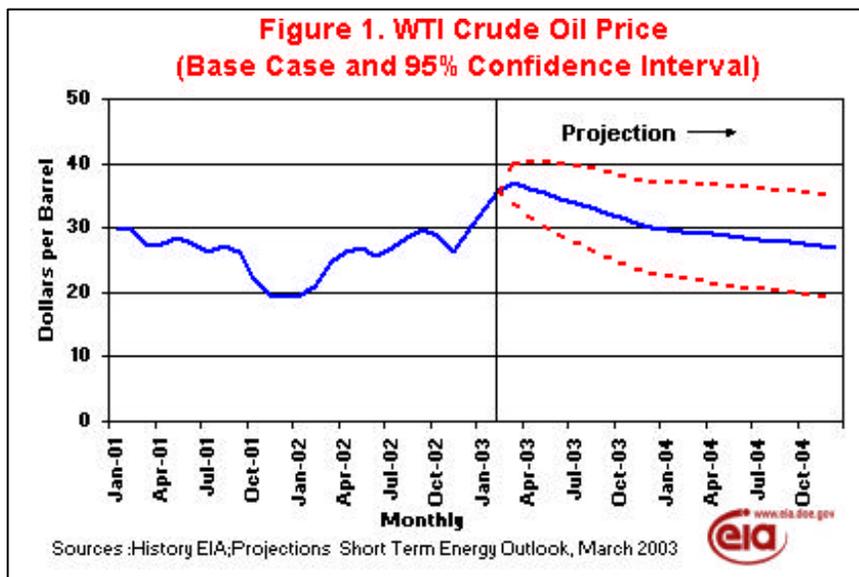


Short-Term Energy Outlook

March 2003

Overview



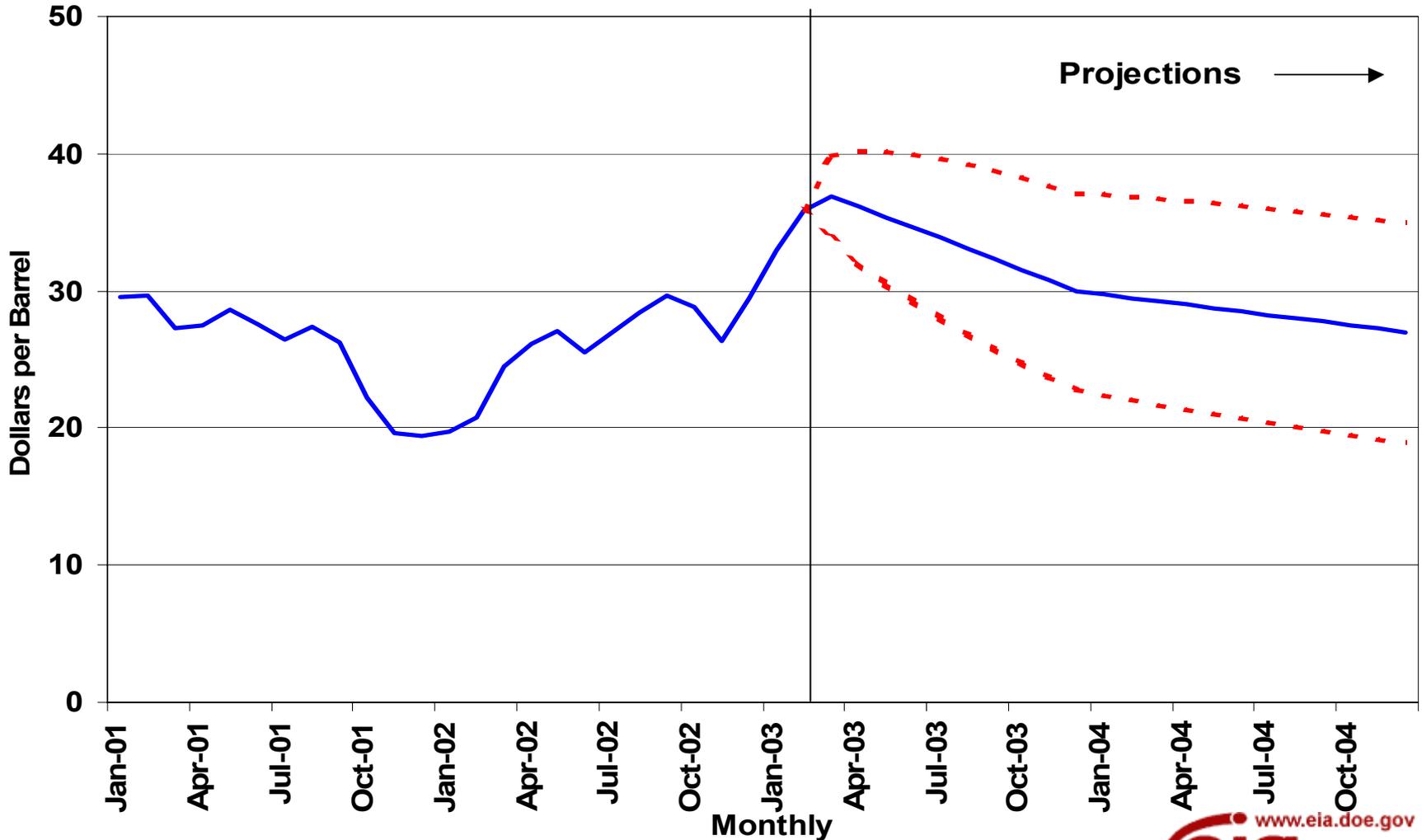
World Oil Markets. February crude oil prices moved higher than expected pushed by fears of a war in Iraq, low inventories, slow recovery in Venezuelan exports, continued cold weather and sharply higher natural gas prices in the United States. West Texas Intermediate prices averaged close to \$36 for the month (Figure 1), a level not seen since October 1990. Oil inventories continued lower through the month resulting in a cumulative reduction in total commercial stocks of 101 million barrels since September 30, 2002, the beginning of the heating season. Total OECD inventories

reached an estimated 2,424 million barrels at the end of February, which would be the lowest level since March 2000. The current situation reinforces our view that, even without additional disruptions to world supply in the near term, prices are likely to remain on the high side and subject to substantial volatility through 2003 because of the abnormally high stock build rates that would be required to bring about the kind of oil market balance that is consistent with WTI prices well below \$30 per barrel.

U.S. Natural Gas Markets. What originally was characterized as a low probability event at the outset of the heating season came to pass as domestic natural gas spot prices spiked higher in late February and early March. Cold weather drove underground storage levels in the East to the lowest level for that period since at least 1993. Surges in natural gas heating demand and electricity output also fueled natural gas demand growth during the first quarter. Tight oil markets exacerbated the pressure on natural gas demand as the Mid Atlantic region experienced an extraordinarily strong marginal tilt toward fuel oil. In fact, Mid Atlantic spot natural gas prices have recently been almost 100 percent higher than spot prices in New York Harbor for no. 2 fuel oil on a dollars-per-million btu basis. Assuming normal weather conditions in March, end-of-season (March 31) working gas in storage is expected to reach a level below the previous minimum of 741 billion cubic feet seen in 2001. Relatively modest swings in demand or supply relative to expected storage levels may produce significant price volatility under these circumstances. On the other hand, strong oil and gas field revenues should contribute to strong increases in drilling this year over 2002 levels. With the above-normal requirements for storage re-injection now looming on top of expected increases in consumption, the United States is going to need as much new supply as it can get to promote short-term market conditions conducive to lower and more stable natural gas prices by next winter.

Heating Fuels Update. Weather in February was almost 10 percent colder than normal for the Northeast and 28 percent colder than in February 2002. This pattern of concentrated cold in the Northeast is matched with relatively milder conditions elsewhere. The U.S. population-weighted and natural gas-weighted totals for heating degree-days have, thus far, season been between 3 and 4 percent above normal. For the

Figure 1. WTI Crude Oil Price (Base Case and 95% Confidence Interval)



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



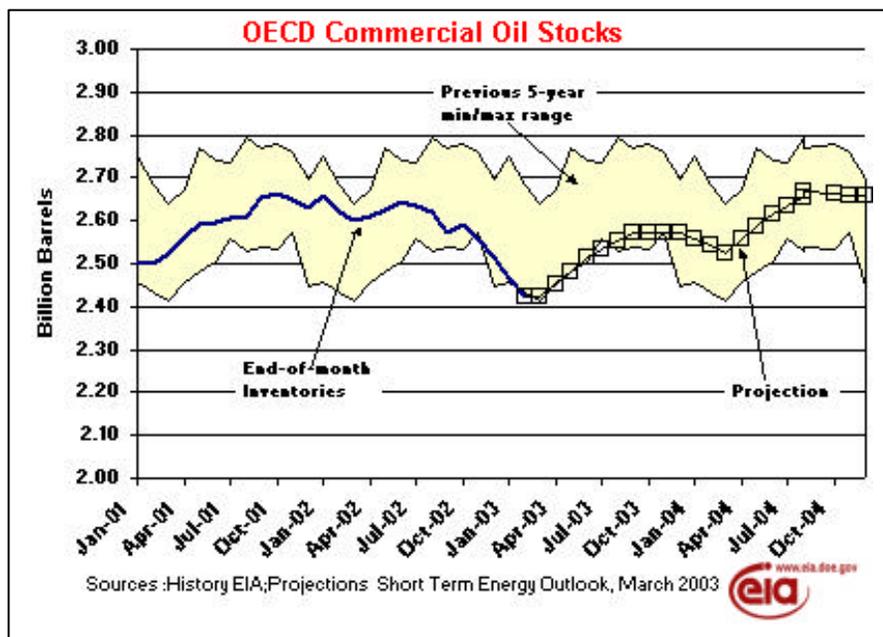
October-February period, Northeast heating degree-days have been about 12 percent above normal and 35 percent above year-ago levels. Usage has therefore been high for heating oil users because of weather-related demand and, since heating oil prices are up substantially as well, expenditures by heating oil customers have been high. While most consumers in major heating regions of the country have seen noticeably higher heating bills this winter, heating oil customers have seen the greatest increases from last year. Normal temperatures through the remainder of the heating season would imply the following increases in household heating expenditures for the winter season (October-March) compared to the 2001-2002 winter: natural gas: 30 percent; heating oil: 60 percent; propane: 25 percent; electricity: 11 percent.

Details

International Oil Markets

Crude Oil Prices. A number of forces could cause substantial price volatility in oil markets during the coming months. Collectively, the continued loss of much of Venezuela's oil exports and the risk of increased tensions in the Middle East could cause oil prices to spike at least temporarily above our base case. Although the Venezuelan general strike has ended, the strike against the oil sector continues and the recovery in production and exports of crude and products has been slow. If the oil strike is prolonged and tensions in the Middle East continue the chance of a price spike will remain high.

Key oil price indicators rose again last month in response to events in Iraq and Venezuela, although only the West Texas Intermediate (WTI) crude oil spot price rose as sharply as in previous months ([Figure 1](#)). The WTI spot price averaged almost \$3 per barrel higher in February than January, following increases of over \$3 per barrel in December and January. The February average WTI spot price of \$35.83 per barrel was just slightly under the \$36.04 per barrel reached in October 1990. The OPEC Basket and Brent spot crude oil prices also rose, but the increases, which averaged \$1.30-\$1.60 per barrel in February, were less than the \$2-\$4 per barrel increases for these prices in December and January and less than the increases for the WTI spot price as well.



The differing price responses reflect differing supply conditions in the United States and other parts of the world. Commercial oil inventories in the United States are considerably below their average range, with crude oil inventories near their estimated lower operational inventory level. These tight supplies are reflected in the WTI, which serves as the marker crude oil price for the western hemisphere. The inventory situation in Europe, where Brent is the marker crude oil, is less constrained. In addition, OPEC production has also been increasing rapidly since last December, with

the increased supplies also reducing upward price pressures.

The OPEC basket price averaged \$31.64 per barrel, marking the third consecutive month that it was above OPEC's target range of \$22 - \$28 per barrel. Prices have remained above the \$22 per barrel target price since March 2002. Even with an assumed end to the turmoil in Venezuela and Iraq, the monthly average OPEC basket price is projected to be slightly above OPEC's target range until later this year and then remain within the range through the rest of the forecast period.

International Oil Supply. OPEC 10 production increased by 1.4 million barrels per day in February, led by the partial restoration of 800,000 barrels per day in Venezuelan production and by increased production in Saudi Arabia. With this increase, OPEC 10 production was 24.5 million barrels per day in February – the same level it was at in November prior to the advent of the Venezuelan oil strike. This was also the new target production level for the month that OPEC had set for its members in January, although every country except Indonesia and Venezuela produced considerably more than their quota in order to offset the loss of Venezuelan oil supplies. The *Outlook* assumes that Iraqi production, which is not governed by OPEC quotas, will continue to fluctuate around their recent levels of 2.3 million barrels per day.

Should tensions in the Middle East increase, OPEC has indicated that it would suspend all production quotas. OPEC President Abdullah al-Attiyah sought to reassure world oil markets by indicating that OPEC would probably pump at capacity if necessary. EIA estimates that spare world oil production capacity in March outside of Iraq and Venezuela could be as low as 1.5 million barrels per day. (Spare capacity is defined as the amount of additional production that can be brought on line within 30 days and be sustained for at least 90 days.) Additionally, Kuwait has indicated that should tensions spread to its borders, it would temporarily shut down production from some fields.

Even if the situations in Venezuela and Iraq are resolved without further oil disruptions, the additional pressure on OECD commercial inventories since early December will likely cause oil stocks to remain near the lower end of the 5-year min/max range through most of 2003 ([Figure 2](#)). Months may also be needed to reach full Venezuelan production levels, resulting in new 5-year lows in OECD commercial inventories in the second quarter.

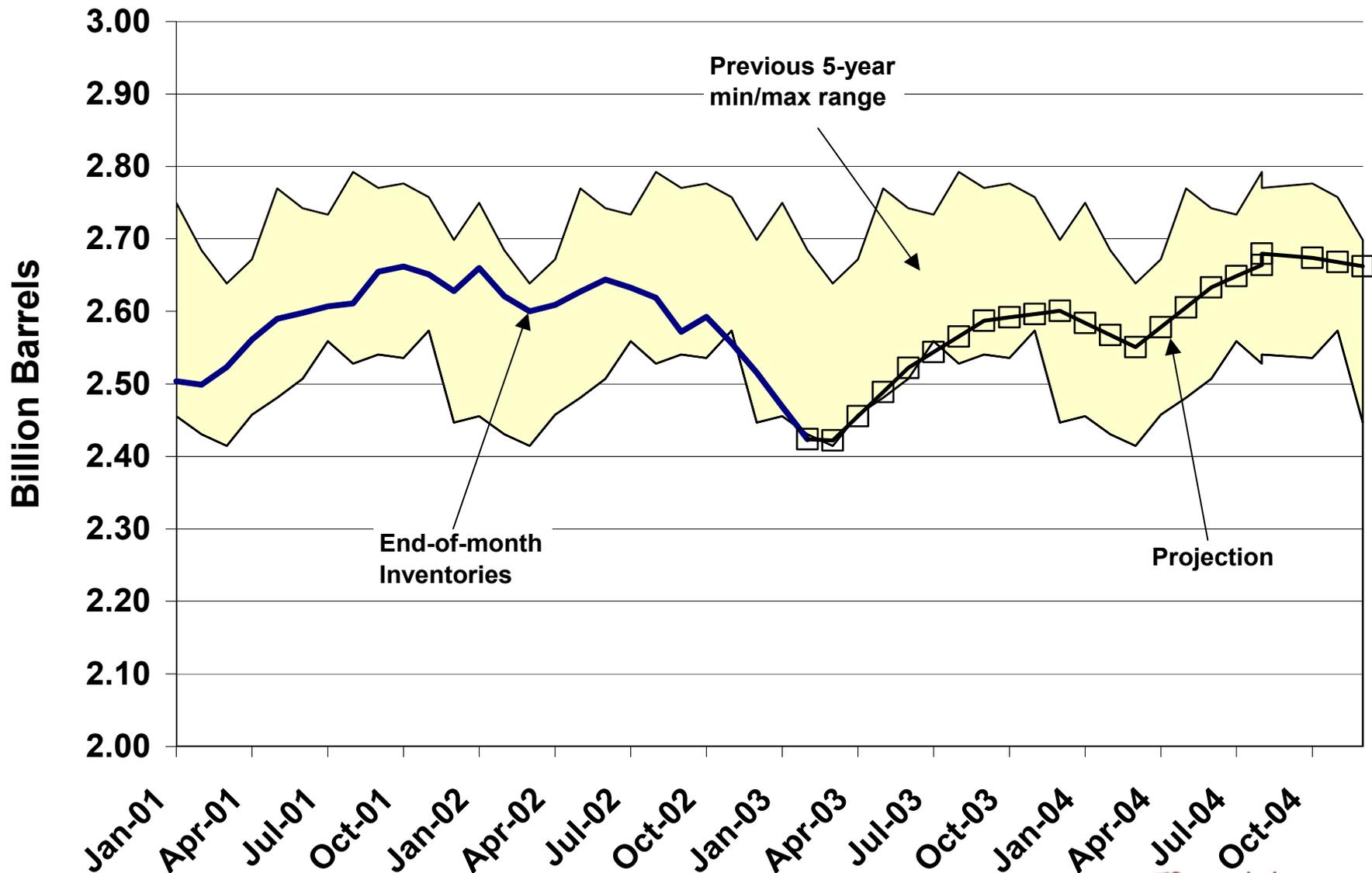
International Oil Demand. EIA projects that the U.S. economy will grow by 2.9 percent in 2003 (compared to 2.4 percent growth in 2002) contributing to the recovery of U.S. oil demand. About 40 percent of the 1.1 million barrels per day growth in world oil demand in 2003 is projected to come from the U.S., with China and other non-OECD countries projected to provide a total of another 0.5 million barrels per day of demand growth next year. As world economic growth continues in 2004, led by a projected 4.4 percent per year increase in the U.S. economy, world oil demand growth could increase as well by 1.3 million barrels per day ([Figure 3](#)).

U. S. Energy Prices

Average crude oil prices (WTI) for February 2003 were more than \$16 per barrel higher than the February 2002 average price. We have already seen much of this increase being passed on through to the end-use products.

