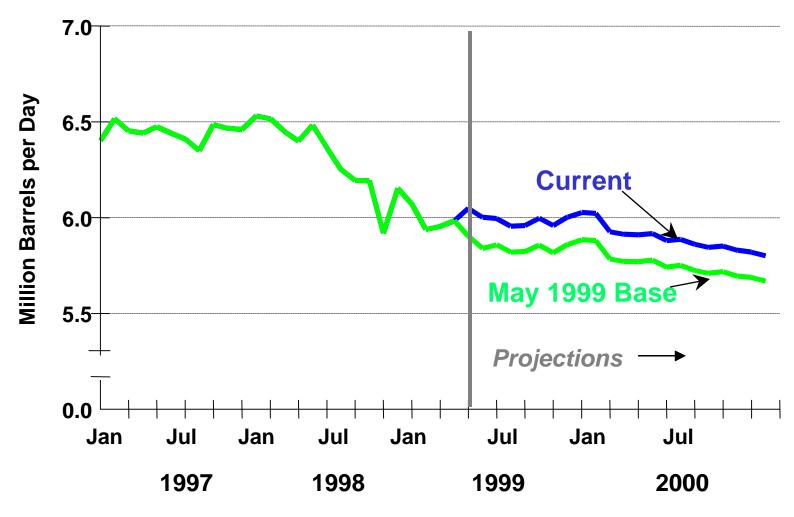
Production. We have significantly modified our U.S. crude oil production forecast since last month (Figure 14). The most recent actual data point (for March) indicates crude oil output levels well (145,000 barrels per day) above our previous estimate data. This, along with our view that prices will remain well above the lows seen last winter and even increase over the forecast period makes for a more optimistic outlook for U.S. production in 1999 and 2000. Average domestic crude oil production is expected to decrease by 250,000 barrels per day or 4.0 percent in 1999 to a level of 5.99 million barrels per day. This contrasts with our previous forecast of a 370,000 barrels per day reduction to 5.87 million barrels per day this year. The currently projected decline of 120,000 barrels per day in 2000 is relatively unchanged from last month's report, but this implies a 2.4-percent improvement in expected U.S. output for next year relative to the previous Outlook. The improvement in the Outlook is in the Lower-48 producing areas, in particular the offshore Gulf of Mexico area.

Shell's Auger platform has been cut back to 70,000 barrels of oil per day (bopd) in the fourth quarter of 1998 due to a forced cut back in production by MMS. After the installation of additional gas treatment facilities the production will go back to 100,000 bopd in the third quarter of 1999.

The Ram-Powell production began in the third quarter 1997, with an accompanying increase of 60,000 bopd in early 98. Shell estimates that this will increase another 5,000 bopd in 99. 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 Bopd in 1999. The Baldpate

Figure 14. U.S. Crude Oil Production

(Current vs Previous Outlook)



Sources: History: EIA; Weekly Petroleum Status Report



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 bopd 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 bopd increasing to 100,000 bopd in early 2001.

Oil production from the Mars, Ram Powell, Auger, Troika, Ursa, Diana-Hoover and Baldpate Federal Offshore fields is expected to account for about 11.90 percent of the lower-48 oil production by the 4th quarter of 2000.

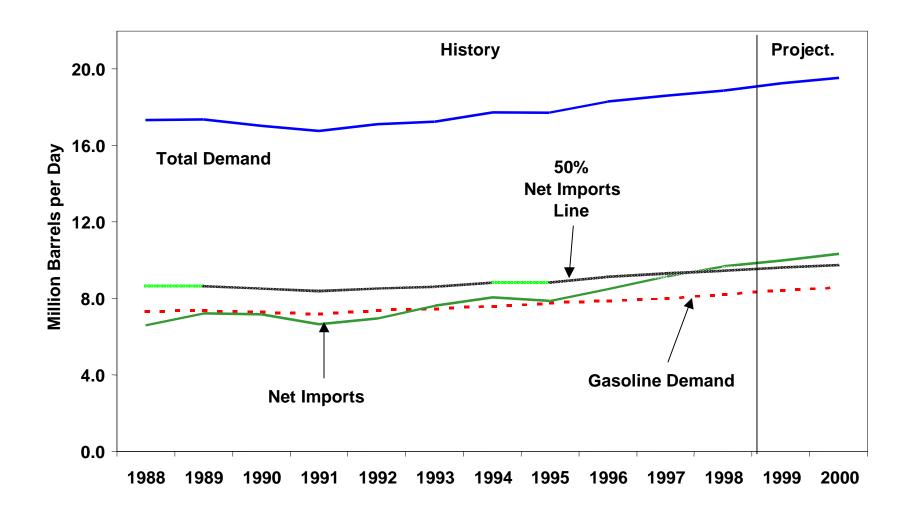
Alaska is expected to account for 17.25 percent of the total U.S. oil production in 2000. Its oil production is expected to decrease by 7.60 percent in 1999 and again by 6.80 percent in 2000. A substantial portion of the oil production from Alaska comes from the giant Prudhoe Bay Field. Other then the 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 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, 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 265,500 barrels per day in 1999-00 forecast period.

Net Imports. The less steep decline in U.S. oil production now expected this year helps marginally to slow down the rate of increase in oil dependency measures. This is partly offset by a larger proportion of refined product supply being allocated to imports of finished and semi-finished petroleum, a reallocation that followed from the revisions to the 1998 data. Thus, we still see almost 52 percent of total U.S. petroleum demand being met by net imports of crude oil and finished petroleum products in 1999. Import dependence may reach 53.6 percent in 2000 if the expected decline in domestic oil production occurs, if weather conditions are normal and modest economic growth continues (Figure 15).

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). This modest view of the domestic production slowdown for the current year is bolstered by the recent upsurge in wellhead prices since April. Meanwhile, late May and early June data indicate a turnaround in U.S. drilling activity, particularly that associated with natural gas. Baker-Hughes, Incorporated reports a rotary rig count for gas-directed drilling of 421 as of June 4, which was 13 percent ahead of the April 1999 average and close to the average for February.

