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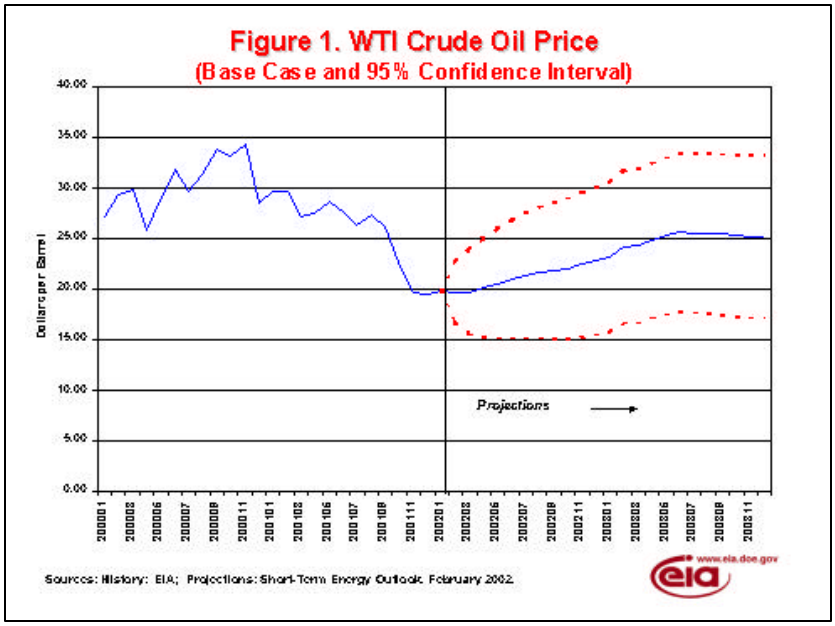
Energy Information Administration

Short-Term Energy Outlook

February 2002



Overview

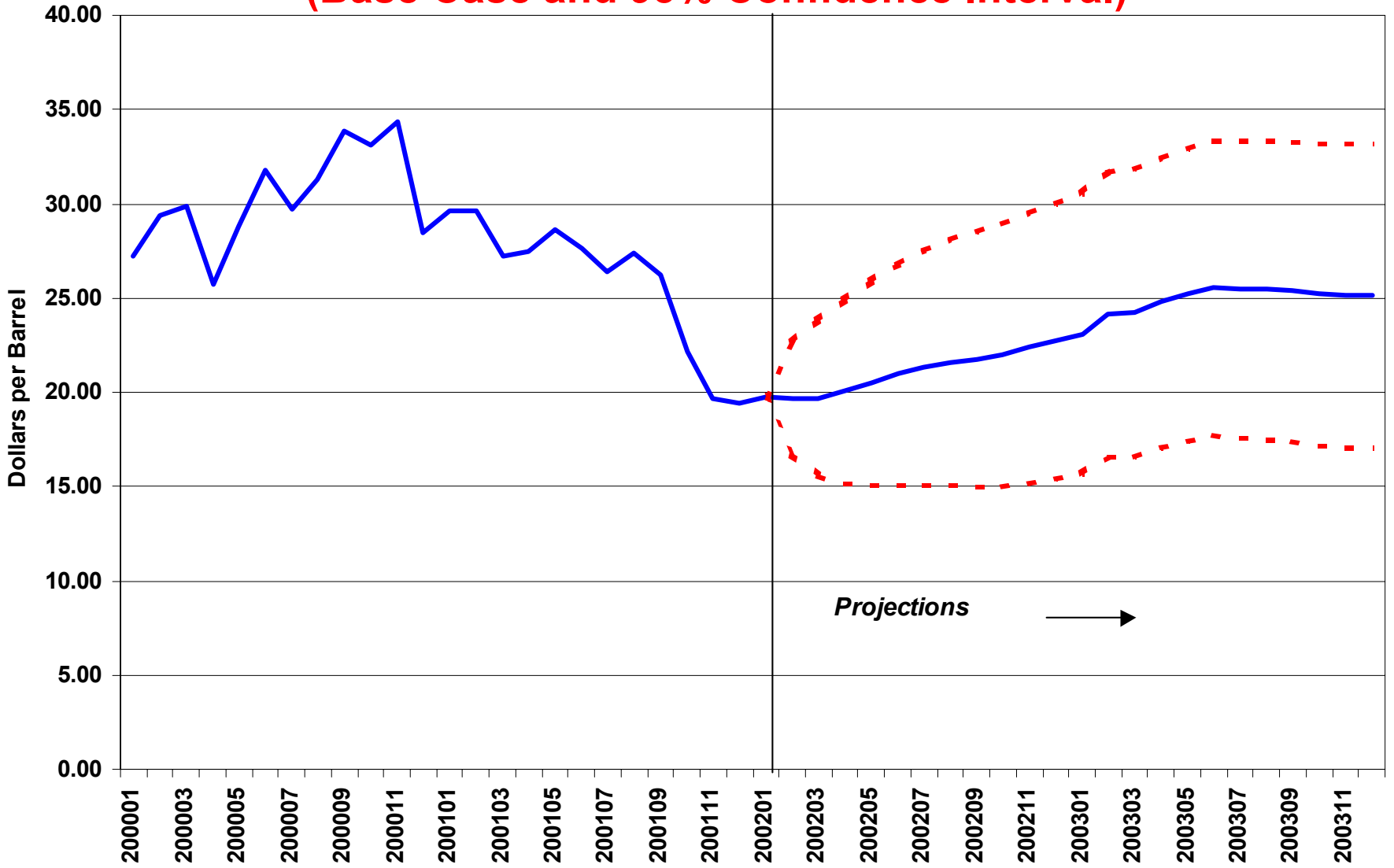
World Oil Markets. OPEC's stated intention to reduce crude oil output beginning in January has been mostly successful. OPEC-10 crude oil output (OPEC less Iraq) fell by an estimated 1.1 million barrels per day in January, or about 70 percent of the officially announced quota reductions. Compliance rates at these levels tend to validate our expectations for steadily increasing average crude oil prices in 2002 (Figure 1).

Weather Update. Very mild winter weather conditions continue to dampen heating season energy demand patterns. Heating degree-days in January 2002 were about 14-17 percent below normal (depending on the region) and below year-ago levels. Even if temperatures are normal for the next two months, Q1 2002 heating degree-days would be 8.5 percent below the same period in 2001. For the entire winter heating season (Q4 2001 - Q1 2002), a return to normal for the time remaining will still imply a year-over-year decline of about 17 percent in heating degree days. Despite efforts by refiners to adjust production rates to deal with low profitability and excess stocks (due in part to the weak heating demand conditions), higher-than-expected domestic product inventories (especially for distillate fuel) continue to materialize. Wholesale prices for heating fuels, including no. 2 heating oil, propane and natural gas, have deteriorated in recent weeks, making more significant the year-to-year decline in average heating fuel prices that we have been observing all season.

Heating Fuel Expenditures Update. The lower prices and heating fuel usage rates bring another round of downward adjustments to our broad estimates of household winter fuels expenditures. Updated estimates of household heating bills for selected fuels (Figure 2) yield the following with respect to the 2001-2002 versus the 2000-2001 heating seasons: a 42-percent reduction in average natural gas heating bills per gas-heated household in the Midwest; a 36-percent fall-off in oil-heated household heating costs in the Northeast, and a 37-percent decline in comparable expenditures for households using propane for heating in the Midwest.

U.S. Natural Gas Markets. Because of the lack of heating demand, the weak economy, and the resultant excess storage levels for natural gas this winter, natural gas market fundamentals are obviously not favorable for strong price performance in the near term. Average daily spot prices at the Henry Hub have slipped below $2 per million Btu on more than one occasion since November, most recently on January 29 of this year. Contrast that price level with the Henry Hub spot average of about $8.30 reported for January of last year. Still, the surprise (given the high storage levels and weak demand fundamentals) has been that, for much of the heating season to date (mid-December through mid-January), Henry Hub spot prices have remained in the $2.30-$3.00 per million Btu range. Whatever the explanation, lower prices have

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



Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

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Figure 2. Illustrated Household Expenditures for Heating Fuels

	1998-1999 Actual	1999-2000 Actual	2000-2001 Actual	2001-2002 Base Forecast
Natural Gas (Midwest)				
Consumption (mcf)	84.5	81.7	97.3	80.7
Avg. Price ($/mcf)	6.29	6.67	9.54	6.63
Expenditures ($)	532	545	928	535
Heating Oil (Northeast)				
Consumption (gals)	650	644	727	611
Avg. Price ($/gal)	0.80	1.18	1.37	1.05
Expenditures ($)	520	760	996	641
Propane (Midwest)				
Consumption (gals)	835	807	961	797
Avg. Price ($/gal)	0.85	1.02	1.36	1.04
Expenditures ($)	710	825	1,309	829

Notes: Consumption based on typical per household use for regions noted.
Prices shown are national average delivered-to-household prices.

Sources: History: EIA; Projections: Short-Term Energy Outlook February 2002.

reappeared in the spot gas market. A current view of natural gas prices for most of the rest of 2002 centers near (or perhaps slightly below) the $2.00-per-million-Btu level. A modest recovery in prices by late 2002 or early 2003 depends largely upon the speed of recovery in the U.S. economy and the net effect on gas productive capacity of the slowdown in U.S. drilling. The latest statistics from Baker Hughes show that gas-directed drilling in the United States has fallen to levels not seen since July 2000. We believe that room for some continued declines exists over the next several months because, on balance, aggregate lease revenues for oil and gas producers aren't likely to turn upward again until mid-summer. This will be particularly true if oil prices remain flat or weaken instead of increasing gradually as expected.

Coal Note: Beginning in July 2001, coal consumption in the Retail and General Industry sector (Table 9, and Table A7) includes data and forecasts of coal consumed at 22 synfuel plants. Historical data for January-June 2001 consumption will be adjusted in a later release. Assumed operating rates at these plants are such that we have increased our projected levels of coal consumed by the Retail and General Industry category by 34 million tons in 2002 and 2003.

International Oil Markets

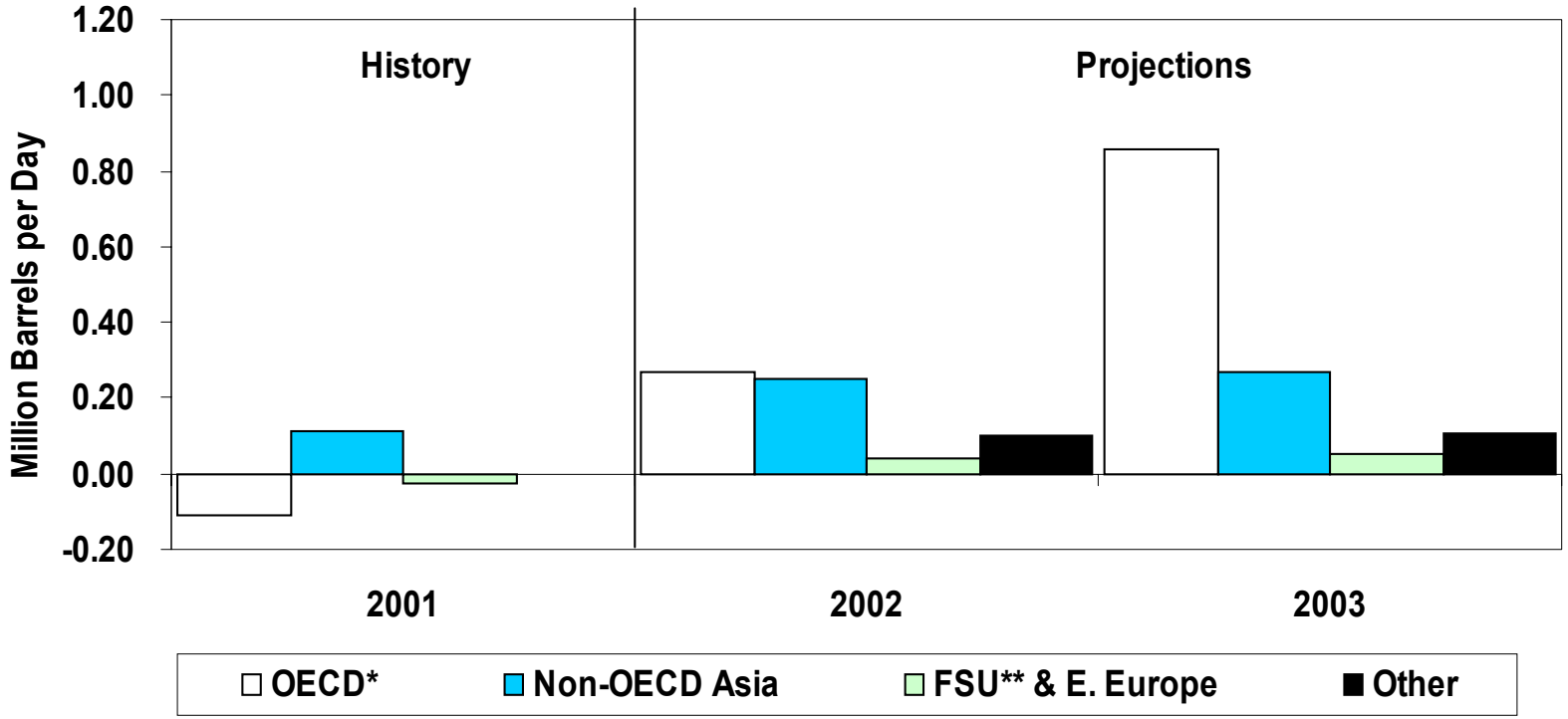
Crude Oil Prices. World oil prices in January rose slightly from December levels after the new OPEC quotas took hold (See EIA's OPEC Fact Sheet for details on new OPEC quotas and non-OPEC production cutback agreements. Although the production cuts have not shown up yet in the form of reduced exports to the United States, markets were relieved that a price war had been averted and were buoyed by talk of possible further cuts to come. The U.S. average imported crude oil price in January was estimated at roughly $16 per barrel, while the U.S. benchmark West Texas Intermediate crude oil price rose slightly to average almost $20 per barrel (Figure 1). The OPEC basket price also rose slightly from December levels, averaging a little over $18 per barrel in January. World oil prices are expected to firm later in 2002 as the new supply cuts by OPEC and others take effect. West Texas Intermediate prices are projected to reach between $22 and $23 per barrel by the end of 2002, and average $25 per barrel in 2003.

