

November 1998

Highlights

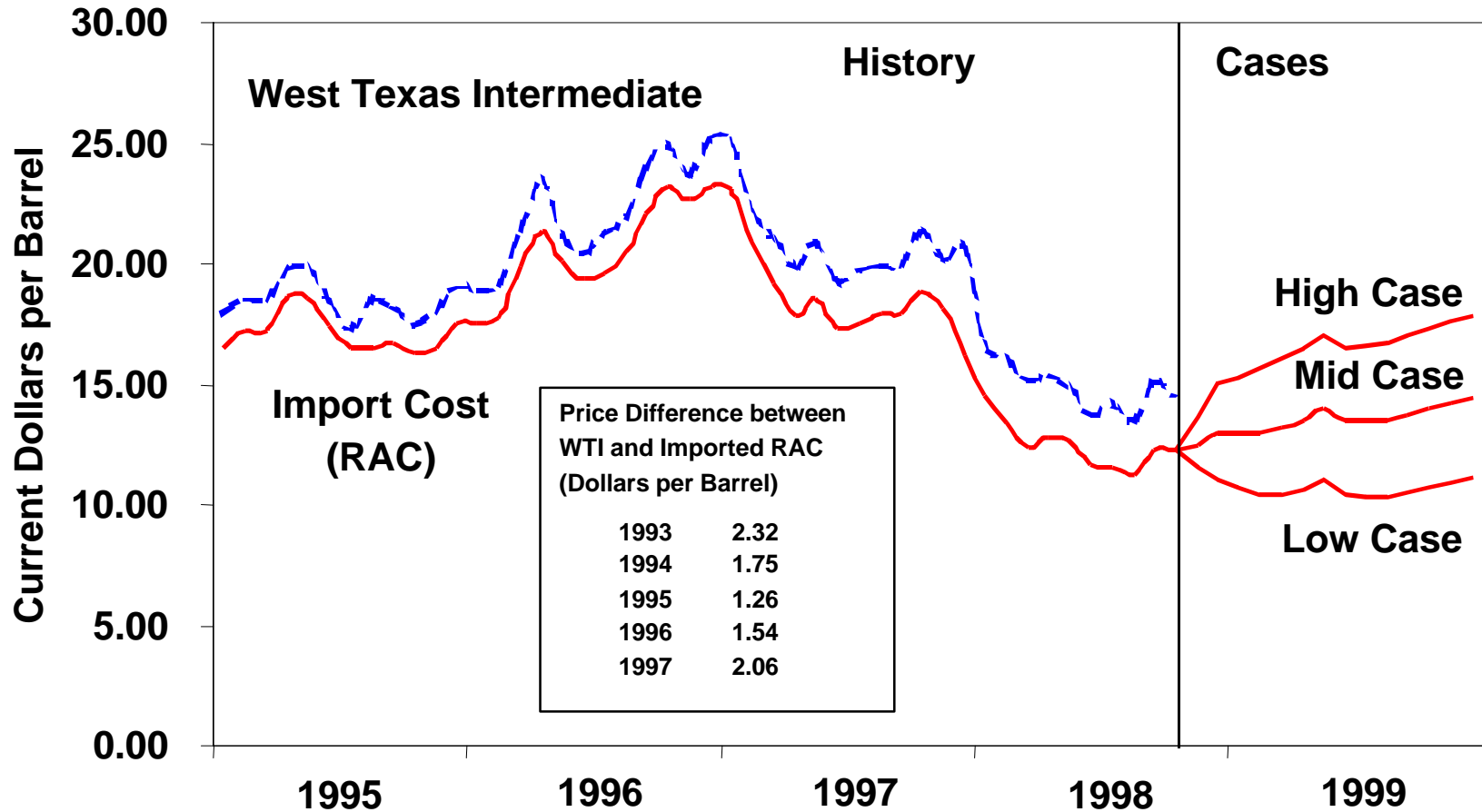
World Oil Markets

The large oil inventory build-up that occurred in 1997 and the first half of 1998 is expected to keep a lid on how high oil prices might increase from their historically low levels. However, the oil production cuts pledged by major oil producers in June, along with some expected recovery in oil demand in 1999, should allow the average annual world oil price (defined as the average price U.S. refiners pay for imported crude oil) to rise from an average of \$12.51 per barrel in 1998 to \$13.65 per barrel next year (see [Figure 1](#) and [Table](#)). Beginning in the second half of 1998, and carrying through 1999, the world oil market should see a more "typical" oil inventory pattern, with drawdowns from oil inventories of approximately 1 million barrels per day in the fourth and first quarters, and oil inventory builds of about 1 million barrels per day in the second and third quarters. This more typical pattern should result in a 1999 stock build of less than 0.1 million barrels per day. This follows 1997 and 1998, when a cumulative 650 million barrels was added to global inventories, as estimated from the difference between global oil supply and demand (See [Table](#)).

The key element to this forecast is a modest increase in world oil demand in 1999, combined with a relatively small increase in oil supply in 1999. World oil demand growth in 1999 is projected to be nearly twice the rate currently estimated for 1998. EIA estimates that 1998 will be the first time world oil demand, excluding the FSU countries, would have increased by less than 1 million barrels per day since 1990. The small increase in 1998 world oil demand is in large part due to both the economic slowdown that has affected Asia, Russia, and some Latin American countries, and a warmer than normal first quarter due to the El Niño weather pattern. With an assumed return to normal weather and a slight recovery in the global economic situation, oil demand is expected to increase in 1999 by 1.5 million barrels per day. This is substantially more than in 1998, but less than has occurred in recent years.

Meanwhile, oil supply is expected to increase by less than 0.7 million barrels per day in 1999, despite an assumed softening in the commitment to pledged oil production cuts made last July. Even with adherence to the pledged production cuts waning throughout the forecast period, OPEC is still expected to produce nearly 0.2 million barrels per day less in 1999 as in 1998. This is because of the relatively high OPEC production levels in the first half of 1998. Our forecast of OPEC oil production also assumes that Iraqi oil production averages nearly 2.6 million barrels per day in 1999. As a result of the expected decline in OPEC oil production in 1999, non-OPEC oil production is projected to increase by over 0.8 million barrels per day, with 30 percent of this increase expected from the North Sea. Other non-OPEC regions that are estimated to have a substantial increase in oil production in 1999 is Latin America (20 percent of the non-OPEC oil production increase), and Africa (10 percent).

Figure 1. U.S. Monthly Crude Oil Prices



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



U.S. Petroleum Prices, Demand and Supply

Retail heating oil prices are projected to average 87 cents per gallon for the winter of 1998-1999 or 5 cents per gallon less than the previous winter even though the weather is assumed to be colder than last winter ([Figure 2](#)). This is because crude oil prices in the fourth quarter of this year are projected to be \$5.25 per barrel less than one year ago and distillate stocks going into the heating season were 12 percent above 1997 levels at the beginning of October ([Figure 3](#)).

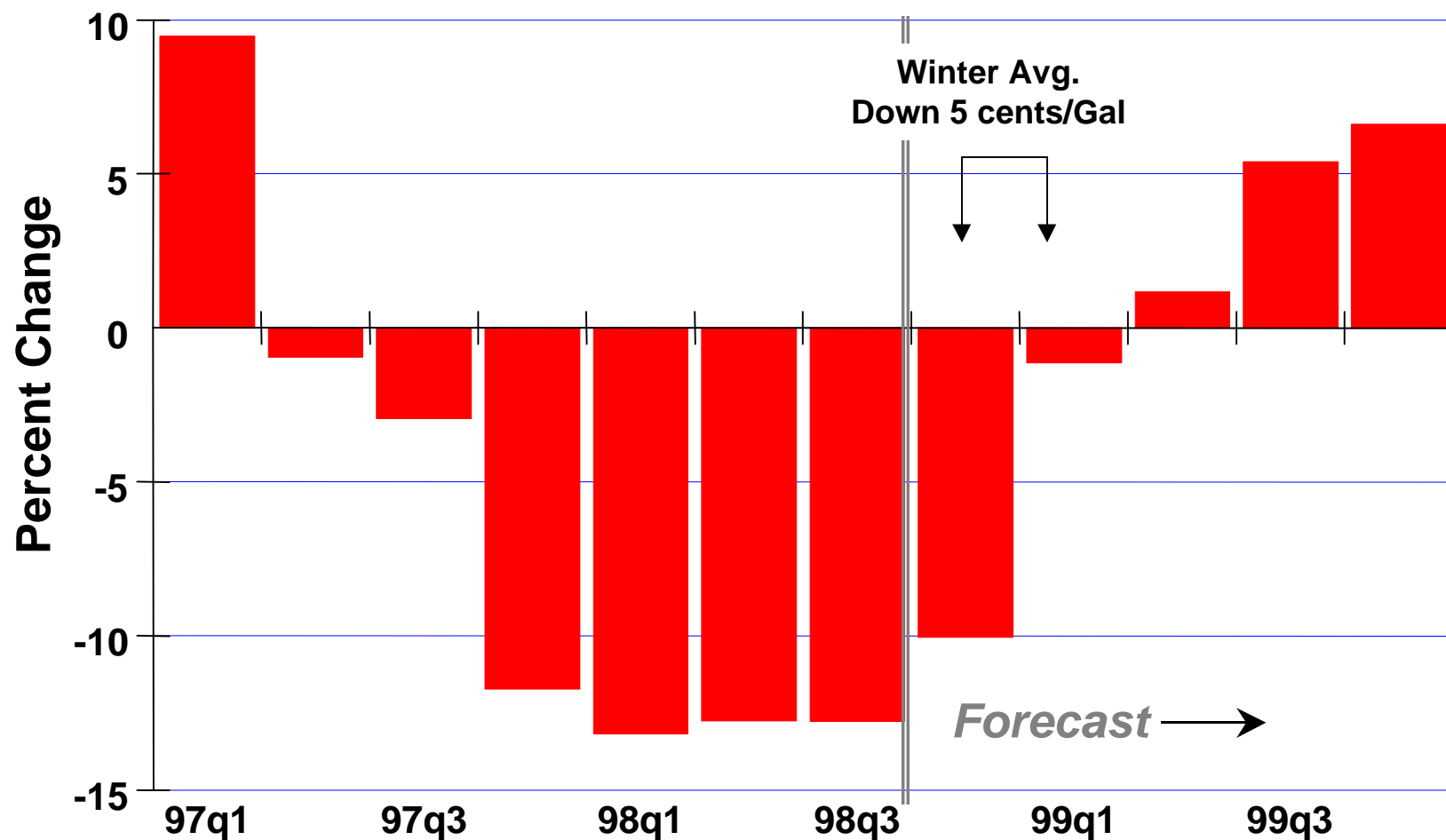
Prices for motor gasoline for the fourth quarter are projected to be the lowest of the year as well as the lowest inflation-adjusted quarterly price ever, with self-service unleaded regular and the average of all grades averaging \$1.02 and \$1.06 per gallon, respectively (However, as shown in [Figure 4](#), the lowest monthly prices for the year appeared in September). As the year ends it appears certain that the average annual price for 1998 will also be the lowest annual inflation-adjusted annual price on record. With plentiful gasoline stocks and assuming a continuation of the weak crude oil price situation, we now expect average retail gasoline prices to be about 14 cents per gallon lower for the fourth quarter of this year than for the same period in 1997. The annual average prices will be 16 cents lower for the entire year (See [Table](#)). In 1999, retail prices should rise a few cents per gallon, given the projected crude oil price increase of about \$1.20 per barrel.

Our U.S. petroleum demand growth projection for 1998 has been revised downward slightly based on additional data. The expectation is now for annual growth of about 0.5 percent this year ([Figure 5](#)), compared to the 0.8 percent projection posted last month. Some of the relatively high late-summer estimates for distillate fuel demand have been revised downward with the release of EIA's August 1998 monthly values (see [Figure 6](#) and the [Petroleum Supply Monthly](#)).

Other products besides distillate were nudged downward for August as well, including residual fuel and gasoline. Interestingly, total residual fuel demand was lower for the month of August than we estimated last month despite the fact that deliveries to electric utilities were higher than originally estimated. This development adds some impetus to the increasingly evident shift in the United States away from the supply of residual fuel to applications outside of the power generation sector, including vessel bunkering. Meanwhile, we have become slightly more bullish on electric utility oil use, based on the higher consumption propensities evident lately ([Figure 7](#)) as well as slight upward revisions in our electricity demand forecast.

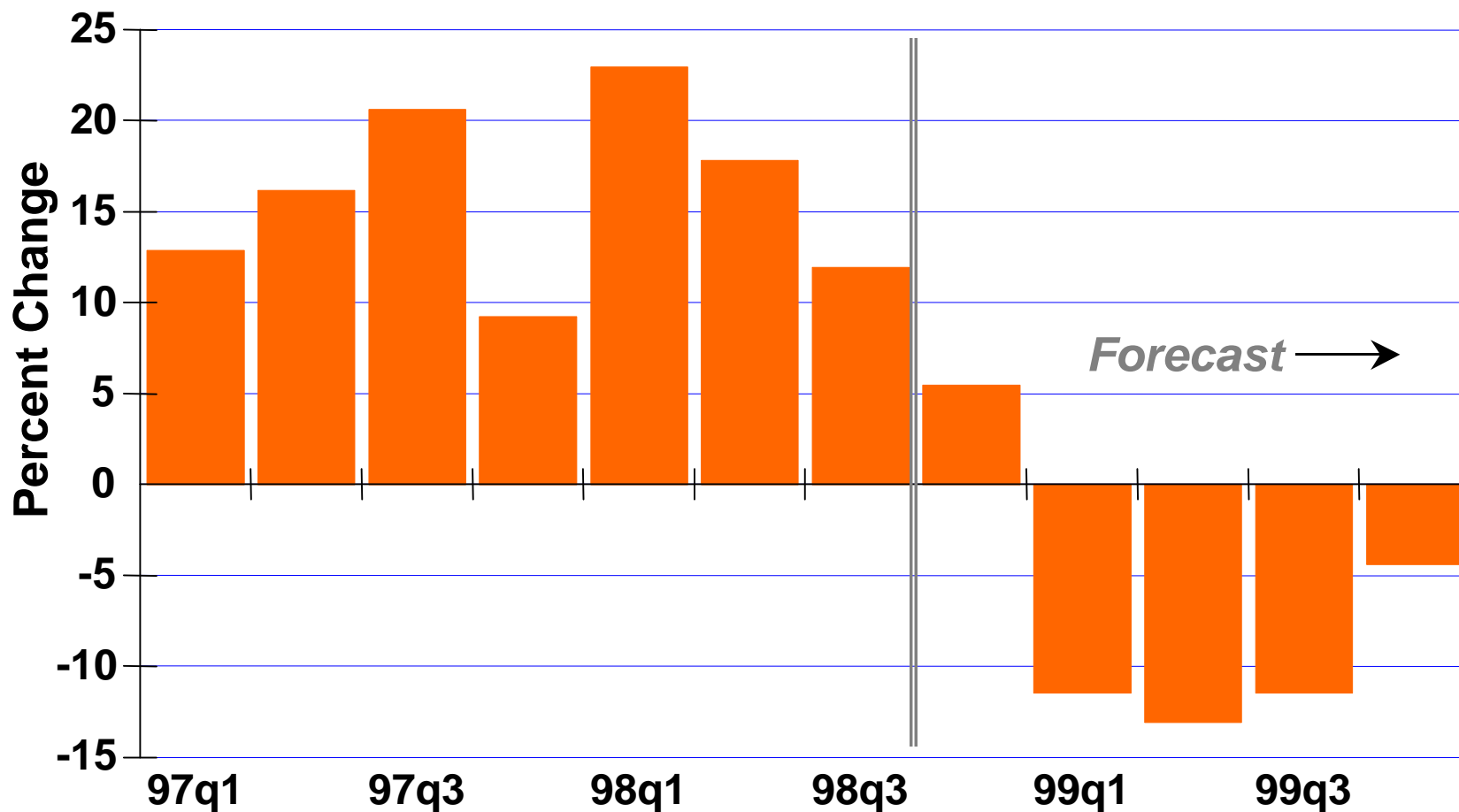
With respect to gasoline, despite the downward August revision, demand has been strong. Preliminary estimates for September and an early estimate for October based on weekly data indicate demand levels above our previous estimates. We now have a gasoline demand estimate for the third quarter of 1998 that is 3.1 percent above the 1997 third-quarter level. This brings the average summer (second and third quarter) demand growth well above 2 percent beyond the 1997 level. For the year, a gain of about 2.2 percent in

Figure 2. Quarterly Retail Heating Oil Prices (Percent Change from Year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998