Figure 15. U.S. Petroleum Demand and Net Imports





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Still, with crude oil prices now expected to be about 24 percent higher than year-earlier levels this summer, a much smaller propensity for power generators to substitute oil for other fuels (including gas) this summer is anticipated than was the case 4 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. The level of "surplus" gas in storage has fallen and is expected to be lower than it was last year by the fourth quarter. Currently warm temperature trends in many of the cooling regions of the United States may be accelerating the reduction in excess storage. However, an abnormally warm summer would probably be needed to push end-year storage as low as levels generally seen in the 1995-1997 period (Figure 16).

Demand. Our latest estimates indicate that gas demand was up by only about 129 billion cubic feet (1.9 percent) in Q1 1999 compared to the same period in 1998 (Figure 17), a significant downward revision from our month-ago estimate. Actual February data indicated a much lower-than-expected consumption level, particularly in the residential sector. This apparently reflects very large reductions in heating demand in the Southern United States during that month. We still see total gas demand increasing significantly (by about 672 billion cubic feet, or 3.2 percent, for all of 1999. The expected 1999 growth would more than undo the demand slump in 1998 and return U.S. consumption to above 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. 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 O1 1999 (up about 9 percent on a gas-weighted basis), it would take at least as great an increase in Q1 2000 to reach "normal." 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. Projections of total demand for electricity in 1999 and 2000 have changed only slightly since our May Outlook. Based partly on sharply lower industrial demand reported for February, we have slightly lowered our overall outlook for industrial electricity demand through the forecast (Figure 18). Assuming normal temperatures from now on, overall demand growth is expected to be 1.1 percent this year compared to a 2.5 percent increase reported for 1998. Growth in 2000 should be higher overall (about 2.4 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 once again revised downwards due to rising prices of crude oil and fuel oil. Partly as a result of this, total residual fuel demand projections have been accordingly reduced from last

Figure 16. Working Gas in Storage

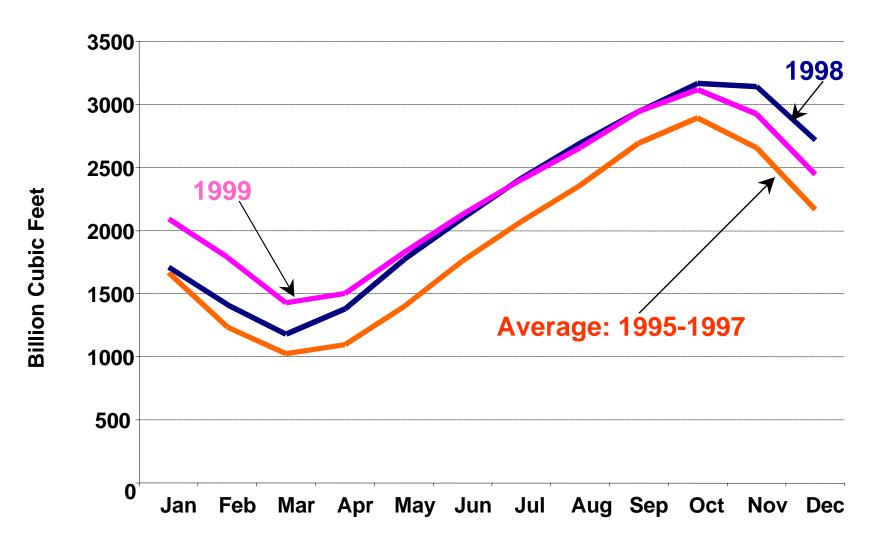
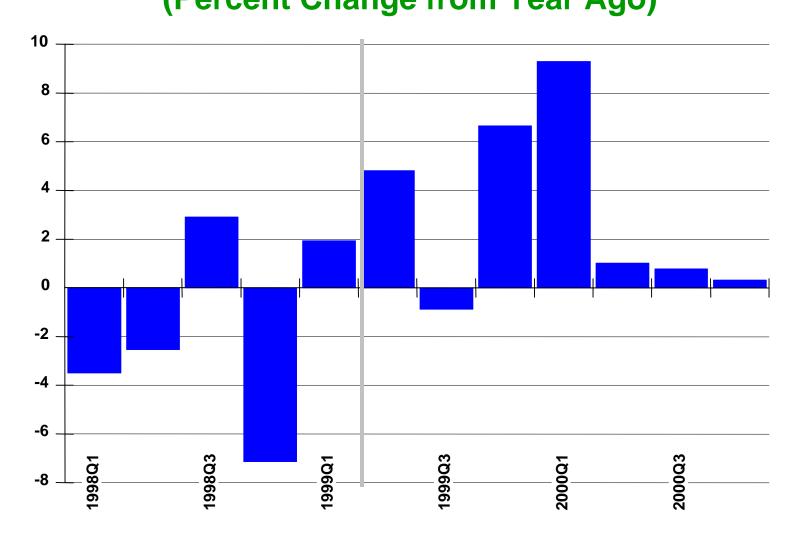




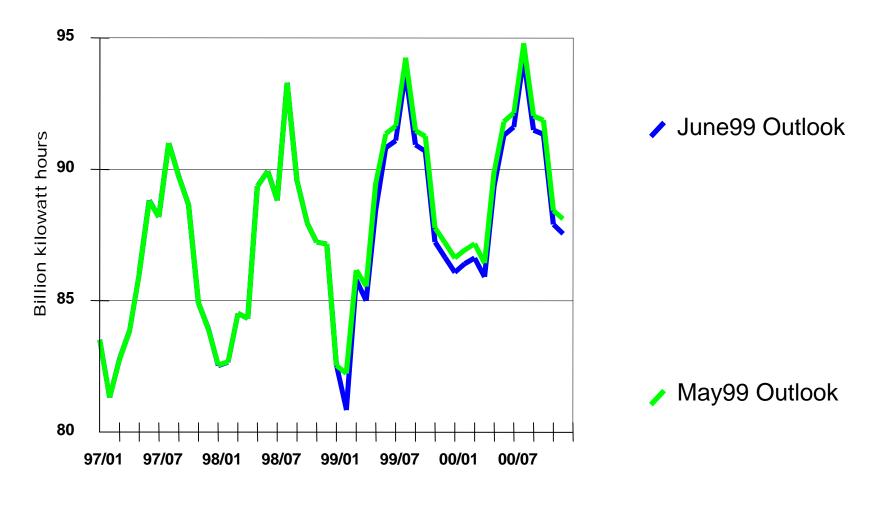
Figure 17. Quarterly U.S. Natural Gas Demand (Percent Change from Year Ago)





Sources: History: EIA; Weekly Petroleum Status Report

Figure 18. Industrial Electricity Demand





month's Outlook. Hydroelectric and nuclear generation were higher than previously expected during February and March, leading to higher demand expectations in the first half of 1999 (Figure 19).