International Oil Supply and Demand. After making 4 production quota cuts totaling 5 million barrels per day within the past 12 months, EIA believes that OPEC will need to focus more on quota compliance in 2002 instead of planning additional cuts. Although average OPEC 10 production in 2001 was only 665,000 barrels per day less than in the prior year, the OPEC 10 succeeded in reducing their production from January 2001-January 2002 by almost 80 percent of their planned cuts. EIA's Outlook estimates that the call on OPEC oil will decline by 600,000 barrels per day in 2002, much less than the quota cut of 1.5 million barrels per day that took effect on January 1. As a result, the January quota cut should be the last one required for 2002.

EIA's global oil demand projections for 2002 suggest world oil demand growth of 650,000 barrels per day, slightly less than the 730,000 barrels per day growth shown in the previous Outlook (Figure 3). With the expected recovery of the global economy by end-2002, oil demand could well increase to 1.3 million barrels per day in 2003, with about half of this coming from the United States, where GDP growth is projected to reach 4 percent annually in 2003.

The slump in global oil demand led to a rise in inventories, as OECD commercial oil stocks continued to rise above last year's extremely low levels. These stocks ended almost 100 million barrels higher in end-2001 than a year ago, and the unseasonably warm winter in the United States contributed to a further buildup in stocks in January. With the agreement between OPEC and non-OPEC producers to reduce world oil supplies for the next 6 months, these additional stocks are projected to be worked off during the latter half of 2002 and in 2003, building support for firmer world oil prices (Figure 4).

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 February 2002.

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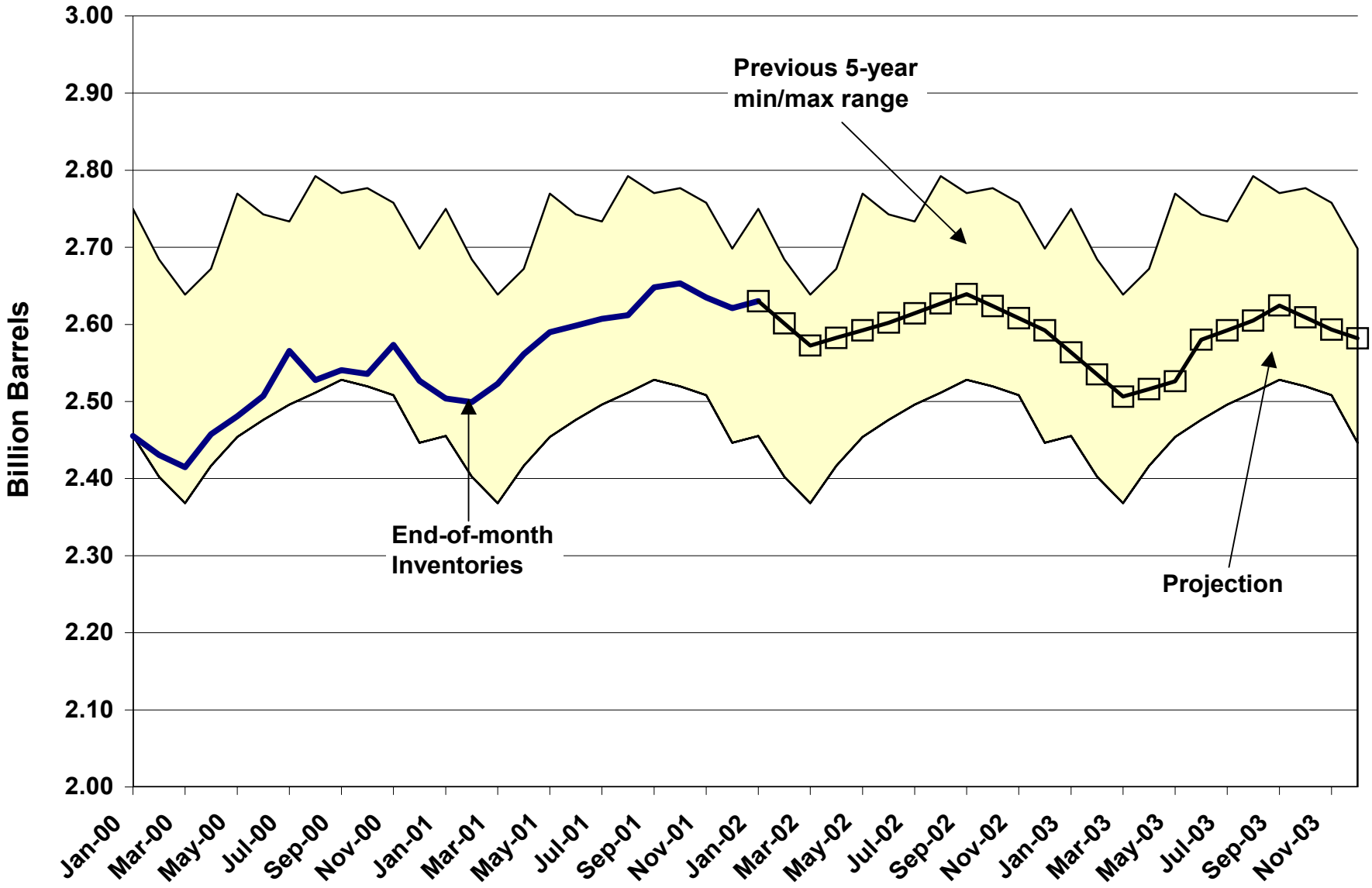
Figure 4. OECD Commercial Oil Stocks



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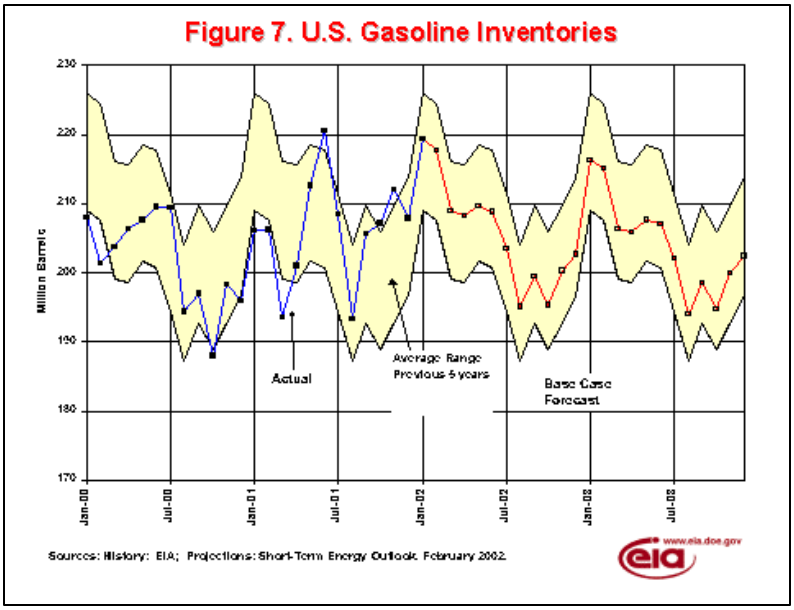
U. S. Energy Prices

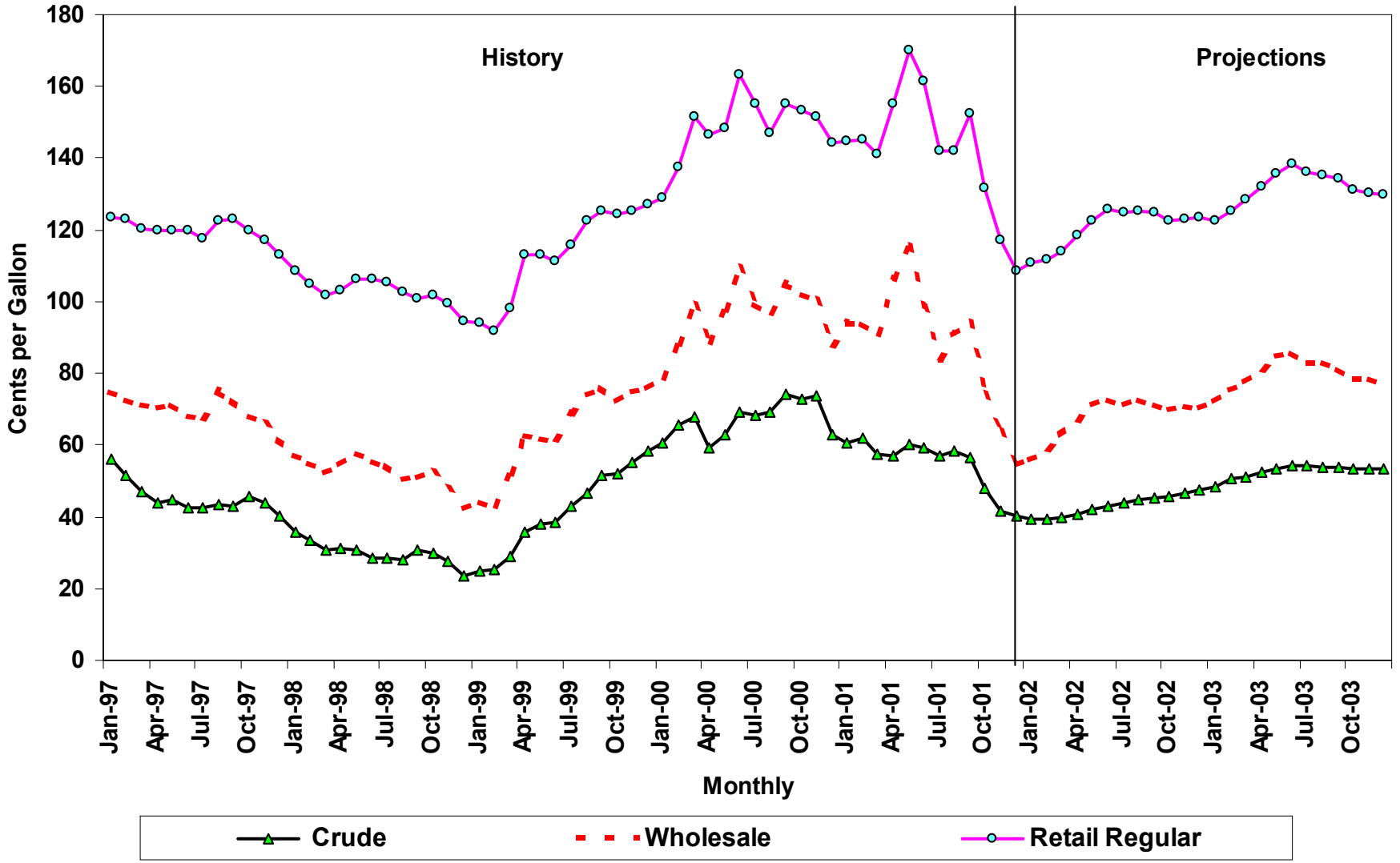
Gasoline Prices: Retail motor gasoline prices have been relatively low over the past few weeks in response to weak crude oil prices, abundant inventories and the normal winter season driving slowdown. The January retail price for regular gasoline averaged $1.11 per gallon, a considerable drop from the record high (in nominal terms) May 2001 price of $1.70 per gallon (Figure 5). Refiner spreads (the difference between the refiner price of gasoline and the crude oil cost) were exceptionally high during the last two driving seasons as the seasonal transition to reformulated gasoline proved difficult due to low inventories and other supply problems (Figure 6). Last year at this time, gasoline stocks were relatively low. Now as we prepare to enter the driving season, inventories of gasoline are well within the "normal" range (Figure 7). Thus, in the base case assumptions, we assume a normal seasonal transition. We do anticipate pump prices to gain about 15-16 cents per gallon by late spring from the current average price. The rise in gasoline demand and the seasonal changeover to reformulated gasoline that characteristically transpire during the driving season, along with somewhat higher crude oil prices, are expected to push average driving season retail prices to about $1.25 per gallon. Nevertheless, it is still possible that we could experience price spikes similar to last year's at the regional level if the seasonal switch to reformulated fuels is complicated by refinery and/or pipeline problems. In 2003, motor gasoline prices should gain about 10 cents per gallon, as gains in crude oil prices are expected and as the economy rebounds.



Distillate Fuel Oil (Diesel and Heating Oil): The unusually warm weather in the Northeast (where 75 percent of the nation's home heating oil is consumed) from September 2001 through January 2002 greatly lowered demand, boosting inventories of distillate fuel to comfortable levels well within the "normal" range. By the end of January, distillate stocks were 16 million barrels above last year's levels (Figure 8). As a result, both heating oil and diesel prices have floundered over the last several months, when normally they would have peaked. Also, crude oil prices are considerably lower compared to this time last year. Compared to last January, residential heating oil prices are currently more than 30 cents per gallon lower (Figure 9). With the heating season two-thirds over, heating oil and diesel prices are projected to be about 30 cents per gallon lower this winter compared to year-ago levels.