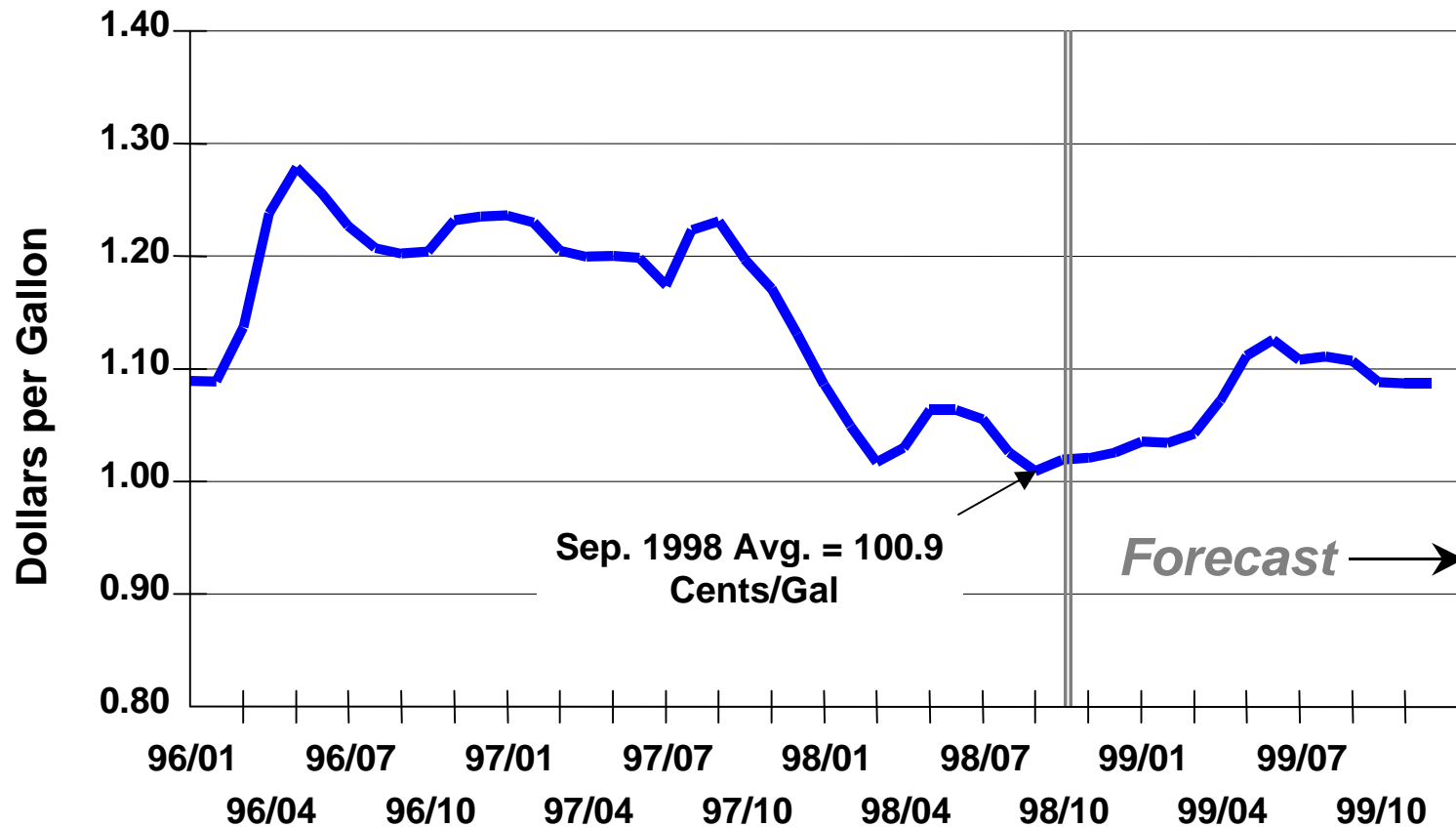
Figure 3. Quarterly Ending Distillate Stocks (Percent Change from year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



Figure 4. Monthly Retail Gasoline Price*

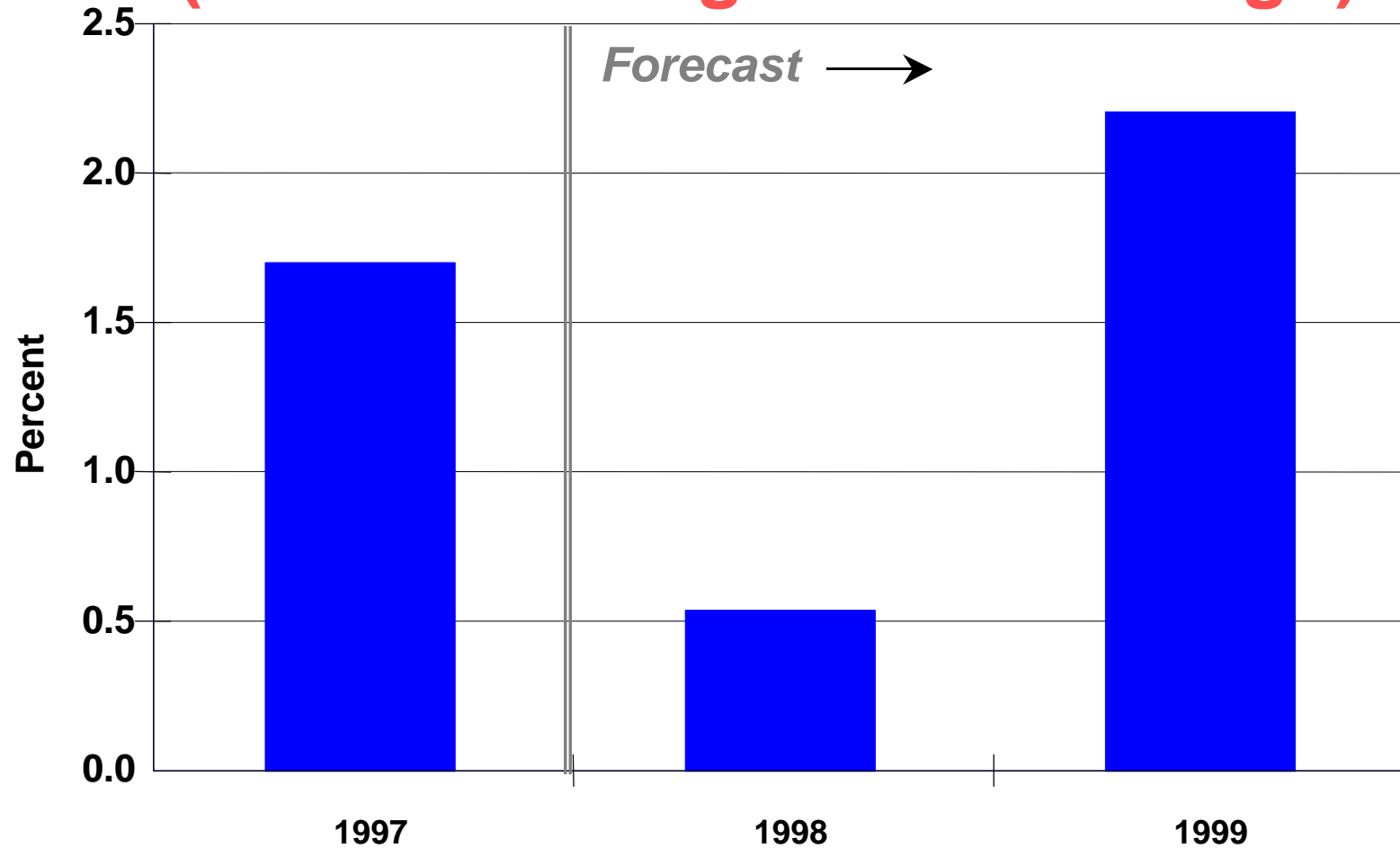


*Regular conventional gasoline, self-serve cash pump price.

Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



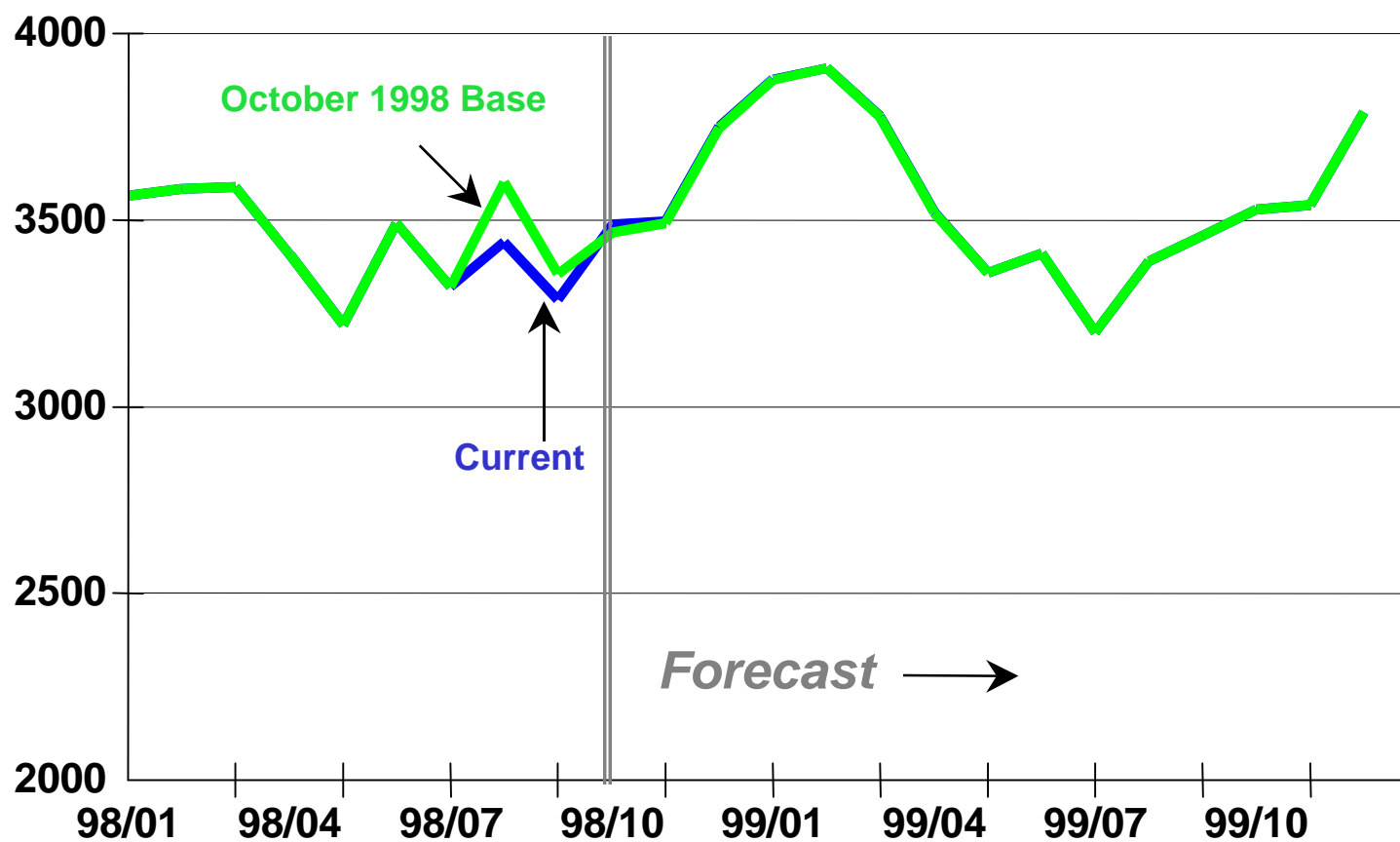
Figure 5. U.S. Petroleum Demand Growth (Percent Change from Year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998

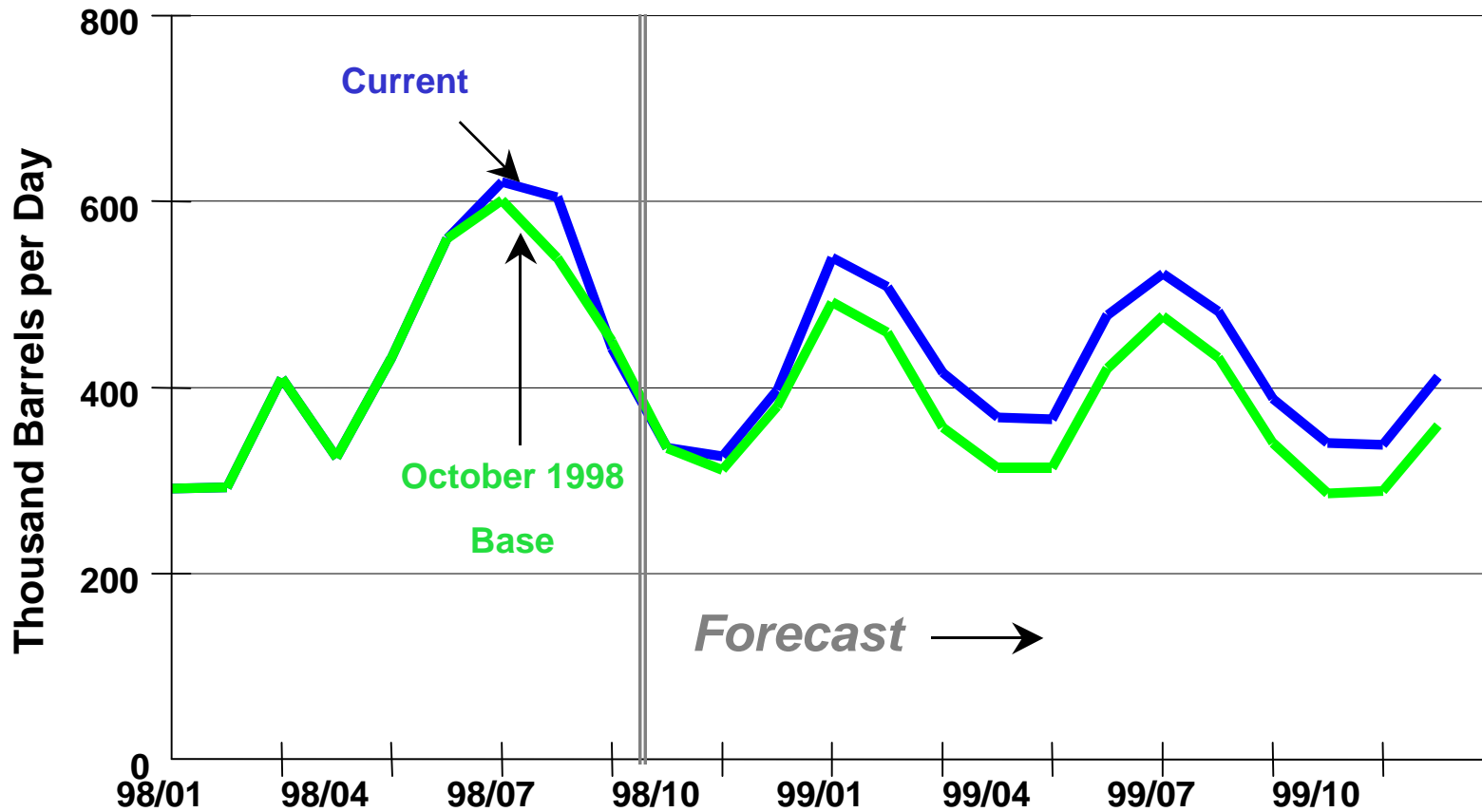


Figure 6. Distillate Fuel Demand (Current vs Previous Outlook)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998

Figure 7. Electric Utility Use of Petroleum



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



gasoline demand now seems likely ([Figure 8](#)). As recently as September, the gasoline demand data were suggesting an annual growth rate of about 1.7 percent (see our [September petroleum demand forecast](#)).

For 1999, U.S. petroleum demand is expected to be about 2.2 percent above 1998 levels. The acceleration in demand growth from the sluggish 1998 rate of 0.5 percent reflects to a large extent the impact of assuming normal weather in the forecast. The contrast between normal weather and the very mild winter weather last year indicates the strong potential for heating fuel demand growth this winter, including distillate fuel, propane and, to a lesser extent, residual fuel oil. Thus, most of the expected growth in 1999 is concentrated in the first quarter. Another warm winter (it would be the third in a row) would sharply reduce the likelihood of significant increases in petroleum demand for 1999. This is because the growth rate of the economy is expected to be about half the 1998 rate next year and because the sharp drop in fuel prices seen in 1998 is expected to be partially reversed.

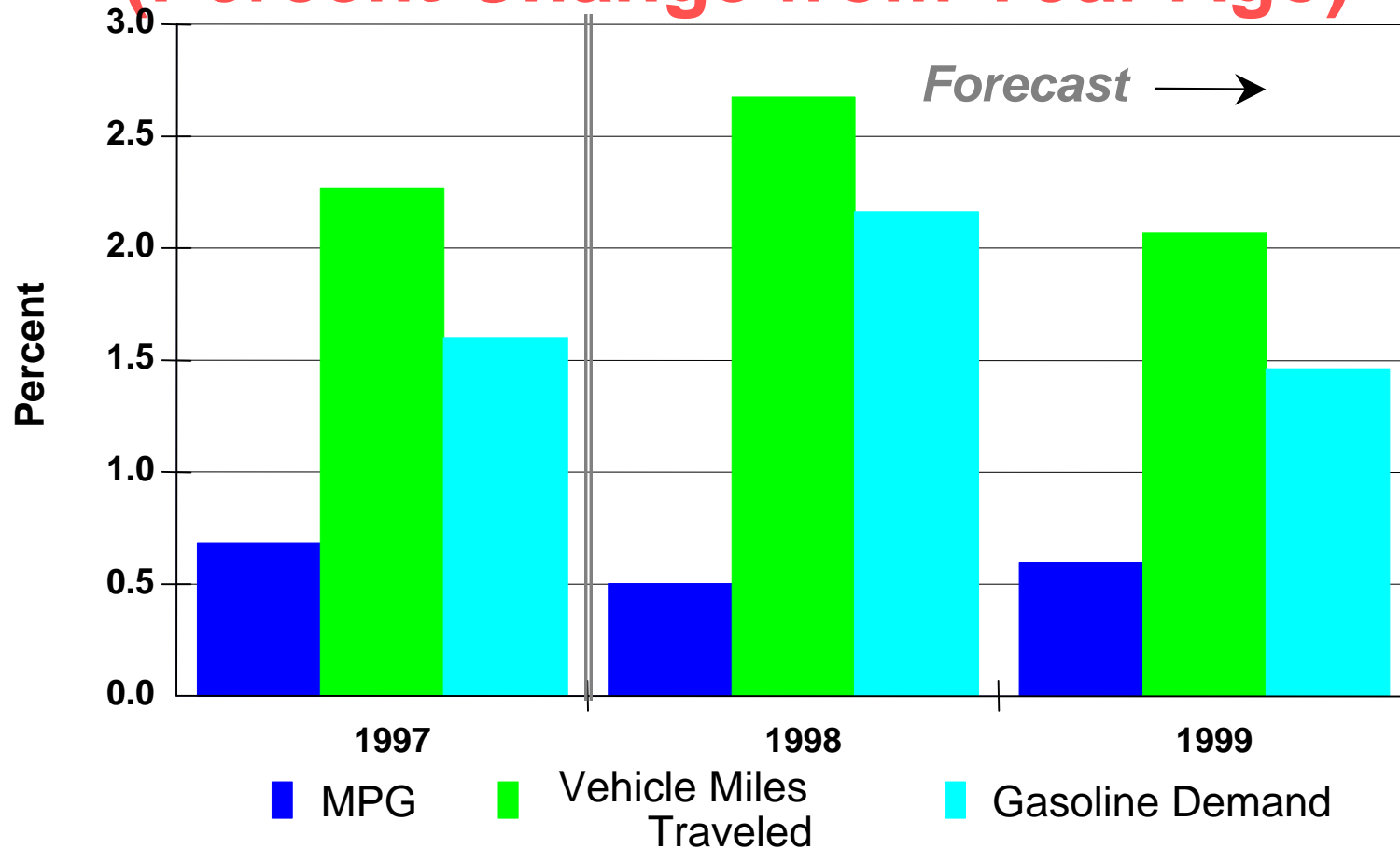
Petroleum stocks in the United States have been relatively high throughout 1998. Higher demand and somewhat higher prices in 1999 are expected to partially reverse that situation ([Figure 9](#)). The net drawdown in U.S. petroleum inventories expected for 1999 should minimize the pressure on import markets generated by the acceleration in petroleum demand expected for the coming year ([Figure 10](#)).