Figure 19. Nuclear and Hydroelectric Generation

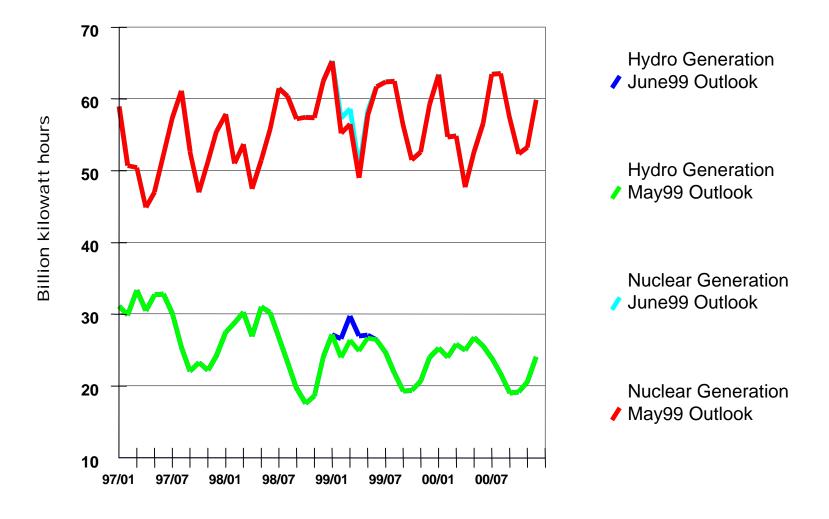




Table HL1. U. S. Energy Supply and Demand

		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	12.12	14.17	16.74	-34.5	16.9	18.1
Petroleum Supply (million barrels per day) Crude Oil Production b	6.45	6.25	5.99	5.87	-3.1	-4.2	-2.0
Total Petroleum Net Imports (including SPR)	9.16	9.70	9.98	10.35	5.9	2.9	3.7
Energy Demand							
World Petroleum (million barrels per day)	73.0	74.0	75.3	76.9	1.4	1.8	2.1
Petroleum (million barrels per day)	18.62	18.88	19.27	19.53	1.4	2.1	1.3
Natural Gas (trillion cubic feet)	21.97	21.33	22.00	22.73	-2.9	3.1	3.3
Coal (million short tons)	1029	1044	1071	1119	1.5	2.6	4.5
Electricity (billion kilowatthours) Utility Sales ^c Nonutility Own Use ^d Total	3140 161 3301	3220 164 3384	3255 166 3420	3333 168 3501	2.5 1.9 2.5	1.1 1.2 1.1	2.4 1.2 2.4
Total Energy Demand ^e (quadrillion Btu)	94.3	94.6	96.7	98.8	0.3	2.3	2.2
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	12.97	12.52	12.36	12.42	-3.5	-1.3	0.5
Renewable Energy as Percent of Total f	7.5	7.1	6.9	6.7			

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

^bIncludes lease condensate.

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

dDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility

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.

^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. U.S. Macroeconomic and Weather Assumptions

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic ^a															
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	4 400	4 400	4 400	4 404	4 404	4 407	4.440	4 4 4 0	4 4 40	4 454	4 455	4.450	4 407	4 400	4 450
(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.	1984	481	42	1444	2144	523	89	1636	2354	524	89	1636	3951	4391	4603
New England	2768	770	104	2038	3064	873	171	2269	3306	915	171	2269	5680	6377	6660
Middle Atlantic	2406	570 540	57 66	1779	2823	696	105 81	2026 1686	3028 2454	716 539	105	2026	4812	5651	5875 4760
U.S. Gas-Weighted Cooling Degree-Days (U.S.)	2078 29	548 386	66 948	1555 93	2267 18	522 334	758	7080 72	2454 30	334	81 758	1686 72	4247 1456	4556 1182	4760 1193
Cooming Degree-Days (U.S.)	25	300	340	33	10	554	750	12	30	334	100	12	1450	1 102	1133

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

^bOECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. 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

Table 2. U.S. Ellergy II		1998				1999		-		2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic ^a		•											ll entered		
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	0.458	0.528	0.557	0.566	0.599	0.621	0.623	0.611	0.514	0.527	0.613
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 =			4446	445.0	445.5	445.0	4400	440.5	440.0	4474	447.4		445.7	447.0
(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	7603	7034	6760	7634	7824	7209	6929	7789	7966	7387	7175	7359	7519
Vehicle Fuel Efficiency															
(index, 1997=1.0)	0.992	1.002	0.991	0.991	0.993	1.013	0.990	0.993	0.995	1.017	0.995	0.996	0.994	0.998	1.001
Real Vehicle Fuel Cost															
(cents per mile)	3.34	3.18	3.08	3.11	2.96	3.28	3.23	3.38	3.39	3.34	3.36	3.46	3.18	3.21	3.39
Air Travel Capacity															
(mill. available ton-miles/day)	423.5	439.1	443.0	439.5	428.8	444.2	464.3	467.6	463.3	464.7	482.4	471.7	436.3	451.4	470.6
Aircraft Utilization															
(mill. revenue ton-miles/day)	237.7	259.0	260.5	247.1	240.8	261.3	277.8	262.2	256.4	273.4	288.6	273.8	251.1	260.6	273.1
Airline Ticket Price Index															
(index, 1982-1984=1.000)	2.058	2.053	2.070	2.029	2.130	2.238	2.222	2.235	2.269	2.280	2.285	2.310	2.053	2.207	2.286
Raw Steel Production															
(millions tons)	28.75	27.87	26.57	24.40	27.05	26.76	26.41	27.34	27.15	26.99	26.67	27.29	107.28	107.57	108.09

^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.

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.