Natural Gas: Spot wellhead prices are currently averaging around $2.00-$2.20 per thousand cubic feet, or about one-quarter of what they were this time last year when prices at the wellhead reached record levels. Last spring the price halved from what it was last winter and by mid-summer it had fallen an additional 30 percent. The mild summer weather and the slowing economy greatly reduced gas consumption compared to the previous year (2000). This year, the exceptionally warm winter thus far has greatly reduced heating demand for gas. As a result, the year-over-year change in the level of working gas in underground storage has become glaringly apparent. At the end of last November, working gas in storage was 30 percent above levels during the previous November. By the end of January, the storage level was almost 80 percent above that of the previous year. We expect that by the end of the heating season—only 2 months away - working gas in storage will be double the level at the end of last March. Consequently, we project that natural gas wellhead prices will fall throughout the latter part of winter and continue to decline though the spring and

Figure 5. Motor Gasoline Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

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Figure 6. Motor Gasoline Spreads

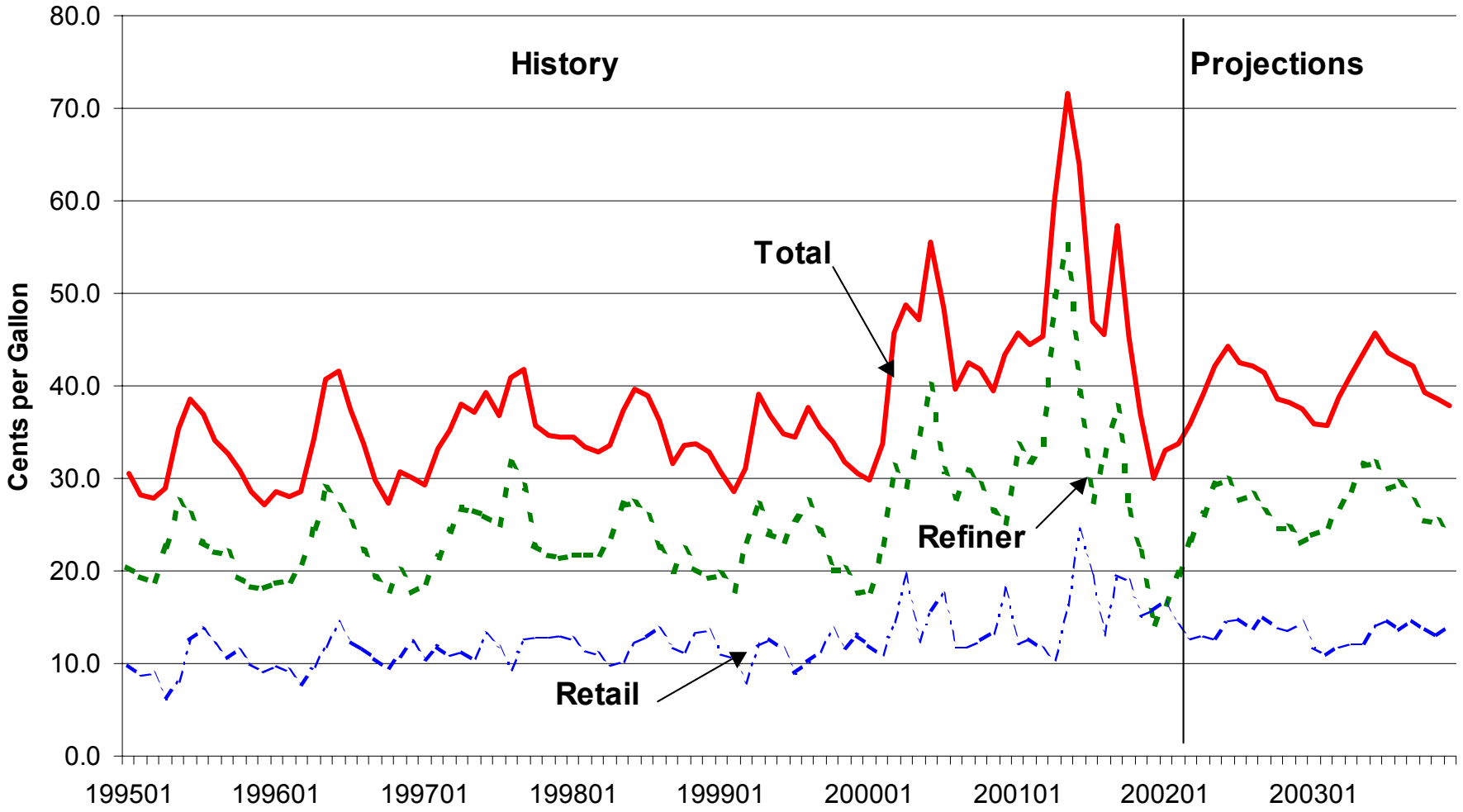

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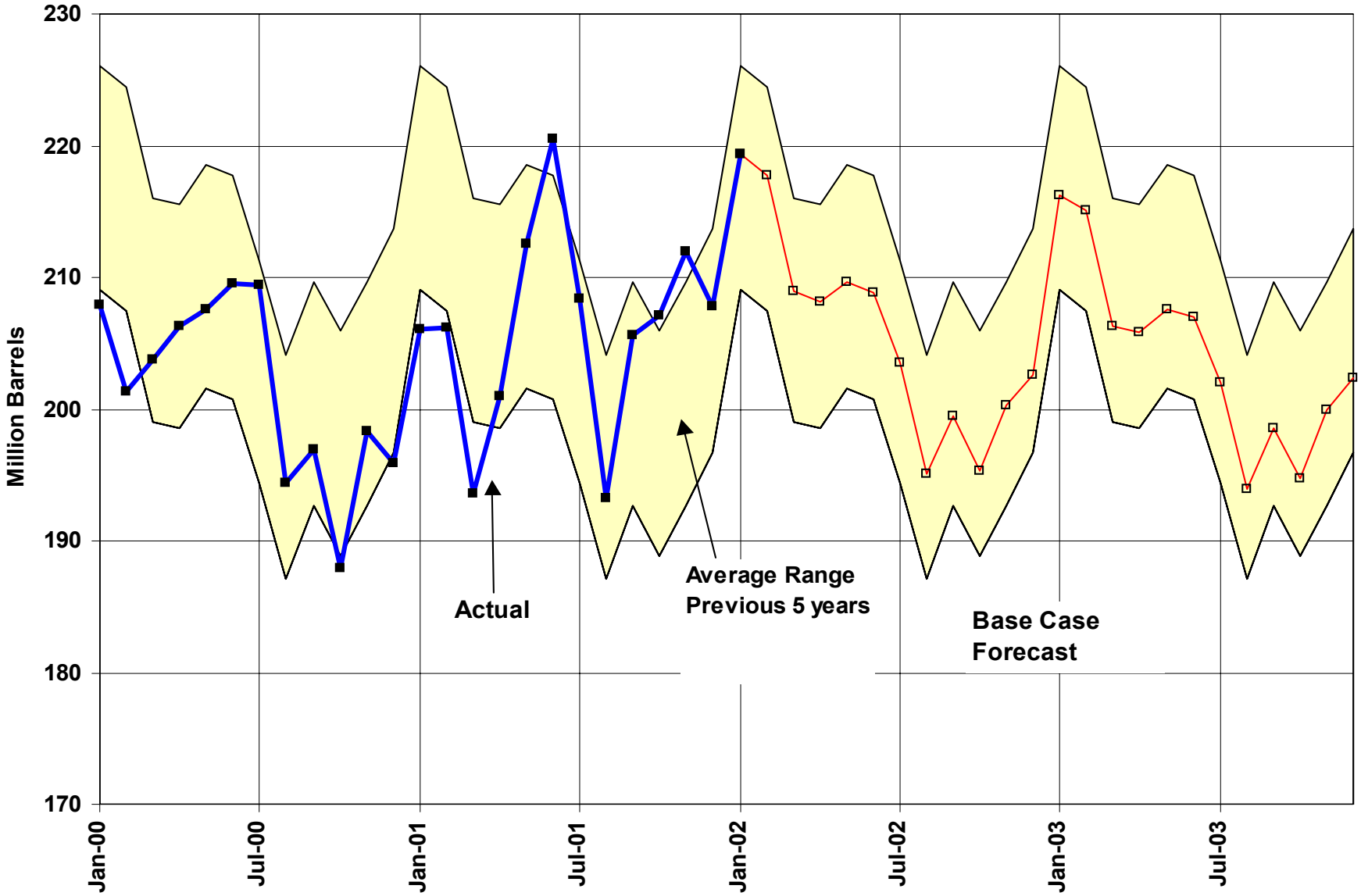
Figure 7. U.S. Gasoline Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

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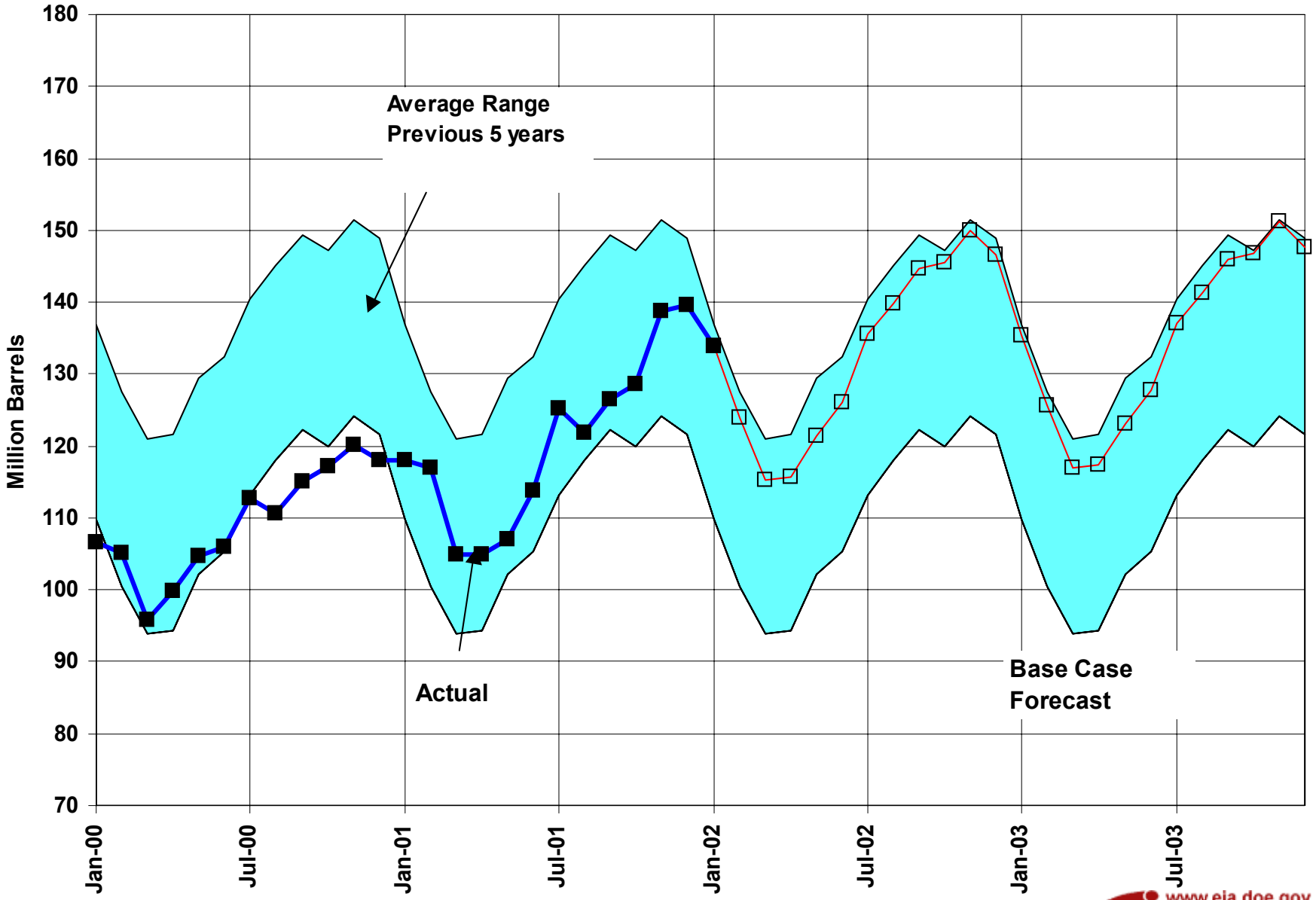
Figure 8. Distillate Fuel Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook,February 2002.