U.S. crude oil production has almost been holding its own over the last two years. The average decline in U.S. production apparently averaged only about 30,000 barrels per day (approximately 0.5 percent) over the last two years. Production in the Lower-48 States (principally the Gulf of Mexico) has actually been increasing since 1996, but net declines from Alaskan fields have more than offset these gains ([Figure 11](#)). We expect to see modest declines in 1999 for total production, but expected increases from Federal Offshore leases should nudge Lower-48 production up slightly in 1998. Uncertainties surrounding prices and other factors that affect production leave open the possibility of sharper declines in aggregate oil production in 1999 ([Figure 12](#)). Looked at from another angle, however, the current depression in oil prices may be preventing the United States from posting annual gains in oil production (even including Alaska).

Natural Gas Prices, Demand and Supply

We are currently projecting that this year's average annual natural gas wellhead price will decline 15 percent from the 1997 annual averages ([Figure 13](#)). Much of this expected average decline stems from the nearly 30-percent year-over-year price decrease that occurred in the unseasonably warm first quarter of this year. In addition, prices for the fourth quarter of this year are projected to be about 18 percent lower than the fourth quarter of 1997 as we enter the heating season with considerably higher inventories than last year. In the previous Outlook we projected a 13 percent annual average decline. These price revisions mainly concern late 1998, and the first quarter of 1999. It is interesting to note that price differential between the Henry Hub spot price and the near-

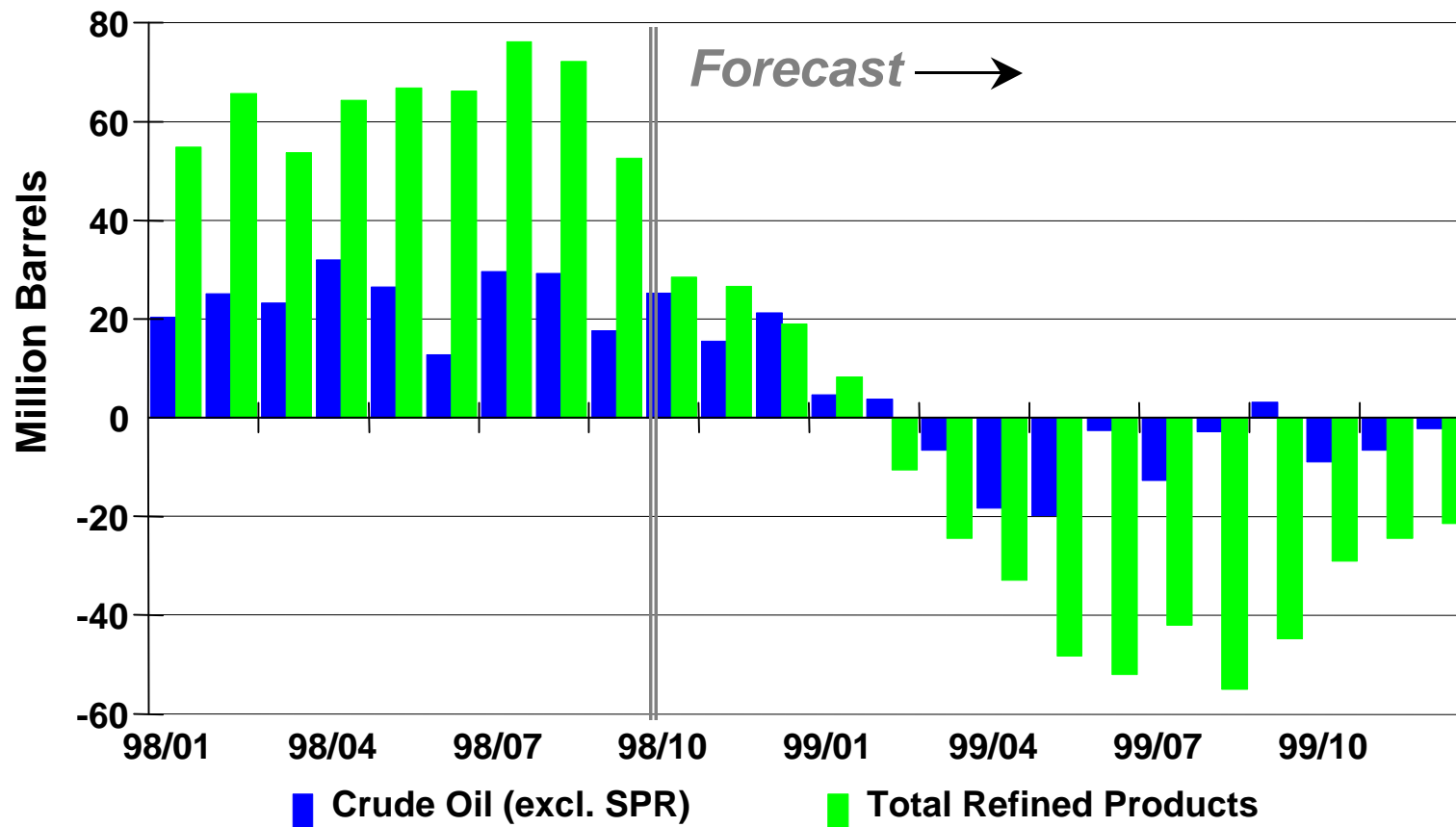
Figure 8. Gasoline Market Indicators (Percent Change from Year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



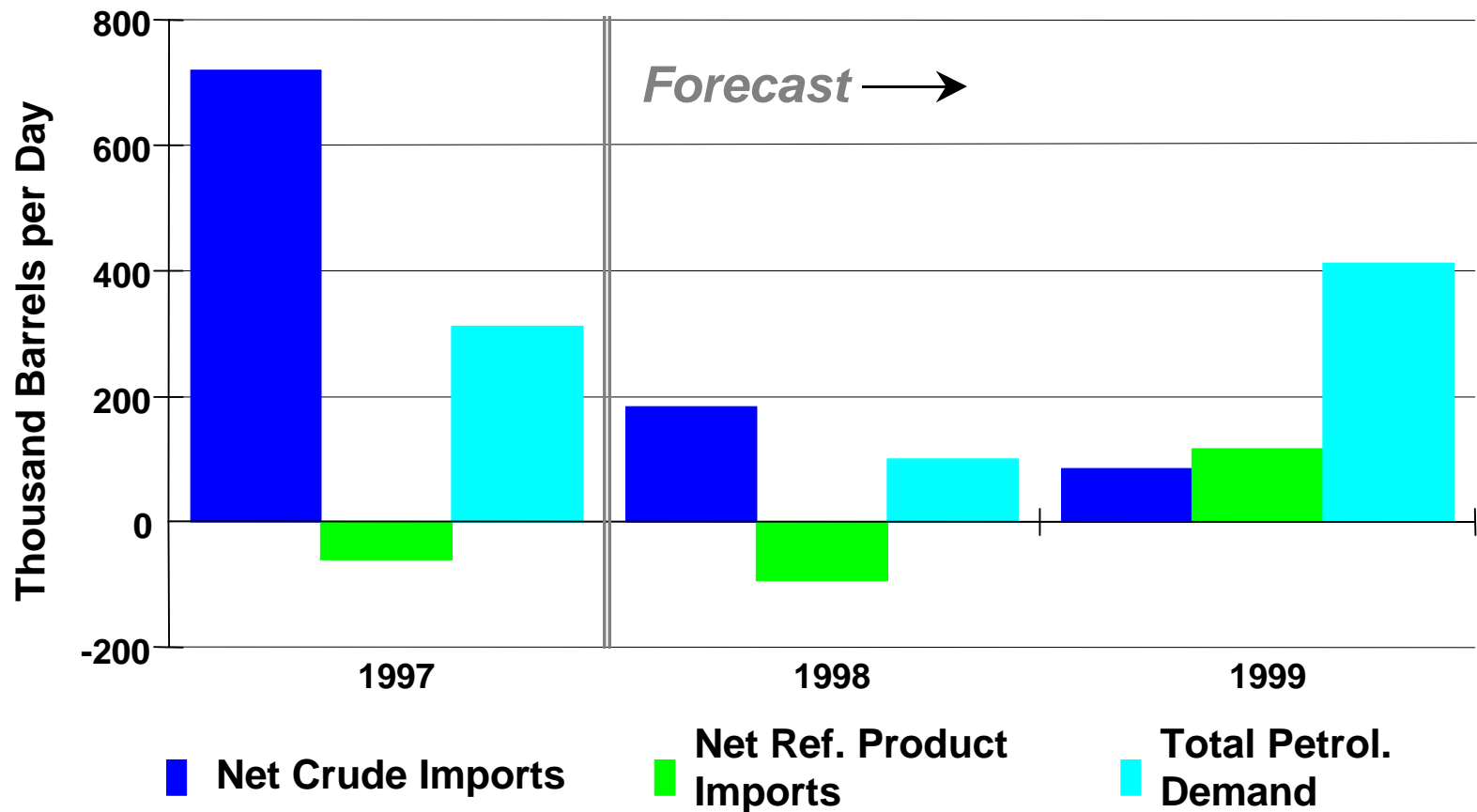
Figure 9. U.S. Petroleum Stocks (Change from Year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



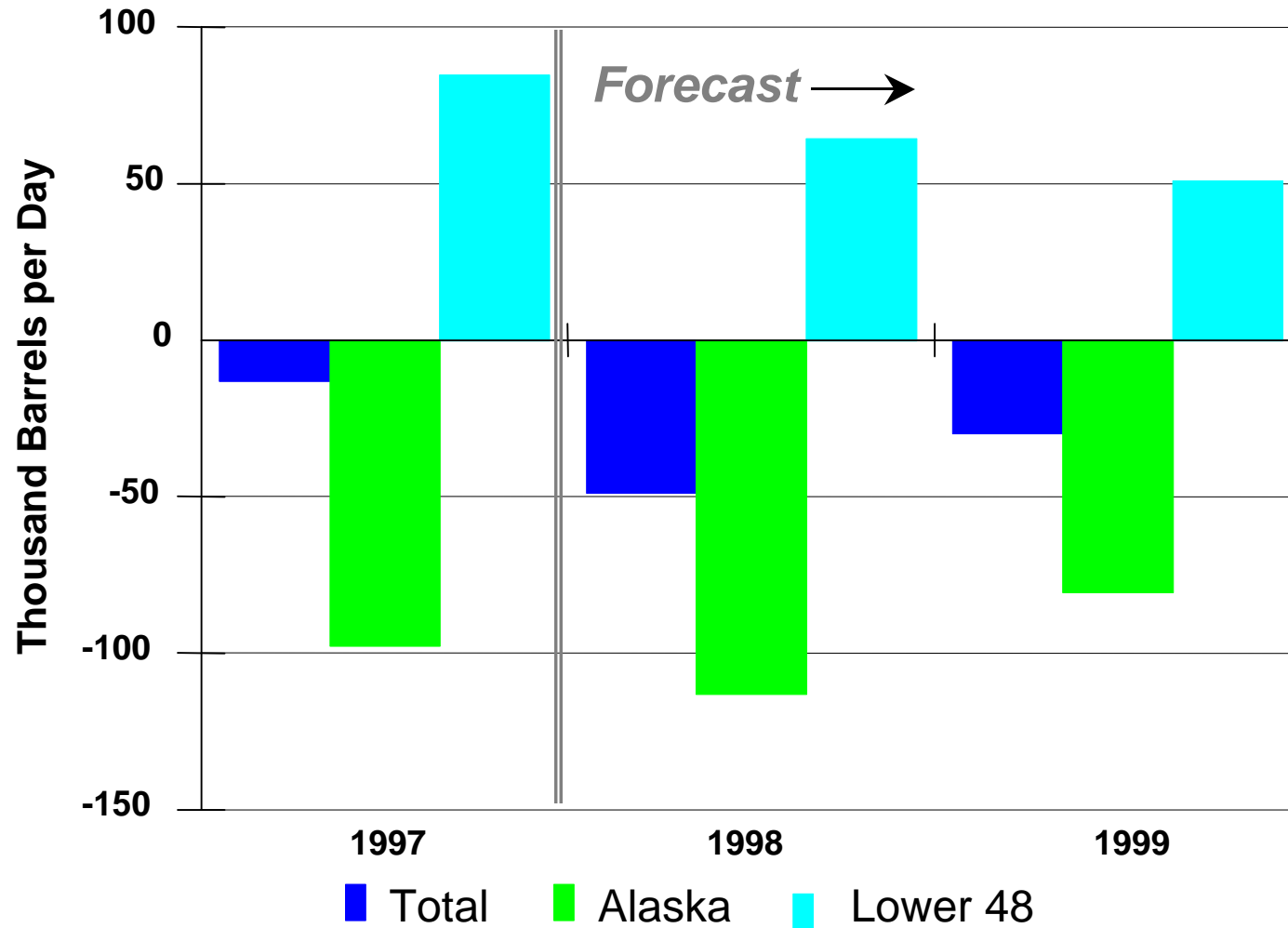
Figure 10. Petroleum Demand and Imports (Change from Year Ago)