^bIncludes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

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

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

(Million Barrels per Day, Except OECD Commercial Stocks)

(Willion Barreis per D	αу, Ε	1998	OLOD	Com	meren	1999	ono,			2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Demand ^a	131	ZIIU	Siu	401	131	ZIIU	Jiu	401	131	ZIIU	JIU	401	1990	1999	2000
OECD	40.5	40.0	40.0	40.0	10.0	10.0	10.4	10.7	10.4	10.1	10.7	10.0	400	10.2	10 E
U.S. (50 States)		18.8	19.2	19.0	19.2	18.8 0.3	19.4	19.7 0.3	19.4 0.3	19.1 0.3	19.7 0.3	19.9 0.3	18.9	19.3 0.3	19.5
U.S. Territories		0.3	0.3	0.3	0.3		0.3						0.3		0.3
Canada		1.8	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.0	2.0	1.9	1.9	2.0
Europe		14.2	14.6 5.2	15.1	15.1	14.4 5.0	14.8	15.3	15.3	14.6 5.1	15.0	15.6	14.7 5.5	14.9	15.1 5.6
Japan		5.0		5.7	6.2		5.2	5.7	6.3	-	5.3	5.8		5.5	
Australia and New Zealand		1.0	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	42.6	41.0	42.2	43.0	43.6	41.3	42.7	44.0	44.3	42.0	43.3	44.6	42.2	<i>4</i> 2.9	43.6
Non-OECD	4.5			4.5	4.5	4.0	4.0		4.5				4.0	4.0	4.0
Former Soviet Union		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		1.4	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		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		8.6	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		13.3	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		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	74.5	72.4	73.2	76.0	76.1	73.2	74.2	77.5	77.7	74.9	75.8	79.1	74.0	75.3	76.9
Supply ^b															
OECD															
U.S. (50 States)		9.4	9.0	9.1	9.0	8.9	9.0	9.0	8.9	8.9	8.9	8.9	9.3	9.0	8.9
Canada		2.6	2.8	2.7	2.6	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.8
North Sea ^c	6.4	6.2	5.9	6.3	6.3	6.1	6.3	6.7	6.8	6.5	6.7	7.0	6.2	6.4	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	20.2	19.8	19.3	19.6	19.4	19.3	19.6	20.1	20.1	19.9	20.0	20.4	19.7	19.6	20.1
Non-OECD															
OPEC	30.9	30.7	30.0	29.9	30.3	28.6	29.0	29.6	29.9	30.3	30.7	31.2	30.4	29.4	30.6
Former Soviet Union	7.3	7.2	7.2	7.3	7.2	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	3.6	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	11.1	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	55.4	53.4	54.0	55.0	55.4	55.7	56.3	56.9	55.1	54.4	56.1
Total World Supply	75.8	75.2	73.9	74.4	74.7	72.7	73.6	75.1	75.5	75.6	76.3	77.3	74.8	74.0	76.2
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	-0.3	-0.7	0.0	0.1	0.4	-0.5	-0.2	0.6	0.6	-0.6	-0.3	0.5	-0.2	0.1	0.1
Other	-1.0	-2.1	-0.7	1.5	0.9	1.1	0.8	1.8	1.6	-0.1	-0.2	1.3	-0.6	1.2	0.6
Total Stock Withdrawals	-1.3	-2.8	-0.7	1.6	1.4	0.6	0.6	2.4	2.2	-0.6	-0.5	1.8	-0.8	1.2	0.7
OECD Comm. Stocks, End (bill. bbls.)	2.7	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.5	2.6	2.6	2.5	2.8	2.7	2.5
Non-OPEC Supply		44.5	43.9	44.5	44.5	44.1	44.7	45.5	45.5	45.2	45.5	46.1	44.5	44.7	45.6
Net Exports from Former Soviet Union		3.1	3.1	2.8	2.7	3.2	3.2	3.0	2.8	3.2	3.2	3.0	3.0	3.0	3.1
THEI EXPORTS HOTH FORTHER SOVIET ORIGIN	2.1	J. I	J. I	2.0	2.1	J.Z	J.Z	5.0	2.0	J.Z	J.Z	5.0	3.0	5.0	J. I

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

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

and liquids produced from coal and other sources.

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. 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)

(Nominal Dollars)		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
2															
Imported Crude Oil ^a	40.44	40.40	44.07	40.05	40.00	45.00	4400	45.50	40.00	40.75	40.00	47.05	40.40	4447	10.71
(dollars per barrel)	13.44	12.40	11.87	10.85	10.92	15.08	14.92	15.58	16.08	10.75	16.83	17.25	12.12	14.17	16.74
Natural Gas Wellhead															
(dollars per thousand cubic feet)	2.02	2.07	1.92	1.83	1.74	2.05	2.24	2.48	2.43	2.09	2.20	2.53	1.96	2.13	2.31
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades	1.10	1.10	1.07	1.03	0.99	1.16	1.14	1.14	1.16	1.22	1.22	1.20	1.07	1.11	1.20
Regular Unleaded		1.05	1.03	0.99	0.95	1.12	1.11	1.10	1.12	1.18	1.19	1.16	1.03	1.07	1.16
No O Discol O'l Data'l															
No. 2 Diesel Oil, Retail (dollars per gallon)	1.08	1.05	1.02	1.00	0.97	1.07	1.06	1.12	1.12	1.14	1.14	1.18	1.04	1.05	1.15
, ,					0.07										
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.47	0.43	0.39	0.38	0.36	0.42	0.43	0.50	0.53	0.54	0.54	0.58	0.42	0.43	0.55
No. 2 Heating Oil, Retail															
(dollars per gallon)	0.91	0.85	0.77	0.79	0.80	0.81	0.80	0.89	0.94	0.94	0.90	0.97	0.85	0.83	0.95
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel)	13.58	13.27	12.32	11.78	11.35	14.57	14.29	15.91	16.55	15.66	15.26	16.76	12.74	13.97	16.12
(30.13.5 po. 54.15.)															
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	1.23	1.23
Lisas Fuel Oil d															
Heavy Fuel Oil ^d (dollars per million Btu)	2 12	2 17	2.07	1.93	1 77	2.37	2.35	2.64	2.58	2.56	2.50	2.78	2.07	2.26	2.60
(dollars per million bla)			2.07	1.50		2.07	2.00	2.07	2.00	2.00	2.00	2.70	2.01	2.20	2.00
Natural Gas															
(dollars per million Btu)	2.61	2.46	2.26	2.31	2.22	2.50	2.65	2.98	3.06	2.61	2.69	3.08	2.38	2.60	2.80
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	6.39	7.33	8.90	6.64	6.24	6.89	8.82	6.94	7.11	7.81	9.10	7.49	6.82	6.74	7.46
Flootricity															
Electricity (cents per kilowatthour)	7.96	8.43	8.55	8.09	7.80	8.35	8.60	8.11	7.51	8.11	8.37	7.90	8.28	8.23	7.98
^a Pofiner acquisition acet (PAC) of imported															