Motor Gasoline: The price of regular unleaded gasoline averaged approximately \$1.66 per gallon in the last half of February, or only 5 cents per gallon lower than the record nominal price set during the first half of May 2001. (Of course, adjusted for inflation, these prices are below the all-time record March 1981 price of nearly \$2.90 per gallon expressed in today's dollars). With the driving season beginning next month, pump prices are expected to continue to rise. Even if crude oil prices recede from recent highs, we expect to see regular motor gasoline pump prices averaging about \$1.70 per gallon during the driving season (April through September), with prices peaking at about \$1.76 in April ([Figure 4](#)). Refiner margins (the difference

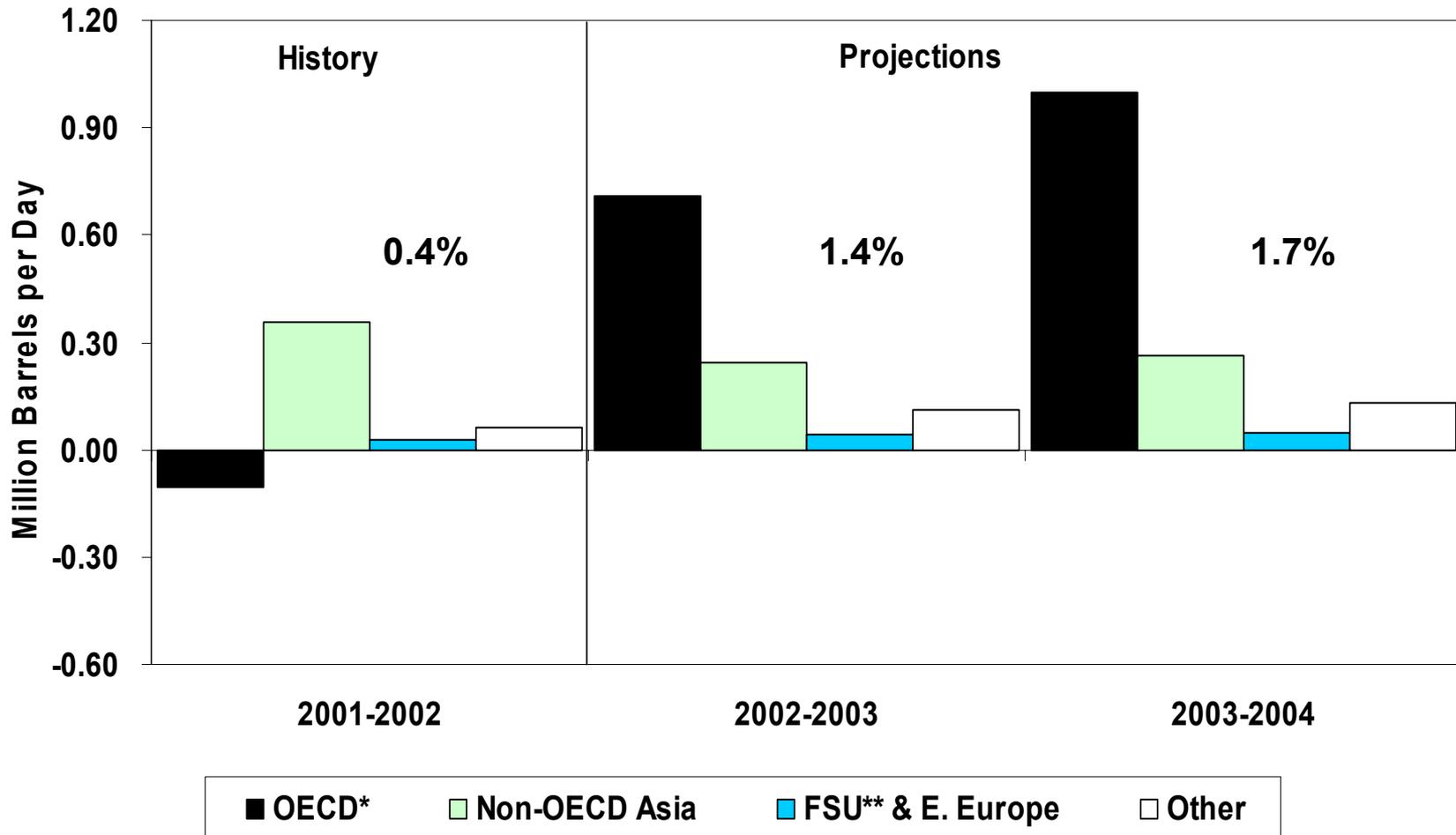
Figure 2. OECD Commercial Oil Stocks



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Figure 3. World Oil Demand Growth (Change from Year Ago)



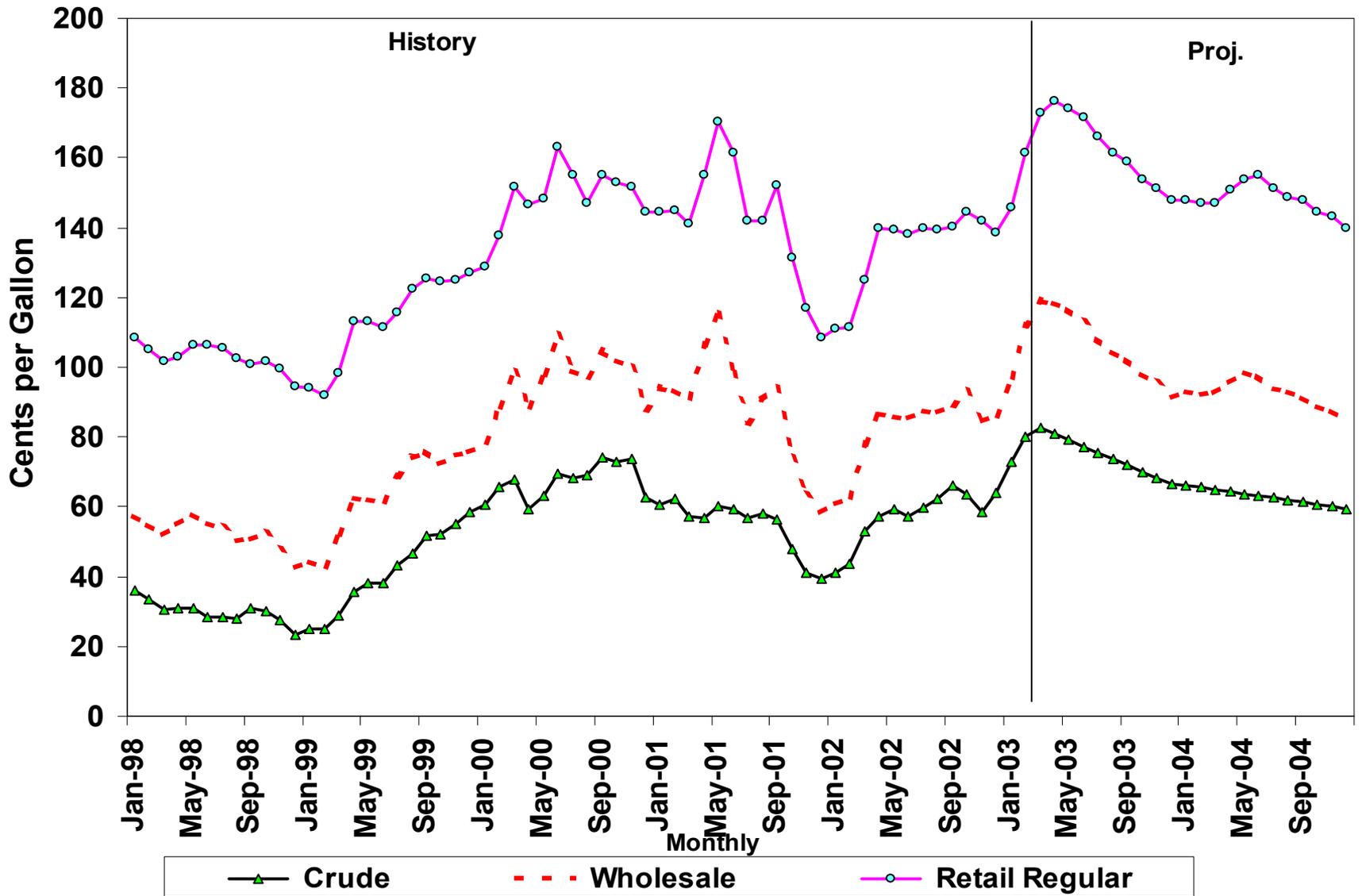
* Note: OECD now defined to include the Czech Republic, Hungary, Mexico, Poland and South Korea in EIA's statistics.

** FSU = Former Soviet Union

Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Figure 4. Gasoline Prices and Crude Oil Costs



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003



between the refiner price of gasoline and the refiner acquisition cost of crude oil), which were slim this past summer, are expected to recover over the next two driving seasons, as demand for gasoline rises and as the cost of producing gasoline increases ([Figure 5](#)).

At the end of February, gasoline inventories moved toward the lower end of the 5-year min/max range ([Figure 6](#)), which is one of the reasons current pump prices are high.

Given our base case crude oil price projections, pump prices are expected to increase by 28 cents per gallon on an annual basis to over \$1.60 per gallon in 2003. This projection is partly indicative of the projected rebound in refiner margins from relatively weak levels last year. In 2004, the annual average pump price is projected to decline by about 13 cents per gallon, falling along with the expected \$5.00 per barrel (12 cents per gallon) drop in crude oil prices that is expected to follow upon movement toward more normal levels of commercial petroleum inventories.

Distillate Fuel Oil (Heating oil and Diesel Fuel): Residential heating oil prices this winter are expected to peak in March at an average of \$1.65 per gallon. These prices normally peak during January or February, when the weather is usually the coldest. However, a confluence of factors, most notably the rising crude oil prices but also recent cold weather, which depleted distillate inventories, have pushed home heating oil prices up by nearly 50 cents per gallon this February compared to a year ago. In addition, fuel switching from natural gas in the electric utility and industrial sectors is suspected of contributing to strength in the no.2 fuel oil market since natural gas has been very expensive and in short supply. At the end of February, distillate fuel oil inventories were at about 96 million barrels, a figure well under the lower band (108 million barrels) of the 5-year min/max range ([Figure 7](#)). The heating oil price spike in the first quarter of 2003, a higher crude oil price path projected for the year, plus continued low levels of distillate stocks throughout the year are behind EIA's estimate that annual average retail prices for both heating oil and diesel fuel in 2003 will be about 25 cents per gallon higher than in 2002 ([Figure 8](#)).

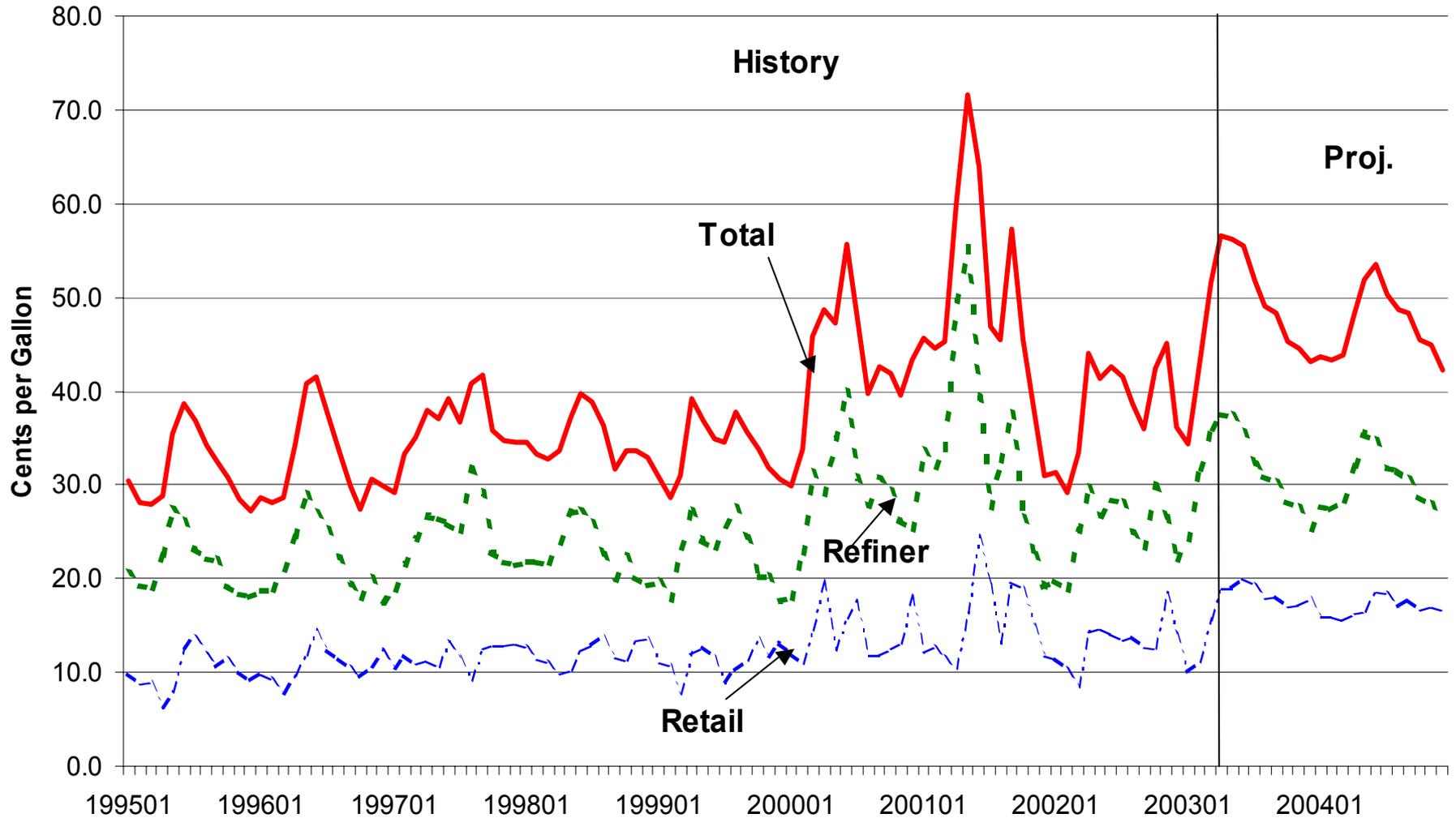
Natural Gas: The spot price of natural gas at the Henry Hub closed above \$18.00 per million btu during the third week of February due to low storage levels and cold weather. Although these prices have abated, they remain well above \$7.00 per million btu because cold weather over the course of the last several weeks has pushed underground storage to low levels ([Figure 9](#)). By the end of February, working gas in storage stood about 52 percent below end-February 2002 and 38 percent below the previous 5-year average. Natural gas prices will likely stay high well into spring.

We project that natural gas wellhead prices this winter (October through March) will average about \$4.45 per thousand cubic feet (mcf), or about \$1.90 (79 percent) above last winter's price. In 2003, wellhead prices are projected to show an increase of about \$1.90 per thousand cubic feet over the 2002 annual average, boosting the price for the year to \$4.80 per thousand cubic feet. On an annual basis, this price would be a record in both nominal and real terms ([Figure 10](#)). This projection is based on the expectation of lower volumes of underground gas in storage for all of this year compared with last year. High oil prices and continued increases in total demand (particularly in the first quarter) over 2002 levels and substantial growth in industrial demand throughout the year should keep natural gas wellhead prices at high levels.

U. S. Oil Demand

U.S. oil demand is expected to grow by 500,000 barrels per day to 20.2 million barrels per day in 2003. Similar growth is expected in 2004 ([Figure 11](#)). In contrast to the diverse demand patterns in 2002, all of the major fuel categories are expected to grow. The economic recovery and increasing supply/demand tightness in natural gas markets are expected to contribute to broad demand growth over the next two years. Motor gasoline demand is projected to increase at an average 2.5 percent per year, as the impact of the average 4.4 percent increase in real disposable income is offset partly by the strong increase in retail

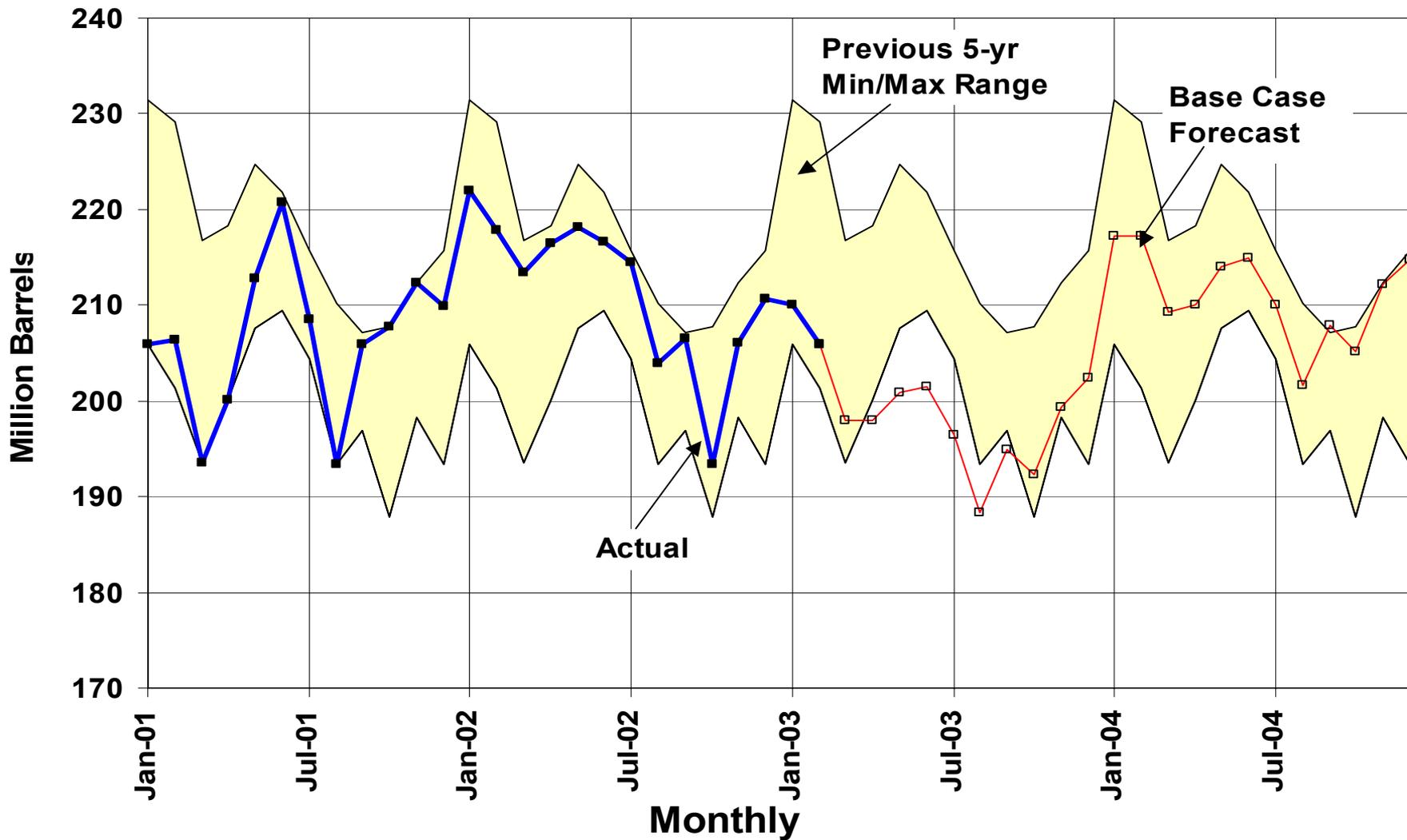
Figure 5. Motor Gasoline Spreads



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



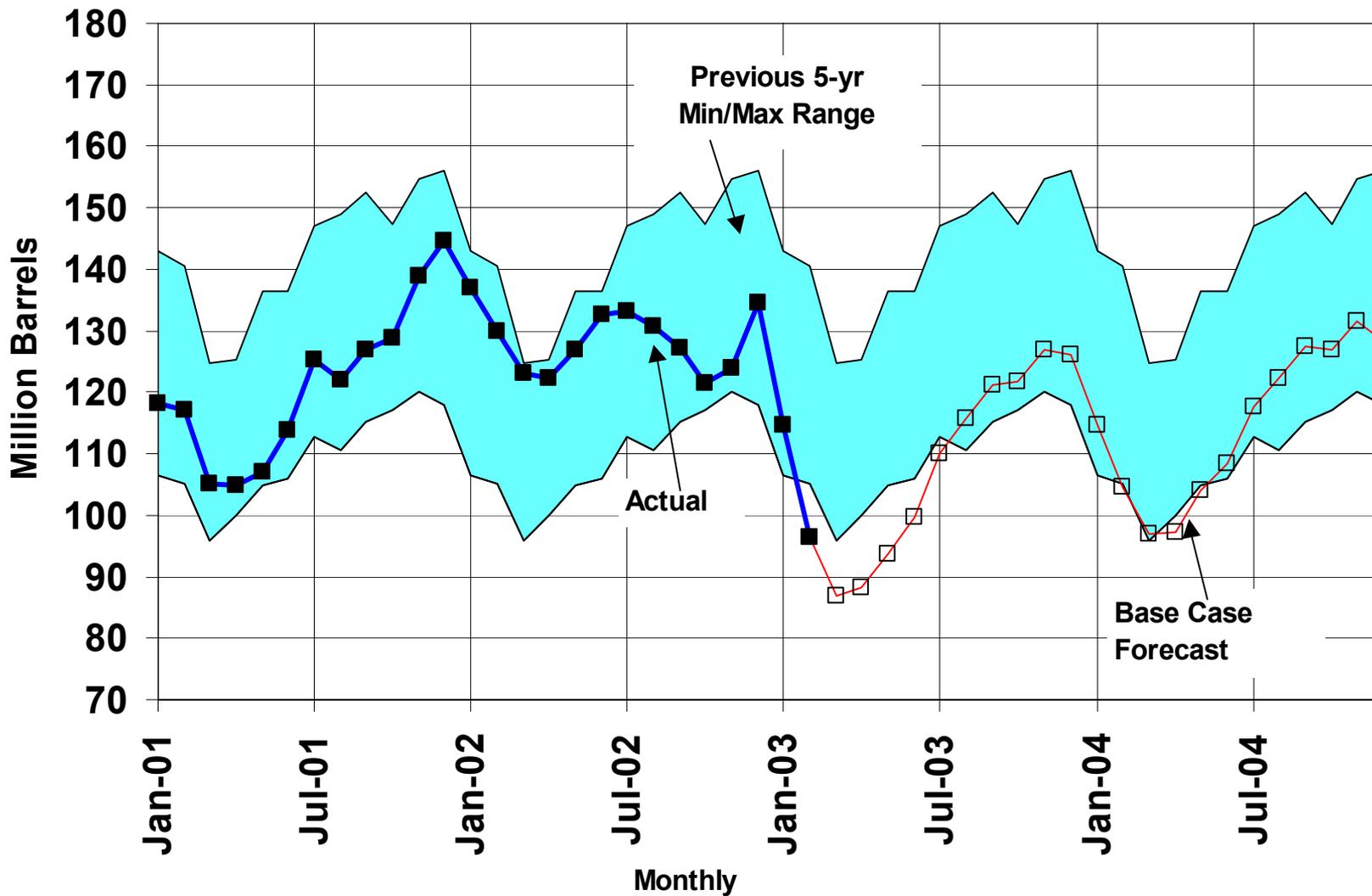
Figure 6. U.S. Gasoline Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