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



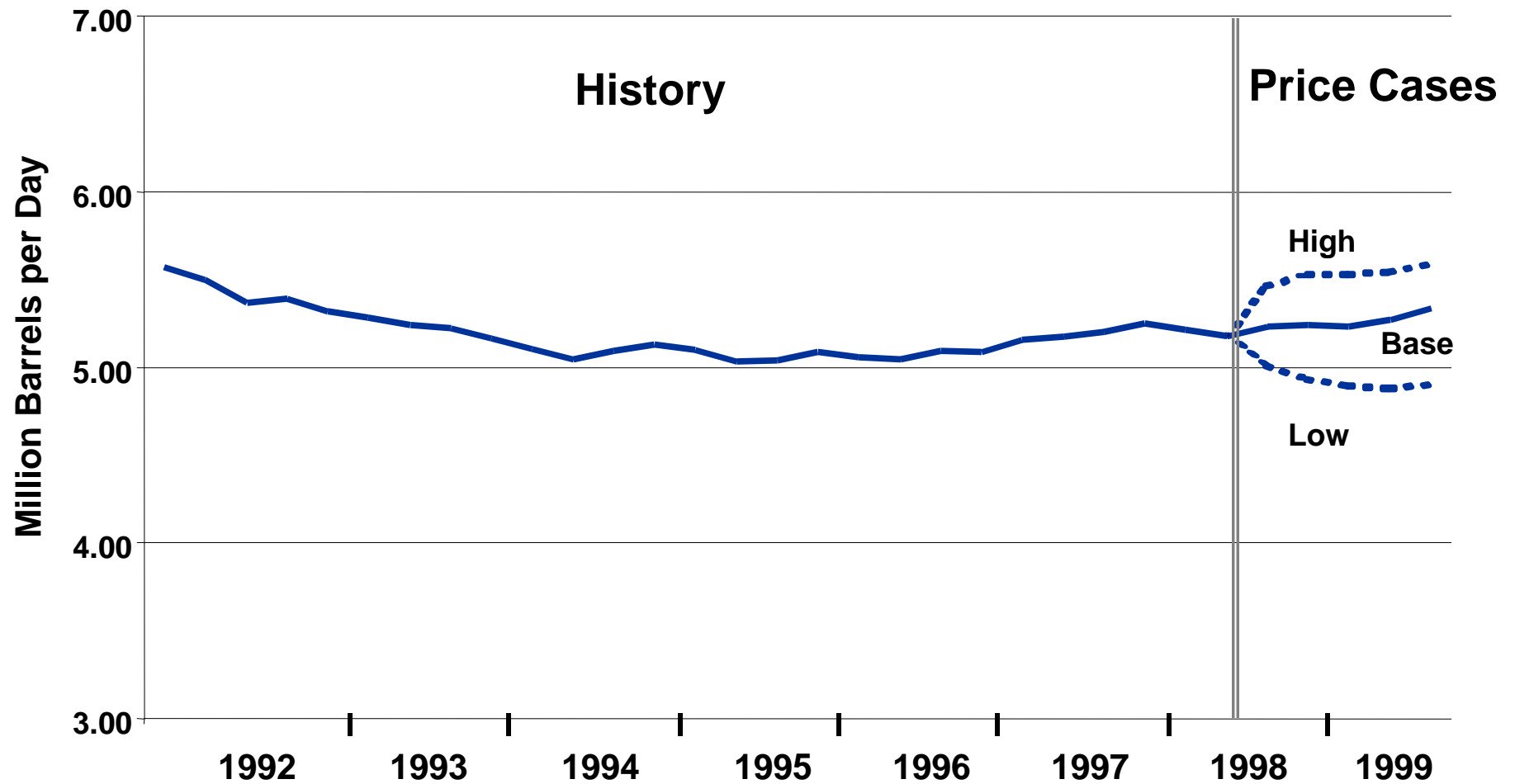
Figure 11. U.S. Crude Oil Production



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998



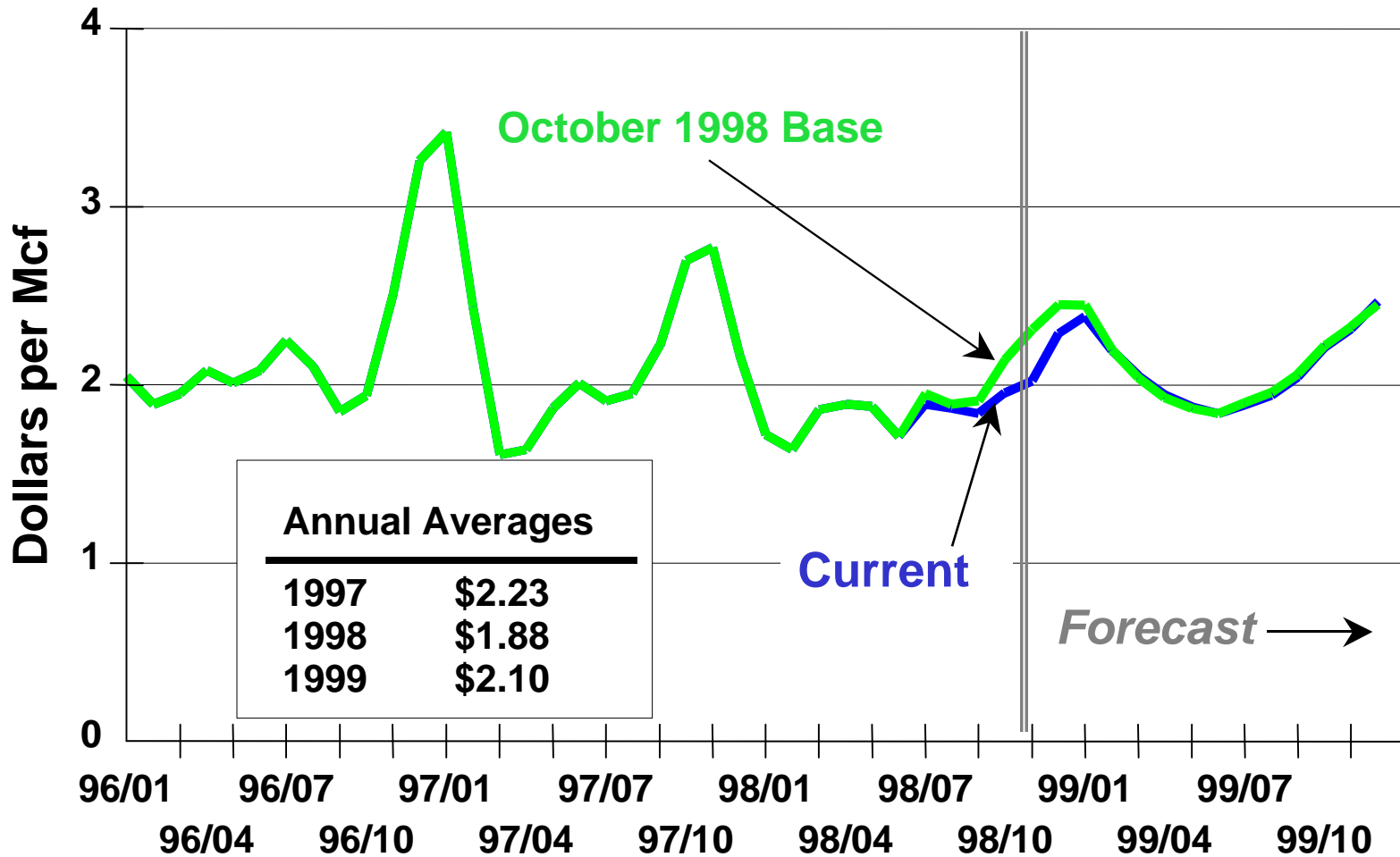
Figure 12. Quarterly U.S. Lower-48 Oil Production



Sources: History: EIA Estimates; Projections: Short-Term Energy Outlook, November 1998



Figure 13. Natural Gas Wellhead Prices



Sources: History: EIA estimates; Projections: Short-Term Energy Outlook, November 1998

month futures contract (NYMEX) reached over 40 cents in October, highlighting the magnitude of the spot surplus, particularly in comparison to the more bullish price expectations for the coming heating months ([Figure 14](#)). (For the most current graph on the price differential, see EIA's [Natural Gas Weekly Market Update](#) and click on the most current date).

Now that the hurricane season is almost behind us, the one factor causing higher spot prices in recent weeks has all but disappeared. The current storage situation, as stated before, shows levels well above last year even with the storm-related production shutdowns that occurred in the late summer and in the fall.

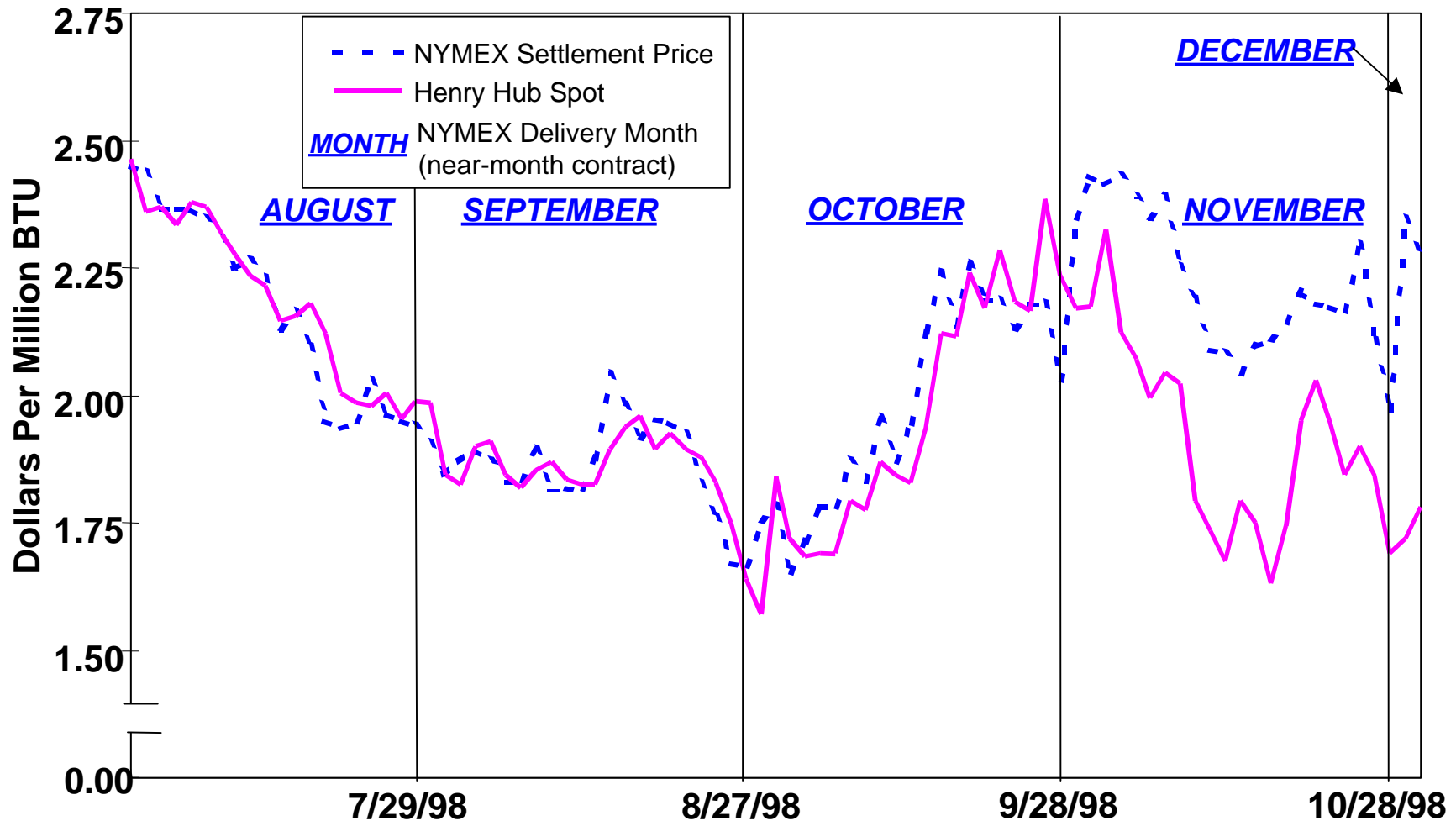
With underground storage at the end of October estimated to have been about 3 percent higher than year-earlier levels, there has been some downward price pressure. In addition, industrial demand for gas is likely to be slightly lower (1.5 percent) than last year's demand. For 1999, the weather is projected to be much colder than in 1998, raising residential and commercial demand sharply early in the year. Higher projected demand for 1999 (about 4 percent above the 1998 level) should lift annual average wellhead prices by about 15 percent above the 1998 average. More than half of the increase comes in the first quarter (27 percent higher) due to weather factors.

The primary change in our outlook for natural gas demand is that electric utility use of natural gas is now expected to increase more than previously anticipated in the October forecast ([Figure 15](#)). This is due in general to the somewhat higher projection for electricity demand. A higher-than-expected consumption level in August adds to the 1998 total for utility demand, which now seems likely to exceed 3.2 trillion cubic feet for the year.

Electricity

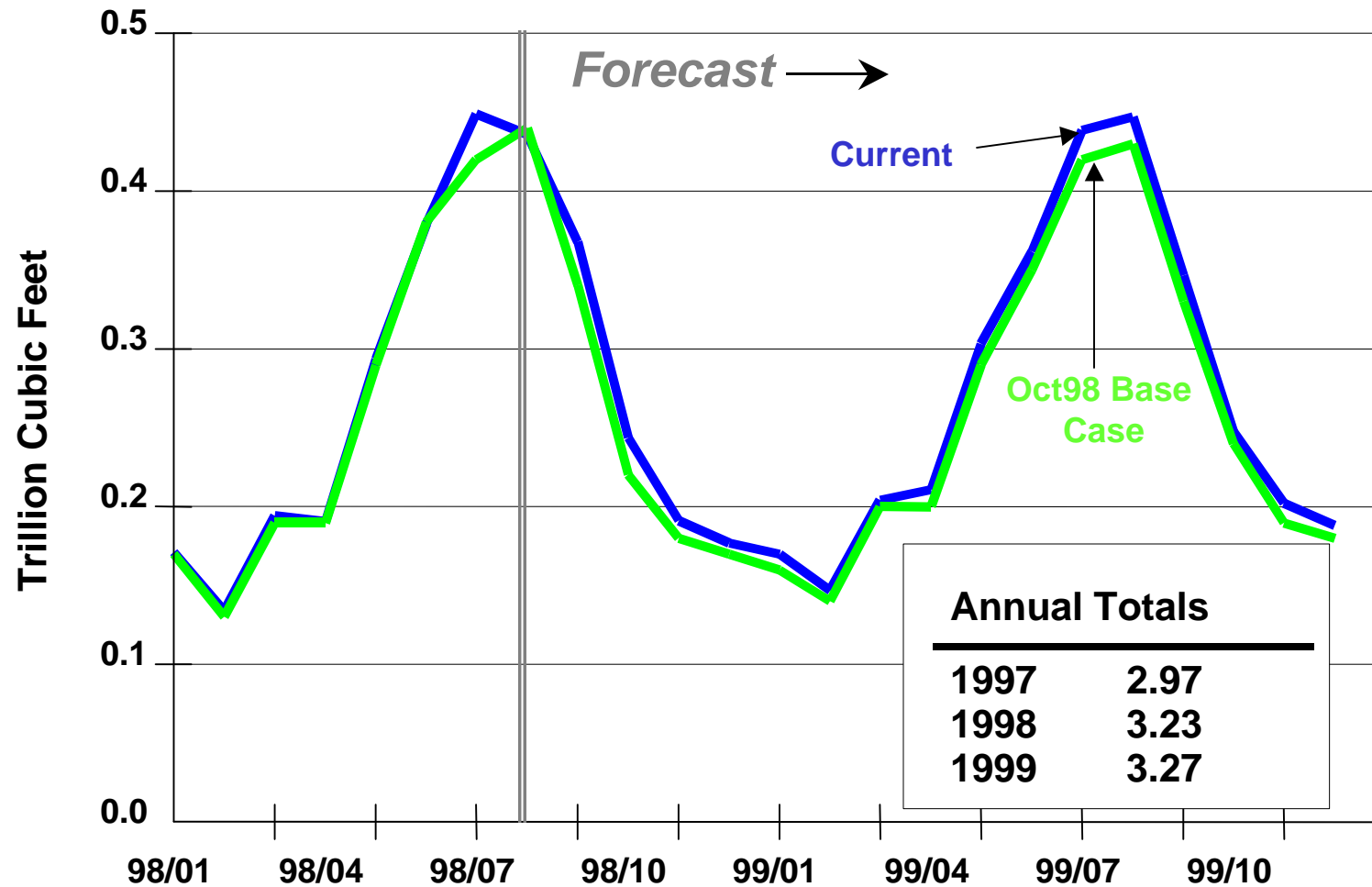
The forecast for total electricity demand growth for 1998 has been revised slightly upward from last month's forecast. It is now expected to be 3,408 billion kilowatt-hours (bkwh), 3.8 percent above the 1997 level, up from the 3,394 bkwh projected last month. This is mainly due to recent estimates of higher industrial demand for electricity beginning in August and September ([Figure 16](#)). Also, residential and commercial demands were somewhat higher than previously forecasted due to a greater demand response to the hot summer weather than previously estimated.

Figure 14. Natural Gas Prices: NYMEX Futures vs Henry Hub Spot



Note: The Henry Hub spot price from the *GAS DAILY* is the midpoint of their high and low price for a day. The dates marked by vertical lines are the NYMEX near-month contract settlement dates.

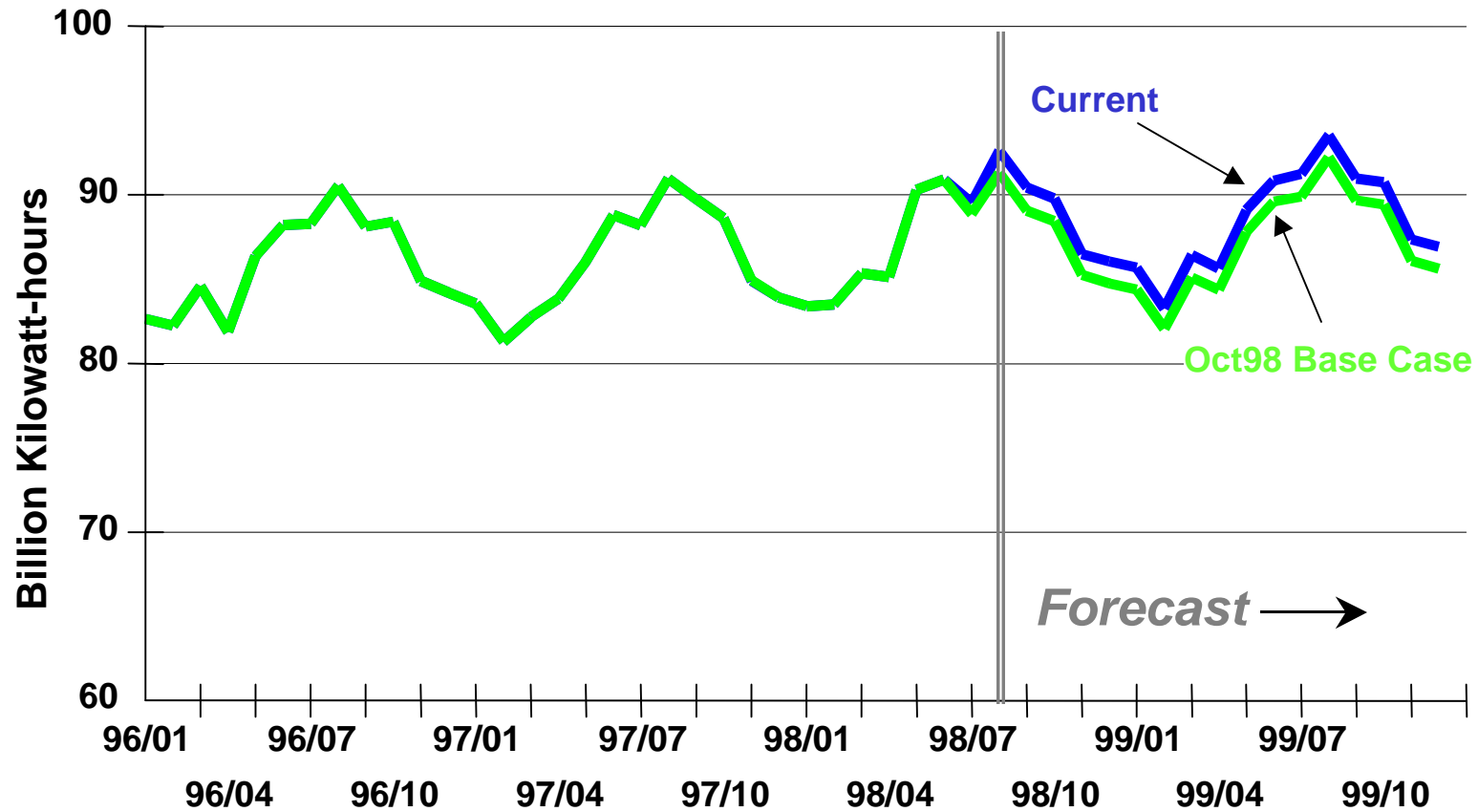
Figure 15. Electric Utility Gas Demand



Sources: History: EIA Estimates; Projections: Short-Term Energy Outlook, November 1998