^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: 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)

(willion barrels per	<u> </u>	1998	0.00.			1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply	1		I .	l l											
Crude Oil Supply															
Domestic Production a	6.45	6.37	6.10	6.05	6.00	5.98	5.97	6.02	5.92	5.89	5.85	5.82	6.24	5.99	5.87
Alaska	1.23	1.17	1.13	1.18	1.15	1.10	1.06	1.10	1.02	1.02	1.01	1.01	1.17	1.10	1.01
Lower 48	5.25	5.20	4.94	4.93	4.84	4.90	4.91	4.92	4.90	4.88	4.84	4.81	5.08	4.89	4.86
Net Imports (including SPR) b	7.95	8.78	9.00	8.46	8.38	8.89	9.36	8.68	8.52	9.29	9.55	9.05	8.55	8.83	9.10
Not importe (including of 11)															
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	-0.02	-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	-0.14	0.04	0.08	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.22	0.10	0.05	0.20	0.25	0.35	0.14	0.11	0.21	0.21	0.22	0.21	0.13	0.21	0.21
Total Crude Oil Supply	14.33	15.28	15.37	14.53	14.47	15.28	15.55	14.94	14.67	15.35	15.67	15.13	14.88	15.06	15.21
Other Supply															
NGL Production	1.85	1.80	1.67	1.70	1.72	1.75	1.77	1.77	1.78	1.78	1.77	1.77	1.75	1.75	1.78
Other Hydrocarbon and Alcohol Inputs	0.34	0.36	0.38	0.39	0.38	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain															
	0.84	0.87	0.90	0.94	0.86	0.85	0.89	0.88	0.85	0.90	0.91	0.88	0.89	0.87	0.89
Net Product Imports ^c	1.04	1.22	1.16	1.17	1.19	1.13	1.12	1.18	1.12	1.27	1.29	1.29	1.15	1.15	1.24
Product Stock Withdrawn or Added (-) u.	0.03	-0.75	-0.24	0.29	0.58	-0.53	-0.24	0.52	0.62		-0.34	0.48	-0.17	0.08	0.06
Total Supply	18.43	18.78	19.24	19.02	19.20	18.82	19.42	19.66	19.40	19.13	19.66	19.94	18.87	19.27	19.53
Demand															
Motor Gasoline	7.78	8.35	8.52	8.34	7.93	8.48	8.77	8.53	8.11	8.63	8.89	8.72	8.25	8.43	8.59
Jet Fuel	1.58	1.61	1.60	1.68	1.70	1.59	1.62	1.69	1.71	1.63	1.69	1.72	1.62	1.65	1.69
Distillate Fuel Oil	3.59	3.40	3.41	3.43	3.70	3.37	3.40	3.65	3.89	3.49	3.44	3.69	3.46	3.53	3.63
Residual Fuel Oil	0.82	0.83	0.92	0.76	0.92	0.73	0.74	0.87	0.96	0.72	0.71	0.82	0.83	0.81	0.80
Other Oils ^e	4.68	4.60	4.79	4.81	4.95	4.63	4.88	4.93	4.74	4.67	4.93	5.00	4.72	4.85	4.83
Total Demand	18.46	18.78	19.24	19.02	19.20	18.82	19.42	19.66	19.40	19.13	19.66	19.94	18.88	19.27	19.53
Total Petroleum Net Imports	8.98	10.00	10.16	9.62	9.56	10.02	10.48	9.86	9.64	10.56	10.84	10.34	9.70	9.98	10.35
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	336	333	310	323	336	332	325	324	322	326	321	316	323	324	316
Total Motor Gasoline	215	221	207	216	216	222	213	215	215	214	210	211	216	215	211
Finished Motor Gasoline	166	178	165	172	168	176	167	169	169	171	166	168	172	169	168
Blending Components	49	44	43	44	48	47	46	46	46	43	44	43	44	46	43
Jet Fuel	43	44	46	45	41	46	48	47	43	44	47	46	45	47	46
Distillate Fuel Oil	124	139	153	156	126	136	147	145	107	117	134	138	156	145	138
Residual Fuel Oil	41	40	40	44	40	40	39	42	33	37	38	40	44	42	40
Other Oils ^e	265	313	334	292	278	305	323	42 274	268	301	315	265	292	42 274	265
				-	_								-		
Total Stocks (excluding SPR)	1025	1090	1089	1076	1036	1081	1096	1047	988	1039	1066	1017	1076	1047	1017
Crude Oil in SPR	563	563	563	571	572	574	581	579	579 1567	579 1610	579	579 1506	571	579 1627	579 1506
Total Stocks (including SPR)	1588	1654	1653	1647	1608	1655	1677	1627	1567	1618	1645	1596	1647	1627	1596

^aIncludes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

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

(Percent Deviation Base Case)

		+ 10	0% Prices	+ 109	% Weather ^e
Demand Sector	+1% GDP	Crude Oil ^c	N.Gas Wellhead ^d	Fall/Winter ^f	Spring/Summer
Petroleum					
Total	0.6%	-0.3%	0.1%	1.1%	0.1%
Motor Gasoline	0.1%	-0.3%	0.0%	0.0%	0.0%
Distillate Fuel	0.8%	-0.2%	0.0%	2.7%	0.1%
Residual Fuel	1.6%	-3.4%	2.6%	2.0%	2.7%
Natural Gas					
Total	1.1%	0.3%	-0.4%	4.4%	1.0%
Residential	0.1%	0.0%	0.0%	8.2%	0.0%
Commercial	0.9%	0.0%	0.0%	7.3%	0.0%
Industrial	1.7%	0.2%	-0.5%	1.3%	0.0%
Electric Utility	1.8%	1.6%	-1.5%	1.0%	4.0%
Coal					
Total	0.7%	0.0%	0.0%	1.7%	1.7%
Electric Utility	0.6%	0.0%	0.0%	1.9%	1.9%
Electricity					
Total	0.6%	0.0%	0.0%	1.5%	1.7%
Residential	0.1%	0.0%	0.0%	3.2%	3.6%
Commercial	0.9%	0.0%	0.0%	1.0%	1.4%
Industrial	0.8%	0.0%	0.0%	0.3%	0.2%

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

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	6.19	5.45	0.74	0.09	0.66
Lower 48 States	5.17	4.45	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.