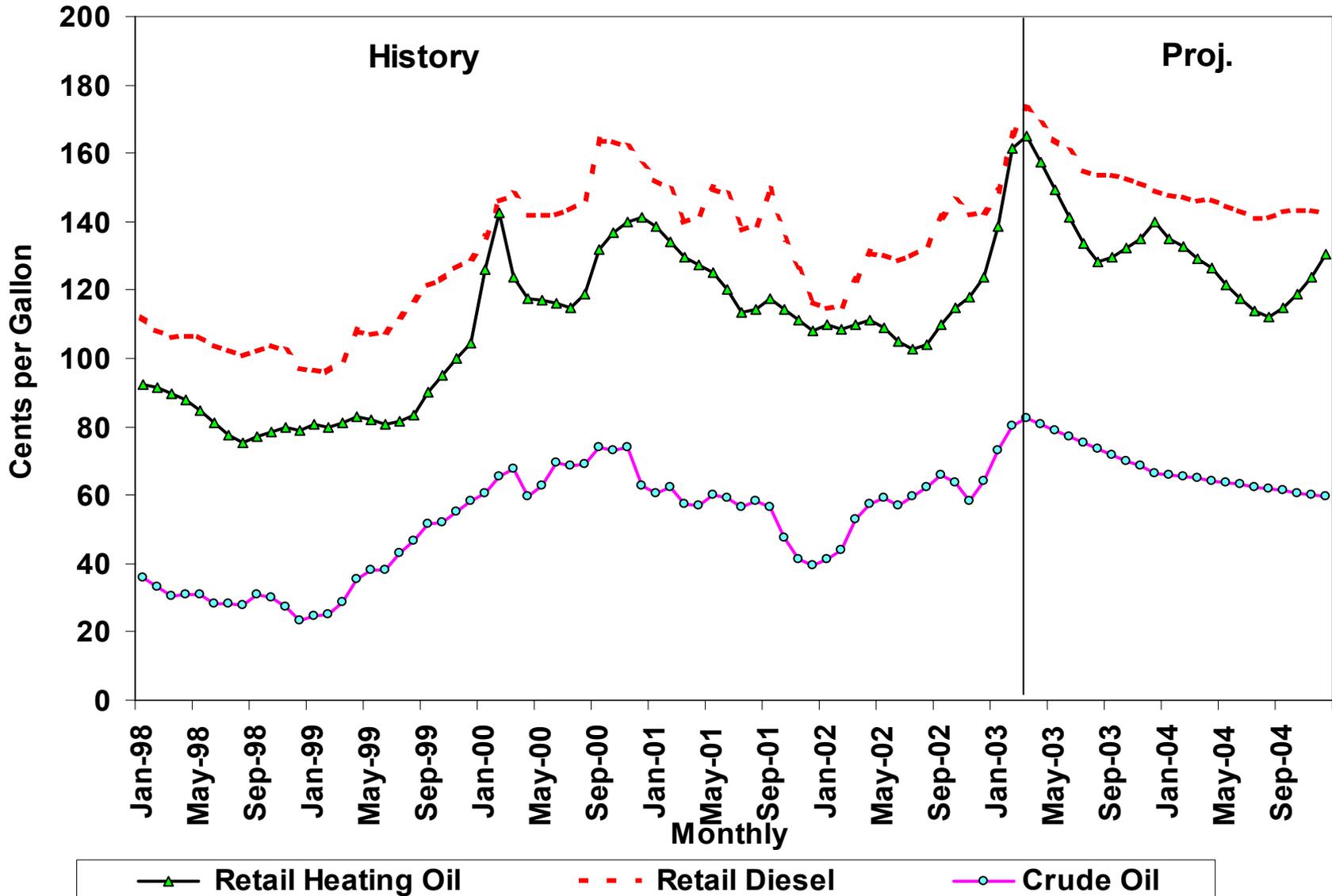
Figure 7. Distillate Fuel Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



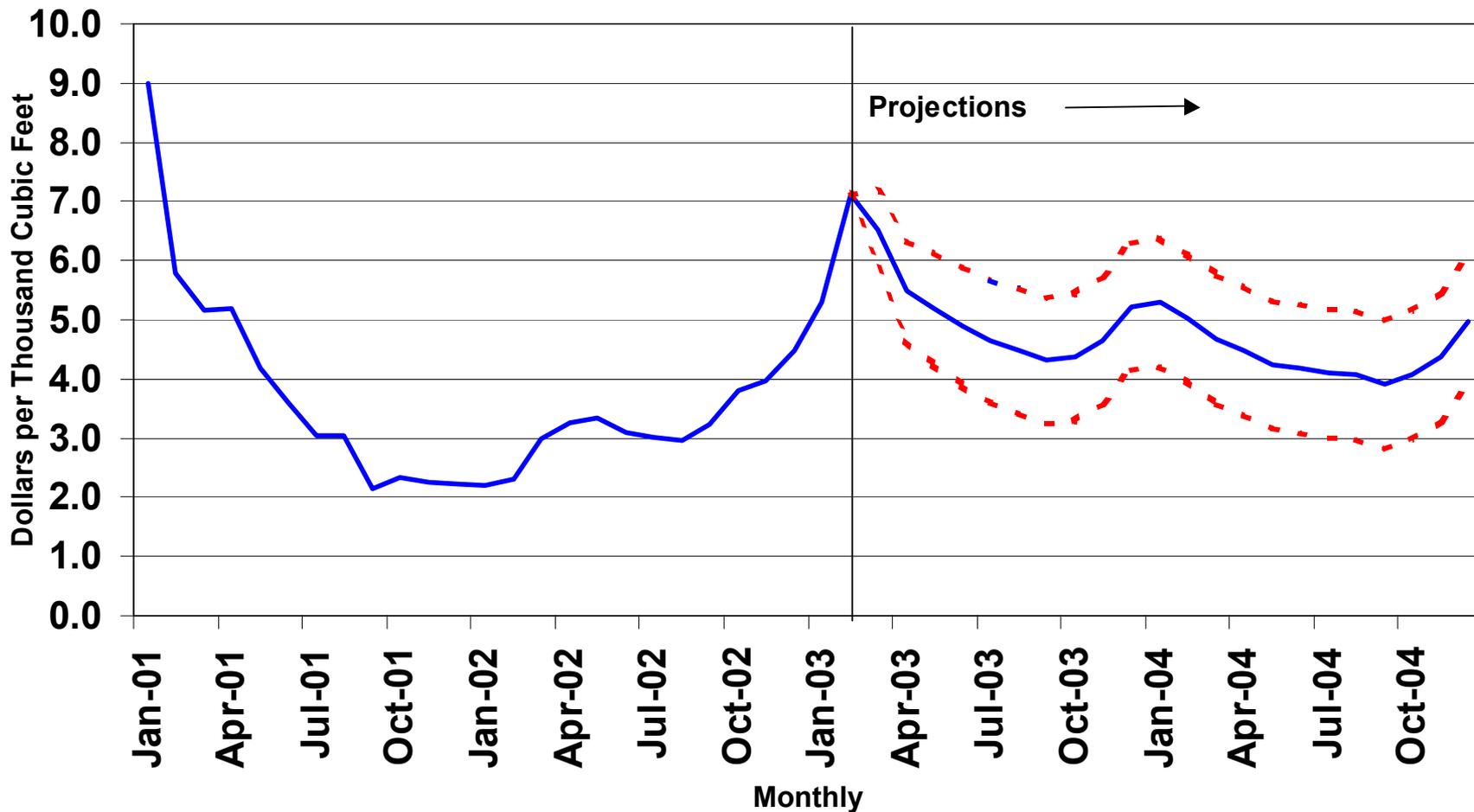
Figure 8. Distillate Fuel Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



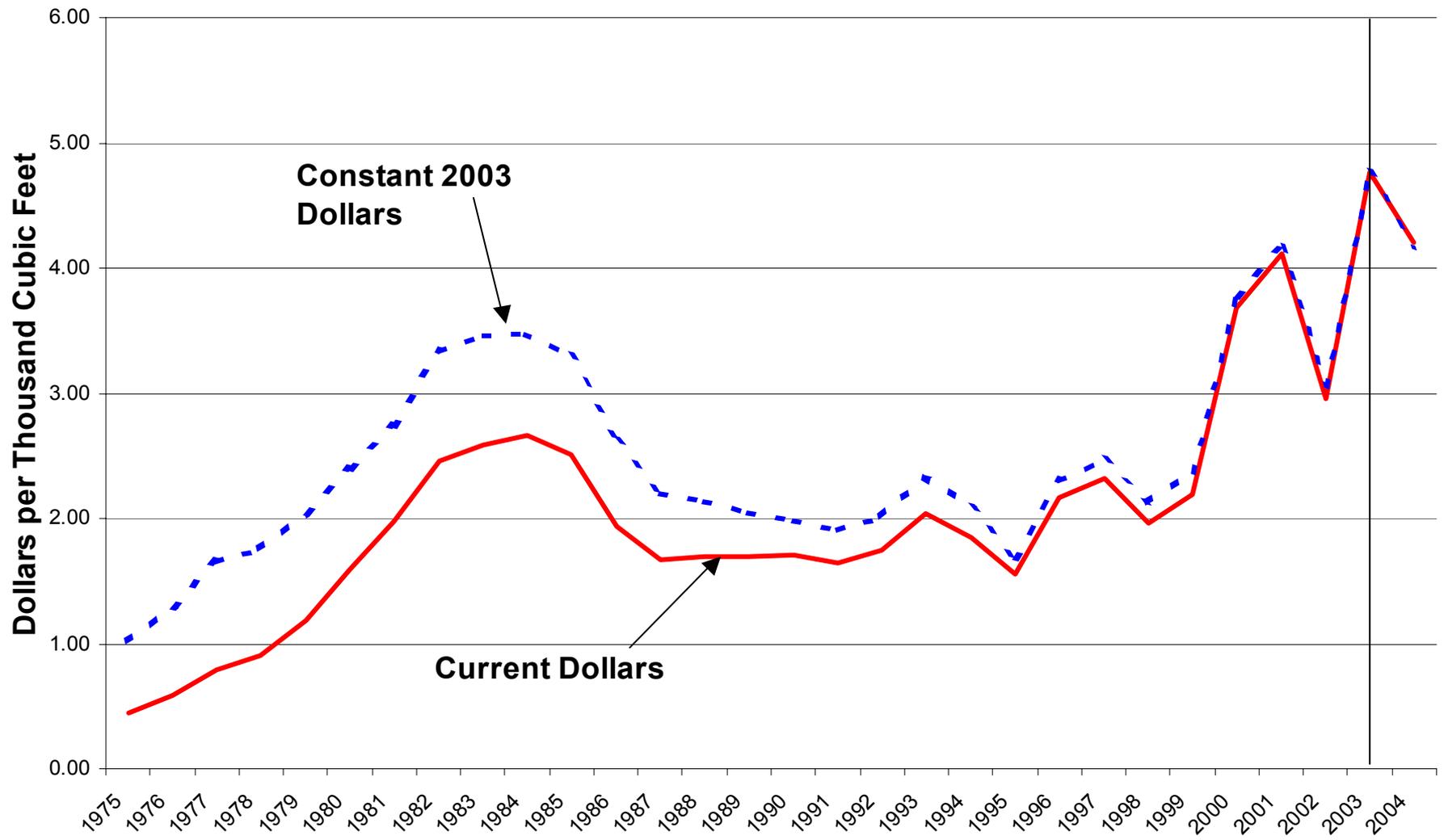
Figure 9. Natural Gas Spot Prices (Base Case and 95% Confidence Interval)



Sources: History: Natural Gas Week; Projections: Short-Term Energy Outlook, March 2003.

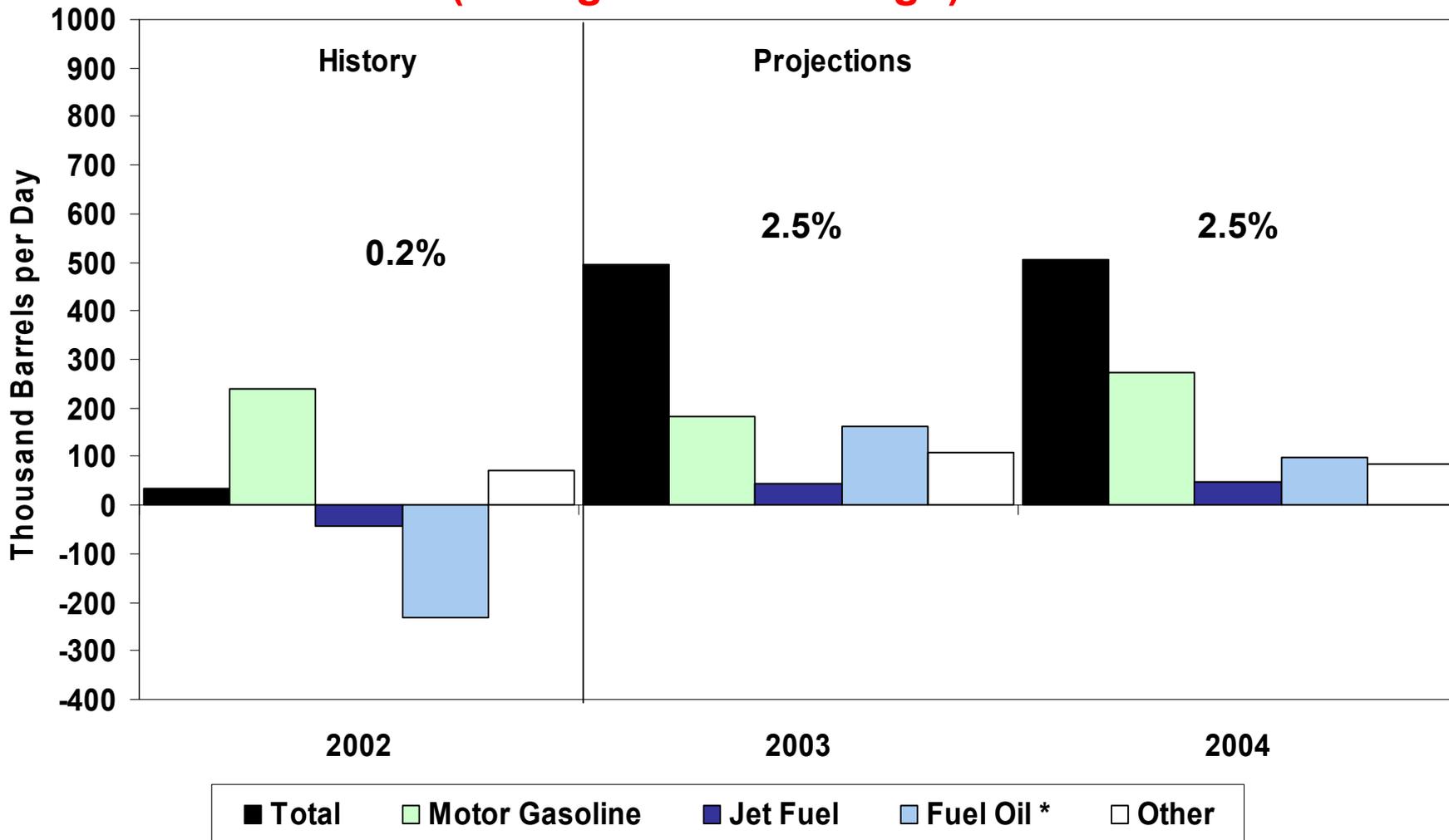


Figure 10. Annual Natural Gas Wellhead Prices: Nominal and Real



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003

Figure 11. Petroleum Products Demand Growth (Change from Year Ago)



* Sum of distillate and residual fuel.

Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



gasoline prices this year. Jet-fuel demand is projected to rise steadily at an average 2.9 percent per year, reflecting the almost 4-percent annual expansion of aircraft capacity and continued fleet-wide fuel efficiency increases. By the end of 2004, both capacity and utilization levels will have equaled or exceeded those reached just prior to the events of 9/11. Distillate fuel oil demand, boosted by the current cold weather in the Northeast as well as accelerating growth in industrial output, is expected to increase at an annual average rate of 5.1 percent this year but a much slower 1.5 percent in 2004. The robust increase projected for the current year stems largely from the contrast between substantial declines in both weather- and transportation-related demand in 2002 and strong weather-related and fuel-switching demand seen in early 2003. Liquefied petroleum gas demand in the current year is projected to rise by about 3.5 percent due to heating generated demand in the first quarter, but should post only modest gains in 2004 as weather factors subside.

U.S. Oil Supply

Average total domestic oil production is expected to decrease by 60 thousand barrels per day or 1.0 percent in 2003, to a level of 5.76 million barrels per day. For 2004, a 2.9 percent decrease is expected with an average production rate of 5.59 million barrels per day for the year ([Figure 12](#)).

Lower-48 States oil production is expected to decrease by 39 thousand barrels per day to a rate of 4.79 million barrels per day in 2003, followed by a decrease of 154 thousand barrels per day in 2004. Oil production from the Mars, Mad Dog, Na Kika, Ursa and Dianna-Hoover Federal Offshore fields is expected to account for about 8.0 percent of the lower-48 oil production by the 4th quarter of 2004.

Alaska is expected to account for 17 percent of the total U.S. oil production in 2004. Alaskan oil production is expected to decrease by 2.1 percent in 2003, with a further decrease of 1.1 percent in 2004. The combined production rate from the two significant satellite fields, Alpine and North Star, averaged nearly 160 thousand barrels per day during December 2002. Production from the Kuparuk River field plus like production from West Sak, Tabasco, Tarn and Meltwater fields is expected to remain at an average of 215 thousand barrels per day over the 2003 and 2004 forecast periods.