Figure 16. Industrial Electricity Demand



Sources: History: EIA Estimates; Projections: Short-Term Energy Outlook, November 1998



Table HL1. U. S. Energy Supply and Demand

	Year				Annual Percentage Change		
	1996	1997	1998	1999	1996-1997	1997-1998	1998-1999
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	6995	7270	<i>7517</i>	<i>7639</i>	3.9	<i>3.4</i>	<i>1.6</i>
Imported Crude Oil Price ^a (nominal dollars per barrel)	20.61	18.57	<i>12.51</i>	<i>13.65</i>	-9.9	<i>-32.6</i>	<i>9.1</i>
Petroleum Supply (million barrels per day) Crude Oil Production ^b	6.46	6.45	<i>6.40</i>	<i>6.37</i>	-0.2	<i>-0.8</i>	<i>-0.5</i>
Total Petroleum Net Imports (including SPR)	8.50	9.16	<i>9.25</i>	<i>9.45</i>	7.8	<i>1.0</i>	<i>2.2</i>
Energy Demand							
World Petroleum (million barrels per day).....	71.5	73.2	<i>74.0</i>	<i>75.5</i>	2.4	<i>1.1</i>	<i>2.0</i>
Petroleum (million barrels per day).....	18.31	18.62	<i>18.72</i>	<i>19.13</i>	1.7	<i>0.5</i>	<i>2.2</i>
Natural Gas (trillion cubic feet)	21.96	21.97	<i>21.56</i>	<i>22.47</i>	0.0	<i>-1.9</i>	<i>4.2</i>
Coal (million short tons)	1006	1030	<i>1049</i>	<i>1072</i>	2.4	<i>1.8</i>	<i>2.2</i>
Electricity (billion kilowatthours) Utility Sales ^c	3098	3115	<i>3235</i>	<i>3271</i>	0.5	<i>3.9</i>	<i>1.1</i>
Nonutility Own Use ^d	164	169	<i>173</i>	<i>178</i>	3.0	<i>2.4</i>	<i>2.9</i>
Total	3262	3283	<i>3408</i>	<i>3449</i>	0.6	<i>3.8</i>	<i>1.2</i>
Total Energy Demand ^e (quadrillion Btu).....	93.9	94.4	<i>94.6</i>	<i>96.4</i>	0.5	<i>0.2</i>	<i>1.9</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar).....	13.43	12.99	<i>12.58</i>	<i>12.62</i>	-3.3	<i>-3.2</i>	<i>0.3</i>
Renewable Energy as Percent of Total.....	7.8	7.6	<i>7.4</i>	<i>7.0</i>			

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

^bIncludes lease condensate.

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

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

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

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0898.

Table 1. U.S. Macroeconomic and Weather Assumptions

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Macroeconomic^a															
Real Gross Domestic Product (billion chained 1992 dollars - SAAR)	7167	7237	7311	7365	7465	7491	<i>7529</i>	<i>7585</i>	<i>7598</i>	<i>7617</i>	<i>7645</i>	<i>7696</i>	7270	<i>7517</i>	<i>7639</i>
Percentage Change from Prior Year	4.1	3.6	4.1	3.8	4.2	3.5	<i>3.0</i>	<i>3.0</i>	<i>1.8</i>	<i>1.7</i>	<i>1.5</i>	<i>1.5</i>	3.9	<i>3.4</i>	<i>1.6</i>
Annualized Percent Change from Prior Quarter.....	4.1	3.9	4.1	2.9	5.4	1.4	<i>2.0</i>	<i>3.0</i>	<i>0.7</i>	<i>1.0</i>	<i>1.5</i>	<i>2.6</i>			
GDP Implicit Price Deflator (Index, 1992=1.000)	1.110	1.115	1.118	1.121	1.123	1.126	<i>1.130</i>	<i>1.134</i>	<i>1.140</i>	<i>1.146</i>	<i>1.151</i>	<i>1.157</i>	1.116	<i>1.128</i>	<i>1.148</i>
Percentage Change from Prior Year.....	1.9	2.0	1.9	1.7	1.2	1.0	<i>1.0</i>	<i>1.2</i>	<i>1.5</i>	<i>1.8</i>	<i>1.9</i>	<i>2.0</i>	1.9	<i>1.1</i>	<i>1.8</i>
Real Disposable Personal Income (billion chained 1992 Dollars - SAAR)	5131	5168	5198	5236	5287	5325	<i>5370</i>	<i>5404</i>	<i>5438</i>	<i>5465</i>	<i>5493</i>	<i>5529</i>	5183	<i>5346</i>	<i>5481</i>
Percentage Change from Prior Year.....	2.8	3.0	2.5	2.9	3.0	3.0	<i>3.3</i>	<i>3.2</i>	<i>2.8</i>	<i>2.6</i>	<i>2.3</i>	<i>2.3</i>	2.8	<i>3.1</i>	<i>2.5</i>
Manufacturing Production (Index, 1992=1.000)	1.243	1.257	1.276	1.301	1.309	1.314	<i>1.309</i>	<i>1.332</i>	<i>1.342</i>	<i>1.350</i>	<i>1.352</i>	<i>1.360</i>	1.269	<i>1.316</i>	<i>1.351</i>
Percentage Change from Prior Year	5.8	5.0	5.3	6.3	5.3	4.5	<i>2.6</i>	<i>2.4</i>	<i>2.6</i>	<i>2.7</i>	<i>3.3</i>	<i>2.1</i>	5.6	<i>3.7</i>	<i>2.7</i>
OECD Economic Growth (percent) ^b													3.1	<i>2.7</i>	<i>2.4</i>
Weather^c															
Heating Degree-Days															
U.S.	2156	635	86	1665	1972	480	<i>68</i>	<i>1636</i>	<i>2327</i>	<i>524</i>	<i>89</i>	<i>1636</i>	4542	<i>4156</i>	<i>4576</i>
New England	3108	1047	172	2335	2766	769	<i>203</i>	<i>2269</i>	<i>3267</i>	<i>915</i>	<i>171</i>	<i>2269</i>	6662	<i>6007</i>	<i>6621</i>
Middle Atlantic	2777	866	121	2045	2461	570	<i>106</i>	<i>2026</i>	<i>2993</i>	<i>716</i>	<i>105</i>	<i>2026</i>	5809	<i>5163</i>	<i>5839</i>
U.S. Gas-Weighted	2275	711	127	1773	2078	548	<i>66</i>	<i>1686</i>	<i>2426</i>	<i>539</i>	<i>81</i>	<i>1686</i>	4886	<i>4378</i>	<i>4732</i>
Cooling Degree-Days (U.S.)	50	289	754	63	25	399	<i>865</i>	<i>72</i>	<i>30</i>	<i>334</i>	<i>758</i>	<i>72</i>	1156	<i>1361</i>	<i>1193</i>

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

^bOECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. 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 CONTROL0898.

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

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Macroeconomic ^a															
Real Fixed Investment (billion chained 1992 dollars-SAAR)	1096	1127	1159	1170	1225	1260	<i>1270</i>	<i>1284</i>	<i>1294</i>	<i>1297</i>	<i>1302</i>	<i>1310</i>	1138	<i>1260</i>	<i>1301</i>
Real Exchange Rate (index).....	1.086	1.098	1.108	1.117	1.140	1.158	<i>1.172</i>	<i>1.164</i>	<i>1.148</i>	<i>1.128</i>	<i>1.113</i>	<i>1.108</i>	1.102	<i>1.159</i>	<i>1.124</i>
Business Inventory Change (billion chained 1992 dollars-SAAR)	20.0	26.7	15.8	17.7	30.2	26.2	<i>14.3</i>	<i>3.2</i>	<i>-1.2</i>	<i>-7.1</i>	<i>-6.8</i>	<i>-6.9</i>	20.1	<i>18.5</i>	<i>-5.5</i>
Producer Price Index (index, 1982=1.000).....	1.286	1.271	1.272	1.275	1.251	1.247	<i>1.244</i>	<i>1.247</i>	<i>1.256</i>	<i>1.262</i>	<i>1.266</i>	<i>1.269</i>	1.276	<i>1.247</i>	<i>1.263</i>
Consumer Price Index (index, 1982-1984=1.000).....	1.596	1.602	1.609	1.618	1.620	1.628	<i>1.633</i>	<i>1.643</i>	<i>1.656</i>	<i>1.666</i>	<i>1.676</i>	<i>1.688</i>	1.606	<i>1.631</i>	<i>1.671</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.722	0.675	0.669	0.654	0.542	0.524	<i>0.505</i>	<i>0.522</i>	<i>0.533</i>	<i>0.549</i>	<i>0.552</i>	<i>0.553</i>	0.680	<i>0.523</i>	<i>0.547</i>
Non-Farm Employment (millions).....	121.5	122.3	123.0	123.9	124.8	125.5	<i>126.3</i>	<i>126.8</i>	<i>127.3</i>	<i>127.6</i>	<i>127.9</i>	<i>128.2</i>	122.7	<i>125.9</i>	<i>127.8</i>
Commercial Employment (millions).....	82.8	83.6	84.1	84.9	85.7	86.3	<i>87.2</i>	<i>87.9</i>	<i>88.4</i>	<i>88.7</i>	<i>88.9</i>	<i>89.3</i>	83.9	<i>86.8</i>	<i>88.8</i>
Total Industrial Production (index, 1992=1.000).....	1.219	1.233	1.251	1.273	1.277	1.285	<i>1.280</i>	<i>1.299</i>	<i>1.308</i>	<i>1.315</i>	<i>1.317</i>	<i>1.325</i>	1.244	<i>1.285</i>	<i>1.316</i>
Housing Stock (millions).....	112.0	112.3	112.5	113.1	113.8	114.2	<i>114.5</i>	<i>114.8</i>	<i>115.1</i>	<i>115.5</i>	<i>115.8</i>	<i>116.1</i>	112.5	<i>114.3</i>	<i>115.6</i>
Miscellaneous															
Gas Weighted Industrial Production (index, 1992=1.000).....	1.140	1.152	1.155	1.170	1.180	1.176	<i>1.168</i>	<i>1.178</i>	<i>1.181</i>	<i>1.186</i>	<i>1.194</i>	<i>1.203</i>	1.154	<i>1.175</i>	<i>1.191</i>
Vehicle Miles Traveled ^b (million miles/day)	6463	7138	7310	6824	6580	7316	<i>7559</i>	<i>7021</i>	<i>6758</i>	<i>7449</i>	<i>7701</i>	<i>7158</i>	6936	<i>7121</i>	<i>7269</i>
Vehicle Fuel Efficiency (index, 1996=1.000).....	1.038	0.997	0.993	1.002	1.032	1.016	<i>0.996</i>	<i>1.006</i>	<i>1.044</i>	<i>1.013</i>	<i>1.000</i>	<i>1.016</i>	1.007	<i>1.012</i>	<i>1.018</i>
Real Vehicle Fuel Cost (cents per mile).....	3.94	3.73	3.70	3.72	3.36	3.17	<i>3.10</i>	<i>3.20</i>	<i>3.21</i>	<i>3.24</i>	<i>3.22</i>	<i>3.27</i>	3.77	<i>3.21</i>	<i>3.23</i>
Air Travel Capacity (mill. available ton-miles/day).....	402.1	417.2	434.3	427.7	422.3	438.1	<i>455.6</i>	<i>446.7</i>	<i>438.2</i>	<i>453.4</i>	<i>471.6</i>	<i>459.2</i>	420.4	<i>440.8</i>	<i>455.7</i>
Aircraft Utilization (mill. revenue ton-miles/day)	230.5	248.0	260.8	247.2	237.1	258.5	<i>271.9</i>	<i>256.2</i>	<i>244.1</i>	<i>268.0</i>	<i>281.5</i>	<i>265.3</i>	246.7	<i>256.0</i>	<i>264.8</i>
Airline Ticket Price Index (index, 1982-1984=1.000).....	1.975	2.016	1.985	1.993	2.058	2.053	<i>2.069</i>	<i>2.102</i>	<i>2.141</i>	<i>2.152</i>	<i>2.162</i>	<i>2.195</i>	1.992	<i>2.071</i>	<i>2.162</i>
Raw Steel Production (millions tons)	26.47	26.59	26.52	27.31	28.44	27.87	<i>26.50</i>	<i>27.06</i>	<i>28.33</i>	<i>28.09</i>	<i>27.71</i>	<i>28.31</i>	106.60	<i>109.86</i>	<i>112.44</i>

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

^bIncludes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0898.