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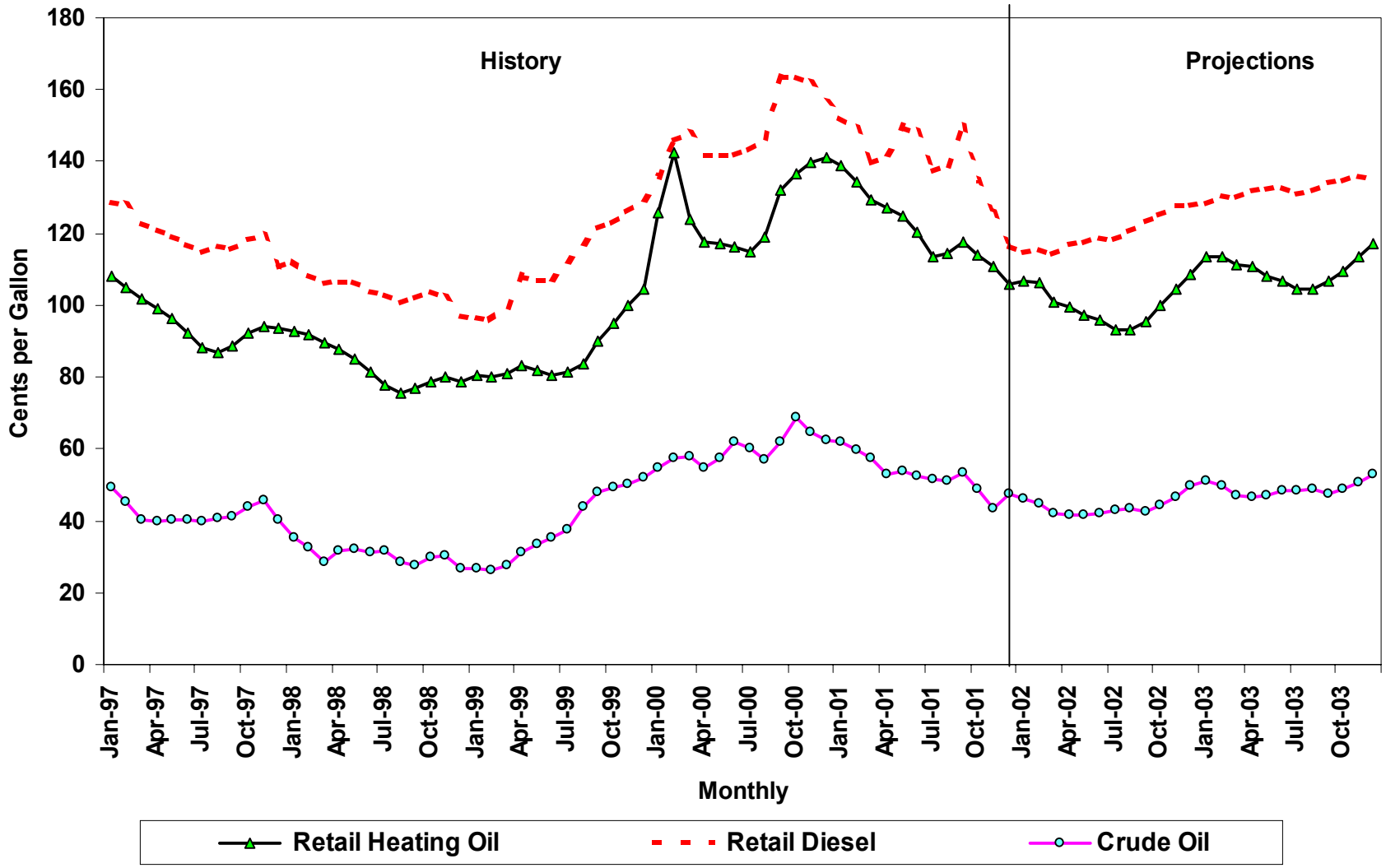
Figure 9. Distillate Fuel Prices



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early summer (Figure 10). For the year 2002, assuming normal weather and barring any major supply disruptions, the annual average natural gas price is projected to be just under $1.90 per thousand cubic feet, or less than half of last year's price. Weak industrial demand and excess underground storage levels should keep a lid on spot prices until next fall. For 2003, we project that, as economic growth accelerates and as world oil prices rise, natural gas wellhead prices will rise accordingly, gaining about 50 cents per thousand cubic feet on average compared to 2002.

Electric Utility Fuels: For the bulk of the forecast period, natural gas is expected to be the more price-competitive fuel compared to heavy oil (Figure 11). However, we expect that by the fourth quarter of 2003, gas will become the more expensive of the two fuels on a cost per Btu basis, as heating demand from winter weather, coupled with the assumption of continued economic growth, boosts the price of gas above the price of heavy oil. Coal prices are projected to continue their slow decline though 2003 as mining productivity continues to advance.

U.S. Oil Demand

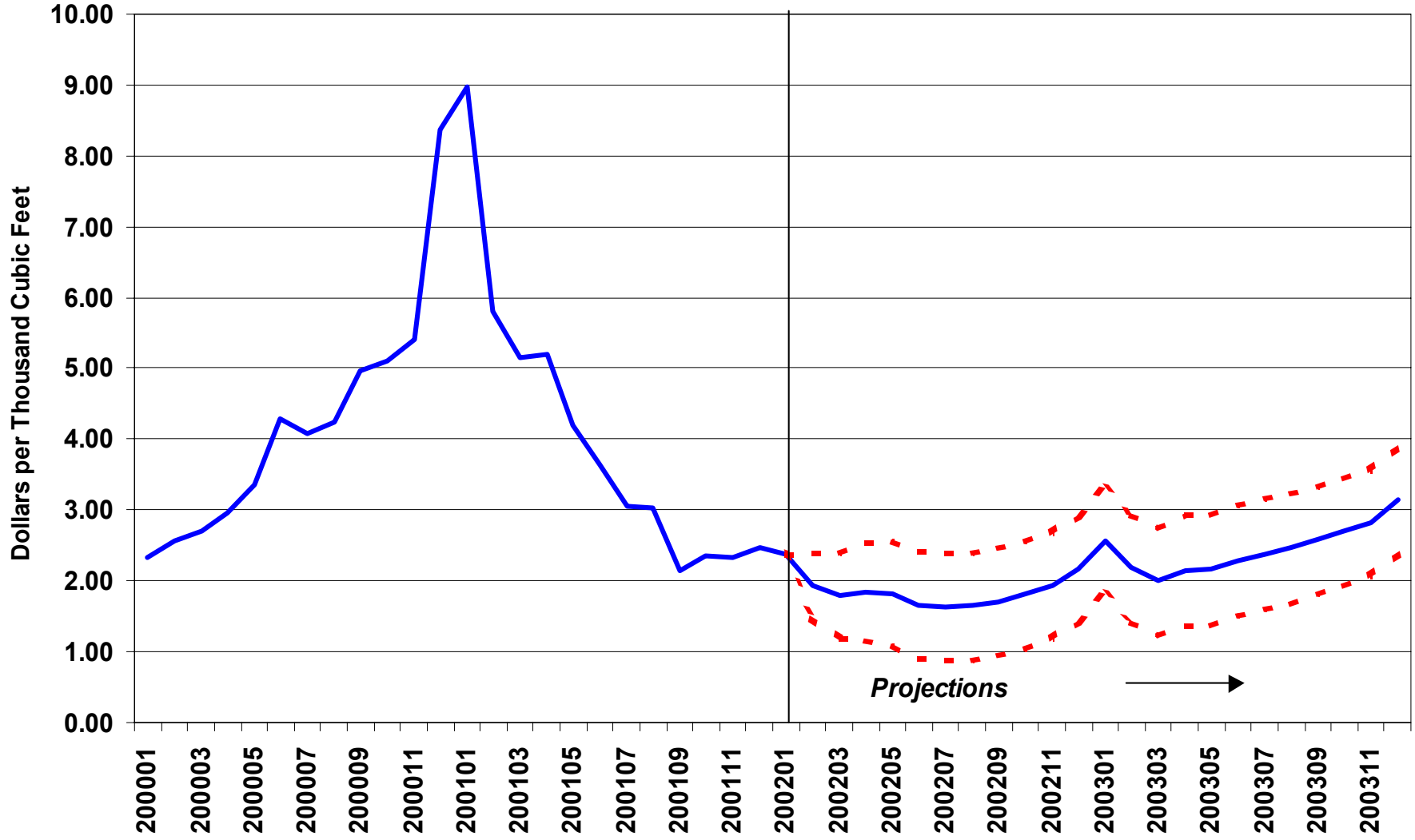
Available data show that domestic petroleum products demand in 2001 averaged 19.65 million barrels per day, down 47,000 barrels per day, or 0.2 percent, from the previous year (Figure 12). This is the first such decline in 10 years, when the economy also contracted. Despite the overall decline in demand, two major fuels--motor gasoline and distillate fuel oil--continued to experience growth, even after the events of September 11. Gasoline demand increased by 1.5 percent for both the year as a whole and for the period of the year following the terrorist attacks. It appears that, during the fourth quarter, the negative effects of a weakening economy were offset by a switch from air travel to highway travel as a result of the terrorist attacks. Distillate fuel oil experienced 3-percent growth in 2001. But much of that growth occurred early in the year due to record high natural gas prices, prompting fuel switching in the power-generation and industrial sectors.

In 2001, jet fuel demand declined almost 4 percent. Even prior to the attacks, demand growth had slowed markedly as a result of a slowdown in air capacity growth, declining passenger load factors and a switch to ground transportation for freight. Due to substantial price declines, residual fuel oil managed to stage a demand increase of 4 percent in 2001. In the first half of the year, increases in power-generation purchases offset weakness in the industrial sector but power-generation demand eventually subsided during the second half in the wake of sharply falling natural gas prices.

During the forecast interval, total petroleum demand is expected to recover. Reflecting projections of an economic recovery starting after the first half of 2002 and normal weather assumptions, demand growth is expected to average 105,000 barrels per day, or 0.5 percent. But the first half is expected to witness a decline of 230,000 barrels per day due to continued economic weakness, recent warm weather and low natural gas prices. Second-half demand is projected to be approximately 430,000 barrels per day higher than during the same period last year. In 2003, petroleum demand is projected to climb a further 600,000 barrels per day, or 3.0 percent, bringing the average annual demand above 20 million barrels per day for the first time.

Motor gasoline growth in 2002 is projected to average 2.4 percent. Commercial air activity is expected to recover gradually, reflecting the continued but still partial reversal of flight curtailments. Commercial jet fuel demand during the first half of this year is still projected to be down 10 percent, but up 8 percent in the second half. The weakness in industrial activity, warm first-quarter weather and continued low gas prices, however, are still projected to result in a decline in distillate demand of 3.8 percent. The presumed return to normal weather patterns and a resumption of growth in industrial output are expected to contribute to 5-percent growth in distillate demand in 2003. Residual fuel oil demand in 2002 is projected to slide 16 percent. Much of that decline stems from the profound shift in relative prices as gas prices plummeted from record highs to almost-record lows. In 2003, residual fuel oil demand is expected to be little changed

Figure 10. Natural Gas Spot Prices
(Base Case and 95% Confidence Interval)



Sources: History: Natural Gas Week; Projections: Short-Term Energy Outlook, February 2002.

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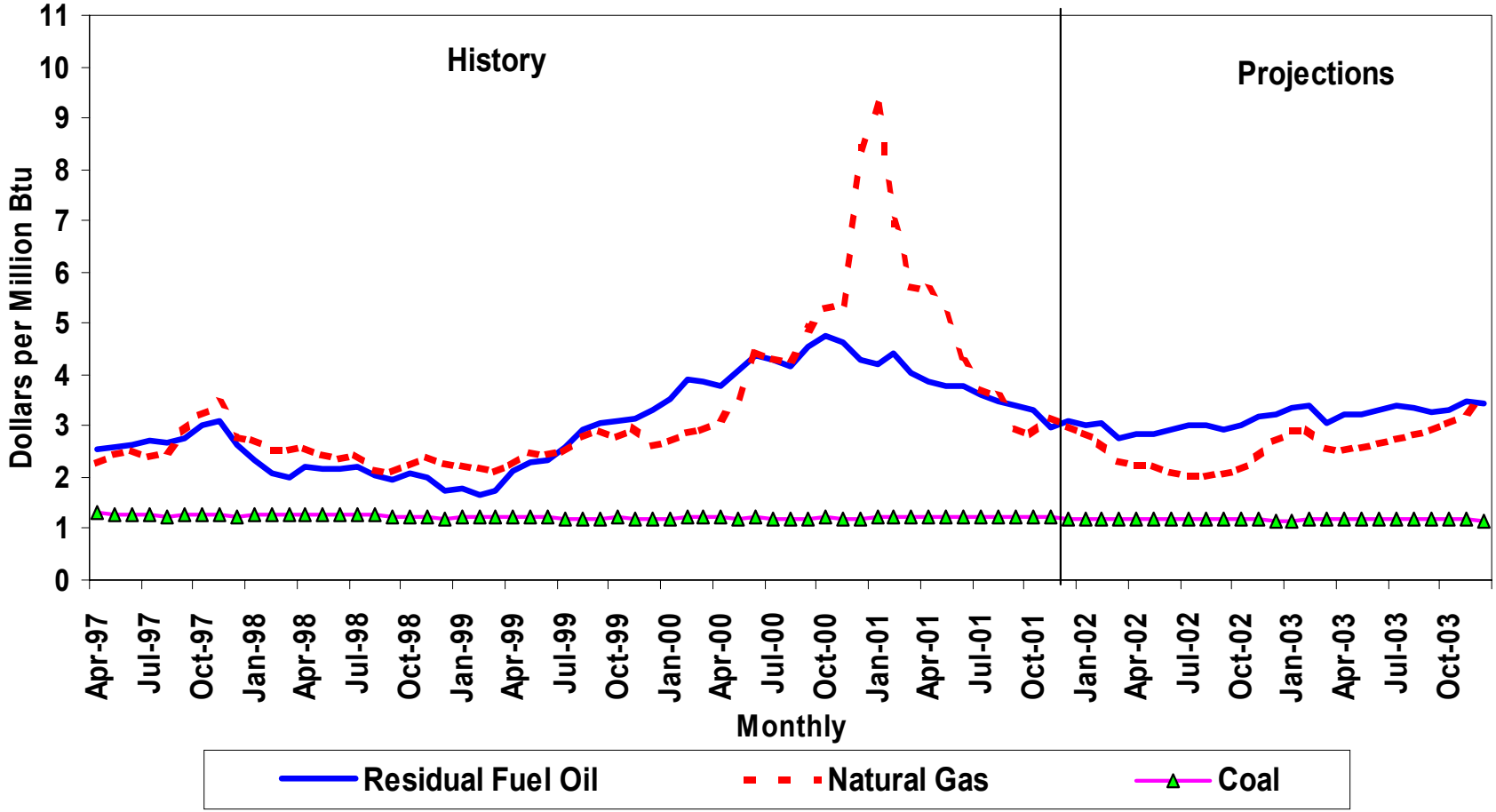
Figure 11. Fossil Fuel Prices to Electric Utilities