Natural Gas Supply and Demand

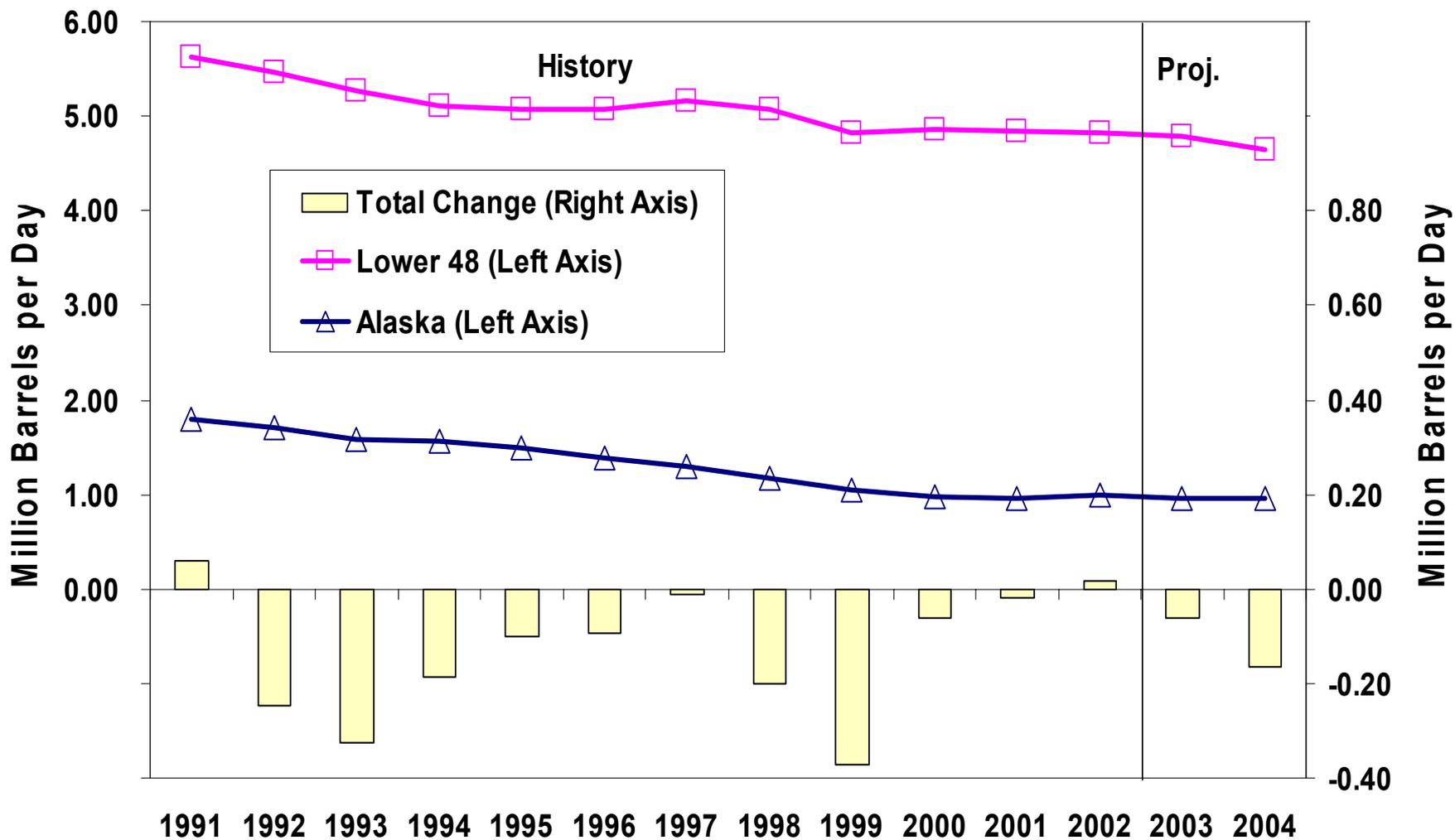
A solid 3.7 percent growth in natural gas demand is projected in 2003, particularly if the industrial sector as a whole expands significantly as expected ([Figure 13](#)). Sharply higher weather-related demand is already a fact for January and February. In 2004, natural gas demand is projected to continue to rise as industrial demand continues its recovery from its 2002 lows.

Natural gas demand this winter is expected to be almost 9 percent above last winter's level, largely due to the fact that natural gas consumption-weighted heating degree-days for the heating season (Q4 2002 and Q1 2003) will be 13 percent above year ago levels, provided that March posts normal temperatures.

Working natural gas in storage fell to about 838 billion cubic feet at the end of February, or about 42 percent below the 5-year average and 54 percent below the year-ago level ([Figure 14](#)). Eastern region stocks, in particular, are low. Since the current level of natural gas in storage is expected to end the winter season at the relatively low level of 675 billion cubic feet, (56 percent below year-ago), demand for natural gas to refill working gas storage in 2003 will be larger than average.

Low storage levels and peak-day conditions during the last week of February led to severe pipeline restrictions through much of the country, but particularly in the Mid-Atlantic and New England regions, where temperatures have consistently fallen below normal. In general terms, shippers with firm transportation capacity on the Columbia Gas Transmission system, which services numerous local

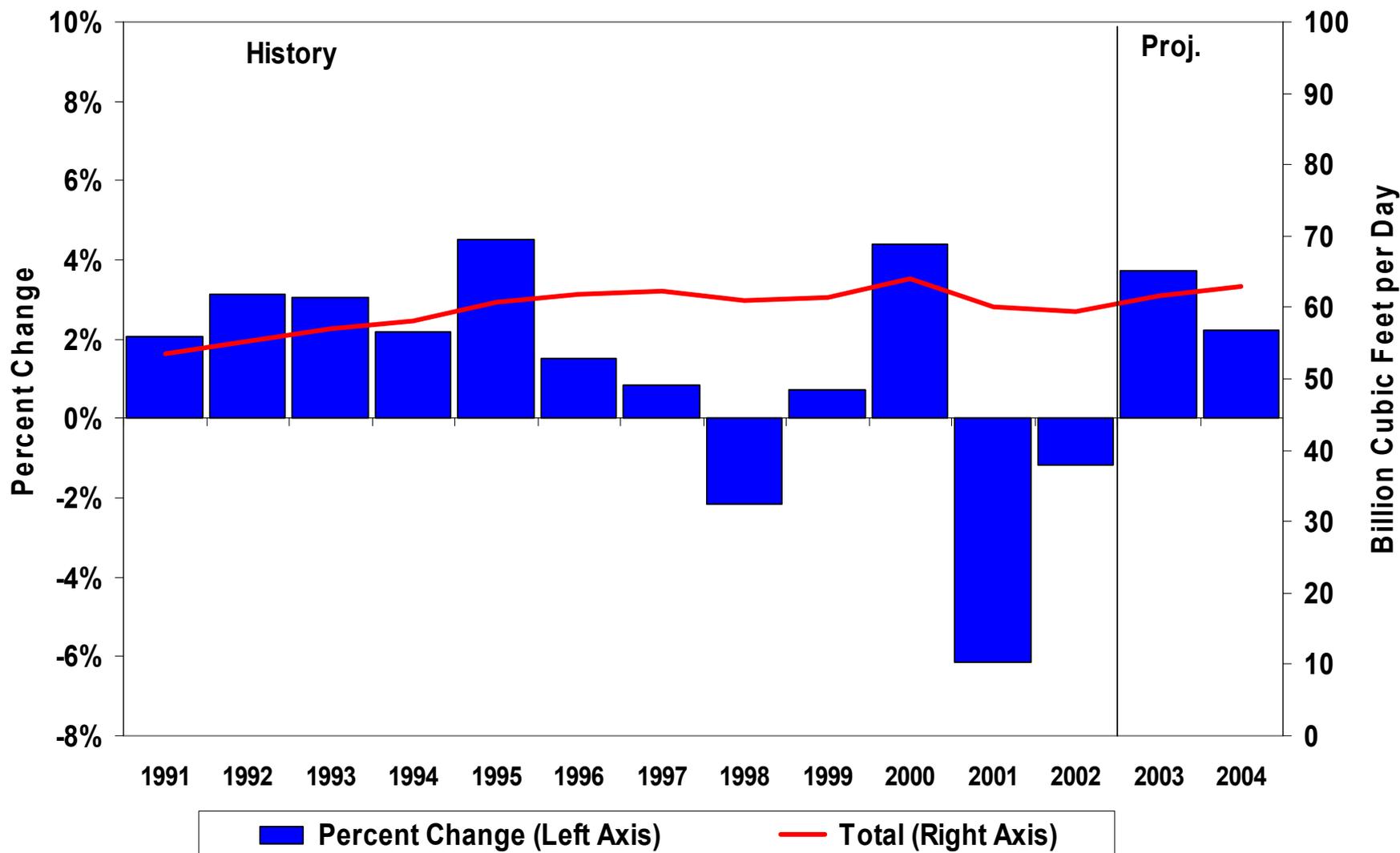
Figure 12. U.S. Crude Oil Production Trends



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



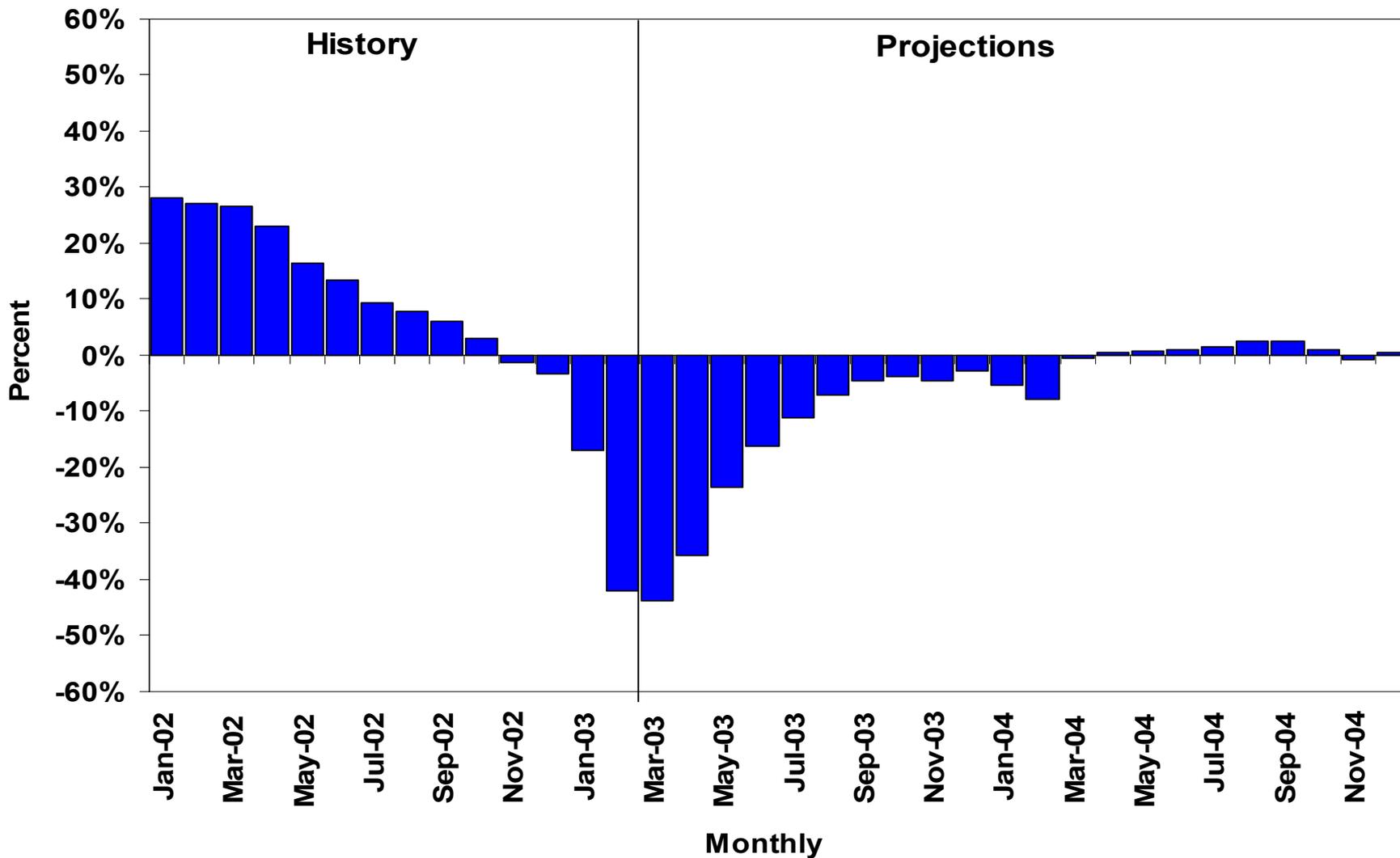
Figure 13. Total Natural Gas Demand Growth Patterns



Note: This chart replaces a previous Figure 12 because of revised data for March 2003.
 Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Figure 14. Working Gas in Storage (Difference from Previous 5-Year Average)



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



distribution companies in the Northeastern United States, must fully utilize their firm transportation capacity at receipt points other than storage prior to withdrawing quantities from storage. This represents a significant restriction that is intended to protect the integrity of pipeline operations due to low storage levels. Across the Columbia system (at least), lines are dedicated to firm service and no interruptible service is available.

Concerns regarding low storage and pipeline restrictions in the face of cold weather, particularly in the Northeast and Mid-Atlantic, are causing volatility in regional spot prices level [\(Figure 15\)](#). The average pipeline price for natural gas going into New York City was \$9.54 for the month of February, easily the highest monthly average price there since January 2001, when the last serious domestic natural gas crunch occurred.

Natural gas production, which fell by about 2.8 percent in 2002, is projected to increase marginally, by 1.2 percent, this year. High natural gas prices and soaring oil and gas field revenues are expected to drive a resurgence in natural gas-directed drilling activity this year following a downturn in 2002 [\(Figure 16\)](#). Monthly oil and gas field revenues could come close to \$500 million this spring for the first time since early 2001 [\(Figure 17\)](#). A continuation of demand growth and high prices into 2004 would be expected to push natural gas drilling totals to near or beyond the high levels seen in 2001. Domestic production growth should accelerate in 2004 but, given recent experience, the extra effort might not result in increases above 2 percent. The prospects for significant reductions in natural gas wellhead prices over the next 2 years from the current high levels could hinge on the productivity of the expected upsurge in drilling in terms of expected output. With demand expected to outpace production growth, natural gas imports are expected to rise.

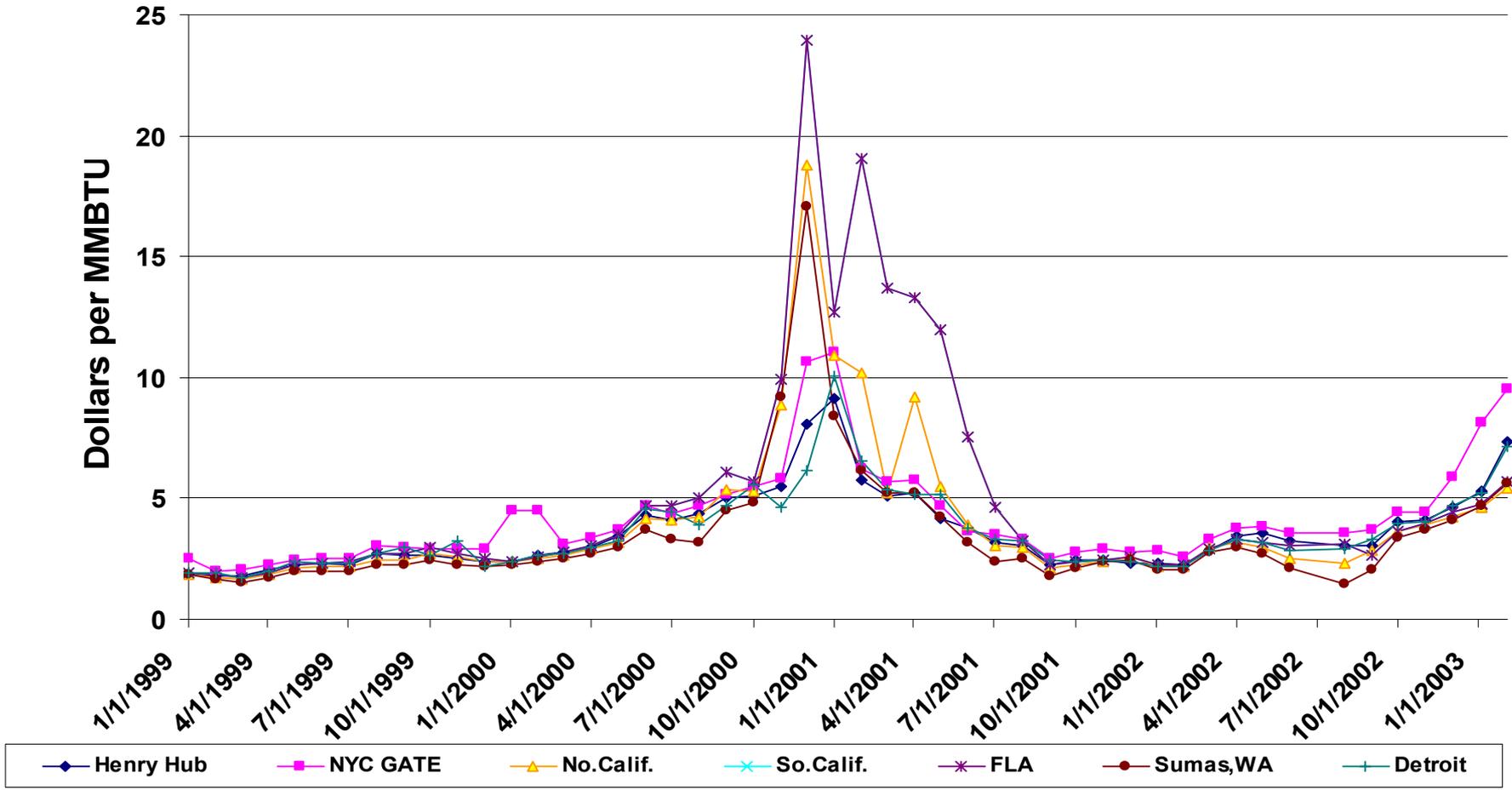
Electricity Demand and Supply

While the 2003 economy is expected to continue to recover, electricity demand is expected to be flat [\(Figure 18\)](#) since little or no net weather-related demand growth would be expected under our assumption of normal temperatures for the remainder of the year. Under normal weather assumptions, spring and summer 2003 electricity demand would be about 1.5 percent lower than comparable 2002 levels. Demand growth of 2.7 percent in 2002 was based on both weather-related and economic-related factors. In 2004, electricity demand is projected to grow by 3.0 percent along with the economy.

Total U.S. electricity demand is expected to increase 4.6 percent this winter compared to last winter, due to continuing growth in the economy, a cold heating season thus far and the assumption that normal temperatures will prevail for the remainder of the winter (March). This winter is expected to be 11 percent colder than last winter.

Natural gas-generated electricity production is expected to drop 1.5 percent in 2003. Oil-generated electricity production also declines 3.7 percent. These gradual declines result from the lower demand across all sectors.