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

(Million Barrels per Day, Except OECD Commercial Stocks)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Demand^a															
OECD															
U.S. (50 States).....	18.3	18.5	18.7	19.0	18.3	18.4	<i>19.0</i>	<i>19.1</i>	<i>19.0</i>	<i>18.8</i>	<i>19.3</i>	<i>19.4</i>	18.6	<i>18.7</i>	<i>19.1</i>
U.S. Territories	0.2	0.2	0.2	0.2	0.2	0.2	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	<i>0.2</i>	0.2	<i>0.2</i>	<i>0.2</i>
Canada.....	1.8	1.8	1.9	1.9	1.9	1.8	<i>2.0</i>	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>2.1</i>	<i>2.0</i>	1.9	<i>1.9</i>	<i>2.0</i>
Europe.....	14.3	14.2	14.4	14.8	14.9	14.1	<i>14.6</i>	<i>14.9</i>	<i>15.1</i>	<i>14.4</i>	<i>14.8</i>	<i>15.2</i>	14.4	<i>14.6</i>	<i>14.9</i>
Japan.....	6.4	5.2	5.4	5.9	6.2	5.0	<i>5.3</i>	<i>5.8</i>	<i>6.2</i>	<i>5.0</i>	<i>5.3</i>	<i>5.9</i>	5.7	<i>5.6</i>	<i>5.6</i>
Australia and New Zealand.....	0.9	0.9	1.0	0.9	0.9	0.9	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	0.9	<i>1.0</i>	<i>1.0</i>
Total OECD.....	41.9	40.8	41.7	42.7	42.3	40.5	<i>42.1</i>	<i>43.0</i>	<i>43.4</i>	<i>41.2</i>	<i>42.7</i>	<i>43.7</i>	41.8	<i>42.0</i>	<i>42.8</i>
Non-OECD															
Former Soviet Union.....	4.7	4.2	4.2	4.6	4.7	4.3	<i>4.1</i>	<i>4.5</i>	<i>4.6</i>	<i>4.2</i>	<i>4.0</i>	<i>4.5</i>	4.4	<i>4.4</i>	<i>4.3</i>
Europe.....	1.5	1.3	1.3	1.4	1.6	1.4	<i>1.4</i>	<i>1.5</i>	<i>1.7</i>	<i>1.4</i>	<i>1.4</i>	<i>1.6</i>	1.4	<i>1.5</i>	<i>1.5</i>
China.....	3.8	3.9	3.9	4.0	4.0	4.1	<i>4.1</i>	<i>4.2</i>	<i>4.2</i>	<i>4.3</i>	<i>4.3</i>	<i>4.4</i>	3.9	<i>4.1</i>	<i>4.3</i>
Other Asia.....	8.8	8.6	8.3	9.5	8.5	8.4	<i>8.3</i>	<i>9.5</i>	<i>8.6</i>	<i>8.6</i>	<i>8.4</i>	<i>9.8</i>	8.8	<i>8.7</i>	<i>8.8</i>
Other Non-OECD.....	12.8	13.1	12.8	13.1	13.2	13.6	<i>13.2</i>	<i>13.5</i>	<i>13.6</i>	<i>14.0</i>	<i>13.6</i>	<i>13.9</i>	13.0	<i>13.4</i>	<i>13.8</i>
Total Non-OECD.....	31.6	31.1	30.6	32.6	32.1	31.7	<i>31.1</i>	<i>33.2</i>	<i>32.7</i>	<i>32.5</i>	<i>31.9</i>	<i>34.1</i>	31.4	<i>32.0</i>	<i>32.8</i>
Total World Demand.....	73.5	71.8	72.2	75.3	74.4	72.2	<i>73.2</i>	<i>76.1</i>	<i>76.0</i>	<i>73.7</i>	<i>74.7</i>	<i>77.8</i>	73.2	<i>74.0</i>	<i>75.5</i>
Supply^b															
OECD															
U.S. (50 States).....	9.4	9.5	9.5	9.5	9.5	9.4	<i>9.3</i>	<i>9.5</i>	<i>9.4</i>	<i>9.3</i>	<i>9.4</i>	<i>9.5</i>	9.5	<i>9.4</i>	<i>9.4</i>
Canada.....	2.6	2.5	2.6	2.7	2.7	2.6	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.7</i>	<i>2.8</i>	<i>2.8</i>	2.6	<i>2.7</i>	<i>2.8</i>
North Sea ^c	6.5	6.1	6.0	6.5	6.4	6.2	<i>5.9</i>	<i>6.3</i>	<i>6.4</i>	<i>6.2</i>	<i>6.4</i>	<i>6.8</i>	6.2	<i>6.2</i>	<i>6.4</i>
Other OECD.....	1.6	1.6	1.6	1.6	1.6	1.6	<i>1.6</i>	<i>1.6</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	1.6	<i>1.6</i>	<i>1.7</i>
Total OECD.....	20.1	19.6	19.7	20.3	20.2	19.8	<i>19.5</i>	<i>20.2</i>	<i>20.2</i>	<i>19.9</i>	<i>20.2</i>	<i>20.7</i>	19.9	<i>19.9</i>	<i>20.2</i>
Non-OECD															
OPEC.....	29.5	29.7	30.1	30.3	30.9	30.7	<i>30.0</i>	<i>30.0</i>	<i>30.0</i>	<i>30.1</i>	<i>30.3</i>	<i>30.4</i>	29.9	<i>30.4</i>	<i>30.2</i>
Former Soviet Union.....	7.0	7.1	7.2	7.2	7.3	7.2	<i>7.2</i>	<i>7.3</i>	<i>7.3</i>	<i>7.3</i>	<i>7.3</i>	<i>7.4</i>	7.1	<i>7.2</i>	<i>7.3</i>
China.....	3.2	3.2	3.2	3.1	3.2	3.2	<i>3.2</i>	<i>3.2</i>	<i>3.3</i>	<i>3.3</i>	<i>3.3</i>	<i>3.3</i>	3.2	<i>3.2</i>	<i>3.3</i>
Mexico.....	3.4	3.4	3.5	3.5	3.6	3.6	<i>3.5</i>	<i>3.5</i>	<i>3.6</i>	<i>3.5</i>	<i>3.6</i>	<i>3.6</i>	3.4	<i>3.5</i>	<i>3.6</i>
Other Non-OECD.....	10.4	10.5	10.4	10.5	10.7	10.7	<i>10.7</i>	<i>10.8</i>	<i>10.8</i>	<i>11.0</i>	<i>11.1</i>	<i>11.2</i>	10.4	<i>10.7</i>	<i>11.0</i>
Total Non-OECD.....	53.5	53.9	54.3	54.7	55.6	55.3	<i>54.5</i>	<i>54.7</i>	<i>54.9</i>	<i>55.1</i>	<i>55.5</i>	<i>55.9</i>	54.1	<i>55.0</i>	<i>55.4</i>
Total World Supply.....	73.6	73.5	74.0	75.0	75.8	75.1	<i>74.0</i>	<i>74.9</i>	<i>75.1</i>	<i>75.0</i>	<i>75.6</i>	<i>76.6</i>	74.0	<i>74.9</i>	<i>75.6</i>
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	0.0	-0.7	-0.2	0.4	-0.3	-0.7	<i>-0.1</i>	<i>0.7</i>	<i>0.5</i>	<i>-0.5</i>	<i>-0.2</i>	<i>0.5</i>	-0.1	<i>-0.1</i>	<i>0.1</i>
Other.....	-0.1	-1.0	-1.6	-0.1	-1.0	-2.2	<i>-0.7</i>	<i>0.6</i>	<i>0.4</i>	<i>-0.9</i>	<i>-0.7</i>	<i>0.8</i>	-0.7	<i>-0.8</i>	<i>-0.1</i>
Total Stock Withdrawals.....	-0.1	-1.7	-1.8	0.2	-1.4	-2.9	<i>-0.8</i>	<i>1.2</i>	<i>0.9</i>	<i>-1.4</i>	<i>-1.0</i>	<i>1.2</i>	-0.8	<i>-0.9</i>	<i>-0.1</i>
OECD Comm. Stocks, End (bill. bbls.).....	2.7	2.7	2.7	2.7	2.7	2.9	<i>2.9</i>	<i>2.8</i>	<i>2.8</i>	<i>2.8</i>	<i>2.9</i>	<i>2.8</i>	2.7	<i>2.8</i>	<i>2.8</i>
Non-OPEC Supply.....	44.1	43.9	43.9	44.7	44.9	44.4	<i>44.0</i>	<i>44.9</i>	<i>45.1</i>	<i>44.9</i>	<i>45.4</i>	<i>46.2</i>	44.1	<i>44.6</i>	<i>45.4</i>
Net Exports from Former Soviet Union.....	2.3	2.9	3.0	2.6	2.6	2.9	<i>3.1</i>	<i>2.8</i>	<i>2.7</i>	<i>3.1</i>	<i>3.3</i>	<i>2.9</i>	2.7	<i>2.8</i>	<i>3.0</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)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Imported Crude Oil ^a (dollars per barrel).....	21.04	17.93	17.81	17.78	13.44	12.39	11.76	12.57	13.08	13.67	13.58	14.24	18.57	12.51	13.65
Natural Gas Wellhead (dollars per thousand cubic feet)	2.49	1.84	2.02	2.54	1.74	1.83	1.87	2.10	2.22	1.89	1.96	2.33	2.23	1.88	2.10
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades.....	1.27	1.24	1.25	1.21	1.10	1.10	1.07	1.06	1.08	1.14	1.15	1.13	1.24	1.08	1.13
Regular Unleaded.....	1.22	1.20	1.21	1.17	1.05	1.05	1.03	1.02	1.04	1.10	1.11	1.09	1.20	1.04	1.09
No. 2 Diesel Oil, Retail (dollars per gallon)	1.25	1.18	1.15	1.17	1.08	1.05	1.02	1.07	1.06	1.06	1.06	1.11	1.19	1.05	1.07
No. 2 Heating Oil, Wholesale (dollars per gallon)	0.65	0.57	0.54	0.57	0.47	0.43	0.40	0.44	0.46	0.46	0.45	0.51	0.59	0.44	0.47
No. 2 Heating Oil, Retail (dollars per gallon)	1.05	0.98	0.88	0.93	0.92	0.85	0.77	0.84	0.90	0.86	0.81	0.90	0.99	0.86	0.89
No. 6 Residual Fuel Oil, Retail ^c (dollars per barrel).....	19.00	16.84	17.04	18.16	13.56	13.22	12.62	12.75	14.07	13.25	12.81	14.38	17.80	13.03	13.66
Electric Utility Fuels															
Coal (dollars per million Btu)	1.29	1.28	1.26	1.26	1.26	1.26	1.24	1.24	1.24	1.26	1.23	1.23	1.27	1.25	1.24
Heavy Fuel Oil ^d (dollars per million Btu)	2.91	2.59	2.71	2.92	2.12	2.17	2.08	2.11	2.23	2.16	2.11	2.38	2.79	2.12	2.21
Natural Gas (dollars per million Btu)	3.10	2.46	2.60	3.15	2.61	2.46	2.41	2.59	2.96	2.51	2.51	2.93	2.76	2.49	2.66
Other Residential															
Natural Gas (dollars per thousand cubic feet)	6.70	6.97	8.80	6.83	6.39	7.04	8.75	6.65	6.82	7.55	8.55	6.79	6.94	6.76	7.05
Electricity (cents per kilowatthour).....	8.04	8.69	8.79	8.31	7.93	8.42	8.60	8.06	7.73	8.38	8.63	8.15	8.46	8.27	8.23

^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 third quarter of 1998. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

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

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Crude Oil Supply															
Domestic Production ^a	6.45	6.45	6.41	6.49	6.48	6.39	6.31	6.44	6.41	6.32	6.33	6.44	6.45	6.40	6.37
Alaska.....	1.36	1.30	1.24	1.28	1.23	1.17	1.13	1.20	1.16	1.08	1.06	1.10	1.30	1.18	1.10
Lower 48.....	5.09	5.15	5.18	5.20	5.25	5.22	5.18	5.23	5.24	5.23	5.27	5.34	5.16	5.22	5.27
Net Imports (including SPR) ^b	7.40	8.41	8.44	8.21	7.81	8.61	8.87	7.91	7.74	8.59	8.87	8.33	8.12	8.30	8.39
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SPR Stock Withdrawn or Added (-)	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Other Stock Withdrawn or Added (-)	-0.33	-0.08	0.18	-0.01	-0.35	0.04	0.13	-0.05	-0.04	-0.01	0.07	0.01	-0.06	-0.06	0.01
Product Supplied and Losses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	0.00	0.00	-0.01
Unaccounted-for Crude Oil	0.19	0.09	0.15	0.15	0.38	0.11	0.14	0.09	0.23	0.24	0.25	0.24	0.14	0.18	0.24
Total Crude Oil Supply.....	13.74	14.87	15.19	14.83	14.32	15.14	15.44	14.38	14.33	15.13	15.51	15.01	14.66	14.82	15.00
Other Supply															
NGL Production.....	1.84	1.82	1.83	1.77	1.85	1.80	1.69	1.77	1.80	1.80	1.80	1.81	1.82	1.78	1.80
Other Hydrocarbon and Alcohol Inputs.....	0.31	0.34	0.36	0.36	0.34	0.36	0.37	0.36	0.37	0.34	0.34	0.37	0.34	0.36	0.35
Crude Oil Product Supplied	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Processing Gain.....	0.79	0.84	0.87	0.90	0.83	0.84	0.89	0.88	0.82	0.86	0.88	0.84	0.85	0.86	0.85
Net Product Imports ^c	1.33	1.23	0.86	0.75	0.93	1.04	0.87	0.95	1.17	1.14	1.04	0.90	1.04	0.95	1.06
Product Stock Withdrawn or Added (-) ^d ..	0.25	-0.62	-0.37	0.36	0.03	-0.75	-0.22	0.73	0.52	-0.45	-0.30	0.47	-0.09	-0.05	0.06
Total Supply	18.27	18.49	18.75	18.97	18.30	18.43	19.03	19.08	19.01	18.82	19.29	19.41	18.62	18.72	19.13
Demand															
Motor Gasoline.....	7.59	8.16	8.25	8.06	7.77	8.21	8.51	8.26	7.88	8.38	8.63	8.34	8.02	8.19	8.31
Jet Fuel	1.57	1.56	1.64	1.62	1.55	1.55	1.55	1.57	1.54	1.59	1.67	1.65	1.60	1.55	1.61
Distillate Fuel Oil.....	3.58	3.33	3.24	3.60	3.58	3.37	3.35	3.58	3.85	3.43	3.35	3.62	3.44	3.47	3.56
Residual Fuel Oil	0.89	0.76	0.77	0.77	0.81	0.81	0.88	0.84	1.01	0.81	0.79	0.84	0.80	0.84	0.86
Other Oils ^e	4.64	4.67	4.85	4.93	4.62	4.49	4.74	4.83	4.72	4.62	4.86	4.96	4.77	4.67	4.79
Total Demand	18.27	18.49	18.75	18.97	18.32	18.43	19.03	19.08	19.01	18.82	19.29	19.41	18.62	18.72	19.13
Total Petroleum Net Imports.....	8.73	9.64	9.31	8.96	8.74	9.66	9.74	8.86	8.91	9.73	9.92	9.23	9.16	9.25	9.45
Closing Stocks (million barrels)															
Crude Oil (excluding SPR).....	313	320	304	305	336	333	321	326	330	331	325	324	305	326	324
Total Motor Gasoline.....	200	204	198	210	215	221	210	205	211	205	199	200	210	205	200
Finished Motor Gasoline.....	154	164	158	166	166	178	166	164	166	164	157	158	166	164	158
Blending Components.....	46	41	41	43	49	44	44	41	45	41	42	41	43	41	41
Jet Fuel	39	43	46	44	43	44	46	41	42	41	43	45	44	41	45
Distillate Fuel Oil.....	101	118	139	138	124	139	155	146	110	121	137	140	138	146	140
Residual Fuel Oil	41	39	35	40	41	40	39	43	34	38	39	42	40	43	42
Other Oils ^e	253	286	308	259	265	313	328	276	267	300	315	263	259	276	263
Total Stocks (excluding SPR).....	948	1011	1029	996	1025	1090	1099	1037	994	1036	1057	1013	996	1037	1013
Crude Oil in SPR.....	563	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Total Stocks (including SPR).....	1512	1575	1592	1560	1588	1654	1662	1600	1558	1599	1621	1577	1560	1600	1577

^aIncludes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

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

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

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

^bShort-Term Integrated Forecasting System.

^cRefiner acquisitions cost of imported crude oil.

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

^eRefers to percent changes in degree-days.

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

Table 7. Forecast Components for U.S. Crude Oil Production
(Million Barrels per Day)

	High Price Case	Low Price Case	Difference		
			Total	Uncertainty	Price Impact
United States	6.73	5.98	0.75	0.11	0.64
Lower 48 States	5.59	4.90	0.69	0.08	0.61
Alaska	1.13	1.08	0.06	0.03	0.03

Note: Components provided are for the fourth quarter 1999. Totals may not add to sum of components due to independent rounding.
Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

Table 8. U.S. Natural Gas Supply and Demand: Mid world Oil Price Case
(Trillion cubic Feet)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Total Dry Gas Production	4.73	4.70	4.72	4.78	4.75	4.70	4.77	4.83	4.77	4.75	4.82	4.89	18.93	19.05	19.23
Net Imports.....	0.74	0.68	0.68	0.74	0.75	0.70	0.72	0.78	0.78	0.75	0.76	0.83	2.84	2.95	3.13
Supplemental Gaseous Fuels	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.04	0.03	0.03	0.03	0.12	0.12	0.13
Total New Supply	5.50	5.40	5.42	5.56	5.53	5.43	5.52	5.65	5.59	5.53	5.61	5.75	21.88	22.12	22.49
Underground Working Gas Storage															
Opening.....	6.51	5.34	6.09	7.03	6.52	5.52	6.44	7.25	6.69	5.30	6.22	7.08	6.51	6.52	6.69
Closing	5.34	6.09	7.03	6.52	5.52	6.44	7.25	6.69	5.30	6.22	7.08	6.47	6.52	6.69	6.47
Net Withdrawals.....	1.18	-0.75	-0.95	0.51	1.00	-0.92	-0.80	0.56	1.39	-0.92	-0.85	0.61	-0.01	-0.17	0.22
Total Supply	6.67	4.65	4.48	6.07	6.52	4.51	4.72	6.20	6.97	4.61	4.76	6.36	21.88	21.95	22.71
Balancing Item ^a	0.21	0.20	0.02	-0.34	0.09	0.17	-0.15	-0.51	0.25	0.29	-0.19	-0.58	0.09	-0.39	-0.24
Total Primary Supply	6.88	4.85	4.50	5.74	6.62	4.68	4.57	5.69	7.22	4.91	4.56	5.78	21.97	21.56	22.47
Demand															
Lease and Plant Fuel.....	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.31	0.32	0.32	1.25	1.26	1.27
Pipeline Use	0.22	0.16	0.15	0.19	0.21	0.15	0.15	0.19	0.22	0.16	0.15	0.19	0.71	0.70	0.71
Residential.....	2.28	0.89	0.38	1.46	2.11	0.78	0.36	1.39	2.45	0.83	0.35	1.40	5.01	4.63	5.02
Commercial	1.27	0.65	0.44	0.93	1.20	0.57	0.45	0.90	1.41	0.65	0.46	0.92	3.29	3.13	3.43
Industrial (Incl. Cogenerators)	2.28	2.08	2.03	2.17	2.23	1.96	2.00	2.23	2.25	2.04	2.02	2.26	8.56	8.42	8.58
Cogenerators.....	0.53	0.57	0.57	0.64	0.58	0.55	0.60	0.68	0.60	0.57	0.62	0.70	2.31	2.41	2.49
Electricity Production															
Electric Utilities.....	0.47	0.72	1.15	0.62	0.50	0.86	1.25	0.61	0.52	0.88	1.23	0.64	2.97	3.23	3.27
Nonutilities (Excl. Cogen.)	0.04	0.04	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.18	0.19	0.20
Total Demand.....	6.88	4.85	4.50	5.74	6.62	4.68	4.57	5.69	7.22	4.91	4.56	5.78	21.97	21.56	22.47

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

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

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

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

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

(Million Short Tons)