^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 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	0.82	0.75	0.74	0.79	0.81	0.77	0.78	0.84	2.98	3.10	3.19
Supplemental Gaseous Fuels	0.03	0.02	0.03	0.03	0.03	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	5.54	5.47	5.48	5.56	5.61	5.50	5.53	5.62	22.02	22.05	22.27
Underground Working Gas Storage															
Opening	6.52	5.52	6.44	7.28	7.04	5.79	6.49	7.31	6.80	5.35	6.18	7.10	6.52	7.04	6.80
Closing	5.52	6.44	7.28	7.04	5.79	6.49	7.31	6.80	5.35	6.18	7.10	6.68	7.04	6.80	6.68
Net Withdrawals	1.00	-0.92	-0.84	0.24	1.25	-0.70	-0.82	0.50	1.45	-0.83	-0.92	0.42	-0.52	0.24	0.12
Total Supply	6.49	4.53	4.67	5.80	6.79	4.77	4.67	6.07	7.06	4.67	4.61	6.04	21.50	22.29	22.39
Balancing Item ^a	0.16	0.18	-0.05	-0.46	-0.01	0.17	-0.08	-0.37	0.35	0.32	0.01	-0.33	-0.17	-0.29	0.35
Total Primary Supply	6.65	4.71	4.63	5.34	6.78	4.94	4.59	5.69	7.41	4.99	4.62	5.71	21.33	22.00	22.73
Demand															
Lease and Plant Fuel	0.31	0.31	0.31	0.31	0.31	0.32	0.31	0.32	0.32	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	0.74
Residential	2.13	0.78	0.37	1.20	2.21	0.81	0.33	1.39	2.49	0.82	0.33	1.41	4.48	4.74	5.05
Commercial	1.21	0.58	0.45	0.81	1.25	0.64	0.46	0.91	1.45	0.65	0.46	0.92	3.05	3.26	<i>3.4</i> 8
Industrial (Incl. Cogenerators)	2.23	1.98	2.01	2.17	2.20	2.05	2.00	2.18	2.30	2.04	1.99	2.17	8.38	8.43	8.50
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		0.86	1.29	0.61	0.54	0.92	1.29	0.64	0.58	0.96	1.33	0.65	3.26	3.39	3.52
Nonutilities (Excl. Cogen.) D	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	6.78	4.94	4.59	5.69	7.41	4.99	4.62	5.71	21.33	22.00	22.73

^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)

		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	278.6	282.6	284.6	267.1	279.7	288.4	293.7	278.8	278.9	290.7	1118.1	1119.8	1142.1
Appalachia	119.5	114.0	113.2	113.6	119.1	113.4	111.3	118.7	121.1	116.3	108.9	117.8	460.4	462.5	464.1
Interior	43.1	42.4	41.5	41.4	41.8	37.3	39.9	41.7	41.4	37.2	37.9	40.2	168.4	160.7	156.6
Western	119.0	119.0	123.8	127.6	123.7	116.4	128.5	128.0	131.2	125.3	132.2	132.7	489.4	496.6	521.5
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	18.6	20.7	19.9	18.8	13.0	17.6	17.8	17.8	15.6	15.8	16.0	15.9	78.0	66.1	63.3
Total Net Domestic Supply	257.8	259.5	265.0	266.3	265.7	252.8	266.4	275.3	274.3	264.9	275.2	277.4	1048.6	1060.2	1091.9
Secondary Stock Levels b															
Opening	106.4	114.5	124.3	111.8	128.1	142.2	146.2	126.5	130.1	125.8	131.8	117.9	106.4	128.1	130.1
Closing	114.5	124.3	111.8	128.1	142.2	146.2	126.5	130.1	125.8	131.8	117.9	120.0	128.1	130.1	120.0
Net Withdrawals	-8.1	-9.8	12.5	-16.2	-14.2	-3.9	19.6	-3.5	4.3	-5.9	13.9	-2.2	-21.7	-2.0	10.1
Waste Coal Supplied to IPPs ^c	2.4	2.4	2.4	2.4	2.5	2.8	3.4	3.8	4.2	4.2	4.2	4.2	9.6	12.5	16.8
Total Supply	252.0	252.2	279.8	252.5	254.0	251.6	289.5	275.6	282.8	263.2	293.3	279.4	1036.5	1070.7	1118.8
Demand															
Coke Plants	6.7	7.2	7.3	7.0	7.3	6.9	6.9	7.2	7.3	7.0	7.0	7.2	28.2	28.3	28.5
Electricity Production															
Electric Utilities		218.4	252.3	219.7	217.2	215.7	252.3	235.5	242.7	226.2	255.7	238.9	910.9	920.7	963.4
Nonutilities (Excl. Cogen.) d	6.4	6.5	7.8	8.8	9.4	10.9	12.1	12.1	12.2	12.0	12.7	12.6	29.5	44.5	49.4
Retail and General Industry e	20.1	18.3	17.8	19.5	20.2	18.1	18.1	20.8	20.7	18.0	18.0	20.7	75.7	77.3	77.4
Total Demand		250.4	285.2	255.1	254.0	251.6	289.5	275.6	282.8	263.2	293.3	279.4	1044.3	1070.7	1118.8
Discrepancy ^f	-1.6	1.7	-5.3	-2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-7.8	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. This item includes waste coal and coal slurry reprocessed into briquettes.

^dEstimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1998 and projections for 1999 and 2000 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1998 and 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

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)

(Billion Kilowa	I	1998				1999			I	2000			Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2000 2nd	3rd	4th	1998	1999	2000
Supply	151	ZIIU	Siu	401	151	ZIIU	Siu	401	131	Ziiu	Siu	401	1990	1999	2000
Supply Net Utility Generation															
	437.6	435.0	500.3	434.5	431.6	430.3	500.1	466.7	486.1	452.1	507.5	474.8	1807 5	1828.6	1020 5
Coal Petroleum		28.5	37.2	23.7	26.9	430.3 17.9	25.9	24.4	29.7	21.3	24.8	24.3	110.2	95.1	1920.5
Natural Gas		80.8	121.1	59.3	52.0	88.1	122.8	61.4	55.0	91.8	127.3	62.4	309.2	324.3	336.5
Nuclear		154.7	179.1	177.3	181.1	170.3	181.2	163.4	172.9	157.0	184.3	165.5	673.7	695.9	679.7
Hydroelectric		88.1	69.6	60.2	83.4	80.4	65.6	64.0	74.9	77.2	64.5	63.7	304.4	293.5	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		788.6	909.3	757.0	776.5	788.5	897.6	782.0	820.3	800.8	910.3	792.8	3212.2		
	. /3/.3	700.0	909.3	757.0	770.5	700.5	097.0	702.0	020.3	000.0	910.3	192.0	3212.2	3244.0	3324.3
Nonutility Generation ^b	440	440	45.5	47.4	45.4		45.7	47.0	45.0	440	45.0	47.0	00.0	00.0	00.7
Coal		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		3.8	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		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		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		17.1	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		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	871.5	879.5	996.7	892.9	916.7	893.2	1010.9	905.4	3602.5	3640.6	3726.2
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	878.3	887.4	1007.9	900.7	923.8	901.6	1022.2	913.5	3631.3	3674.3	3761.0
Losses and Unaccounted for ^f	54.1	80.8	59.8	52.9	52.1	73.3	63.9	64.5	49.8	76.2	66.6	67.1	247.6	253.8	259.7
Demand															
Electric Utility Sales															
Residential	273.5	248.9	346.6	255.0	286.5	252.5	328.2	265.3	311.7	259.4	335.7	270.8	1124.0	1132.5	1177.7
Commercial	216.5	230.2	271.9	230.2	226.6	234.6	272.3	235.4	238.0	236.7	273.8	236.7	948.9	968.9	985.1
Industrial	249.7	263.6	271.6	262.4	249.2	263.9	274.5	263.5	257.9	265.3	276.1	265.7	1047.3	1051.2	1064.9
Other	23.6	24.1	27.0	25.1	24.1	24.8	27.5	25.5	26.0	25.2	27.9	26.0	99.9	101.9	105.1
Subtotal	763.4	766.9	917.1	772.7	786.4	775.9	902.5	789.8	833.5	786.7	913.5	799.2	3220.1	3254.5	3332.8
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		804.5	958.0	818.6	826.2	814.0	944.0	836.3	873.9	825.4	955.6	846.3	3383.7	3420.5	3501.3
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

 $^{^{\}rm a}$ "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.

d Includes 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 (Change
	1997	1998	1999	2000	1997-1998	1998-1999	1999-2000
Electric Utilities				•	•	•	
Hydroelectric Power ^a	3.530	3.186	3.072	2.934	-9.7	-3.6	-4.5
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	0.020	0.021	0.0	-4.8	5.0
Total	3.665	3.316	3.201	3.064	-9.5	-3.5	-4.3
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	4.223	4.091	-7.1	-2.6	-3.1
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	0.096	0.095	8.0	2.1	-1.0
Total	2.138	2.178	2.212	2.247	1.9	1.6	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	6.709	6.621	-5.0	-0.5	-1.3

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

b Also 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.

elincludes 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	12.12	14.17	16.74
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	5.99	5.87
Total Petroleum Net Imports (including SPR) (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	9.70	9.98	10.35
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	74.0	75.3	76.9
(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	18.88	19.27	19.53
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	22.00	22.73
(million short tons)	797	830	877	891	897	898	907	944	951	962	1006	1029	1044	1071	1119
Electricity (billion kilowatthours)															
Utility Sales ^c	2369	2457	2578	2647	2713	2762	2763	2861	2935	3013	3098	3140	3220	3255	3333
Nonutility Own Use d	NA	NA	NA	97	113	122	137	138	150	158	158	161	164	166	168
Total	2369	2457	2578	2744	2826	2884	2901	2999	3085	3171	3256	3301	3384	3420	3501
Total Energy Demand ^e															
(quadrillion Btu)	NA	NA	NA	NA	84.2	84.3	85.6	87.4	89.3	90.9	93.9	94.3	94.6	96.7	98.8
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	12.52	12.36	12.42

a Refers to the imported cost of crude oil to U.S. refiners.

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information; 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-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

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.

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.

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

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Macroeconomic															
Real Gross Domestic Product															
(billion chained 1992 dollars)	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	7552	7825	7960
GDP Implicit Price Deflator	0.00	0010	0000	0002	0.00	00.0	02	0000	0011	0.02	0000		.002	.020	
(Index, 1992=1.000)	0.806	0.831	0.861	0.897	0.936	0.973	1.000	1.026	1.051	1.075	1.095	1.116	1.127	1.139	1.153
Real Disposable Personal Income	0.000		0.00	0.00.	0.000	0.0.0									
(billion chained 1992 Dollars)	4077	4155	4325	4412	4490	4484	4605	4667	4773	4906	5043	5183	5348	5538	5688
Manufacturing Production			.0_0												
(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															
(billion chained 1992 dollars)	805	799	818	832	806	741	783	843	916	966	1051	1138	1269	1362	1379
Real Exchange Rate															
(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											-	-			
(billion chained 1992 dollars)	-4.2	5.1	9.5	19.2	6.6	-6.1	-9.2	6.1	11.1	11.2	12.0	20.1	20.0	12.6	-3.8
Producer Price Index															
(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
Consumer Price Index															
(index, 1982-1984=1.000)	1.097	1.137	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	1.631	1.662	1.701
Petroleum Product Price Index															
(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	0.527	0.613
Non-Farm Employment															
(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	128.7	130.0
Commercial Employment															
(millions)	62.9	65.2	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.7	89.6	90.9
Total Industrial Production															
(index, 1987=1.000)	0.890	0.931	0.974	0.991	0.990	0.970	1.000	1.034	1.091	1.144	1.196	1.267	1.314	1.346	1.370
Housing Stock															
(millions)	98.0	99.8	101.6	102.9	103.5	104.5	105.5	106.8	108.2	109.6	111.0	112.5	114.2	115.7	117.0
Weather ^a															
Heating Degree-Days															
U.S	4295	4334	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4391	4603
New England	6517	6546	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	5680	6377	6660
Middle Atlantic	5665	5699	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	4812	5651	5875
U.S. Gas-Weighted	4442	4391	4804	4856	4139	4337	4458	4754	4659	4707	5040	4886	4247	4556	4760
Cooling Degree-Days (U.S.)	1249	1269	1283	1156	1260	1331	1040	1218	1220	1293	1180	1156	1456	1182	1193

^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								l .							
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	18.9	19.3	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	14.9	15.1
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	42.2	42.9	43.6
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	74.0	75.3	76.9
Supply ^c															
OECD															
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	9.3	9.0	8.9
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	2.7	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	6.4	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	1.6	1.6
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	19.6	20.1
Non-OECD															
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	29.4	30.6
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	3.2	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-OECD	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	54.4	56.1
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	76.2
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	-0.8	1.2	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	2.8	2.7	2.5
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.