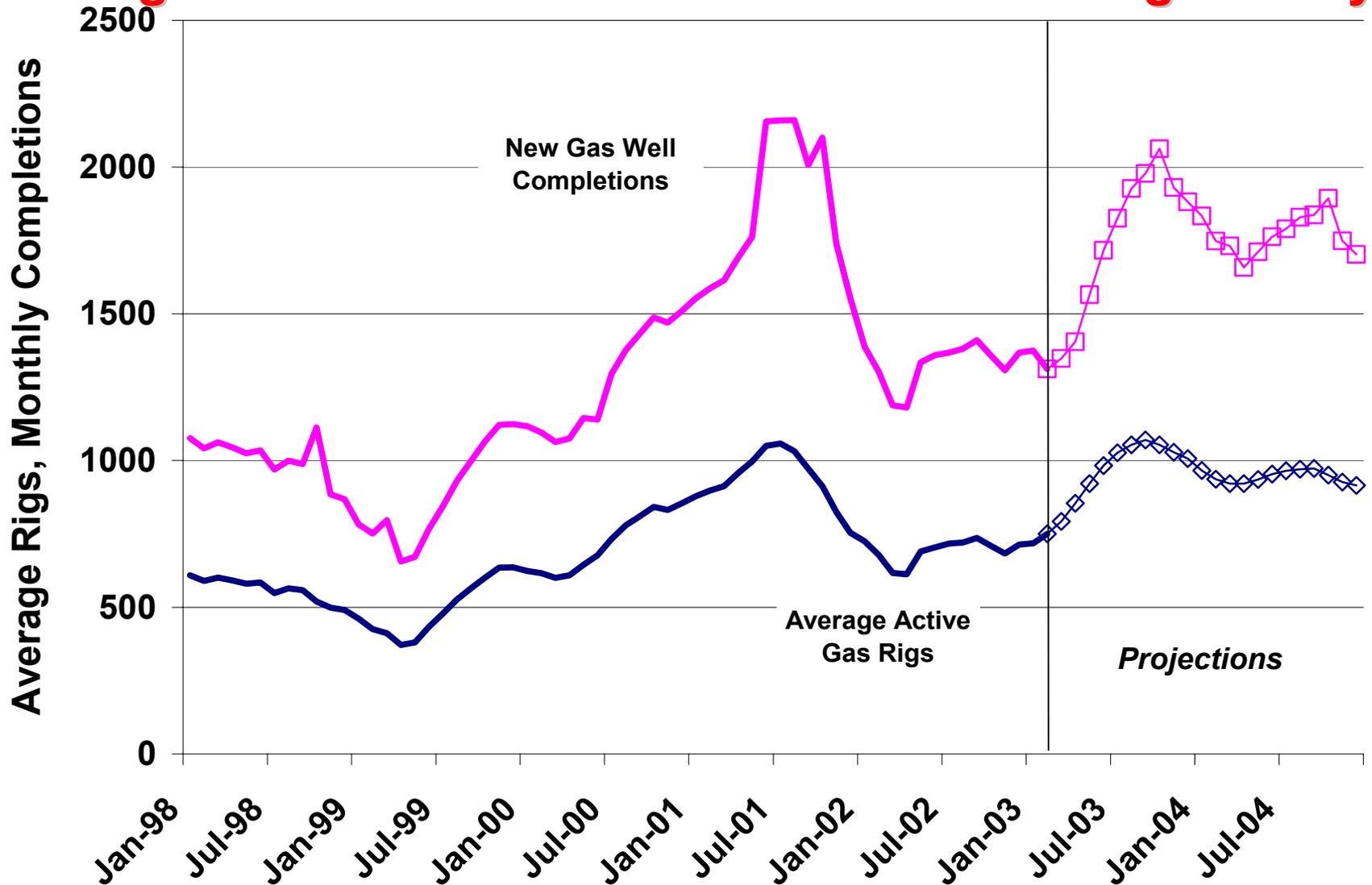
Figure 15 . Selected Natural Gas Spot Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003



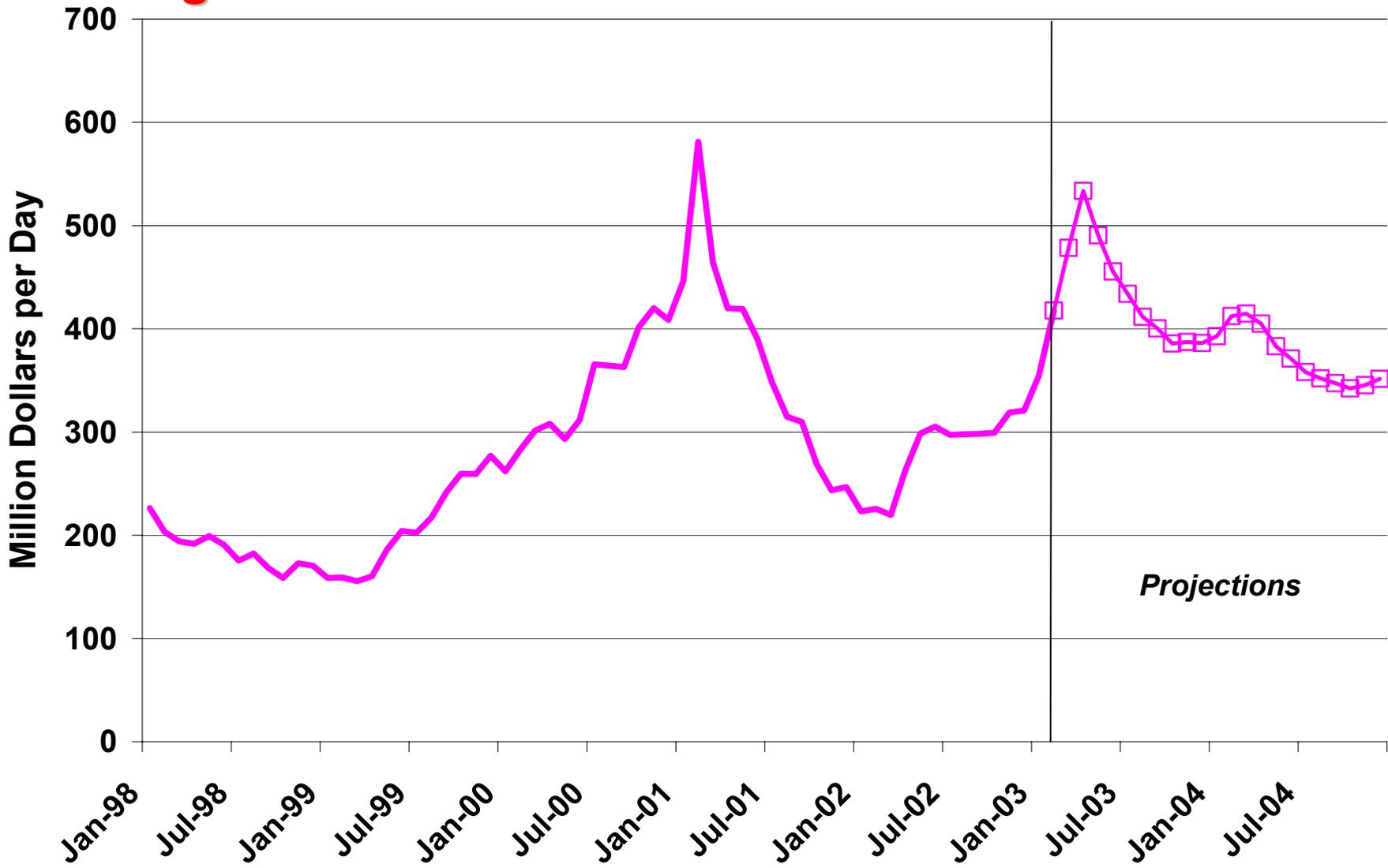
Figure 16. U.S. Natural Gas-Directed Drilling Activity



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Figure 17. U.S. Oil and Gas Production Revenues

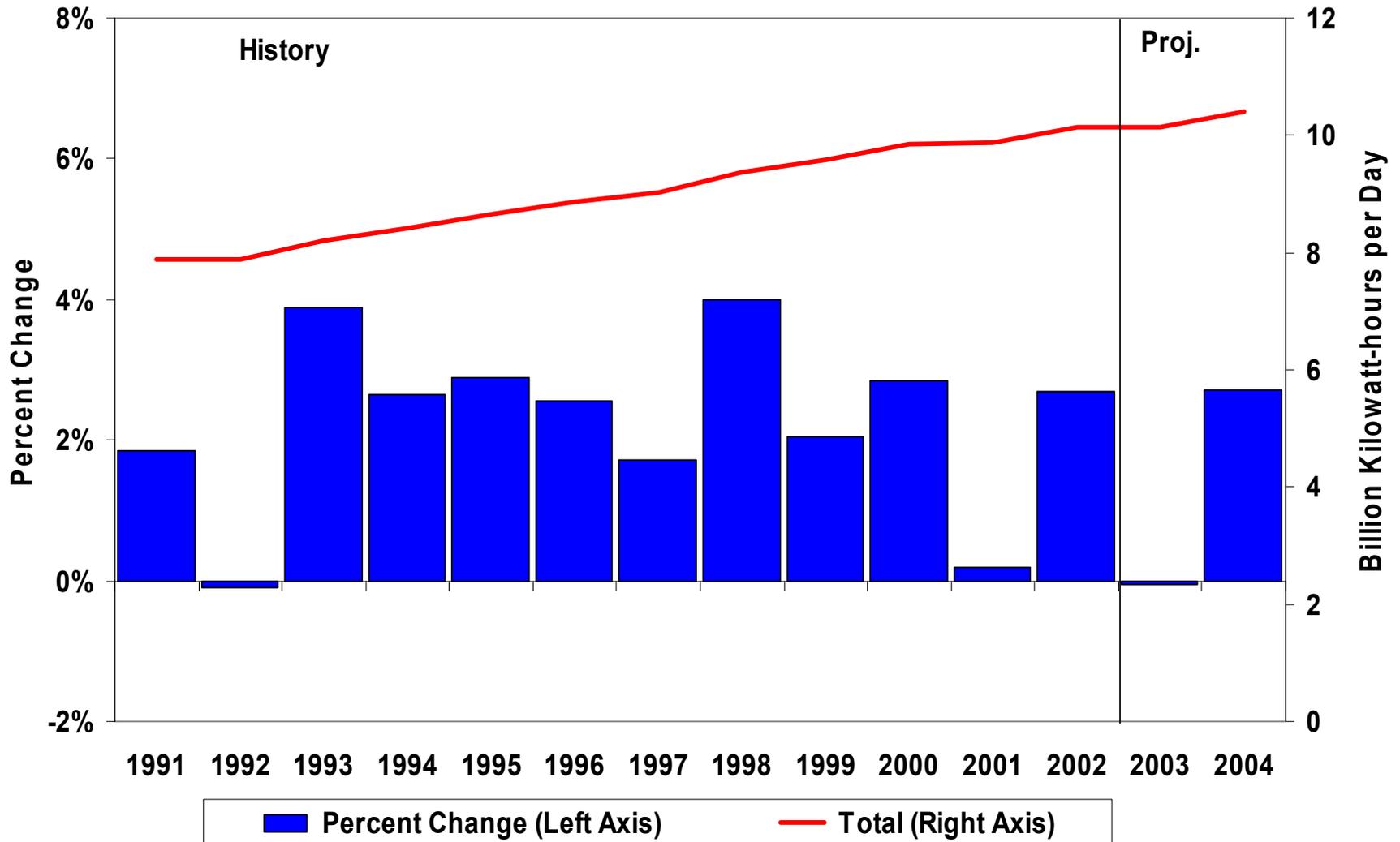


Projections

Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Figure 18. Total Electricity Demand Growth Patterns



Sources: History: EIA; Projections: Short-Term Energy Outlook, March 2003.



Table HL1. U.S. Energy Supply and Demand: Base Case

	Year				Annual Percentage Change		
	2001	2002	2003	2004	2001-2002	2002-2003	2003-2004
Real Gross Domestic Product (GDP)							
(billion chained 1996 dollars)	9215	<i>9436</i>	<i>9713</i>	<i>10138</i>	2.4	2.9	4.4
Imported Crude Oil Price ^a (nominal dollars per barrel).....	22.00	<i>23.68</i>	<i>30.91</i>	<i>25.86</i>	7.6	30.5	-16.3
Petroleum Supply (million barrels per day)							
Crude Oil Production ^b	5.80	<i>5.82</i>	<i>5.76</i>	<i>5.59</i>	0.3	-1.0	-2.9
Total Petroleum Net Imports (including SPR).....							
	10.90	<i>10.49</i>	<i>11.05</i>	<i>11.73</i>	-3.8	5.3	6.2
Energy Demand							
World Petroleum (million barrels per day)							
	76.0	<i>76.3</i>	77.4	<i>78.7</i>	0.4	1.4	1.7
Petroleum (million barrels per day)							
	19.65	<i>19.68</i>	<i>20.18</i>	<i>20.68</i>	0.2	2.5	2.5
Natural Gas (trillion cubic feet)							
	21.95	<i>21.69</i>	<i>22.50</i>	<i>23.06</i>	-1.2	3.7	2.5
Coal ^c (million short tons)							
	1059	<i>1071</i>	<i>1084</i>	<i>1107</i>	1.1	1.3	2.1
Electricity (billion kilowatthours)							
Retail Sales ^d	3397	<i>3468</i>	<i>3452</i>	<i>3555</i>	2.1	-0.5	3.0
Other Use/Sales ^e	205	<i>231</i>	<i>245</i>	<i>253</i>	12.6	6.1	3.2
Total	3602	<i>3699</i>	<i>3697</i>	<i>3808</i>	2.7	0.0	3.0
Total Energy Demand ^f (quadrillion Btu)							
	96.3	<i>98.0</i>	<i>99.5</i>	<i>101.8</i>	1.8	1.5	2.3
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar).....							
	10.45	<i>10.39</i>	<i>10.24</i>	<i>10.04</i>	-0.6	-1.4	-1.9
Renewable Energy as Percent of Total ^g							
	5.9	<i>6.6</i>	<i>7.1</i>	<i>7.0</i>			

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

^bIncludes lease condensate.

^cTotal Demand includes estimated Independent Power Producer (IPP) coal consumption.

^dTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA's Electric Power Monthly and Electric Power Annual. Power marketers' sales for historical periods are reported in EIA's Electric Sales and Revenue, Appendix C. Data for 2001 are estimates.

^eDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2001 are estimates.

^fThe 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).

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

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; and Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-0520; Weekly Petroleum Status Report, DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL1202.

Table 1. U.S. Macroeconomic and Weather Assumptions: Base Case

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Macroeconomic ^a															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR).....	9363	9392	9486	9503	9572	9653	9756	9872	10009	10074	10186	10281	9436	9713	10138
Percentage Change from Prior Year.....	1.4	2.2	3.3	2.8	2.2	2.8	2.9	3.9	4.6	4.4	4.4	4.1	2.4	2.9	4.4
Annualized Percent Change from Prior Quarter	5.0	1.2	4.0	0.7	2.9	3.4	4.3	4.7	5.6	2.6	4.5	3.8			
GDP Implicit Price Deflator (Index, 1996=1.000).....	1.101	1.105	1.108	1.112	1.119	1.123	1.129	1.135	1.142	1.147	1.154	1.161	1.107	1.126	1.151
Percentage Change from Prior Year.....	1.4	1.1	0.8	1.3	1.6	1.6	1.9	2.0	2.1	2.1	2.2	2.2	1.1	1.8	2.2
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	6961	7027	7082	7127	7174	7235	7382	7421	7627	7638	7652	7714	7049	7303	7658
Percentage Change from Prior Year.....	3.8	5.0	3.2	5.9	3.1	3.0	4.2	4.1	6.3	5.6	3.7	3.9	4.5	3.6	4.9
Manufacturing Production (Index, 1997=100.0).....	110.8	111.8	112.6	111.9	112.5	113.5	115.3	116.5	118.1	120.2	122.5	124.6	111.8	114.4	121.4
Percentage Change from Prior Year.....	-4.0	-1.5	0.5	1.5	1.6	1.5	2.4	4.0	5.0	6.0	6.3	7.0	-0.9	2.4	6.1
OECD Economic Growth (percent) ^b													0.9	1.8	2.6
Weather ^c															
Heating Degree-Days															
U.S.	2098	498	44	1639	2218	518	86	1622	2254	517	85	1621	4279	4444	4477
New England.....	2796	869	119	2396	3313	882	167	2236	3205	880	167	2235	6180	6598	6488
Middle Atlantic.....	2481	653	36	2213	3155	699	105	2001	2919	697	106	2001	5383	5960	5723
U.S. Gas-Weighted	2181	558	43	1736	2362	554	90	1713	2373	554	90	1713	4518	4720	4730
Cooling Degree-Days (U.S.).....	31	372	882	81	26	347	783	76	33	348	784	76	1366	1232	1240

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

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

^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.

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 Global Insight, "World Economic Outlook," Volume 1. Macroeconomic projections are based on Global Insight Forecast CONTROL1202.

Table 2. U.S. Energy Indicators: Base Case

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Macroeconomic ^a															
Real Fixed Investment (billion chained 1996 dollars-SAAR)...	1576	1573	1572	<i>1584</i>	<i>1597</i>	<i>1614</i>	<i>1634</i>	<i>1658</i>	<i>1689</i>	<i>1715</i>	<i>1746</i>	<i>1775</i>	<i>1576</i>	<i>1626</i>	<i>1731</i>
Real Exchange Rate (index).....	1.193	1.152	1.104	<i>1.100</i>	<i>1.053</i>	<i>1.040</i>	<i>1.047</i>	<i>1.032</i>	<i>1.023</i>	<i>1.013</i>	<i>1.004</i>	<i>0.997</i>	<i>1.137</i>	<i>1.043</i>	<i>1.009</i>
Business Inventory Change (billion chained 1996 dollars-SAAR)...	-31.9	-14.1	-2.6	<i>2.9</i>	<i>-1.2</i>	<i>6.3</i>	<i>9.8</i>	<i>12.7</i>	<i>21.3</i>	<i>23.4</i>	<i>24.0</i>	<i>20.3</i>	<i>-11.4</i>	<i>6.9</i>	<i>22.2</i>
Producer Price Index (index, 1982=1.000).....	1.292	1.308	1.313	<i>1.332</i>	<i>1.352</i>	<i>1.355</i>	<i>1.360</i>	<i>1.359</i>	<i>1.359</i>	<i>1.360</i>	<i>1.372</i>	<i>1.376</i>	<i>1.311</i>	<i>1.356</i>	<i>1.367</i>
Consumer Price Index (index, 1982-1984=1.000).....	1.781	1.796	1.804	<i>1.815</i>	<i>1.824</i>	<i>1.833</i>	<i>1.843</i>	<i>1.853</i>	<i>1.863</i>	<i>1.871</i>	<i>1.883</i>	<i>1.894</i>	<i>1.799</i>	<i>1.838</i>	<i>1.878</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.656	0.810	0.839	<i>0.877</i>	<i>1.054</i>	<i>1.075</i>	<i>0.968</i>	<i>0.932</i>	<i>0.954</i>	<i>0.919</i>	<i>0.862</i>	<i>0.857</i>	<i>0.795</i>	<i>1.007</i>	<i>0.898</i>
Non-Farm Employment (millions)	130.8	130.7	130.8	<i>130.8</i>	<i>130.8</i>	<i>130.9</i>	<i>131.3</i>	<i>132.0</i>	<i>132.8</i>	<i>133.8</i>	<i>134.6</i>	<i>135.4</i>	<i>130.8</i>	<i>131.3</i>	<i>134.2</i>
Commercial Employment (millions)	92.1	92.2	92.3	<i>92.4</i>	<i>92.5</i>	<i>92.8</i>	<i>93.4</i>	<i>94.1</i>	<i>94.9</i>	<i>95.8</i>	<i>96.6</i>	<i>97.3</i>	<i>92.3</i>	<i>93.2</i>	<i>96.1</i>
Total Industrial Production (index, 1997=100.0).....	109.3	110.5	111.4	<i>110.7</i>	<i>111.4</i>	<i>112.2</i>	<i>113.7</i>	<i>114.7</i>	<i>116.3</i>	<i>118.0</i>	<i>120.0</i>	<i>121.7</i>	<i>110.4</i>	<i>113.0</i>	<i>119.0</i>
Housing Stock (millions)	119.2	119.5	119.8	<i>120.5</i>	<i>120.7</i>	<i>120.8</i>	<i>121.2</i>	<i>121.5</i>	<i>121.8</i>	<i>122.1</i>	<i>122.4</i>	<i>122.7</i>	<i>119.8</i>	<i>121.1</i>	<i>122.2</i>
Miscellaneous															
Gas Weighted Industrial Production (index, 1997=100.0).....	100.4	101.0	101.6	<i>101.3</i>	<i>101.7</i>	<i>102.6</i>	<i>103.4</i>	<i>103.8</i>	<i>104.6</i>	<i>105.8</i>	<i>107.0</i>	<i>108.0</i>	<i>101.1</i>	<i>102.9</i>	<i>106.3</i>
Vehicle Miles Traveled ^b (million miles/day).....	7266	8027	8052	<i>7641</i>	<i>7392</i>	<i>8088</i>	<i>8258</i>	<i>7780</i>	<i>7543</i>	<i>8288</i>	<i>8450</i>	<i>8024</i>	<i>7748</i>	<i>7882</i>	<i>8077</i>
Vehicle Fuel Efficiency (index, 1999=1.000).....	0.997	1.040	1.034	<i>1.007</i>	<i>1.004</i>	<i>1.036</i>	<i>1.035</i>	<i>0.990</i>	<i>0.977</i>	<i>1.034</i>	<i>1.037</i>	<i>0.994</i>	<i>1.020</i>	<i>1.016</i>	<i>1.011</i>
Real Vehicle Fuel Cost (cents per mile)	3.31	3.75	3.77	<i>3.90</i>	<i>4.43</i>	<i>4.55</i>	<i>4.24</i>	<i>4.11</i>	<i>4.05</i>	<i>3.96</i>	<i>3.83</i>	<i>3.80</i>	<i>3.69</i>	<i>4.33</i>	<i>3.91</i>
Air Travel Capacity (mill. available ton-miles/day).....	435.0	475.3	438.4	<i>452.1</i>	<i>460.8</i>	<i>463.8</i>	<i>470.0</i>	<i>472.5</i>	<i>473.0</i>	<i>480.3</i>	<i>488.8</i>	<i>492.0</i>	<i>450.2</i>	<i>466.8</i>	<i>483.6</i>
Aircraft Utilization (mill. revenue ton-miles/day).....	237.6	268.7	270.6	<i>255.2</i>	<i>248.1</i>	<i>270.6</i>	<i>281.7</i>	<i>263.2</i>	<i>262.2</i>	<i>283.8</i>	<i>292.7</i>	<i>278.5</i>	<i>258.1</i>	<i>266.0</i>	<i>279.3</i>
Airline Ticket Price Index (index, 1982-1984=1.000).....	2.317	2.377	2.334	<i>2.235</i>	<i>2.299</i>	<i>2.432</i>	<i>2.500</i>	<i>2.531</i>	<i>2.586</i>	<i>2.607</i>	<i>2.621</i>	<i>2.629</i>	<i>2.316</i>	<i>2.440</i>	<i>2.611</i>
Raw Steel Production (million tons).....	23.92	25.03	26.34	<i>25.39</i>	<i>23.30</i>	<i>23.96</i>	<i>24.75</i>	<i>24.05</i>	<i>26.07</i>	<i>26.84</i>	<i>27.25</i>	<i>26.09</i>	<i>100.68</i>	<i>96.05</i>	<i>106.24</i>

^aMacroeconomic projections from Global Insight model forecasts are seasonally adjusted at annual rates and modified as appropriate to the base world oil price case.