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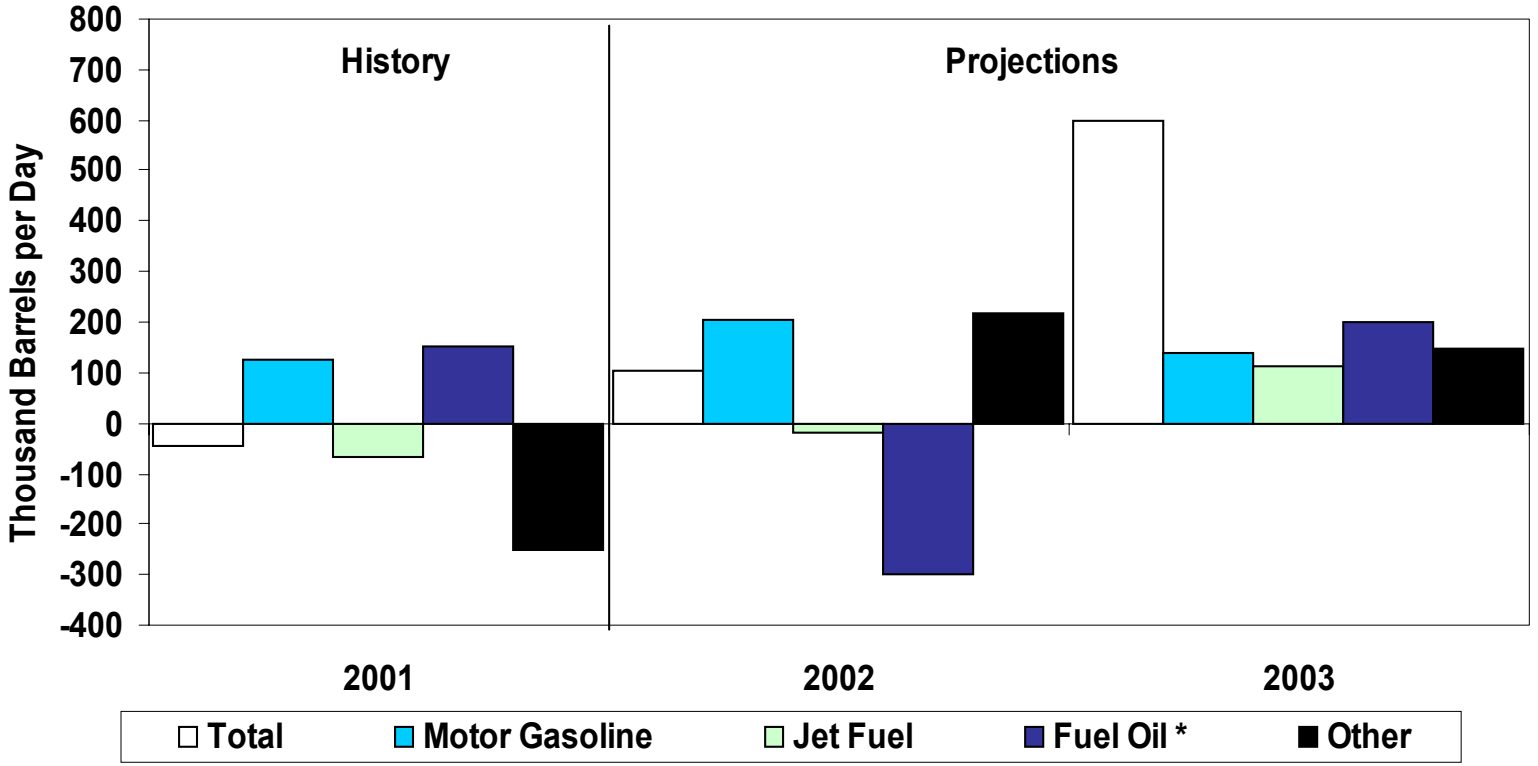
Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

Figure 12. Petroleum Products Demand Growth
(Change from Year Ago)



* Sum of distillate and residual fuel.

Sources: History: EIA; Projections: Short-Term Energy Outlook February 2002.

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from that of the current year, because continued rises in oil prices (as well as continued low gas prices) are expected to offset any stimulus provided by continued economic growth.

U.S. Oil Supply

Average domestic oil production is expected to decrease by 6,000 barrels per day, or 0.3 percent, in 2002 to a level of 5.83 million barrels of oil per day (Figure 13). For 2003, a 1.6 percent decrease is expected, which results in an average production rate of 5.74 million barrels of oil per day for the year.

Lower-48 States oil production is expected to increase by 3,000 barrels per day to a rate of 4.89 million barrels per day in 2002, followed by a decrease of 116,000 barrels per day in 2003. Shell's Brutus platform is expected to peak its oil production at 100,000 barrels per day in 2002. Oil production from the Mars, Troika, Ursa, Dianna-Hoover and Brutus Federal Offshore fields is expected to account for about 9.5 percent of the lower-48 oil production by the fourth quarter of 2003.

Alaska is expected to account for 16.9 percent of total U.S. oil production in 2003. Alaska oil production is expected to decrease by 1.8 percent in 2002 and increase by 2.6 percent in 2003. The increase in 2003 is the result of adding new satellite fields: Colville River (Alpine), Prudhoe Bay (Aurora), Polaris and Borealis, which will contribute to the Alaska North Slope production. Another satellite field, Northstar, came on line in November 2001, and is expected to peak at a rate of 65,000 barrels per day this year. Production from the Kuparuk River field plus like production from West Sak, Tabasco, Tarn and Meltwater fields is expected to stay at an average of 220,000 barrels per day in the 2002 and 2003 forecast periods.

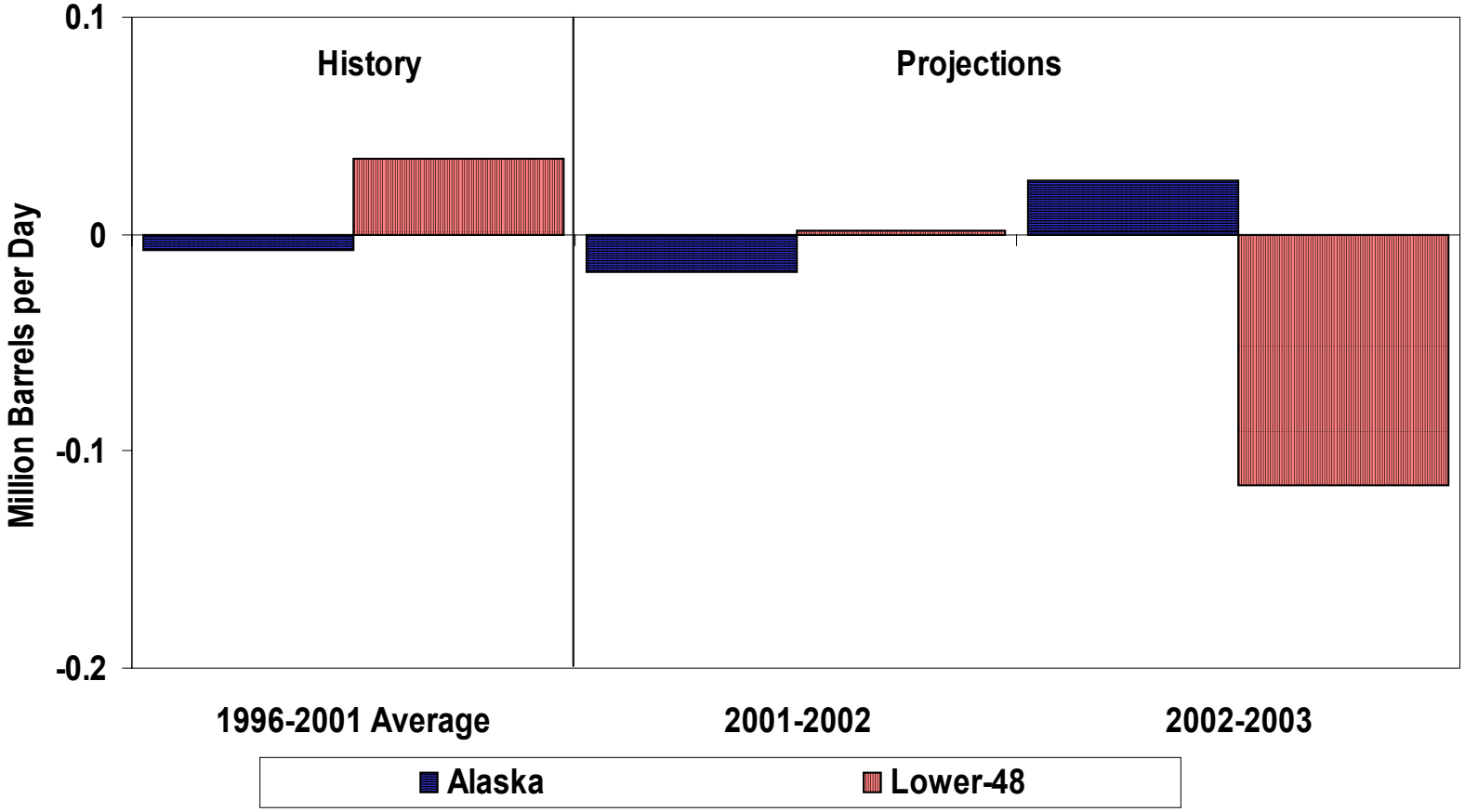
Natural Gas Demand and Supply

Weaker demand estimates for 2002 stemming from the unusually warm January weather prompts us to once again reduce projected dry gas production for this year. Currently, we expect a reduction in domestic dry natural gas production of about 3.4 percent in 2002 compared to the 2001 level. Without such a reduction, a collapse in natural gas spot prices to very low levels in 2002 would seem quite likely. As it is, we see a strong possibility of spot gas prices approaching the range of $1.60-$1.70 per thousand cubic feet by mid- summer, barring late winter cold snaps or very hot summer conditions. Such prices would be reminiscent of the depressed conditions seen in 1998-1999. The projected cutback in domestic production this year would bring gas inventories much closer to normal by mid autumn and set the stage for a moderate price recovery in 2003.

Along with the weaker prices, the gas drilling activity outlook has deteriorated. Baker Hughes reported average active rigs drilling for natural gas at 725 in January, 18 percent below the year-ago level and 32 percent below the peak seen in the current drilling cycle, which occurred in July of 2001. Aggregate lease revenues from domestic oil and gas production are expected to continue to weaken marginally through July 2002 (Figure 14). Inasmuch as these revenues are strongly related to industry cash flow, which in turn is a powerful driver of drilling activity levels, further reductions in gas drilling levels are anticipated this year (Figure 15). If the U.S. gas market moves more toward balance as the year wears on (as we expect) then drilling levels should bottom out somewhere between 560 and 600 average monthly active rigs over the next 12 months or so. Drilling rates should begin moving up again once prices regain some altitude. The latter is anticipated by late 2002/early 2003 as the expected reduction in gas productive capacity interacts with strengthened demand fundamentals related to economic recovery and (perhaps) more normal weather.

For all of 2001, natural gas demand is estimated to have declined by 4.8 percent. Although residential demand is estimated to have declined in 2001 based on weak heating-related demand in the fourth quarter, the overall demand decline was mainly the result of the downturn in gas-intensive industrial production

Figure 13. U.S. Crude Oil Production Growth
(Change from Year Ago)



Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

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Figure 14. U.S. Oil and Gas Production Revenues