DOECD Europe includes the former East Germany.

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

d Includes 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	12.12	14.17	16.74
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	2.13	2.31
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades	0.88	0.91	0.92	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.11	1.20
Regular Unleaded	0.88	0.91	0.91	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.07	1.16
No. 2 Diesel Oil, Retail															
(dollars per gallon)	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	1.05	1.15
No. 2 Heating Oil, Wholesale	0.40	0.50	0.47	0.50	0.70	0.00	0.50	0.54	0.54	0.54	0.04	0.50	0.40	0.40	0.55
(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	0.43	0.55
(dollars per gallon)	0.84	0.80	0.81	0.90	1.06	1.02	0.93	0.91	0.89	0.87	0.99	0.99	0.85	0.83	0.95
No. 6 Residual Fuel Oil, Retail ^c	0.04	0.00	0.01	0.30	1.00	1.02	0.33	0.31	0.03	0.07	0.33	0.55	0.03	0.03	0.30
(dollars per barrel)	14.46	17.76	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.74	13.97	16.12
(dollars per barrer)	14.40	17.70	14.04	10.20	10.00	14.32	14.21	14.00	14.73	10.43	13.01	17.02	12.74	13.91	10.12
Electric Utility Fuels															
Coal															
(dollars per million Btu)	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	1.23	1.23
Heavy Fuel Oil ^d															
(dollars per million Btu)	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	2.26	2.60
Natural Gas															
(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	2.80
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	6.74	7.46
Electricity															
(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	8.2	8.0

aRefiner acquisition cost (RAC) of imported crude oil.

Average 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 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	· I	·				1	ı			·	·		1	1	
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	6.25	5.99	5.87
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	5.08	4.89	4.86
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	8.55	8.83	9.10
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	0.00	0.00
Unaccounted-for Crude Oil	0.14	0.14	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.13	0.21	0.21
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	14.88	15.06	15.21
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	1.78
Other Hydrocarbon 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	0.00	0.00
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	0.89	0.87	0.89
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	1.15	1.15	1.24
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	0.08	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	18.87	19.27	19.53
Demand															
Motor Gasoline ^d	6.94	7.19	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.59
Jet Fuel	1.31	1.38	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.65	1.69
Distillate Fuel Oil	2.91	2.98	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.53	3.63
Residual Fuel Oil	1.42	1.26	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.83	0.81	0.80
Other Oils ^e	3.75	3.90	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.72	4.85	4.83
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	18.88	19.27	19.53
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	9.70	9.98	10.35
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	215	211
Jet Fuel	50	50	44	41	52	49	43	40	47	40	40	44	45	47	46
Distillate Fuel Oil	155	134	124	106	132	144	141	141	145	130	127	138	156	145	138
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	274	265
a, , , , , , , , ,															

an Includes lease condensate.

Constitution of the Includes Includes Includes gross imports plus SPR imports minus exports.

Constitution of the Includes an estimate of fuel ethanol blended into gasoline and certain product reclassifications, not reported elsewhere in EIA. See Appendix B in Energy Information Administration, Short-Term Energy Outlook, EIA/DOE-0202(93/3Q), for details on this adjustment.

fincludes 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.

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	3.10	3.19
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	22.05	22.27
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	6.80
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	6.80	6.68
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	0.24	0.12
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	22.29	22.39
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	-0.29	0.35
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	22.00	22.73
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	0.74
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	4.74	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	3.26	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	8.62	8.69
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	3.39	3.52
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	22.00	22.73

^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.

^b Annual 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								
	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	1118.1	1119.8	1142.1
Appalachia	NA	NA	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	462.5	464.1
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	156.6
Western	NA	NA	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	489.4	496.6	521.5
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	78.0	66.1	63.3
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	1048.6	1060.2	1091.9
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	106.4	128.1	130.1
Closing	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	128.1	130.1	120.0
Net Withdrawals	-5.0	-10.2	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.6	-21.7	-2.0	10.1
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	12.5	16.8
Total Supply	803.1	834.4	882.3	896.5	899.4	891.4	901.8	930.2	954.0	960.4	1006.7	1033.2	1036.5	1070.7	1118.8
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	28.2	28.3	28.5
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	920.7	963.4
Nonutilities (Excl. Cogen.) d	NA	NA	NA	0.9	1.6	10.2	14.8	17.8	20.9	21.2	22.2	21.6	29.5	44.5	49.4
Retail and General Industry e	75.6	75.2	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	76.9	77.1	75.7	77.3	77.4
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	1044.3	1070.7	1118.8
Discrepancy f	6.5	4.4	5.8	5.9	2.4	-6.4	-5.4	-13.5	2.9	-1.6	1.2	4.0	-7.8	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. This item includes waste coal and coal slurry reprocessed into briquettes.

dEstimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1998 and projections for 1999 and 2000 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1998 and 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

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)

	1986 1385.8 136.6 248.5	1987 1463.8 118.5	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Net Utility Generation Coal	136.6		1540.7												
Coal	136.6		1540.7												
	136.6		1540.7												
Potroloum		440 E		1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	1807.5	1828.6	1920.5
	248.5		148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	110.2	95.1	100.1
		272.6	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	309.2	324.3	336.5
	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	695.9	679.7
	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	293.5	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
	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	3244.6	332 <i>4.</i> 3
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	3640.6	3726.2
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	3674.3	3761.0
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	253.8	259.7
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	1132.5	1177.7
	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	968.9	985.1
	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	1051.2	1064.9
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	101.9	105.1
	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	3254.5	3332.8
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	3420.5	3501.3
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

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

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.

For 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.