^bIncludes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

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

Table 3. International Petroleum Supply and Demand: Base Case

(Million Barrels per Day, Except OECD Commercial Stocks)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Demand^a															
OECD															
U.S. (50 States).....	19.4	19.6	19.8	19.8	20.2	19.8	20.3	20.4	20.7	20.3	20.7	21.0	19.7	20.2	20.7
U.S. Territories	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Canada	2.0	1.9	2.0	2.0	2.0	1.9	2.1	2.1	2.1	2.0	2.2	2.1	2.0	2.0	2.1
Europe	15.2	14.6	15.2	15.4	15.4	14.5	15.0	15.7	15.6	14.6	15.2	15.9	15.1	15.2	15.3
Japan.....	5.7	4.6	5.0	5.9	5.9	4.8	5.1	5.5	5.9	4.9	5.1	5.5	5.3	5.3	5.3
Other OECD	5.3	4.9	5.0	5.3	5.1	5.0	5.3	5.3	5.1	5.1	5.4	5.4	5.1	5.2	5.2
Total OECD	48.0	46.1	47.5	48.8	48.9	46.5	48.1	49.4	49.8	47.2	48.9	50.3	47.6	48.2	49.1
Non-OECD															
Former Soviet Union.....	3.8	3.6	3.6	3.6	3.8	3.7	3.7	3.7	3.9	3.7	3.8	3.7	3.7	3.7	3.8
Europe.....	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China	5.2	5.2	5.1	5.2	5.3	5.3	5.2	5.3	5.4	5.4	5.3	5.4	5.2	5.3	5.4
Other Asia.....	7.4	7.4	7.2	7.5	7.6	7.6	7.3	7.7	7.7	7.7	7.5	7.8	7.4	7.5	7.7
Other Non-OECD.....	11.7	12.0	12.0	11.9	11.8	12.1	12.1	12.1	12.0	12.2	12.3	12.2	11.9	12.0	12.1
Total Non-OECD.....	28.8	28.8	28.6	28.9	29.1	29.2	29.0	29.3	29.6	29.6	29.4	29.7	28.7	29.1	29.6
Total World Demand.....	76.7	74.9	76.0	77.7	78.0	75.6	77.1	78.7	79.4	76.9	78.4	80.0	76.3	77.4	78.7
Supply^b															
OECD															
U.S. (50 States).....	9.1	9.2	8.9	9.0	9.1	9.0	9.0	9.1	9.0	8.9	8.9	8.9	9.1	9.0	8.9
Canada.....	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.3	3.2	3.2	3.4	3.4	2.9	3.2	3.3
Mexico.....	3.6	3.6	3.6	3.6	3.8	3.8	3.8	3.7	3.9	3.9	4.0	3.9	3.6	3.8	3.9
North Sea ^c	6.3	6.4	5.9	6.4	6.4	6.0	6.1	6.4	6.3	6.0	6.1	6.4	6.2	6.2	6.2
Other OECD	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Total OECD	23.6	23.6	23.0	23.6	23.9	23.5	23.7	24.1	24.0	23.6	23.8	24.1	23.5	23.8	23.9
Non-OECD															
OPEC	27.9	27.4	28.3	29.0	29.4	29.1	29.2	29.4	29.0	29.0	29.1	29.1	28.1	29.3	29.0
Former Soviet Union.....	9.0	9.2	9.6	9.8	9.8	9.9	10.1	10.2	10.3	10.4	10.7	10.7	9.4	10.0	10.5
China	3.3	3.3	3.4	3.4	3.3	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4
Other Non-OECD.....	11.5	11.5	11.4	11.4	11.7	11.8	12.0	12.1	12.1	12.2	12.4	12.6	11.4	11.9	12.3
Total Non-OECD.....	51.7	51.4	52.6	53.7	54.2	54.1	54.7	55.1	54.7	55.0	55.6	55.8	52.3	54.5	55.3
Total World Supply	75.3	75.0	75.6	77.2	78.2	77.6	78.4	79.2	78.7	78.6	79.4	79.9	75.8	78.3	79.1
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	0.2	-0.5	0.4	0.3	0.8	-0.7	-0.4	0.1	0.0	-0.6	-0.2	0.4	0.1	0.0	-0.1
Other	1.3	0.4	-0.1	0.2	-0.9	-1.3	-1.0	-0.5	0.6	-1.0	-0.8	-0.3	0.4	-0.9	-0.4
Total Stock Withdrawals	1.4	-0.1	0.4	0.5	-0.1	-2.0	-1.3	-0.4	0.7	-1.7	-1.0	0.1	0.6	-1.0	-0.5
OECD Comm. Stocks, End (bill. bbls.)	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.6	2.7	2.8
Non-OPEC Supply	47.4	47.6	47.4	48.2	48.7	48.6	49.2	49.8	49.7	49.6	50.3	50.9	47.7	49.1	50.1
Net Exports from Former Soviet Union	5.2	5.5	5.9	6.2	6.0	6.2	6.4	6.5	6.4	6.7	6.9	7.0	5.7	6.3	6.7

^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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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 Monthly*, DOE/EIA-0520; Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

Table 4. U.S. Energy Prices: Base Case
(Nominal Dollars)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	19.33	23.84	25.88	25.39	32.50	32.68	30.48	28.22	27.00	26.25	25.50	24.75	23.68	30.91	25.86
WTI ^b Spot Average.....	21.66	26.25	28.34	28.22	35.22	35.36	33.07	30.76	29.49	28.75	28.00	27.25	26.12	33.60	28.37
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	2.34	3.00	2.88	3.60	5.31	5.13	4.33	4.32	4.76	4.15	3.84	4.05	2.95	4.77	4.20
Petroleum Products															
Gasoline Retail ^c (dollars per gallon)															
All Grades.....	1.20	1.43	1.44	1.46	1.64	1.77	1.65	1.54	1.51	1.57	1.53	1.46	1.39	1.65	1.52
Regular Unleaded.....	1.16	1.39	1.40	1.42	1.60	1.74	1.62	1.51	1.47	1.53	1.49	1.42	1.34	1.62	1.48
No. 2 Diesel Oil, Retail															
(dollars per gallon).....	1.18	1.30	1.35	1.44	1.63	1.64	1.54	1.51	1.47	1.45	1.42	1.43	1.32	1.58	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon).....	0.60	0.68	0.73	0.79	0.99	0.97	0.89	0.89	0.87	0.82	0.80	0.82	0.69	0.94	0.83
No. 2 Heating Oil, Retail															
(dollars per gallon).....	1.09	1.09	1.06	1.19	1.53	1.52	1.30	1.37	1.33	1.23	1.14	1.26	1.11	1.45	1.27
No. 6 Residual Fuel Oil, Retail ^d															
(dollars per barrel)	19.35	24.11	25.71	26.18	32.65	31.40	29.16	28.00	27.05	24.67	24.21	24.60	23.81	30.47	25.17
Electric Utility Fuels															
Coal															
(dollars per million Btu).....	1.22	1.21	1.22	1.22	1.24	1.26	1.24	1.23	1.22	1.22	1.20	1.18	1.22	1.24	1.21
Heavy Fuel Oil ^e															
(dollars per million Btu).....	2.73	3.58	3.67	4.15	5.34	5.13	4.64	4.36	4.45	4.06	3.84	3.83	3.57	4.92	4.04
Natural Gas															
(dollars per million Btu).....	3.22	3.71	3.48	4.21	5.82	5.61	4.89	5.00	5.52	4.74	4.42	4.73	3.64	5.29	4.77
Other Residential															
Natural Gas															
(dollars per thousand cubic feet).....	7.13	8.18	10.10	8.15	8.60	10.48	11.53	9.07	8.99	9.90	10.93	8.79	7.84	9.24	9.22
Electricity															
(cents per kilowatthour).....	8.08	8.52	8.70	8.26	8.05	8.69	8.94	8.50	8.01	8.59	8.81	8.35	8.41	8.55	8.45

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

^bWest Texas Intermediate.

^cAverage self-service cash prices.

^dAverage for all sulfur contents.

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

Notes: Data are estimated for the fourth quarter of 2001. 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: Base Case

(Million Barrels per Day, Except Closing Stocks)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Supply															
Crude Oil Supply															
Domestic Production ^a	5.93	5.89	5.66	5.79	5.90	5.75	5.65	5.74	5.70	5.61	5.53	5.53	5.82	5.76	5.59
Alaska.....	1.03	1.01	0.93	0.97	1.02	0.95	0.88	1.00	1.01	0.95	0.92	0.93	0.99	0.96	0.95
Lower 48.....	4.89	4.88	4.73	4.82	4.87	4.80	4.76	4.74	4.69	4.65	4.61	4.60	4.83	4.79	4.64
Net Commercial Imports ^b	8.74	9.29	9.17	9.20	8.58	9.60	10.05	9.68	9.62	10.01	10.25	10.06	9.10	9.48	9.99
Net SPR Withdrawals	-0.13	-0.16	-0.12	-0.11	0.00	-0.11	-0.11	-0.11	-0.13	0.00	0.00	0.00	-0.13	-0.08	-0.03
Net Commercial Withdrawals.....	-0.24	0.19	0.50	-0.08	-0.04	0.05	0.10	-0.11	-0.23	-0.03	0.12	-0.01	0.09	0.00	-0.04
Product Supplied and Losses.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil.....	0.11	0.09	-0.03	-0.03	0.07	0.19	0.17	0.12	0.17	0.19	0.17	0.12	0.03	0.14	0.16
Total Crude Oil Supply.....	14.41	15.30	15.19	14.77	14.50	15.49	15.85	15.32	15.12	15.77	16.07	15.69	14.92	15.29	15.67
Other Supply															
NGL Production.....	1.86	1.91	1.90	1.84	1.90	1.94	1.94	1.95	1.95	1.96	1.96	1.98	1.88	1.93	1.96
Other Hydrocarbon and Alcohol Inputs.....	0.37	0.44	0.45	0.43	0.40	0.40	0.41	0.41	0.38	0.38	0.40	0.41	0.42	0.41	0.39
Inputs															
Crude Oil Product Supplied.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain.....	0.95	0.95	0.94	0.97	0.92	0.93	0.96	0.96	0.93	0.94	0.97	0.99	0.95	0.94	0.96
Net Product Imports ^c	1.34	1.51	1.32	1.31	1.61	1.68	1.50	1.46	1.89	1.84	1.68	1.58	1.37	1.56	1.75
Product Stock Withdrawn or Added (-).....	0.52	-0.48	0.05	0.47	0.81	-0.60	-0.37	0.33	0.39	-0.60	-0.34	0.38	0.14	0.04	-0.04
Total Supply.....	19.45	19.63	19.85	19.80	20.15	19.84	20.29	20.42	20.67	20.28	20.74	21.03	19.68	20.18	20.68
Demand															
Motor Gasoline	8.49	8.99	9.07	8.84	8.58	9.09	9.29	9.15	8.99	9.33	9.49	9.40	8.85	9.03	9.30
Jet Fuel.....	1.57	1.61	1.63	1.64	1.59	1.64	1.68	1.71	1.75	1.67	1.69	1.71	1.61	1.66	1.70
Distillate Fuel Oil.....	3.79	3.70	3.70	3.88	4.29	3.81	3.75	3.99	4.23	3.86	3.85	4.13	3.77	3.96	4.02
Residual Fuel Oil	0.68	0.65	0.57	0.72	0.78	0.57	0.58	0.57	0.72	0.58	0.66	0.70	0.66	0.63	0.66
Other Oils ^d	4.92	4.68	4.87	4.72	4.91	4.73	4.98	4.99	4.97	4.84	5.05	5.09	4.80	4.90	4.99
Total Demand	19.45	19.63	19.85	19.80	20.15	19.84	20.29	20.42	20.67	20.28	20.74	21.03	19.68	20.18	20.68
Total Petroleum Net Imports	10.10	10.81	10.49	10.54	10.19	11.29	11.55	11.14	11.51	11.86	11.93	11.64	10.49	11.05	11.73
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	333	316	270	278	282	277	267	278	298	301	290	291	278	278	291
Total Motor Gasoline	213	217	207	211	198	202	195	202	209	215	208	215	211	202	215
Finished Motor Gasoline.....	160	168	158	164	146	153	148	156	158	166	161	167	164	156	167
Blending Components	53	48	48	47	52	49	47	46	52	49	47	47	47	46	47
Jet Fuel.....	42	39	41	40	39	39	40	41	39	40	41	42	40	41	42
Distillate Fuel Oil.....	123	133	127	134	87	100	121	126	97	108	128	128	134	126	128
Residual Fuel Oil	34	33	33	31	31	32	34	35	33	34	36	37	31	35	37
Other Oils ^e	265	301	310	257	247	282	298	254	245	280	296	252	257	254	252
Total Stocks (excluding SPR)	1011	1038	987	951	882	932	956	936	921	979	999	965	951	936	965
Crude Oil in SPR	561	576	587	599	599	609	619	630	642	642	642	642	599	630	642
Heating Oil Reserve.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total Stocks (incl SPR and HOR) ..	1574	1616	1576	1552	1484	1543	1577	1568	1565	1623	1643	1609	1552	1568	1609

^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, with the following exception: recent petroleum demand and supply data displayed here reflect the incorporation of resubmissions of the data as reported in EIA's Petroleum Supply Monthly, Table C1. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System model.

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
(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 (second and third calendar quarters) 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	5.69	5.34	0.34	0.07	0.27
Lower 48 States	4.75	4.43	0.32	0.05	0.26
Alaska	0.95	0.92	0.03	0.02	0.01

Note: Components provided are for the fourth quarter 2004. 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: Base Case

(Trillion Cubic Feet)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Supply															
Total Dry Gas Production	4.69	4.77	4.78	4.63	4.78	4.78	4.77	4.77	4.85	4.85	4.87	4.83	18.87	19.09	19.40
Net Imports	0.88	0.84	0.95	0.84	0.90	0.86	0.89	0.90	0.95	0.90	0.93	0.93	3.51	3.55	3.71
Supplemental Gaseous Fuels.....	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.08	0.08	0.09
Total New Supply.....	5.59	5.62	5.75	5.49	5.71	5.65	5.68	5.69	5.83	5.76	5.81	5.79	22.45	22.73	23.20
Working Gas in Storage															
Opening.....	2.90	1.52	2.31	3.04	2.37	0.68	1.70	2.74	2.38	1.19	2.05	2.94	2.90	2.37	2.38
Closing.....	1.52	2.31	3.04	2.37	0.68	1.70	2.74	2.38	1.19	2.05	2.94	2.46	2.37	2.38	2.46
Net Withdrawals.....	1.39	-0.79	-0.73	0.67	1.69	-1.03	-1.04	0.36	1.19	-0.86	-0.88	0.48	0.54	-0.01	-0.08
Total Supply.....	6.97	4.83	5.02	6.16	7.40	4.63	4.64	6.04	7.01	4.90	4.93	6.27	22.99	22.71	23.12
Balancing Item ^a	-0.27	-0.13	-0.61	-0.29	-0.04	0.26	-0.09	-0.36	0.39	0.09	-0.16	-0.38	-1.30	-0.22	-0.06
Total Primary Supply	6.71	4.70	4.41	5.87	7.36	4.89	4.56	5.69	7.40	5.00	4.77	5.88	21.69	22.50	23.06
Demand															
Residential.....	2.19	0.84	0.37	1.45	2.38	0.79	0.34	1.37	2.44	0.82	0.36	1.39	4.85	4.89	5.01
Commercial	1.20	0.62	0.46	0.90	1.23	0.57	0.40	0.84	1.29	0.62	0.45	0.89	3.18	3.04	3.26
Industrial.....	2.00	1.85	1.66	2.20	2.41	2.07	1.93	2.32	2.41	2.07	1.94	2.33	7.71	8.73	8.75
Lease and Plant Fuel.....	0.28	0.28	0.28	0.27	0.28	0.28	0.28	0.29	0.29	0.28	0.29	0.29	1.12	1.14	1.15
Other Industrial.....	1.72	1.57	1.37	1.92	2.12	1.79	1.64	2.03	2.12	1.79	1.65	2.04	6.59	7.59	7.60
CHP ^b	0.33	0.34	0.35	0.35	0.34	0.35	0.35	0.36	0.35	0.36	0.37	0.37	1.37	1.40	1.45
Non-CHP	1.39	1.22	1.02	1.58	1.79	1.44	1.29	1.68	1.77	1.43	1.28	1.67	5.21	6.19	6.15
Transportation ^c	0.19	0.13	0.13	0.16	0.20	0.12	0.11	0.15	0.20	0.13	0.12	0.16	0.61	0.58	0.60
Electric Power ^d	1.12	1.25	1.81	1.16	1.15	1.33	1.78	1.00	1.05	1.35	1.90	1.13	5.34	5.26	5.44
Total Demand.....	6.71	4.70	4.41	5.87	7.36	4.89	4.56	5.69	7.40	5.00	4.77	5.88	21.69	22.50	23.06

^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.

^bNatural gas used for electricity generation and production of useful thermal output by combined heat and power plants at industrial facilities. Includes a small amount of natural gas consumption at electricity-only plants in the industrial sector.

^cPipeline fuel use plus natural gas used as vehicle fuel.