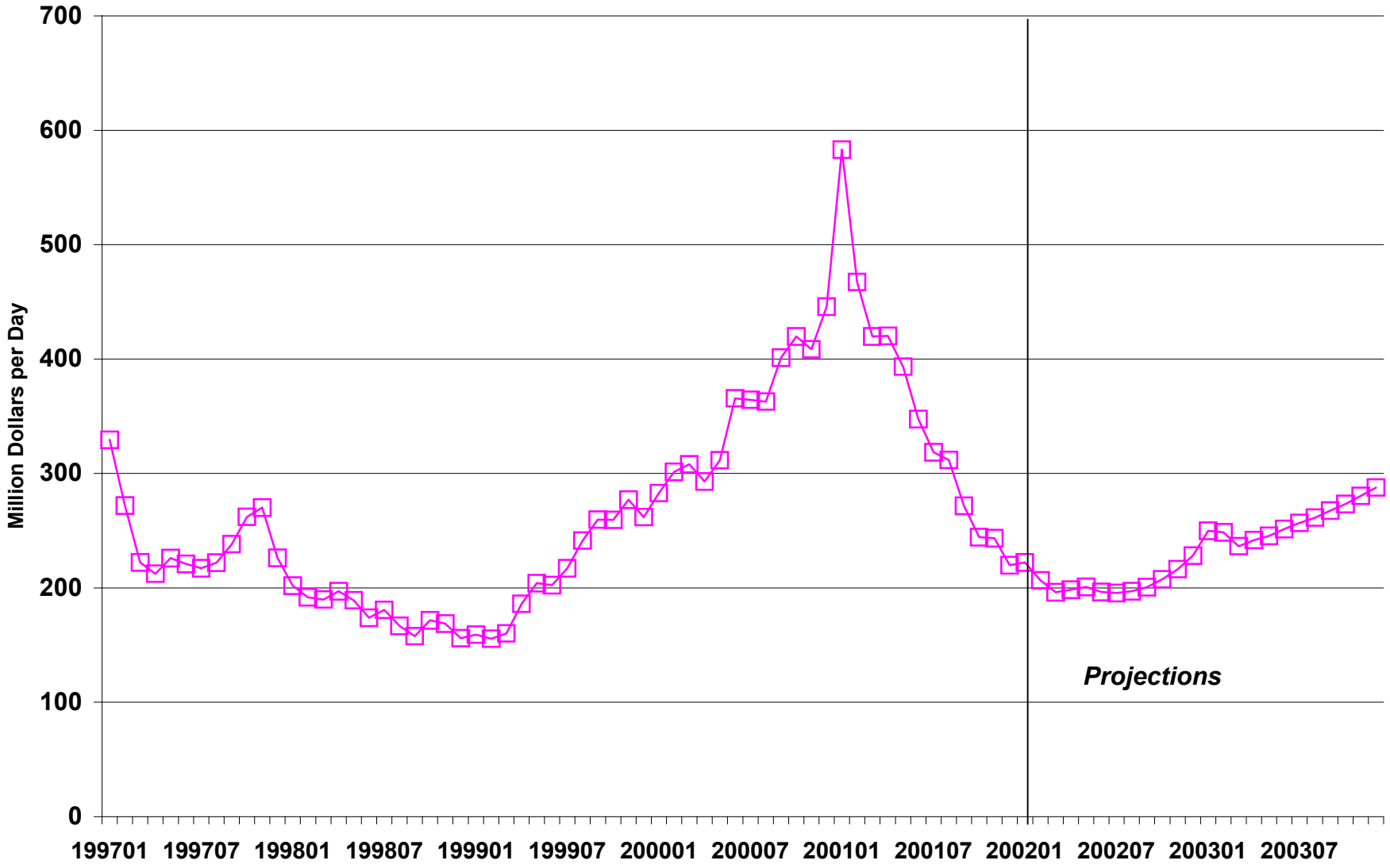

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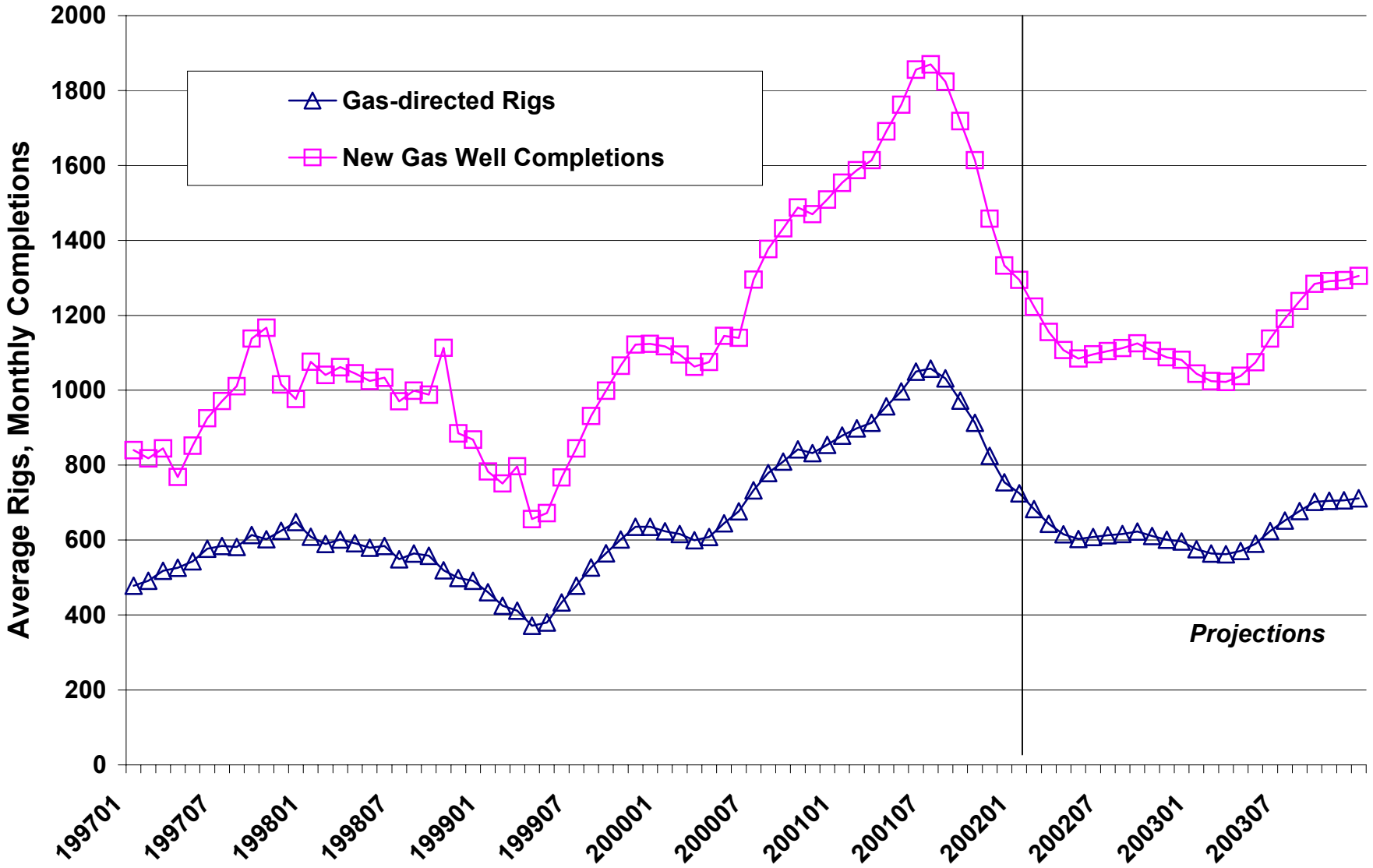
Figure 15. U.S. Natural Gas-Directed Drilling Activity



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(Figure 16). On the other hand, natural gas use for power generation increased by an estimated 5.2 percent in 2001 entirely because of increased use by nonutility generators.

Based on EIA survey data and recent information from the American Gas Association on early-season storage additions, we estimate that, on an EIA survey basis, working gas in storage at the end of January was 2,256 billion cubic feet. Storage is well above last year's level and also above the previous 5-year seasonal range (Figure 17). As excess storage levels have materialized, spot natural gas prices have fallen. In January 2002, spot natural gas prices averaged about $2.37 per thousand cubic feet (mcf) compared with an average of $8.98 in January of 2001.

Average heating season temperatures for the fourth quarter of 2001 were above normal, causing withdrawals from storage to be delayed. This was despite the cold spell at the end of December, which was 14.6 percent lower than normal temperatures in that month. But natural gas demand was still 20 percent lower than it was in December of 2000, which saw record cold for the whole month. If temperatures are assumed to be normal for the rest of this winter, then heating degree-days for the entire 2001-2002 winter season would be about 17 percent lower than last winter. As a consequence, winter demand for natural gas is projected to decline by 8.4 percent compared with growth of 6.4 percent last winter. Spot natural gas prices, which averaged $6.48 per thousand cubic feet last winter, are expected to be two-thirds lower this winter at about $2.21 per thousand cubic feet. Residential and commercial demands for natural gas are expected to be lower than last winter's levels by 16.4 and 11.2 percent, respectively. Industrial gas demand, which was under downward pressure all through 2001, is projected to begin to rise late in the first quarter of 2002. This expectation is seen as the result of the reversal of significant fuel substitution away from natural gas that occurred last winter and, further into 2002, of the gradually reviving economy.

Electricity Demand and Supply

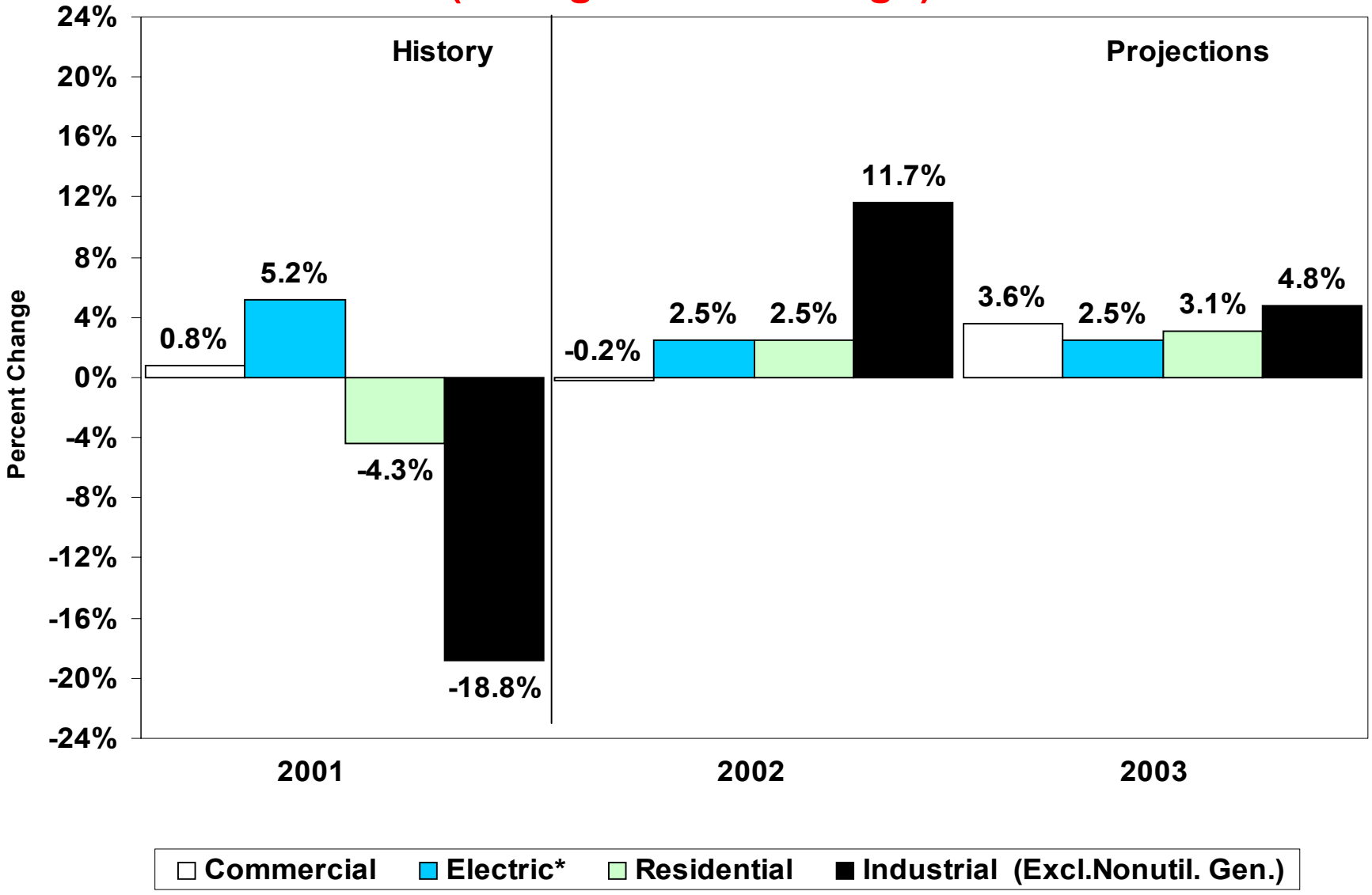
Total annual electricity demand growth (retail sales plus industrial generation for own use and other direct sales) is estimated to have been flat in 2001, but expected to revive slightly by 0.6 percent in 2002, and by a further 2.7 percent in 2003. This is compared with estimated demand growth in 2000 of 2.8 percent over 1999's level. Electricity demand growth is expected to rise in the forecast years (Figure 18) mainly because the economy is assumed to gradually rebound.

Electricity demand in the industrial sector in 2001 was adversely affected by the overall economic slowdown, particularly as illustrated by falling industrial output. In 2002, growth in industrial demand for electricity (including estimated net industrial own-use generation) is expected to grow by about 1.2 percent in contrast to the estimated 8.0 percent contraction seen in 2001. This category of demand growth is expected to exhibit (approximately normal) growth of 3.1 percent in 2003 as the economic recovery proceeds. In 2003, growth in residential demand for electricity is expected to be 3.1 percent, due mainly to assumptions of normal weather. This winter, total electricity demand growth is expected to be negative (down 3.7 percent) compared with last winter's demand growth of 4.7 percent due to a weaker industrial economy compared with last winter, the relatively warm fourth quarter of 2001 and the assumption of normal weather through the remainder of the winter.

In 2001, total hydropower generation (utility and nonutility sectors) was down to record lows not seen since 1966. In 2002, total hydro generation is expected to rise by 28 percent if normal precipitation materializes in the Pacific Northwest, the main region affected.

Figure 16. Natural Gas Demand Growth by Sector

(Change from Year Ago)



* Includes gas to electric utilities and nonutility generators.

Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

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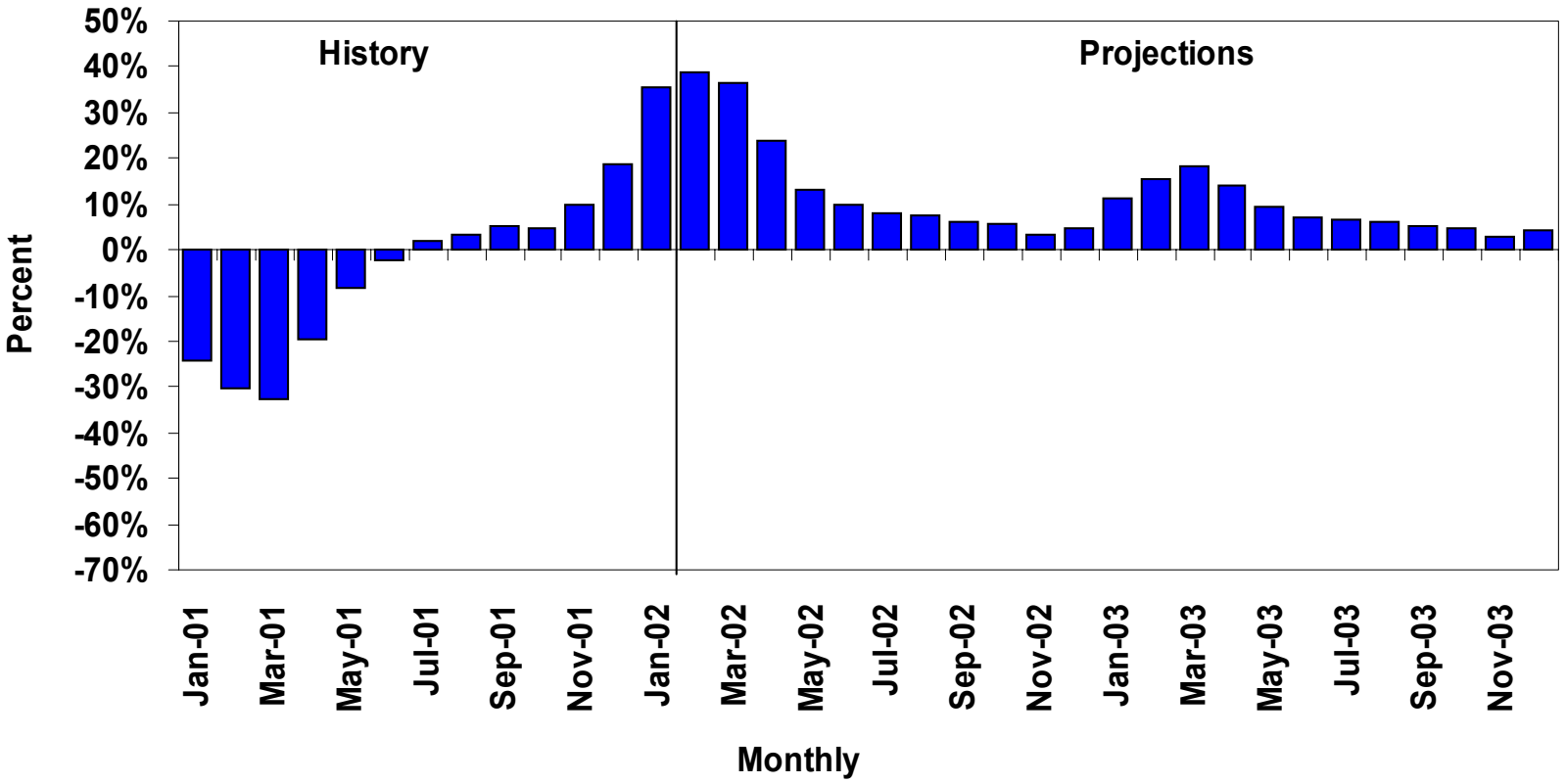
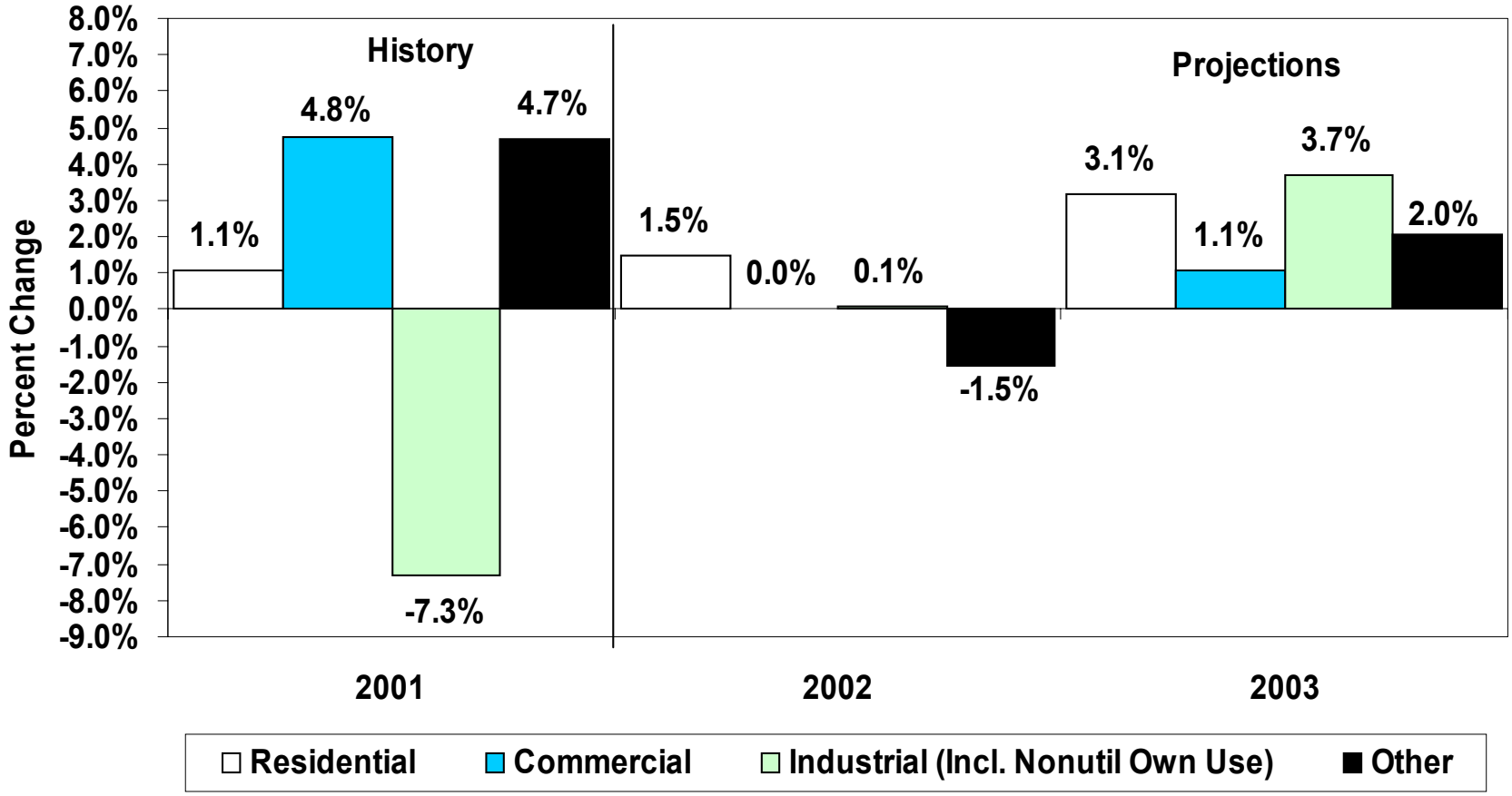
Figure 17. Working Gas in Storage
(Difference from Previous 5-Year Average)



Sources: History: EIA; Projections: Short-Term Energy Outlook, February 2002.

www.eia.doe.gov

Figure 18. U.S. Electricity Demand Growth by Sector
(Change from Year Ago)



Sources: History: EIA; Projections: Short-Term Energy Outlook,February 2002.

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Table HL1. U. S. Energy Supply and Demand

	Year				Annual Percentage Change		
	2000	2001	2002	2003	2000-2001	2001-2002	2002-2003
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	**9224**	*9319*	*9406*	*9780*	**1.0**	*0.9*	*4.0*
Imported Crude Oil Price [a] (nominal dollars per barrel)	**27.72**	*22.06*	*17.54*	*21.52*	**-20.4**	*-20.5*	*22.7*
Petroleum Supply (million barrels per day)							
Crude Oil Production [b]	**5.82**	*5.85*	*5.83*	*5.74*	**0.5**	*-0.3*	*-1.5*
Total Petroleum Net Imports (including SPR)	**10.42**	*10.74*	*10.54*	*11.17*	**3.1**	*-1.9*	*6.0*
Energy Demand							
World Petroleum (million barrels per day)	**75.7**	*75.8*	*76.5*	*77.8*	**0.1**	*0.9*	*1.7*
Petroleum (million barrels per day)	**19.70**	*19.65*	*19.76*	*20.36*	**-0.3**	*0.6*	*3.0*
Natural Gas (trillion cubic feet)	**22.54**	*21.46*	*22.30*	*23.07*	**-4.8**	*3.9*	*3.5*
Coal [c] (million short tons)	**1081**	*1092*	*1127*	*1151*	**1.0**	*3.2*	*2.1*
Electricity (billion kilowatthours)							
Retail Sales [d]	**3413**	*3394*	*3422*	*3505*	**-0.6**	*0.8*	*2.4*
Nonutility Use/Sales [e]	**187**	*185*	*177*	*190*	**-1.1**	*-4.3*	*7.3*
Total	**3599**	*3579*	*3599*	*3695*	**-0.6**	*0.6*	*2.7*
Total Energy Demand [f] (quadrillion Btu)	**99.6**	*98.1*	*100.4*	*103.2*	**-1.5**	*2.4*	*2.8*
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar)	**10.80**	*10.53*	*10.68*	*10.56*	**-2.5**	*1.4*	*-1.1*
Renewable Energy as Percent of Total [g]	**7.0**	*6.7*	*7.3*	*7.4*			

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

[b] Includes lease condensate.

[c] Total Demand includes estimated Independent Power Producer (IPP) coal consumption.

[d] Total 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 2000 are estimates.

[e] Defined as the sum of nonutility facility use of onsite net electricity generation plus direct sales of power by nonutility generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2000 are estimates.

[f] The 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).

[g] Renewable 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 DRI-WEFA Forecast CONTROL1201.

Table 1. U.S. Macroeconomic and Weather Assumptions

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Macroeconomic [a]															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR)	**9334**	**9342**	**9317**	*9284*	*9288*	*9353*	*9435*	*9547*	*9641*	*9742*	*9821*	*9915*	*9319*	*9406*	*9780*
Percentage Change from Prior Year	**2.5**	**1.2**	**0.6**	*-0.2*	*-0.5*	*0.1*	*1.3*	*2.8*	*3.8*	*4.2*	*4.1*	*3.9*	*1.0*	*0.9*	*4.0*
Annualized Percent Change from Prior Quarter	**1.3**	**0.3**	**-1.1**	*-1.4*	*0.2*	*2.8*	*3.5*	*4.8*	*3.9*	*4.2*	*3.2*	*3.8*			
GDP Implicit Price Deflator (Index, 1996=1.000)	**1.087**	**1.092**	**1.098**	*1.099*	*1.104*	*1.106*	*1.110*	*1.116*	*1.124*	*1.129*	*1.136*	*1.143*	*1.094*	*1.109*	*1.133*
Percentage Change from Prior Year	**2.3**	**2.2**	**2.3**	*1.9*	*1.6*	*1.3*	*1.1*	*1.5*	*1.8*	*2.1*	*2.3*	*2.4*	*2.2*	*1.4*	*2.2*
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	**6679**	**6719**	**6919**	*6788*	*6899*	*6888*	*6940*	*7001*	*7082*	*7168*	*7213*	*7255*	*6776*	*6932*	*7180*
Percentage Change from Prior Year	**3.8**	**3.0**	**5.4**	*2.3*	*3.3*	*2.5*	*0.3*	*3.1*	*2.7*	*4.1*	*3.9*	*3.6*	*3.6*	*2.3*	*3.6*
Manufacturing Production (Index, 1996=1.000)	**1.221**	**1.202**	**1.186**	*1.155*	*1.153*	*1.159*	*1.170*	*1.194*	*1.221*	*1.253*	*1.284*	*1.305*	*1.191*	*1.169*	*1.266*
Percentage Change from Prior Year	**-1.1**	**-4.2**	**-5.6**	*-7.1*	*-5.5*	*-3.6*	*-1.3*	*3.3*	*5.9*	*8.1*	*9.7*	*9.3*	*-4.5*	*-1.8*	*8.3*
OECD Economic Growth (percent) [b]													0.9	*1.2*	*2.9*
Weather [c]															
Heating Degree-Days															
U.S.	**2329**	**446**	**90**	*1366*	*2109*	*518*	*86*	*1622*	*2231*	*518*	*86*	*1622*	*4231*	*4335*	*4456*
New England	**3268**	**802**	**149**	*1926*	*2980*	*883*	*167*	*2237*	*3171*	*882*	*167*	*2237*	*6145*	*6267*	*6457*
Middle Atlantic	**2950**	**627**	**101**	*1601*	*2700*	*700*	*105*	*2002*	*2888*	*699*	*105*	*2001*	*5279*	*5507*	*5693*
U.S. Gas-Weighted	**2450**	**470**	**93**	*1438*	*2220*	*555*	*90*	*1714*	*2348*	*555*	*90*	*1713*	*4451*	*4578*	*4706*
Cooling Degree-Days (U.S.)	**26**	**371**	**779**	*80*	*30*	*347*	*782*	*76*	*33*	*347*	*783*	*76*	*1256*	*1234*	*1238*

[a]Macroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case.
[b]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.
[c]Population-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 DRI-WEFA, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI-WEFA Forecast CONTROL1201.