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Production	274.1	270.1	271.6	274.1	279.2	271.6	<i>282.5</i>	<i>279.7</i>	<i>291.1</i>	<i>273.8</i>	<i>277.8</i>	<i>286.1</i>	1089.9	<i>1113.1</i>	<i>1128.8</i>
Appalachia.....	119.7	118.7	112.7	116.7	119.1	111.6	<i>114.8</i>	<i>117.2</i>	<i>122.4</i>	<i>114.1</i>	<i>110.6</i>	<i>118.0</i>	467.8	<i>462.7</i>	<i>465.2</i>
Interior	42.5	41.1	44.1	43.3	41.0	41.5	<i>44.0</i>	<i>42.3</i>	<i>40.9</i>	<i>38.3</i>	<i>41.4</i>	<i>41.4</i>	170.9	<i>168.8</i>	<i>162.1</i>
Western.....	111.9	110.4	114.8	114.1	119.1	118.5	<i>123.7</i>	<i>120.2</i>	<i>127.7</i>	<i>121.5</i>	<i>125.7</i>	<i>126.7</i>	451.3	<i>481.6</i>	<i>501.5</i>
Primary Stock Levels ^a															
Opening.....	28.6	37.5	42.5	39.1	34.0	37.5	<i>37.2</i>	<i>34.2</i>	<i>32.9</i>	<i>39.9</i>	<i>40.3</i>	<i>34.1</i>	28.6	<i>34.0</i>	<i>32.9</i>
Closing	37.5	42.5	39.1	34.0	37.5	37.2	<i>34.2</i>	<i>32.9</i>	<i>39.9</i>	<i>40.3</i>	<i>34.1</i>	<i>33.0</i>	34.0	<i>32.9</i>	<i>33.0</i>
Net Withdrawals.....	-8.9	-5.0	3.4	5.1	-3.6	0.3	<i>3.0</i>	<i>1.2</i>	<i>-6.9</i>	<i>-0.4</i>	<i>6.2</i>	<i>1.1</i>	-5.3	<i>1.0</i>	<i>(S)</i>
Imports	1.3	1.7	2.2	2.2	1.8	2.2	<i>2.2</i>	<i>1.7</i>	<i>1.9</i>	<i>2.0</i>	<i>2.0</i>	<i>2.0</i>	7.5	<i>3.8</i>	<i>7.8</i>
Exports	20.0	20.6	22.4	20.6	18.3	20.5	<i>19.7</i>	<i>20.3</i>	<i>19.3</i>	<i>19.9</i>	<i>20.1</i>	<i>20.0</i>	83.5	<i>40.0</i>	<i>79.3</i>
Total Net Domestic Supply.....	246.5	246.3	254.9	260.9	259.2	253.6	<i>268.0</i>	<i>262.3</i>	<i>266.8</i>	<i>255.5</i>	<i>265.8</i>	<i>269.2</i>	1008.5	<i>1043.1</i>	<i>1057.4</i>
Secondary Stock Levels ^b															
Opening.....	123.0	120.7	127.6	109.8	106.8	114.1	<i>124.7</i>	<i>110.7</i>	<i>114.8</i>	<i>115.1</i>	<i>120.7</i>	<i>107.0</i>	123.0	<i>106.8</i>	<i>114.8</i>
Closing	120.7	127.6	109.8	106.8	114.1	124.7	<i>110.7</i>	<i>114.8</i>	<i>115.1</i>	<i>120.7</i>	<i>107.0</i>	<i>111.1</i>	106.8	<i>114.8</i>	<i>111.1</i>
Net Withdrawals.....	2.3	-6.9	17.8	3.0	-7.3	-10.6	<i>14.0</i>	<i>-4.0</i>	<i>-0.3</i>	<i>-5.6</i>	<i>13.8</i>	<i>-4.2</i>	16.1	<i>-7.9</i>	<i>3.6</i>
Waste Coal Supplied to IPPs ^c	2.3	2.4	2.4	2.4	2.5	2.5	<i>2.5</i>	<i>2.5</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	9.4	<i>10.0</i>	<i>10.6</i>
Total Supply	251.2	241.7	275.0	266.2	254.4	245.5	<i>284.5</i>	<i>260.8</i>	<i>269.2</i>	<i>252.6</i>	<i>282.2</i>	<i>267.6</i>	1034.1	<i>1045.2</i>	<i>1071.6</i>
Demand															
Coke Plants.....	7.6	7.4	7.9	6.6	6.9	6.8	<i>7.2</i>	<i>7.4</i>	<i>7.6</i>	<i>7.3</i>	<i>7.2</i>	<i>7.5</i>	29.4	<i>28.3</i>	<i>29.6</i>
Electricity Production															
Electric Utilities.....	218.8	207.7	243.7	230.3	220.5	218.7	<i>253.1</i>	<i>226.7</i>	<i>234.4</i>	<i>220.6</i>	<i>250.4</i>	<i>232.7</i>	900.4	<i>919.1</i>	<i>938.0</i>
Nonutilities (Excl. Cogen.) ^d	5.9	5.9	5.9	5.9	6.3	6.2	<i>6.3</i>	<i>6.3</i>	<i>6.6</i>	<i>6.6</i>	<i>6.6</i>	<i>6.6</i>	23.5	<i>25.0</i>	<i>26.5</i>
Retail and General Industry ^e	20.0	18.2	17.9	20.2	20.0	18.3	<i>17.9</i>	<i>20.4</i>	<i>20.6</i>	<i>18.1</i>	<i>18.1</i>	<i>20.8</i>	76.4	<i>76.7</i>	<i>77.5</i>
Total Demand.....	252.3	239.1	275.4	262.9	253.7	250.1	<i>284.5</i>	<i>260.8</i>	<i>269.2</i>	<i>252.6</i>	<i>282.2</i>	<i>267.6</i>	1029.7	<i>1049.0</i>	<i>1071.6</i>
Discrepancy ^f	-1.1	2.6	-0.4	3.3	0.7	-4.5	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	4.4	<i>-3.8</i>	<i>0.0</i>

^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 8.9 million tons in 1996.

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

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

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

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

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

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

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

	1997				1998				1999				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1997	1998	1999
Supply															
Net Utility Generation															
Coal	434.1	413.9	480.9	458.9	437.0	434.9	<i>501.7</i>	<i>450.6</i>	<i>469.1</i>	<i>441.3</i>	<i>498.3</i>	<i>463.9</i>	1787.8	<i>1824.2</i>	<i>1872.6</i>
Petroleum	17.0	15.1	24.5	21.1	20.9	28.5	<i>35.9</i>	<i>22.8</i>	<i>30.1</i>	<i>25.5</i>	<i>29.5</i>	<i>23.5</i>	77.8	<i>108.1</i>	<i>108.6</i>
Natural Gas	45.0	69.5	109.9	59.2	47.9	80.7	<i>120.1</i>	<i>58.5</i>	<i>49.7</i>	<i>83.7</i>	<i>117.8</i>	<i>61.0</i>	283.6	<i>307.2</i>	<i>312.2</i>
Nuclear	160.0	144.0	171.0	153.6	162.6	154.7	<i>175.3</i>	<i>168.4</i>	<i>168.5</i>	<i>152.9</i>	<i>179.5</i>	<i>161.8</i>	628.6	<i>661.0</i>	<i>662.8</i>
Hydroelectric.....	94.2	95.9	77.5	69.6	86.7	88.6	<i>70.9</i>	<i>69.6</i>	<i>77.3</i>	<i>78.3</i>	<i>66.1</i>	<i>63.7</i>	337.2	<i>315.9</i>	<i>285.5</i>
Geothermal and Other ^a	1.6	1.8	2.0	2.0	1.9	1.4	<i>1.9</i>	<i>1.8</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	7.5	<i>7.0</i>	<i>6.8</i>
Subtotal.....	752.0	740.2	865.8	764.5	757.0	789.0	<i>905.9</i>	<i>771.7</i>	<i>796.5</i>	<i>783.4</i>	<i>892.9</i>	<i>775.6</i>	3122.5	<i>3223.5</i>	<i>3248.3</i>
Nonutility Generation ^b															
Coal	15.3	16.3	16.4	18.4	16.6	15.9	<i>17.3</i>	<i>19.3</i>	<i>17.0</i>	<i>16.3</i>	<i>17.7</i>	<i>19.8</i>	66.4	<i>69.1</i>	<i>70.8</i>
Petroleum	4.0	4.2	4.2	4.7	4.4	4.2	<i>4.6</i>	<i>5.1</i>	<i>4.7</i>	<i>4.5</i>	<i>4.9</i>	<i>5.5</i>	17.1	<i>18.4</i>	<i>19.6</i>
Natural Gas	49.2	52.5	52.8	59.1	53.7	51.4	<i>55.9</i>	<i>62.6</i>	<i>55.2</i>	<i>52.9</i>	<i>57.6</i>	<i>64.5</i>	213.7	<i>223.7</i>	<i>230.2</i>
Other Gaseous Fuels ^c	2.9	3.1	3.1	3.5	3.0	2.9	<i>3.1</i>	<i>3.5</i>	<i>3.0</i>	<i>2.9</i>	<i>3.1</i>	<i>3.5</i>	12.5	<i>12.5</i>	<i>12.6</i>
Hydroelectric.....	3.9	4.2	4.2	4.7	4.4	4.2	<i>4.5</i>	<i>5.1</i>	<i>4.6</i>	<i>4.4</i>	<i>4.7</i>	<i>5.3</i>	17.1	<i>18.2</i>	<i>19.0</i>
Geothermal and Other ^d	19.0	20.3	20.4	22.9	20.3	19.4	<i>21.2</i>	<i>23.7</i>	<i>20.5</i>	<i>19.6</i>	<i>21.3</i>	<i>23.9</i>	82.6	<i>84.6</i>	<i>85.3</i>
Subtotal.....	94.3	100.6	101.2	113.3	102.3	98.0	<i>106.7</i>	<i>119.4</i>	<i>104.9</i>	<i>100.5</i>	<i>109.4</i>	<i>122.5</i>	409.4	<i>426.4</i>	<i>437.4</i>
Total Generation.....	846.3	840.8	967.0	877.7	859.3	887.0	<i>1012.5</i>	<i>891.1</i>	<i>901.4</i>	<i>883.9</i>	<i>1002.3</i>	<i>898.1</i>	3531.9	<i>3649.9</i>	<i>3685.7</i>
Net Imports ^e	7.5	8.9	11.8	8.3	5.8	6.9	<i>9.2</i>	<i>6.5</i>	<i>6.8</i>	<i>7.9</i>	<i>10.4</i>	<i>7.6</i>	36.6	<i>28.5</i>	<i>32.7</i>
Total Supply.....	853.8	849.8	978.8	886.1	865.1	893.9	<i>1021.7</i>	<i>897.6</i>	<i>908.2</i>	<i>891.8</i>	<i>1012.7</i>	<i>905.7</i>	3568.5	<i>3678.3</i>	<i>3718.4</i>
Losses and Unaccounted for ^f	52.8	82.7	76.3	73.3	54.5	81.8	<i>65.1</i>	<i>69.0</i>	<i>53.3</i>	<i>76.7</i>	<i>70.3</i>	<i>69.5</i>	285.0	<i>270.3</i>	<i>269.8</i>
Demand															
Electric Utility Sales															
Residential.....	276.7	226.2	309.9	258.8	275.8	250.7	<i>343.8</i>	<i>263.3</i>	<i>301.6</i>	<i>252.5</i>	<i>327.6</i>	<i>265.2</i>	1071.6	<i>1133.5</i>	<i>1147.0</i>
Commercial.....	214.5	217.6	256.0	225.3	217.4	230.9	<i>270.6</i>	<i>229.8</i>	<i>230.3</i>	<i>231.7</i>	<i>267.7</i>	<i>231.1</i>	913.3	<i>948.8</i>	<i>960.8</i>
Industrial.....	247.6	258.7	268.9	257.4	252.2	266.3	<i>272.6</i>	<i>262.3</i>	<i>255.3</i>	<i>265.6</i>	<i>275.7</i>	<i>265.0</i>	1032.5	<i>1053.4</i>	<i>1061.7</i>
Other.....	23.5	23.2	26.2	24.6	23.7	24.3	<i>26.3</i>	<i>24.8</i>	<i>25.0</i>	<i>24.4</i>	<i>27.0</i>	<i>25.1</i>	97.5	<i>99.1</i>	<i>101.5</i>
Subtotal.....	762.2	725.7	860.9	766.1	769.1	772.3	<i>913.3</i>	<i>780.1</i>	<i>812.2</i>	<i>774.3</i>	<i>898.0</i>	<i>786.4</i>	3114.9	<i>3234.8</i>	<i>3270.9</i>
Nonutility Gener. for Own Use ^b	38.8	41.4	41.7	46.6	41.5	39.8	<i>43.3</i>	<i>48.5</i>	<i>42.6</i>	<i>40.9</i>	<i>44.5</i>	<i>49.8</i>	168.6	<i>173.1</i>	<i>177.7</i>
Total Demand.....	801.0	767.1	902.6	812.7	810.6	812.1	<i>956.7</i>	<i>828.6</i>	<i>854.9</i>	<i>815.1</i>	<i>942.5</i>	<i>836.2</i>	3283.5	<i>3408.0</i>	<i>3448.7</i>
Memo:															
Nonutility Sales to															
Electric Utilities ^b	55.5	59.2	59.5	66.6	60.7	58.2	<i>63.3</i>	<i>70.9</i>	<i>62.3</i>	<i>59.7</i>	<i>65.0</i>	<i>72.7</i>	240.8	<i>253.2</i>	<i>259.7</i>

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

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

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

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

^eData for 1997 are estimates.

^fBalancing item, mainly transmission and distribution losses.

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

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

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

	Year				Annual Percentage Change		
	1996	1997	1998	1999	1996-1997	1997-1998	1998-1999
Electric Utilities							
Hydroelectric Power ^a	3.433	3.530	<i>3.306</i>	<i>2.988</i>	2.8	-6.3	-9.6
Geothermal, Solar and Wind Energy ^b	0.110	0.115	<i>0.105</i>	<i>0.100</i>	4.5	-8.7	-4.8
Biofuels ^c	0.020	0.021	<i>0.021</i>	<i>0.021</i>	5.0	0.0	0.0
Total	3.563	3.665	<i>3.432</i>	<i>3.109</i>	2.9	-6.4	-9.4
Nonutility Power Generators							
Hydroelectric Power ^a	0.171	0.177	<i>0.188</i>	<i>0.196</i>	3.5	6.2	4.3
Geothermal, Solar and Wind Energy ^b	0.258	0.280	<i>0.289</i>	<i>0.294</i>	8.5	3.2	1.7
Biofuels ^c	0.601	0.638	<i>0.651</i>	<i>0.655</i>	6.2	2.0	0.6
Total	1.030	1.095	<i>1.128</i>	<i>1.145</i>	6.3	3.0	1.5
Total Power Generation.....	4.593	4.760	<i>4.560</i>	<i>4.253</i>	3.6	-4.2	-6.7
Other Sectors							
Residential and Commercial ^d	0.722	0.553	<i>0.568</i>	<i>0.574</i>	-23.4	2.7	1.1
Industrial ^e	1.603	1.498	<i>1.515</i>	<i>1.542</i>	-6.6	1.1	1.8
Transportation ^f	0.074	0.097	<i>0.094</i>	<i>0.095</i>	31.1	-3.1	1.1
Total	2.399	2.148	<i>2.177</i>	<i>2.211</i>	-10.5	1.4	1.6
Net Imported Electricity ^g	0.305	0.297	<i>0.231</i>	<i>0.266</i>	-2.6	-22.2	15.2
Total Renewable Energy Demand.....	7.297	7.205	<i>6.969</i>	<i>6.730</i>	-1.3	-3.3	-3.4

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

^bAlso includes photovoltaic and solar thermal energy.

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

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

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

^fEthanol blended into gasoline.

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

(S) Less than 500 billion Btu.

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

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

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Real Gross Domestic Product (GDP) (billion chained 1992 dollars).....	5324	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	7517	7639
Imported Crude Oil Price ^a (nominal dollars per barrel).....	26.99	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.57	12.51	13.65
Petroleum Supply															
Crude Oil Production ^b (million barrels per day).....	8.97	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.40	6.37
Total Petroleum Net Imports (including SPR) (million barrels per day).....	4.29	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.25	9.45
Energy Demand															
World Petroleum (million barrels per day).....	60.1	61.8	63.1	64.9	65.9	66.0	66.6	66.8	67.0	68.3	69.9	71.5	73.2	74.0	75.5
U.S. Petroleum (million barrels per day).....	15.78	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.72	19.13
Natural Gas (trillion cubic feet).....	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.56	22.47
Coal (million short tons).....	810	797	830	877	891	897	898	907	944	951	962	1006	1030	1049	1072
Electricity (billion kilowatthours)															
Utility Sales ^c	2324	2369	2457	2578	2647	2713	2762	2763	2861	2935	3013	3098	3115	3235	3271
Nonutility Own Use ^d	NA	NA	NA	NA	108	113	122	132	138	150	158	164	169	173	178
Total.....	2324	2369	2457	2578	2755	2826	2884	2895	3000	3085	3171	3262	3283	3408	3449
Total Energy Demand ^e (quadrillion Btu)	NA	NA	NA	NA	NA	84.1	84.0	85.6	87.4	89.3	90.9	93.9	94.4	94.6	96.6
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar).....	NA	NA	NA	NA	NA	13.71	13.82	13.70	13.67	13.50	13.45	13.43	12.99	12.59	12.65

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

^bIncludes lease condensate.

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

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

^e"Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, *Annual Energy Review*, 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 comprehensive measure of total energy demand can be found in EIA's AER. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, *Monthly Energy Review* (MER). Consequently, the historical data may not precisely match those published in the *MER* or the *AER*.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520; *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0898.