^dNatural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers. 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: Base Case
(Million Short Tons)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Supply															
Production	281.1	266.8	269.2	<i>282.8</i>	<i>282.8</i>	<i>266.4</i>	<i>278.1</i>	<i>285.5</i>	<i>290.1</i>	<i>264.6</i>	<i>281.5</i>	<i>297.6</i>	<i>1099.9</i>	<i>1112.7</i>	<i>1133.8</i>
Appalachia.....	107.1	98.4	94.1	<i>105.9</i>	<i>105.0</i>	<i>96.2</i>	<i>99.4</i>	<i>101.9</i>	<i>106.6</i>	<i>93.5</i>	<i>98.3</i>	<i>103.9</i>	<i>405.4</i>	<i>402.6</i>	<i>402.3</i>
Interior.....	36.6	37.2	36.6	<i>38.2</i>	<i>35.7</i>	<i>35.6</i>	<i>34.0</i>	<i>31.7</i>	<i>34.2</i>	<i>33.7</i>	<i>32.6</i>	<i>31.1</i>	<i>148.6</i>	<i>136.9</i>	<i>131.6</i>
Western.....	137.5	131.2	138.5	<i>142.8</i>	<i>141.7</i>	<i>134.6</i>	<i>144.7</i>	<i>151.9</i>	<i>149.4</i>	<i>137.3</i>	<i>150.5</i>	<i>162.6</i>	<i>549.9</i>	<i>572.9</i>	<i>599.8</i>
Primary Stock Levels ^a															
Opening.....	35.9	40.3	41.3	<i>35.7</i>	<i>32.0</i>	<i>31.3</i>	<i>31.1</i>	<i>29.7</i>	<i>32.0</i>	<i>31.2</i>	<i>31.6</i>	<i>29.5</i>	<i>35.9</i>	<i>32.0</i>	<i>32.0</i>
Closing.....	40.3	41.3	35.7	<i>32.0</i>	<i>31.3</i>	<i>31.1</i>	<i>29.7</i>	<i>32.0</i>	<i>31.2</i>	<i>31.6</i>	<i>29.5</i>	<i>32.2</i>	<i>32.0</i>	<i>32.0</i>	<i>32.2</i>
Net Withdrawals.....	-4.4	-1.0	5.6	<i>3.7</i>	<i>0.7</i>	<i>0.2</i>	<i>1.4</i>	<i>-2.3</i>	<i>0.8</i>	<i>-0.4</i>	<i>2.0</i>	<i>-2.7</i>	<i>3.9</i>	<i>(S)</i>	<i>-0.2</i>
Imports.....	4.0	3.9	4.7	<i>4.4</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.6</i>	<i>4.7</i>	<i>4.7</i>	<i>4.7</i>	<i>4.7</i>	<i>16.9</i>	<i>18.1</i>	<i>18.8</i>
Exports.....	9.3	11.0	9.3	<i>10.0</i>	<i>9.8</i>	<i>10.0</i>	<i>10.1</i>	<i>10.2</i>	<i>10.2</i>	<i>10.2</i>	<i>10.4</i>	<i>10.4</i>	<i>39.6</i>	<i>40.1</i>	<i>41.2</i>
Total Net Domestic Supply	271.5	258.6	270.2	<i>280.8</i>	<i>278.2</i>	<i>261.1</i>	<i>273.8</i>	<i>277.6</i>	<i>285.5</i>	<i>258.6</i>	<i>277.8</i>	<i>289.3</i>	<i>1081.1</i>	<i>1090.7</i>	<i>1111.1</i>
Secondary Stock Levels ^b															
Opening.....	145.6	149.8	152.5	<i>137.0</i>	<i>149.5</i>	<i>156.5</i>	<i>169.5</i>	<i>159.3</i>	<i>175.5</i>	<i>180.8</i>	<i>192.2</i>	<i>180.1</i>	<i>145.6</i>	<i>149.5</i>	<i>175.5</i>
Closing.....	149.8	152.5	137.0	<i>149.5</i>	<i>156.5</i>	<i>169.5</i>	<i>159.3</i>	<i>175.5</i>	<i>180.8</i>	<i>192.2</i>	<i>180.1</i>	<i>194.7</i>	<i>149.5</i>	<i>175.5</i>	<i>194.7</i>
Net Withdrawals.....	-4.2	-2.7	15.4	<i>-12.5</i>	<i>-7.0</i>	<i>-13.0</i>	<i>10.2</i>	<i>-16.2</i>	<i>-5.3</i>	<i>-11.4</i>	<i>12.1</i>	<i>-14.6</i>	<i>-3.9</i>	<i>-26.0</i>	<i>-19.2</i>
Waste Coal Supplied to IPPs ^c	2.8	2.8	2.8	<i>2.8</i>	<i>2.9</i>	<i>2.9</i>	<i>2.9</i>	<i>2.9</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>11.1</i>	<i>11.6</i>	<i>14.8</i>
Total Supply.....	270.1	258.6	288.4	<i>271.1</i>	<i>274.1</i>	<i>251.0</i>	<i>286.9</i>	<i>264.3</i>	<i>283.9</i>	<i>250.9</i>	<i>293.6</i>	<i>278.3</i>	<i>1088.3</i>	<i>1076.3</i>	<i>1106.7</i>
Demand															
Coke Plants	5.5	5.6	5.6	<i>6.7</i>	<i>6.7</i>	<i>6.3</i>	<i>6.5</i>	<i>5.8</i>	<i>6.1</i>	<i>5.9</i>	<i>6.2</i>	<i>5.5</i>	<i>23.4</i>	<i>25.3</i>	<i>23.7</i>
Electric Power Sector ^d	233.6	230.2	265.0	<i>253.0</i>	<i>258.7</i>	<i>230.2</i>	<i>265.8</i>	<i>241.6</i>	<i>261.2</i>	<i>231.0</i>	<i>273.0</i>	<i>256.2</i>	<i>981.9</i>	<i>996.3</i>	<i>1021.4</i>
Retail and General Industry.....	17.1	15.5	15.6	<i>17.2</i>	<i>16.7</i>	<i>14.4</i>	<i>14.7</i>	<i>16.9</i>	<i>16.6</i>	<i>14.1</i>	<i>14.3</i>	<i>16.6</i>	<i>65.4</i>	<i>62.7</i>	<i>61.6</i>
Total Demand ^e	256.2	251.3	286.2	<i>276.9</i>	<i>282.1</i>	<i>251.0</i>	<i>286.9</i>	<i>264.3</i>	<i>283.9</i>	<i>250.9</i>	<i>293.6</i>	<i>278.3</i>	<i>1070.7</i>	<i>1084.3</i>	<i>1106.7</i>
Discrepancy ^f	13.9	7.3	2.2	<i>-5.8</i>	<i>-8.0</i>	<i>0.0</i>	<i>17.6</i>	<i>-8.0</i>	<i>0.0</i>						

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

^bSecondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.

^cEstimated independent power producers' (IPPs) consumption of waste coal. This item includes waste coal and coal slurry reprocessed into briquettes.

^dCoal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

^eTotal Demand includes estimated IPP consumption.

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

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: Base Case

(Billion Kilowatt-hours)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Net Electricity Generation															
Electric Power Sector ^a															
Coal	444.8	451.1	517.0	497.5	494.9	441.0	510.3	463.7	510.5	451.7	533.8	501.1	1910.4	1909.9	1997.1
Petroleum.....	18.4	21.5	25.1	23.6	28.3	18.3	25.3	13.3	26.0	18.0	30.8	21.6	88.6	85.3	96.4
Natural Gas.....	118.6	131.1	189.7	122.9	121.2	140.2	187.3	105.3	111.1	142.5	200.6	118.5	562.4	554.0	572.7
Nuclear	195.0	187.8	205.7	182.9	194.5	190.6	205.1	190.3	195.1	191.4	206.2	191.5	771.4	780.5	784.2
Hydroelectric.....	60.0	75.4	61.2	57.3	72.5	79.7	67.5	64.6	76.7	79.7	66.6	65.0	253.8	284.3	288.0
Geothermal and Other ^b	13.2	11.7	14.1	12.8	13.7	13.6	15.3	14.0	14.7	14.3	16.1	14.7	51.8	56.6	59.9
Subtotal.....	850.0	878.5	1012.9	897.1	925.1	883.5	1010.8	851.1	934.0	897.6	1054.2	912.4	3638.4	3670.5	3798.2
Other Sectors ^c	43.7	50.5	58.4	52.5	44.3	51.2	59.4	53.7	46.1	52.9	61.5	55.9	205.0	208.7	216.4
Total Generation	893.6	929.0	1071.3	949.6	969.4	934.7	1070.2	904.9	980.1	950.5	1115.7	968.3	3843.5	3879.2	4014.6
Net Imports ^d	4.9	8.5	6.3	5.6	6.1	7.7	11.1	6.6	3.7	5.3	8.6	4.1	25.3	31.4	21.7
Total Supply	898.5	937.5	1077.6	955.2	975.4	942.5	1081.3	911.4	983.8	955.8	1124.3	972.4	3868.8	3910.6	4036.3
Losses and Unaccounted for ^e	22.1	51.7	24.6	71.3	65.0	73.9	40.6	33.9	47.8	64.8	49.4	66.2	169.8	213.3	228.2
Demand															
Retail Sales ^f															
Residential	312.0	280.4	382.4	293.6	332.4	269.7	380.0	285.7	341.5	275.4	392.3	293.5	1268.3	1267.9	1302.6
Commercial.....	255.8	279.5	318.0	265.9	262.3	275.2	317.8	268.4	269.7	282.0	327.8	276.9	1119.2	1123.7	1156.4
Industrial	227.5	243.2	259.0	240.0	227.6	235.9	246.8	236.5	234.0	244.0	255.9	245.8	969.6	946.7	979.7
Other.....	25.6	26.5	31.0	27.8	27.5	27.6	31.1	27.9	28.2	28.1	31.8	28.5	110.9	114.0	116.6
Subtotal.....	820.9	829.6	990.3	827.3	849.8	808.4	975.7	818.5	873.4	829.5	1007.7	844.7	3468.1	3452.4	3555.3
Other Use/Sales ^g	55.5	56.1	62.7	56.6	60.7	60.1	65.0	59.1	62.7	61.5	67.1	61.5	230.9	244.9	252.8
Total Demand	876.4	885.7	1053.0	883.9	910.5	868.6	1040.7	877.6	936.1	891.0	1074.8	906.2	3699.0	3697.3	3808.1

^aElectric Utilities and independent power producers.^b"Other" includes generation from other gaseous fuels, wind, wood, waste, and solar sources.^cElectricity generation from combined heat and power facilities and electricity -only plants in the industrial and commercial sectors.^dData for 2001 are estimates.^eBalancing item, mainly transmission and distribution losses.^fTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S Electric Power Monthly and Electric Power Annual. Power marketers' sales are reported annually in Appendix C of EIA's Electric Sales and Revenue. Quarterly data for power marketers (and thus retail sales totals) are imputed. Data for 2001 are estimated.^gDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2001 are estimates.

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.

Table 11. U.S. Renewable Energy Use by Sector: Base Case
(Quadrillion Btu)

	Year				Annual Percentage Change		
	2001	2002	2003	2004	2001-2002	2002-2003	2003-2004
Electricity Sector							
Hydroelectric Power ^a	2.091	2.784	<i>3.118</i>	<i>3.159</i>	33.1	<i>12.0</i>	<i>1.3</i>
Geothermal, Solar and Wind Energy ^b	0.354	0.367	<i>0.379</i>	<i>0.413</i>	3.7	<i>3.3</i>	<i>9.0</i>
Biofuels ^c	0.451	0.425	<i>0.496</i>	<i>0.538</i>	-5.8	<i>16.7</i>	<i>8.5</i>
Total	2.897	3.575	<i>3.992</i>	<i>4.110</i>	23.4	<i>11.7</i>	<i>3.0</i>
Other Sectors ^d							
Residential and Commercial ^e	0.574	0.603	<i>0.642</i>	<i>0.664</i>	5.1	<i>6.5</i>	<i>3.4</i>
Residential ^e	0.475	0.496	<i>0.517</i>	<i>0.539</i>	4.4	<i>4.2</i>	<i>4.3</i>
Commercial ^e	0.098	0.108	<i>0.126</i>	<i>0.125</i>	10.2	<i>16.7</i>	<i>-0.8</i>
Industrial ^f	1.816	1.873	<i>1.911</i>	<i>1.958</i>	3.1	<i>2.0</i>	<i>2.5</i>
Transportation ^g	0.147	0.168	<i>0.199</i>	<i>0.205</i>	14.3	<i>18.5</i>	<i>3.0</i>
Total	2.537	2.644	<i>2.752</i>	<i>2.827</i>	4.2	<i>4.1</i>	<i>2.7</i>
Net Imported Electricity	0.159	0.197	<i>0.245</i>	<i>0.169</i>	23.9	<i>24.4</i>	<i>-31.0</i>
Total Renewable Energy Demand	5.593	6.416	<i>6.989</i>	<i>7.106</i>	14.7	<i>8.9</i>	<i>1.7</i>

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

^bAlso includes photovoltaic and solar thermal energy. Sharp declines since 1998 in the electric utility sector and corresponding increases in the nonutility sector for this category mostly reflect sale of geothermal facilities to the nonutility sector.

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

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

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

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

^gEthanol blended into gasoline.

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: Base Case

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Real Gross Domestic Product (GDP)															
(billion chained 1996 dollars).....	6708	6676	6880	7063	7348	7544	7813	8159	8509	8859	9191	9215	<i>9436</i>	<i>9713</i>	<i>10138</i>
Imported Crude Oil Price ^a (nominal dollars per barrel).....	21.79	18.74	18.20	16.13	15.53	17.14	20.62	18.49	12.07	17.26	27.72	22.00	<i>23.68</i>	<i>30.91</i>	<i>25.86</i>
Petroleum Supply															
Crude Oil Production ^b (million barrels per day).....	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	<i>5.82</i>	<i>5.76</i>	<i>5.59</i>
Total Petroleum Net Imports (including SPR) (million barrels per day).....	7.16	6.42	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	<i>10.49</i>	<i>11.05</i>	<i>11.73</i>
Energy Demand															
World Petroleum (million barrels per day).....	66.0	66.6	66.8	67.0	68.3	69.9	71.4	72.9	73.6	75.0	76.0	76.0	<i>76.3</i>	<i>77.4</i>	<i>78.7</i>
U.S. Petroleum (million barrels per day).....	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	<i>19.68</i>	<i>20.18</i>	<i>20.68</i>
Natural Gas (trillion cubic feet).....	19.16	19.56	20.23	20.79	21.24	22.20	22.60	22.73	22.24	22.39	23.44	21.95	<i>21.69</i>	<i>22.50</i>	<i>23.06</i>
Coal (million short tons).....	904	899	908	944	951	962	1006	1030	1037	1039	1084	1059	<i>1077</i>	<i>1084</i>	<i>1107</i>
Electricity (billion kilowatthours) Retail Sales ^c	2713	2762	2763	2861	2935	3013	3101	3146	3264	3312	3421	3397	<i>3468</i>	<i>3452</i>	<i>3555</i>
Other Use/Sales ^d	115	118	122	128	134	144	146	148	161	183	183	205	<i>231</i>	<i>245</i>	<i>253</i>
Total.....	2828	2880	2885	2989	3069	3157	3247	3294	3425	3495	3604	3602	<i>3699</i>	<i>3697</i>	<i>3808</i>
Total Energy Demand ^e (quadrillion Btu).....	84.6	84.6	86.1	87.8	89.6	91.5	94.5	95.0	95.3	97.0	99.3	96.3	<i>98.0</i>	<i>99.5</i>	<i>101.8</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar).....	12.61	12.68	12.51	12.43	12.19	12.13	12.10	11.66	11.20	10.95	10.81	10.45	<i>10.39</i>	<i>10.24</i>	<i>10.04</i>

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

^bIncludes lease condensate.

^cTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA's Electric Power Monthly and Electric Power Annual. Power marketers' sales for historical periods are reported in EIA's Electric Sales and Revenue, Appendix C.

^dDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2001 are estimates.

^e"Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, Annual Energy Review, 2001, DOE/EIA-0384(01) (AER), Table 1.1. 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; Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-520, and Weekly Petroleum Status Report DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL1202.

Table A2. Annual U.S. Macroeconomic and Weather Indicators: Base Case

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Macroeconomic															
Real Gross Domestic Product (billion chained 1996 dollars).....	6708	6676	6880	7063	7348	7544	7813	8159	8509	8859	9191	9215	<i>9436</i>	<i>9713</i>	<i>10138</i>
GDP Implicit Price Deflator (Index, 1996=1.000).....	0.865	0.897	0.918	0.941	0.960	0.981	1.000	1.019	1.032	1.047	1.069	1.094	<i>1.107</i>	<i>1.126</i>	<i>1.151</i>
Real Disposable Personal Income (billion chained 1996 Dollars).....	5014	5033	5189	5261	5397	5539	5678	5854	6169	6328	6630	6748	<i>7049</i>	<i>7303</i>	<i>7658</i>
Manufacturing Production (Index, 1996=1.000).....	74.156	72.721	75.516	78.214	83.212	87.846	92.157	100.000	106.518	111.872	117.672	112.800	<i>111.798</i>	<i>114.443</i>	<i>121.386</i>
Real Fixed Investment (billion chained 1996 dollars).....	895	833	886	958	1046	1109	1213	1329	1480	1595	1692	1627	<i>1576</i>	<i>1626</i>	<i>1731</i>
Real Exchange Rate (Index, 1996=1.000).....	0.918	0.920	0.926	0.956	0.933	0.869	0.918	0.992	1.044	1.047	1.083	1.141	<i>1.137</i>	<i>1.043</i>	<i>1.009</i>
Business Inventory Change (billion chained 1996 dollars).....	8.7	-6.6	-4.7	3.6	11.9	13.8	9.9	14.8	27.1	14.4	17.5	-36.2	<i>-11.4</i>	<i>6.9</i>	<i>22.2</i>
Producer Price Index (index, 1982=1.000).....	1.163	1.165	1.172	1.189	1.205	1.247	1.277	1.276	1.244	1.255	1.327	1.342	<i>1.311</i>	<i>1.356</i>	<i>1.367</i>
Consumer Price Index (index, 1982-1984=1.000).....	1.307	1.362	1.403	1.445	1.482	1.524	1.569	1.605	1.630	1.666	1.722	1.771	<i>1.799</i>	<i>1.838</i>	<i>1.878</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	0.913	0.853	<i>0.795</i>	<i>1.007</i>	<i>0.898</i>
Non-Farm Employment (millions).....	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.9	128.9	131.7	131.9	<i>130.8</i>	<i>131.3</i>	<i>134.2</i>
Commercial Employment (millions).....	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.6	89.6	92.0	92.7	<i>92.3</i>	<i>93.2</i>	<i>96.1</i>
Total Industrial Production (index, 1997=100.0).....	77.6	76.3	78.3	80.9	85.2	89.3	93.2	100.0	105.6	110.1	115.3	111.2	<i>110.4</i>	<i>113.0</i>	<i>119.0</i>
Housing Stock (millions).....	103.4	104.4	105.4	106.7	108.0	109.6	110.9	112.3	114.1	115.7	116.2	118.0	<i>119.8</i>	<i>121.1</i>	<i>122.2</i>
Weather ^a															
Heating Degree-Days															
U.S.	4016	4200	4441	4700	4483	4531	4713	4542	3951	4169	4460	4223	<i>4279</i>	<i>4444</i>	<i>4477</i>
New England	5848	5960	6844	6728	6672	6559	6679	6662	5680	5952	6489	6059	<i>6180</i>	<i>6598</i>	<i>6488</i>
Middle Atlantic	4998	5177	5964	5948	5934	5831	5986	5809	4812	5351	5774	5297	<i>5383</i>	<i>5960</i>	<i>5723</i>
U.S. Gas-Weighted.....	4139	4337	4458	4754	4659	4707	4980	4802	4183	4399	4680	4451	<i>4518</i>	<i>4720</i>	<i>4730</i>
Cooling Degree-Days (U.S.).....	1260	1331	1040	1218	1220	1293	1180	1156	1410	1297	1229	1256	<i>1366</i>	<i>1232</i>	<i>1240</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.

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 Global Insight Forecast CONTROL1202.

Table A3. Annual International Petroleum Supply and Demand Balance: Base Case

(Millions Barrels per Day, Except OECD Commercial Stocks)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Demand ^a															
OECD															
U.S. (50 States).....	17.0	16.7	17.0	17.2	17.7	17.7	18.3	18.6	18.9	19.5	19.7	19.6	19.7	20.2	20.7
Europe ^b	13.3	13.3	14.0	14.2	14.1	14.2	14.8	15.0	15.3	15.2	15.1	15.3	15.1	15.2	15.3
Japan.....	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.6	5.5	5.4	5.3	5.3	5.3
Other OECD.....	5.4	5.6	5.9	6.2	6.6	6.8	6.9	7.3	7.1	7.4	7.5	7.4	7.5	7.6	7.7
Total OECD.....	40.8	41.6	42.6	43.0	44.2	45.0	46.1	46.6	46.9	47.7	47.9	47.7	47.6	48.2	49.1
Non-OECD															
Former Soviet Union.....	8.4	8.4	6.8	5.6	4.8	4.6	4.0	3.9	3.8	3.7	3.7	3.6	3.7	3.7	3.8
Europe.....	1.0	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
China.....	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.1	4.3	4.8	4.9	5.2	5.3	5.4
Other Asia.....	4.3	4.5	4.7	5.1	5.5	5.9	6.3	6.6	6.7	6.9	7.3	7.3	7.4	7.5	7.7
Other Non-OECD.....	8.9	8.9	9.3	9.7	10.0	10.4	10.7	11.1	11.4	11.6	11.7	11.8	11.9	12.0	12.1
Total Non-OECD.....	24.9	25.0	24.2	24.0	24.1	24.9	25.3	26.2	26.7	27.3	28.1	28.3	28.7	29.1	29.6
Total World Demand.....	65.7	66.6	66.8	67.0	68.3	69.9	71.4	72.9	73.6	75.0	76.0	76.0	76.3	77.4	78.7
Supply ^c															
OECD															
U.S. (50 States).....	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.3	9.0	9.1	9.0	9.1	9.0	8.9
Canada.....	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.6	2.7	2.8	2.9	3.2	3.3
Mexico.....	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.4	3.5	3.6	3.6	3.8	3.9
North Sea ^d	3.9	4.1	4.5	4.8	5.5	5.9	6.3	5.8	5.9	6.0	6.0	6.3	6.2	6.2	6.2
Other OECD.....	1.5	1.5	1.5	1.4	1.5	1.5	1.5	1.8	2.1	1.9	2.1	1.6	1.6	1.6	1.6
Total OECD.....	20.2	20.8	21.1	21.2	21.9	22.4	22.7	23.1	23.6	22.9	23.4	23.2	23.5	23.8	23.9
Non-OECD															
OPEC.....	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	29.3	30.9	30.1	28.1	29.3	29.0
Former Soviet Union.....	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.6	8.1	8.8	9.4	10.0	10.5
China.....	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.4
Other Non-OECD.....	7.9	8.1	8.3	8.7	9.1	9.8	10.2	10.4	10.7	11.2	11.2	11.2	11.4	11.9	12.3
Total Non-OECD.....	46.6	45.9	45.9	46.2	46.3	47.5	48.7	50.6	51.6	51.3	53.4	53.4	52.3	54.5	55.3
Total World Supply.....	66.8	66.7	67.0	67.4	68.2	69.9	71.4	73.7	75.2	74.2	76.8	76.7	75.8	78.3	79.1
Total Stock Withdrawals.....	-0.8	-0.1	-0.3	-0.4	0.0	0.0	-0.4	-1.2	-1.3	0.8	-0.8	-0.7	0.6	-1.0	-0.5
OECD Comm. Stocks, End (bill. bbls.).....	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.4	2.5	2.7	2.6	2.7	2.8
Net Exports from Former Soviet Union.....	3.0	2.1	2.1	2.3	2.4	2.6	3.0	3.3	3.5	3.9	4.5	5.2	5.7	6.3	6.7

^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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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 Monthly, DOE/EIA-0520, and Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

Table A4. Annual Average U.S. Energy Prices: Base Case

(Nominal Dollars)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	21.79	18.74	18.20	16.13	15.53	17.14	20.62	18.49	12.07	17.26	27.72	22.00	23.68	30.91	25.86
WTI ^b Spot Average.....	24.48	21.60	20.54	18.49	17.16	18.41	22.11	20.61	14.45	19.25	30.29	25.95	26.12	33.60	28.37
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.96	2.19	3.69	4.12	2.95	4.77	4.20
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades.....	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.18	1.53	1.47	1.39	1.65	1.52
Regular Unleaded.....	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.14	1.49	1.43	1.34	1.62	1.48
No. 2 Diesel Oil, Retail															
(dollars per gallon).....	1.17	1.13	1.11	1.11	1.11	1.11	1.24	1.19	1.04	1.12	1.49	1.40	1.32	1.58	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon).....	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.49	0.89	0.76	0.69	0.94	0.83
No. 2 Heating Oil, Retail															
(dollars per gallon).....	1.04	0.98	0.93	0.90	0.87	0.86	0.98	0.97	0.84	0.87	1.29	1.23	1.11	1.45	1.27
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel)	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	16.02	25.34	22.24	23.81	30.47	25.17
Electric Utility Fuels															
Coal															
(dollars per million Btu).....	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.22	1.20	1.23	1.22	1.24	1.21
Heavy Fuel Oil ^d															
(dollars per million Btu).....	3.22	2.48	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.38	4.27	3.71	3.57	4.92	4.04
Natural Gas															
(dollars per million Btu).....	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.57	4.33	4.43	3.64	5.29	4.77
Other Residential															
Natural Gas															
(dollars per thousand cubic feet).....	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.83	6.69	7.77	9.62	7.84	9.24	9.22
Electricity															
(cents per kilowatthour).....	7.85	8.05	8.23	8.34	8.40	8.40	8.36	8.43	8.26	8.16	8.24	8.48	8.41	8.55	8.45

^aRefiner acquisition cost (RAC) of imported crude oil.^bWest Texas Intermediate.^cAverage self-service cash prices.^dAverage for all sulfur contents.^eIncludes 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: Base Case

(Million Barrels per Day, Except Closing Stocks)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Crude Oil Supply															
Domestic Production ^a	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.82	5.76	5.59
Alaska	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.05	0.97	0.96	0.99	0.96	0.95
Lower 48	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.85	4.84	4.83	4.79	4.64
Net Commercial Imports ^b	5.76	5.67	5.98	6.67	6.95	7.14	7.40	8.12	8.60	8.60	9.01	9.30	9.10	9.48	9.99
Net SPR Withdrawals	0.06	0.05	-0.01	-0.02	0.00	0.00	0.07	0.01	-0.02	0.02	0.08	-0.02	-0.13	-0.08	-0.03
Net Commercial Withdrawals	0.00	-0.01	0.02	-0.05	-0.01	0.09	0.05	-0.06	-0.05	0.11	0.00	-0.07	0.09	0.00	-0.04
Product Supplied and Losses	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.15	0.12	0.03	0.14	0.16
Total Crude Oil Supply	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.80	15.07	15.13	14.92	15.29	15.67
Other Supply															
NGL Production	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.85	1.91	1.87	1.88	1.93	1.96
Other Hydrocarbon and Alcohol Inputs	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.38	0.42	0.41	0.39
Crude Oil Product Supplied	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.90	0.95	0.94	0.96
Net Product Imports ^c	1.38	0.76	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.40	1.59	1.37	1.56	1.75
Product Stock Withdrawn	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	0.00	-0.23	0.14	0.04	-0.04
Total Supply	17.04	16.56	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.68	20.18	20.68
Demand															
Motor Gasoline ^d	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.47	8.61	8.85	9.03	9.30
Jet Fuel	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.73	1.66	1.61	1.66	1.70
Distillate Fuel Oil	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.72	3.85	3.77	3.96	4.02
Residual Fuel Oil	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.83	0.91	0.81	0.66	0.63	0.66
Other Oils ^e	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.73	4.80	4.90	4.99
Total Demand	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.68	20.18	20.68
Total Petroleum Net Imports	7.16	6.42	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.49	11.05	11.73
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	323	325	318	335	337	303	284	305	324	284	286	312	278	278	291
Total Motor Gasoline	220	219	216	226	215	202	195	210	216	193	196	210	211	202	215
Jet Fuel	52	49	43	40	47	40	40	44	45	41	45	42	40	41	42
Distillate Fuel Oil	132	144	141	141	145	130	127	138	156	125	118	145	134	126	128
Residual Fuel Oil	49	50	43	44	42	37	46	40	45	36	36	41	31	35	37
Other Oils ^f	227	251	292	237	274	348	280	204	212	396	246	178	342	269	223

^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, with the following exception: recent petroleum demand and supply data displayed here reflect the incorporation of resubmissions of the data as reported in EIA's Petroleum Supply Monthly, TableC1. 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: Base Case
(Trillion Cubic Feet)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Total Dry Gas Production.....	17.81	17.70	17.84	18.10	18.82	18.60	18.85	18.90	19.02	18.83	18.99	19.40	<i>18.87</i>	<i>19.09</i>	<i>19.40</i>
Net Imports	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	3.54	3.60	<i>3.51</i>	<i>3.55</i>	<i>3.71</i>
Supplemental Gaseous Fuels	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.09	<i>0.08</i>	<i>0.08</i>	<i>0.09</i>
Total New Supply	19.38	19.45	19.88	20.42	21.39	21.40	21.75	21.84	22.12	22.35	22.61	23.09	<i>22.45</i>	<i>22.73</i>	<i>23.20</i>
Working Gas in Storage															
Opening	2.85	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	<i>2.90</i>	<i>2.37</i>	<i>2.38</i>
Closing	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	<i>2.37</i>	<i>2.38</i>	<i>2.46</i>
Net Withdrawals	-0.22	0.24	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.21	0.80	-1.18	<i>0.54</i>	<i>-0.01</i>	<i>-0.08</i>
Total Supply	19.16	19.70	20.11	20.70	21.11	21.85	21.73	21.84	21.56	22.56	23.41	21.91	<i>22.99</i>	<i>22.71</i>	<i>23.12</i>
Balancing Item ^a	0.00	-0.14	0.12	0.09	0.13	0.35	0.87	0.89	0.67	-0.17	0.03	0.04	<i>-1.30</i>	<i>-0.22</i>	<i>-0.06</i>
Total Primary Supply.....	19.16	19.56	20.23	20.79	21.24	22.20	22.60	22.73	22.24	22.39	23.44	21.95	<i>21.69</i>	<i>22.50</i>	<i>23.06</i>
Demand															
Residential	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	4.99	4.81	<i>4.85</i>	<i>4.89</i>	<i>5.01</i>
Commercial	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	3.22	3.04	<i>3.18</i>	<i>3.04</i>	<i>3.26</i>
Industrial	8.24	8.36	8.70	8.87	8.91	9.38	9.69	9.71	9.49	9.16	9.38	8.19	<i>7.71</i>	<i>8.73</i>	<i>8.75</i>
Lease and Plant Fuel	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.17	1.08	1.13	1.09	<i>1.12</i>	<i>1.14</i>	<i>1.15</i>
Other Industrial	7.01	7.23	7.53	7.70	7.79	8.16	8.44	8.51	8.32	8.08	8.25	7.10	<i>6.59</i>	<i>7.59</i>	<i>7.60</i>
CHP ^b	1.06	1.06	1.11	1.12	1.18	1.26	1.29	1.28	1.36	1.40	1.39	1.37	<i>1.37</i>	<i>1.40</i>	<i>1.45</i>
Non-CHP	5.95	6.17	6.42	6.57	6.61	6.90	7.15	7.23	6.97	6.68	6.87	5.73	<i>5.21</i>	<i>6.19</i>	<i>6.15</i>
Transportation ^c	0.66	0.60	0.59	0.63	0.69	0.70	0.71	0.76	0.64	0.65	0.65	0.63	<i>0.61</i>	<i>0.58</i>	<i>0.60</i>
Electric Power ^d	3.24	3.32	3.45	3.47	3.90	4.24	3.81	4.06	4.59	4.82	5.21	5.29	<i>5.34</i>	<i>5.26</i>	<i>5.44</i>
Total Demand	19.16	19.56	20.23	20.79	21.24	22.20	22.60	22.73	22.24	22.39	23.44	21.95	<i>21.69</i>	<i>22.50</i>	<i>23.06</i>

^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.

^bNatural gas used for electricity generation and production of useful thermal output by combined heat and power plants at industrial facilities. Includes a small amount of natural gas consumption at electricity-only plants in the industrial sector.

^cPipeline fuel use plus natural gas used as vehicle fuel.

^dNatural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

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: Base Case
(Million Short Tons)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Production	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.4	1073.6	1127.7	<i>1099.9</i>	<i>1112.7</i>	<i>1133.8</i>
Appalachia.....	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	425.6	419.4	432.8	<i>405.4</i>	<i>402.6</i>	<i>402.3</i>
Interior	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	143.5	147.0	<i>148.6</i>	<i>136.9</i>	<i>131.6</i>
Western.....	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	488.8	512.3	510.7	547.9	<i>549.9</i>	<i>572.9</i>	<i>599.8</i>
Primary Stock Levels ^a															
Opening.....	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	<i>35.9</i>	<i>32.0</i>	<i>32.0</i>
Closing.....	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	35.9	<i>32.0</i>	<i>32.0</i>	<i>32.2</i>
Net Withdrawals.....	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-2.6	-2.9	7.6	-4.0	<i>3.9</i>	<i>S</i>	<i>-0.2</i>
Imports.....	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	9.1	12.5	19.8	<i>16.9</i>	<i>18.1</i>	<i>18.8</i>
Exports.....	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	58.5	48.7	<i>39.6</i>	<i>40.1</i>	<i>41.2</i>
Total Net Domestic Supply.....	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1045.7	1048.1	1035.2	1094.8	<i>1081.1</i>	<i>1090.7</i>	<i>1111.1</i>
Secondary Stock Levels ^b															
Opening.....	147.1	170.1	170.2	166.8	123.1	139.6	138.0	126.0	108.8	131.6	149.1	108.5	<i>145.6</i>	<i>149.5</i>	<i>175.5</i>
Closing.....	170.1	170.2	166.8	123.1	139.6	138.0	126.0	108.8	131.6	149.1	108.5	145.6	<i>149.5</i>	<i>175.5</i>	<i>194.7</i>
Net Withdrawals.....	-23.0	-0.1	3.3	43.8	-16.5	1.5	12.0	17.2	-22.8	-17.5	40.7	-37.1	<i>-3.9</i>	<i>-26.0</i>	<i>-19.2</i>
Waste Coal Supplied to IPPs ^c	0.0	0.0	6.0	6.4	7.9	8.5	8.8	8.1	9.0	9.6	10.1	10.6	<i>11.1</i>	<i>11.6</i>	<i>14.8</i>
Total Supply.....	898.5	890.8	907.2	937.1	953.2	960.4	1007.1	1033.9	1031.8	1040.2	1086.0	1068.3	<i>1088.3</i>	<i>1076.3</i>	<i>1106.7</i>
Demand															
Coke Plants	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	28.9	26.1	<i>23.4</i>	<i>25.3</i>	<i>23.7</i>
Electric Power Sector ^d	782.6	783.9	795.1	831.6	838.4	850.2	896.9	921.4	936.6	940.9	985.8	965.1	<i>981.9</i>	<i>996.3</i>	<i>1021.4</i>
Retail and General Industry.....	83.1	81.5	80.2	81.1	81.2	78.9	77.7	78.0	72.3	69.6	69.3	67.5	<i>65.4</i>	<i>62.7</i>	<i>61.6</i>
Residential and Commercial	6.7	6.1	6.2	6.2	6.0	5.8	6.0	6.5	4.9	4.9	4.1	4.1	<i>4.3</i>	<i>4.0</i>	<i>3.8</i>
Industrial.....	76.3	75.4	74.0	74.9	75.2	73.1	71.7	71.5	67.4	64.7	65.2	63.4	<i>61.1</i>	<i>58.8</i>	<i>57.8</i>
CHP ^e	27.8	27.0	28.2	28.9	29.7	29.4	29.4	29.8	28.5	27.8	28.0	26.4	<i>26.5</i>	<i>26.9</i>	<i>27.6</i>
Non-CHP.....	48.5	48.4	45.8	46.0	45.5	43.7	42.3	41.7	38.9	37.0	37.2	36.9	<i>34.7</i>	<i>31.9</i>	<i>30.1</i>
Total Demand ^f	904.5	899.2	907.7	944.1	951.3	962.1	1006.3	1029.5	1037.1	1038.6	1084.1	1058.6	<i>1070.7</i>	<i>1084.3</i>	<i>1106.7</i>
Discrepancy ^g	-6.0	-8.5	-0.5	-7.0	1.9	-1.7	0.8	4.3	-5.3	1.6	1.9	9.6	<i>17.6</i>	<i>-8.0</i>	<i>0.0</i>

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

^bSecondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.

^cEstimated independent power producers (IPPs) consumption of waste coal. This item includes waste coal and coal slurry reprocessed into briquettes.

^dEstimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 2001 and projections for 2002 and 2003 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

^eCoal used for electricity generation and production of useful thermal output by combined heat and power plants at industrial facilities. Includes a small amount of coal consumption at electricity-only plants in the industrial sector.

^fCoal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

^gTotal Demand includes estimated IPP consumption.

^hThe 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.

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: Base Case
(Billion Kilowatt-hours)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Net Electricity Generation															
Electric Power Sector ^a															
Coal	1572.1	1568.8	1597.7	1665.5	1666.3	1686.1	1772.0	1820.8	1850.2	1858.6	1943.1	1881.7	1910.4	1909.9	1997.1
Petroleum.....	118.9	112.8	92.2	105.4	98.7	68.1	74.8	86.5	122.2	111.5	105.2	121.2	88.6	85.3	96.4
Natural Gas.....	309.5	317.8	334.3	342.2	385.7	419.2	378.8	399.6	449.3	473.0	518.0	545.9	562.4	554.0	572.7
Nuclear	577.0	612.6	618.8	610.4	640.5	673.4	674.7	628.6	673.7	728.3	753.9	768.8	771.4	780.5	784.2
Hydroelectric	286.2	281.5	245.8	273.5	250.6	302.7	338.1	346.6	313.4	308.6	265.8	204.5	253.8	284.3	288.0
Geothermal and Other ^b	37.1	41.4	44.3	46.0	45.9	42.8	44.5	45.8	46.3	48.4	49.5	48.0	51.8	56.6	59.9
Subtotal.....	2900.8	2934.9	2933.2	3043.0	3087.7	3192.3	3282.8	3327.8	3455.1	3528.4	3635.5	3570.2	3638.4	3670.5	3798.2
Other Sectors ^c	136.9	138.7	149.4	153.4	160.8	161.0	161.4	162.4	168.6	166.4	166.6	163.3	205.0	208.7	216.4
Total	3037.7	3073.7	3082.6	3196.4	3248.5	3353.3	3444.2	3490.2	3623.7	3694.8	3802.1	3733.5	3843.5	3879.2	4014.6
Net Imports ^d	2.3	19.6	25.4	27.8	44.8	39.2	38.0	36.6	27.6	30.6	34.0	20.3	25.3	31.4	21.7
Total Supply	3040.1	3093.3	3108.1	3224.2	3293.3	3392.5	3482.2	3526.8	3651.3	3725.4	3836.2	3753.8	3868.8	3910.6	4036.3
Losses and Unaccounted for ^e	212.5	213.2	222.7	234.7	224.7	235.2	235.0	233.1	225.9	230.2	231.7	152.0	169.8	213.3	228.2
Demand															
Retail Sales ^f															
Residential	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.9	1130.1	1144.9	1192.4	1201.0	1268.3	1267.9	1302.6
Commercial.....	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1055.2	1085.0	1119.2	1123.7	1156.4
Industrial	945.5	946.6	972.7	977.2	1008.0	1012.7	1033.6	1038.2	1051.2	1058.2	1064.2	994.1	969.6	946.7	979.7
Other.....	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	109.5	116.7	110.9	114.0	116.6
Subtotal.....	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3421.4	3396.8	3468.1	3452.4	3555.3
Other Use/Sales ^g	115.0	118.0	122.0	128.0	134.0	144.1	146.0	148.1	161.1	183.1	183.0	205.1	230.9	244.9	252.8
Total Demand	2827.6	2880.1	2885.4	2989.5	3068.6	3157.3	3247.2	3293.7	3425.3	3495.2	3604.4	3601.8	3699.0	3697.3	3808.1

^aElectric Utilities and independent power producers.

^b"Other" includes generation from other gaseous fuels, wind, wood, waste, and solar sources.

^cElectricity generation from combined heat and power facilities and electricity-only plants in the industrial and commercial sectors.

^dData for 2001 are estimates.

^eBalancing item, mainly transmission and distribution losses.

^fTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S Electric Power Monthly and Electric Power Annual. Power marketers' sales are reported annually in Appendix C of EIA's Electric Sales and Revenue. Quarterly data for power marketers (and thus retail sales totals) are imputed. Data for 2001 are estimated.

^gDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2001 are estimates.

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.