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Macroeconomic															
Real Gross Domestic Product (billion chained 1992 dollars)	5324	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	<i>7517</i>	<i>7639</i>
GDP Implicit Price Deflator (Index, 1992=1.000)	0.786	0.806	0.831	0.861	0.897	0.936	0.973	1.000	1.026	1.051	1.075	1.095	1.116	<i>1.128</i>	<i>1.148</i>
Real Disposable Personal Income (billion chained 1992 Dollars).....	3960	4077	4155	4325	4412	4490	4484	4605	4667	4773	4906	5043	5183	<i>5346</i>	<i>5481</i>
Manufacturing Production (Index, 1987=1.000)	0.857	0.881	0.928	0.971	0.990	0.985	0.962	1.000	1.038	1.100	1.160	1.202	1.269	<i>1.316</i>	<i>1.351</i>
Real Fixed Investment (billion chained 1992 dollars)	799	805	799	818	832	806	741	783	843	916	966	1051	1138	<i>1260</i>	<i>1301</i>
Real Exchange Rate (Index, 1990=1.000)	NA	NA	NA	NA	NA	1.000	1.006	1.012	1.055	1.032	0.959	1.015	1.102	<i>1.159</i>	<i>1.124</i>
Business Inventory Change (billion chained 1992 dollars)	-4.5	-4.2	5.1	9.5	19.2	6.6	-6.1	-9.2	6.1	11.1	11.2	12.0	20.1	<i>18.5</i>	<i>-5.5</i>
Producer Price Index (index, 1982=1.000).....	1.032	1.002	1.028	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	<i>1.247</i>	<i>1.263</i>
Consumer Price Index (index, 1982-1984=1.000)	1.076	1.097	1.137	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	<i>1.631</i>	<i>1.671</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.832	0.532	0.568	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	<i>0.523</i>	<i>0.547</i>
Non-Farm Employment (millions)	97.4	99.3	102.0	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	<i>125.9</i>	<i>127.8</i>
Commercial Employment (millions)	60.8	62.9	65.2	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	<i>86.8</i>	<i>88.8</i>
Total Industrial Production (index, 1987=1.000).....	0.880	0.890	0.931	0.974	0.991	0.990	0.970	1.000	1.036	1.092	1.146	1.185	1.244	<i>1.285</i>	<i>1.316</i>
Housing Stock (millions)	96.3	98.0	99.8	101.6	102.9	103.5	104.5	105.5	106.8	108.2	109.6	111.0	112.5	<i>114.3</i>	<i>115.6</i>
Weather ^a															
Heating Degree-Days															
U.S.	4642	4295	4334	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	<i>4156</i>	<i>4576</i>
New England	6571	6517	6546	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	<i>6007</i>	<i>6621</i>
Middle Atlantic	5660	5665	5699	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	<i>5163</i>	<i>5839</i>
U.S. Gas-Weighted	4856	4442	4391	4804	4856	4139	4337	4458	4754	4659	4707	5040	4886	<i>4378</i>	<i>4732</i>
Cooling Degree-Days (U.S.)	1194	1249	1269	1283	1156	1260	1331	1040	1218	1220	1293	1180	1156	<i>1361</i>	<i>1193</i>

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

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0898.

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Demand^a															
OECD															
U.S. (50 States).....	15.8	16.3	16.7	17.3	17.4	17.0	16.8	17.1	17.2	17.7	17.7	18.3	18.6	18.7	19.1
Europe ^b	11.7	12.1	12.3	12.4	12.5	12.6	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.6	14.9
Japan.....	4.4	4.4	4.5	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.6	5.6
Other OECD.....	2.5	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.0	3.1	3.2
Total OECD.....	34.3	35.3	36.0	37.1	37.6	37.5	38.1	38.8	39.0	39.9	40.6	41.4	41.8	42.0	42.8
Non-OECD															
Former Soviet Union.....	9.0	9.0	9.0	8.9	8.7	8.4	8.3	6.8	5.6	4.8	4.6	4.4	4.4	4.4	4.3
Europe.....	2.2	2.2	2.2	2.2	2.1	1.9	1.4	1.3	1.3	1.3	1.3	1.3	1.4	1.5	1.5
China.....	1.9	2.0	2.1	2.3	2.4	2.3	2.5	2.7	3.0	3.1	3.3	3.5	3.9	4.1	4.3
Other Asia.....	3.6	3.8	4.1	4.4	4.9	5.3	5.7	6.2	6.8	7.3	7.9	8.3	8.8	8.7	8.8
Other Non-OECD.....	9.1	9.5	9.7	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.2	12.5	13.0	13.4	13.8
Total Non-OECD.....	25.8	26.5	27.1	27.7	28.3	28.5	28.5	28.0	28.1	28.4	29.4	30.1	31.4	32.0	32.8
Total World Demand.....	60.1	61.8	63.1	64.9	66.0	66.0	66.6	66.8	67.0	68.3	69.9	71.5	73.2	74.0	75.5
Supply^c															
OECD															
U.S. (50 States).....	11.2	11.0	10.7	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.4	9.4
Canada.....	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
North Sea ^d	3.6	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
Other OECD.....	1.4	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	1.7
Total OECD.....	18.1	17.9	17.9	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.9	19.9	20.2
Non-OECD															
OPEC.....	17.2	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	30.2
Former Soviet Union.....	11.9	12.3	12.5	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.3
China.....	2.5	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.3
Mexico.....	3.0	2.8	2.9	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.6
Other Non-OECD.....	6.6	11.0	6.9	7.3	7.7	8.0	8.1	8.4	8.7	9.2	9.9	10.2	10.4	10.7	11.0
Total Non-OECD.....	41.2	43.9	44.6	47.0	48.9	49.7	49.1	49.1	49.4	49.6	50.7	52.0	54.1	55.0	55.4
Total World Supply.....	59.3	61.8	62.5	64.8	65.9	66.8	66.7	67.0	67.4	68.3	69.9	71.8	74.0	74.9	75.6
Total Stock Withdrawals.....	0.8	0.0	0.6	0.1	0.0	-0.8	-0.1	-0.2	-0.3	0.1	0.1	-0.2	-0.8	-0.9	-0.1
OECD Comm. Stocks, End (bill. bbls.).....	2.6	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.8
Net Exports from Former Soviet Union.....	3.0	3.4	3.5	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.5	2.7	2.7	2.8	3.0

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

^bOECD Europe includes the former East Germany.

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

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. 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														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Imported Crude Oil ^a															
(dollars per barrel).....	26.99	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.57	12.51	13.65
Natural Gas Wellhead ^b															
(dollars per thousand cubic feet)	2.51	1.94	1.66	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.16	2.23	1.88	2.10
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades.....	1.15	0.88	0.91	0.92	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.08	1.13
Regular Unleaded.....	1.17	0.88	0.91	0.91	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.04	1.09
No. 2 Diesel Oil, Retail (dollars per gallon)	1.16	0.88	0.93	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.11	1.23	1.19	1.05	1.07
No. 2 Heating Oil, Wholesale (dollars per gallon)	0.78	0.49	0.53	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.44	0.47
No. 2 Heating Oil, Retail (dollars per gallon)	1.05	0.84	0.80	0.81	0.90	1.06	1.02	0.93	0.91	0.89	0.87	0.99	0.99	0.86	0.89
No. 6 Residual Fuel Oil, Retail ^c (dollars per barrel).....	25.57	14.46	17.76	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	18.97	17.80	13.03	13.66
Electric Utility Fuels															
Coal (dollars per million Btu)	1.65	1.58	1.51	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.24
Heavy Fuel Oil ^d (dollars per million Btu)	4.26	2.40	2.98	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.12	2.21
Natural Gas (dollars per million Btu)	3.43	2.35	2.24	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.49	2.66
Other Residential															
Natural Gas (dollars per thousand cubic feet)	6.12	5.83	5.55	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.94	6.76	7.05
Electricity (cents per kilowatthour).....	7.8	7.4	7.4	7.5	7.6	7.8	8.1	8.2	8.3	8.4	8.4	8.4	8.5	8.3	8.2

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

^bAverage self-service cash prices.

^cAverage for all sulfur contents.

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

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

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

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Crude Oil Supply															
Domestic Production ^a	8.97	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.40	6.37
Alaska.....	1.83	1.87	1.96	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.18	1.10
Lower 48.....	7.15	6.81	6.39	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.22	5.27
Net Imports (including SPR) ^b	3.00	4.02	4.52	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.30	8.39
Other SPR Supply.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stock Draw (Including SPR).....	-0.05	-0.08	-0.12	0.00	-0.09	0.02	-0.01	0.01	-0.06	-0.02	0.09	0.05	-0.06	-0.06	0.01
Product Supplied and Losses.....	-0.06	-0.05	-0.03	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	-0.01
Unaccounted-for Crude Oil.....	0.15	0.14	0.14	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.18	0.24
Total Crude Oil Supply.....	12.00	12.72	12.85	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.82	15.00
Other Supply															
NGL Production.....	1.61	1.55	1.59	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.78	1.80
Other Hydrocarbon and Alcohol Inputs.....	0.11	0.11	0.12	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.36	0.35
Crude Oil Product Supplied.....	0.06	0.05	0.03	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01
Processing Gain.....	0.56	0.62	0.64	0.66	0.66	0.70	0.71	0.77	0.76	0.77	0.77	0.84	0.85	0.86	0.85
Net Product Imports ^c	1.29	1.41	1.39	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	0.95	1.06
Product Stock Withdrawn.....	0.15	-0.12	0.09	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.05	0.06
Total Supply.....	15.78	16.33	16.72	17.33	17.37	17.05	16.76	17.10	17.25	17.72	17.72	18.31	18.62	18.72	19.13
Demand															
Motor Gasoline ^d	6.78	6.94	7.19	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.19	8.31
Jet Fuel.....	1.22	1.31	1.38	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.55	1.61
Distillate Fuel Oil.....	2.87	2.91	2.98	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.47	3.56
Residual Fuel Oil.....	1.20	1.42	1.26	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.84	0.86
Other Oils ^e	3.71	3.75	3.90	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.67	4.79
Total Demand.....	15.78	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.72	19.13
Total Petroleum Net Imports.....	4.29	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.25	9.45
Closing Stocks (million barrels)															
Crude Oil (excluding SPR).....	321	331	349	330	341	323	325	318	335	337	303	284	305	326	324
Total Motor Gasoline.....	223	233	226	228	213	220	219	216	226	215	202	195	210	205	200
Jet Fuel.....	40	50	50	44	41	52	49	43	40	47	40	40	44	41	45
Distillate Fuel Oil.....	144	155	134	124	106	132	144	141	141	145	130	127	138	146	140
Residual Fuel Oil.....	50	47	47	45	44	49	50	43	44	42	37	46	40	43	42
Other Oils ^f	247	265	260	267	257	261	267	263	273	275	258	250	259	276	263

^aIncludes lease condensate.

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

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

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

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

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

SPR: Strategic Petroleum Reserve. NGL: Natural Gas Liquids

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

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

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Total Dry Gas Production	16.45	16.06	16.62	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.79	18.93	19.05	19.23
Net Imports	0.89	0.69	0.94	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.95	3.13
Supplemental Gaseous Fuels	0.13	0.11	0.10	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.12	0.12	0.13
Total New Supply	17.47	16.86	17.66	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.69	21.88	22.12	22.49
Total Underground Storage															
Opening	6.71	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	6.69
Closing	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	6.69	6.47
Net Withdrawals	0.26	-0.12	0.02	-0.10	0.33	-0.61	0.16	0.14	-0.01	-0.32	0.46	-0.01	-0.01	-0.17	0.22
Total Supply	17.73	16.74	17.68	18.32	19.02	18.77	19.61	20.02	20.42	21.08	21.86	21.68	21.88	21.95	22.71
Balancing Item ^a	-0.45	-0.52	-0.47	-0.29	-0.22	-0.05	-0.58	-0.47	-0.14	-0.37	-0.28	0.29	0.09	-0.39	-0.24
Total Primary Supply	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.56	22.47
Demand															
Lease and Plant Fuel	0.97	0.92	1.15	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.25	1.26	1.27
Pipeline Use	0.50	0.49	0.52	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.71	0.70	0.71
Residential	4.43	4.31	4.31	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	5.01	4.63	5.02
Commercial	2.43	2.32	2.43	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.29	3.13	3.43
Industrial (Incl. Nonutilities)	5.90	5.58	5.95	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.75	8.61	8.77
Cogenerators ^b	NA	NA	NA	NA	0.00	1.30	1.41	1.67	1.80	1.98	2.18	2.27	2.31	2.41	2.49
Other Nonutil. Gen. ^b	NA	NA	NA	NA	0.00	0.09	0.16	0.18	0.22	0.17	0.17	0.16	0.18	0.19	0.20
Electric Utilities	3.04	2.60	2.84	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.23	3.27
Total Demand	17.28	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.56	22.47

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

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

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

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

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Production.....	883.6	890.3	918.8	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	<i>1113.1</i>	<i>1128.8</i>
Appalachia	NA	NA	NA	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	462.7	465.2
Interior.....	NA	NA	NA	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.8	162.1
Western.....	NA	NA	NA	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	481.6	501.5
Primary Stock Levels ^a															
Opening	34.1	33.1	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	<i>34.0</i>	<i>32.9</i>
Closing.....	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	<i>32.9</i>	<i>33.0</i>
Net Withdrawals.....	1.0	1.0	3.8	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	<i>1.0</i>	<i>S</i>
Imports.....	2.0	2.2	1.7	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	<i>3.8</i>	<i>7.8</i>
Exports.....	92.7	85.5	79.6	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	<i>40.0</i>	<i>79.3</i>
Total Net Domestic Supply.....	793.9	808.0	844.7	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	<i>1043.1</i>	<i>1057.4</i>
Secondary Stock Levels ^b															
Opening	197.2	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	<i>106.8</i>	<i>114.8</i>
Closing.....	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.8	<i>114.8</i>	<i>111.1</i>
Net Withdrawals.....	27.0	-5.0	-10.2	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.1	<i>-7.9</i>	<i>3.6</i>
Waste Coal Supplied to IPPs ^c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	8.5	8.8	9.4	<i>10.0</i>	<i>10.6</i>
Total Supply	820.8	803.1	834.4	882.3	896.5	899.4	891.4	901.8	930.2	954.0	960.4	1006.7	1034.1	<i>1045.2</i>	<i>1071.6</i>
Demand															
Coke Plants.....	41.1	35.9	37.0	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	29.4	<i>28.3</i>	<i>29.6</i>
Electricity Production															
Electric Utilities	693.8	685.1	717.9	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	<i>919.1</i>	<i>938.0</i>
Nonutilities (Excl. Cogen.) ^d	NA	NA	NA	NA	0.9	1.6	10.2	14.8	17.8	20.9	21.2	22.2	23.5	<i>25.0</i>	<i>26.5</i>
Retail and General Industry ^e	75.4	75.6	75.2	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	76.9	76.4	<i>76.7</i>	<i>77.5</i>
Total Demand	810.3	796.6	830.0	876.5	890.6	897.1	897.8	907.3	943.7	951.1	962.0	1005.6	1029.7	<i>1049.0</i>	<i>1071.6</i>
Discrepancy ^f	10.6	6.5	4.4	5.8	5.9	2.4	-6.4	-5.4	-13.5	2.9	-1.6	1.2	4.4	<i>-3.8</i>	<i>0.0</i>

^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 8.9 million tons in 1996.
^dConsumption of coal by IPPs. In 1995, IPP consumption was estimated to be 5.290 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Data for third quarter 1998 are estimates.
^eSynfuels plant demand in 1993 was 1.7 million tons per quarter and is assumed to remain at that level in 1994, 1995, 1996, 1997 and 1998.
^fThe discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period. Prior to 1994, discrepancy may include some waste coal supplied to IPPs that has not been specifically identified.
(S) indicates amounts of less than 50,000 tons in absolute value.
Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.
Sources: Historical data: Energy Information Administration; latest data available from EIA databases supporting the following reports: *Quarterly Coal Report*, DOE/EIA-0121, and *Electric Power Monthly*, DOE/EIA-0226.
Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

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

	Year														
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Supply															
Net Utility Generation															
Coal	1402.1	1385.8	1463.8	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	<i>1824.2</i>	<i>1872.6</i>
Petroleum	100.2	136.6	118.5	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	<i>108.1</i>	<i>108.6</i>
Natural Gas	291.9	248.5	272.6	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	<i>307.2</i>	<i>312.2</i>
Nuclear	383.7	414.0	455.3	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.6	<i>661.0</i>	<i>662.8</i>
Hydroelectric	281.1	290.8	249.7	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	337.2	<i>315.9</i>	<i>285.5</i>
Geothermal and Other ^a	10.7	11.5	12.3	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.5	<i>7.0</i>	<i>6.8</i>
Subtotal	2469.8	2487.3	2572.1	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	<i>3223.5</i>	<i>3248.3</i>
Nonutility Generation ^b	NA	NA	NA	NA	191.3	221.8	253.7	296.0	325.5	354.9	374.4	382.5	409.4	<i>426.4</i>	<i>437.4</i>
Total Generation	NA	NA	NA	NA	2975.6	3030.0	3078.7	3093.2	3208.1	3265.6	3369.0	3460.0	3531.9	<i>3649.9</i>	<i>3685.7</i>
Net Imports	40.9	35.9	46.3	31.8	11.0	2.0	22.3	28.3	28.4	44.6	37.6	38.0	36.6	<i>28.5</i>	<i>32.7</i>
Total Supply	NA	NA	NA	NA	2986.6	3032.0	3101.0	3121.6	3236.5	3310.3	3406.6	3498.0	3568.5	<i>3678.3</i>	<i>3718.4</i>
Losses and Unaccounted for ^c	NA	NA	NA	NA	231.4	206.1	217.1	226.6	236.9	225.5	235.4	236.2	285.0	<i>270.3</i>	<i>269.8</i>
Demand															
Electric Utility Sales															
Residential.....	793.9	819.1	850.4	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1071.6	<i>1133.5</i>	<i>1147.0</i>
Commercial.....	606.0	630.5	660.4	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	913.3	<i>948.8</i>	<i>960.8</i>
Industrial.....	836.8	830.5	858.2	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1030.4	1032.5	<i>1053.4</i>	<i>1061.7</i>
Other.....	87.3	88.6	88.2	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	97.5	<i>99.1</i>	<i>101.5</i>
Subtotal	2324.0	2368.8	2457.3	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3097.8	3114.9	<i>3234.8</i>	<i>3270.9</i>
Nonutility Own Use ^b	NA	NA	NA	NA	108.4	113.4	121.9	131.6	138.1	150.2	157.9	164.0	168.6	<i>173.1</i>	<i>177.7</i>
Total Demand.....	NA	NA	NA	NA	2755.2	2825.9	2883.9	2895.0	2999.6	3084.8	3171.2	3261.8	3283.5	<i>3408.0</i>	<i>3448.7</i>
Memo:															
Nonutility Sales															
to Electric Utilities ^d	26.0	39.9	50.0	68.0	83.0	108.5	131.9	164.4	187.4	204.7	216.5	218.5	240.8	<i>253.2</i>	<i>259.7</i>

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

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

^cBalancing item, mainly transmission and distribution losses.

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

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

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

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