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

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Macroeconomic [a]															
Real Fixed Investment (billion chained 1996 dollars-SAAR)	**1740**	**1696**	**1669**	*1629*	*1608*	*1604*	*1618*	*1636*	*1659*	*1687*	*1712*	*1739*	*1684*	*1616*	*1699*
Real Exchange Rate (index)	**1.105**	**1.141**	**1.134**	*1.127*	*1.124*	*1.123*	*1.115*	*1.108*	*1.106*	*1.100*	*1.084*	*1.069*	*1.127*	*1.118*	*1.090*
Business Inventory Change (billion chained 1996 dollars-SAAR)	**-15.0**	**-35.6**	**-47.2**	*-26.4*	*-19.4*	*-12.2*	*-2.3*	*11.9*	*10.9*	*11.4*	*11.6*	*12.4*	*-31.0*	*-5.5*	*11.6*
Producer Price Index (index, 1982=1.000)	**1.385**	**1.363**	**1.331**	*1.302*	*1.293*	*1.289*	*1.288*	*1.294*	*1.305*	*1.308*	*1.317*	*1.326*	*1.345*	*1.291*	*1.314*
Consumer Price Index (index, 1982-1984=1.000)	**1.761**	**1.774**	**1.777**	*1.781*	*1.787*	*1.794*	*1.803*	*1.814*	*1.826*	*1.836*	*1.848*	*1.862*	*1.773*	*1.800*	*1.843*
Petroleum Product Price Index (index, 1982=1.000)	**0.892**	**0.971**	**0.888**	*0.704*	*0.634*	*0.655*	*0.662*	*0.694*	*0.752*	*0.773*	*0.756*	*0.767*	*0.864*	*0.661*	*0.762*
Non-Farm Employment (millions)	**132.6**	**132.5**	**132.4**	*131.5*	*131.5*	*131.8*	*132.3*	*132.7*	*133.0*	*133.4*	*133.7*	*134.2*	*132.2*	*132.1*	*133.6*
Commercial Employment (millions)	**93.2**	**93.3**	**93.3**	*92.8*	*93.1*	*93.5*	*94.1*	*94.5*	*94.7*	*94.9*	*95.0*	*95.4*	*93.1*	*93.8*	*95.0*
Total Industrial Production (index, 1996=1.000)	**1.199**	**1.181**	**1.166**	*1.139*	*1.136*	*1.140*	*1.151*	*1.174*	*1.200*	*1.229*	*1.256*	*1.274*	*1.171*	*1.150*	*1.240*
Housing Stock (millions)	**117.6**	**117.8**	**117.7**	*117.9*	*118.3*	*118.7*	*119.0*	*119.4*	*119.7*	*120.1*	*120.5*	*120.8*	*117.8*	*118.8*	*120.3*
Miscellaneous															
Gas Weighted Industrial Production (index, 1996=1.000)	**1.081**	**1.073**	**1.069**	*1.064*	*1.072*	*1.083*	*1.097*	*1.114*	*1.130*	*1.149*	*1.167*	*1.183*	*1.072*	*1.091*	*1.157*
Vehicle Miles Traveled [b] (million miles/day)	**6949**	**7727**	**7719**	*7216*	*7048*	*7846*	*7908*	*7445*	*7182*	*7908*	*8077*	*7610*	*7404*	*7564*	*7696*
Vehicle Fuel Efficiency (index, 1999=1.000)	**0.993**	**1.001**	**0.991**	*0.985*	*0.992*	*0.990*	*0.994*	*0.986*	*0.987*	*0.980*	*1.004*	*0.996*	*0.992*	*0.990*	*0.992*
Real Vehicle Fuel Cost (cents per mile)	**4.19**	**4.41**	**4.05**	*3.47*	*3.25*	*3.32*	*3.41*	*3.49*	*3.55*	*3.62*	*3.55*	*3.55*	*4.03*	*3.37*	*3.57*
Air Travel Capacity (mill. available ton-miles/day)	**475.5**	**493.2**	**475.1**	*399.5*	*415.5*	*429.6*	*448.1*	*438.8*	*449.5*	*469.0*	*505.5*	*495.0*	*460.7*	*433.1*	*479.9*
Aircraft Utilization (mill. revenue ton-miles/day)	**263.5**	**279.3**	**262.8**	*217.0*	*228.8*	*255.7*	*277.5*	*265.0*	*262.4*	*286.5*	*302.6*	*289.5*	*255.6*	*256.9*	*285.3*
Airline Ticket Price Index (index, 1982-1984=1.000)	**2.399**	**2.408**	**2.452**	*2.318*	*2.352*	*2.398*	*2.430*	*2.459*	*2.510*	*2.537*	*2.557*	*2.576*	*2.394*	*2.410*	*2.545*
Raw Steel Production (millions tons)	**25.53**	**26.07**	**25.25**	*23.80*	*24.80*	*25.59*	*25.39*	*25.68*	*26.41*	*27.05*	*26.51*	*26.47*	*100.65*	*101.46*	*106.44*

[a] Macroeconomic projections from DRI-WEFA model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case.
[b] Includes all highway travel.
SAAR: Seasonally-adjusted annualized rate.
Note: Historical data are printed in bold; forecasts are in italics.

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

(Million Barrels per Day, Except OECD Commercial Stocks)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Demand [a]															
OECD															
U.S. (50 States)	19.9	19.6	19.7	*19.5*	*19.4*	*19.5*	*20.0*	*20.0*	*20.2*	*20.0*	*20.5*	*20.6*	*19.7*	*19.7*	*20.3*
U.S. Territories	0.4	0.4	0.3	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.5*	*0.4*	*0.4*	*0.5*	*0.4*	*0.4*	*0.4*
Canada	2.0	1.9	2.0	*2.2*	*2.0*	*2.0*	*2.2*	*2.1*	*2.1*	*2.1*	*2.2*	*2.2*	*2.0*	*2.1*	*2.1*
Europe	15.2	14.8	15.5	*15.4*	*15.5*	*14.6*	*15.2*	*15.8*	*15.6*	*14.7*	*15.3*	*15.9*	*15.2*	*15.3*	*15.4*
Japan	6.1	5.0	5.1	*5.6*	*6.1*	*5.0*	*5.2*	*5.6*	*6.1*	*5.0*	*5.2*	*5.6*	*5.5*	*5.5*	*5.5*
Other OECD	5.3	4.9	4.9	*5.2*	*5.0*	*5.0*	*5.2*	*5.3*	*5.1*	*5.0*	*5.3*	*5.3*	*5.1*	*5.1*	*5.2*
Total OECD	48.9	46.6	47.5	*48.3*	*48.5*	*46.4*	*48.1*	*49.3*	*49.5*	*47.1*	*48.9*	*50.2*	*47.8*	*48.1*	*48.9*
Non-OECD															
Former Soviet Union	3.7	3.5	3.5	*3.5*	*3.7*	*3.5*	*3.5*	*3.5*	*3.7*	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*	*3.6*
Europe	0.7	0.7	0.7	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.7*	*0.8*	*0.8*
China	4.9	4.9	4.8	*4.8*	*5.1*	*5.0*	*5.0*	*5.0*	*5.3*	*5.2*	*5.2*	*5.2*	*4.9*	*5.0*	*5.2*
Other Asia	7.0	7.0	6.7	*7.0*	*7.0*	*7.0*	*6.8*	*7.1*	*7.1*	*7.1*	*6.9*	*7.2*	*6.9*	*3.1*	*7.1*
Other Non-OECD	11.8	12.0	12.1	*11.9*	*11.9*	*12.1*	*12.2*	*12.1*	*12.0*	*12.2*	*12.3*	*12.2*	*12.0*	*16.0*	*12.2*
Total Non-OECD	28.1	28.1	27.8	*28.0*	*28.4*	*28.4*	*28.2*	*28.5*	*28.8*	*28.9*	*28.7*	*29.0*	*28.0*	*28.4*	*28.8*
Total World Demand	77.0	74.7	75.3	*76.3*	*77.0*	*74.8*	*76.3*	*77.8*	*78.4*	*76.0*	*77.6*	*79.1*	*75.8*	*76.5*	*77.8*
Supply [b]															
OECD															
U.S. (50 States)	8.8	9.0	9.1	*9.2*	*9.1*	*9.1*	*9.1*	*9.1*	*9.1*	*9.1*	*9.0*	*9.0*	*9.0*	*9.1*	*9.1*
Canada	2.8	2.8	2.7	*2.9*	*3.0*	*3.0*	*3.1*	*3.2*	*3.0*	*3.0*	*3.1*	*3.2*	*2.8*	*3.1*	*3.1*
Mexico	3.6	3.5	3.6	*3.5*	*3.6*	*3.6*	*3.6*	*3.5*	*3.8*	*3.8*	*3.9*	*3.8*	*3.6*	*3.6*	*3.8*
North Sea [c]	5.9	5.6	5.7	*6.2*	*6.1*	*5.8*	*5.9*	*6.2*	*6.1*	*5.8*	*5.8*	*6.1*	*5.9*	*6.0*	*6.0*
Other OECD	2.1	2.1	2.0	*2.1*	*2.1*	*2.1*	*2.1*	*2.1*	*2.2*	*2.2*	*2.2*	*2.2*	*2.1*	*2.1*	*2.2*
Total OECD	23.2	23.0	23.2	*23.9*	*23.9*	*23.6*	*23.8*	*24.1*	*24.2*	*23.9*	*24.0*	*24.3*	*23.3*	*23.8*	*24.1*
Non-OECD															
OPEC	31.2	29.9	30.1	*29.3*	*28.1*	*28.0*	*29.0*	*28.5*	*29.3*	*29.0*	*29.4*	*28.9*	*30.1*	*28.4*	*29.2*
Former Soviet Union	8.6	8.7	8.9	*9.1*	*9.0*	*9.1*	*9.3*	*9.4*	*9.4*	*9.5*	*9.7*	*9.8*	*8.8*	*9.2*	*9.6*
China	3.3	3.3	3.3	*3.3*	*3.3*	*3.4*	*3.4*	*3.4*	*3.3*	*3.4*	*3.4*	*3.4*	*3.3*	*3.4*	*3.4*
Other Non-OECD	11.3	11.1	11.3	*11.3*	*11.3*	*11.4*	*11.6*	*11.8*	*11.7*	*11.8*	*12.0*	*12.2*	*11.3*	*11.6*	*11.9*
Total Non-OECD	54.4	53.1	53.7	*53.0*	*51.8*	*52.0*	*53.4*	*53.1*	*53.7*	*53.7*	*54.6*	*54.3*	*53.5*	*52.6*	*54.1*
Total World Supply	77.7	76.1	76.9	*76.8*	*75.6*	*75.6*	*77.2*	*77.2*	*77.9*	*77.5*	*78.6*	*78.6*	*76.9*	*76.4*	*78.1*
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	-0.1	-0.9	-0.2	*0.0*	*0.2*	*-0.7*	*-0.3*	*0.3*	*0.1*	*-0.6*	*-0.2*	*0.4*	*-0.3*	*-0.1*	*-0.1*
Other	-0.6	-0.5	-1.4	*-0.5*	*1.2*	*0.0*	*-0.6*	*0.3*	*0.4*	*-0.9*	*-0.8*	*0.2*	*-0.7*	*0.2*	*-0.3*
Total Stock Withdrawals	-0.7	-1.4	-1.6	*-0.5*	*1.3*	*-0.7*	*-0.9*	*0.6*	*0.5*	*-1.5*	*-1.0*	*0.5*	*-1.0*	*0.1*	*-0.4*
OECD Comm. Stocks, End (bill. bbls.)	2.5	2.6	2.7	*2.7*	*2.6*	*2.6*	*2.7*	*2.6*	*2.6*	*2.7*	*2.7*	*2.7*	*2.7*	*2.6*	*2.7*
Non-OPEC Supply	46.5	46.2	46.7	*47.5*	*47.5*	*47.5*	*48.2*	*48.7*	*48.6*	*48.5*	*49.1*	*49.6*	*46.7*	*48.0*	*49.0*
Net Exports from Former Soviet Union	5.0	5.2	5.4	*5.6*	*5.3*	*5.6*	*5.8*	*5.8*	*5.6*	*5.9*	*6.1*	*6.2*	*5.3*	*5.6*	*6.0*

[a] Demand 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.

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

[c] Includes 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

(Nominal Dollars)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Crude Oil Prices (dollars per barrel)															
Imported Average[a]	**24.12**	**23.85**	**23.04**	*17.06*	*16.00*	*17.00*	*18.13*	*18.95*	*20.41*	*21.79*	*22.03*	*21.76*	*22.06*	*17.54*	*21.52*
WTI[b] Spot Average	**28.82**	**27.92**	**26.66**	*20.40*	*19.69*	*20.52*	*21.57*	*22.37*	*23.82*	*25.18*	*25.43*	*25.16*	*25.95*	*21.03*	*24.90*
Natural Gas Wellhead															
(dollars per thousand cubic feet)	**6.37**	**4.56**	**3.06**	*2.51*	*2.11*	*1.78*	*1.65*	*1.89*	*2.24*	*2.14*	*2.40*	*2.76*	*4.13*	*1.86*	*2.39*
Petroleum Products															
Gasoline Retail [c] (dollars per gallon)															
All Grades	**1.47**	**1.66**	**1.49**	*1.23*	*1.16*	*1.25*	*1.28*	*1.26*	*1.29*	*1.38*	*1.38*	*1.33*	*1.47*	*1.24*	*1.35*
Regular Unleaded	**1.43**	**1.62**	**1.45**	*1.19*	*1.12*	*1.22*	*1.25*	*1.23*	*1.25*	*1.35*	*1.35*	*1.30*	*1.43*	*1.21*	*1.32*
No. 2 Diesel Oil, Retail															
(dollars per gallon)	**1.47**	**1.47**	**1.42**	*1.26*	*1.15*	*1.18*	*1.21*	*1.27*	*1.30*	*1.32*	*1.32*	*1.36*	*1.40*	*1.20*	*1.33*
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	**0.83**	**0.80**	**0.76**	*0.61*	*0.57*	*0.56*	*0.59*	*0.64*	*0.67*	*0.68*	*0.69*	*0.72*	*0.75*	*0.59*	*0.69*
No. 2 Heating Oil, Retail															
(dollars per gallon)	**1.35**	**1.25**	**1.15**	*1.09*	*1.05*	*0.97*	*0.94*	*1.05*	*1.13*	*1.09*	*1.05*	*1.14*	*1.23*	*1.01*	*1.10*
No. 6 Residual Fuel Oil, Retail [d]															
(dollars per barrel)	**25.13**	**22.29**	**21.77**	*19.62*	*18.63*	*17.52*	*18.04*	*19.79*	*20.81*	*19.88*	*20.25*	*21.44*	*22.35*	*18.49*	*20.61*
Electric Utility Fuels															
Coal															
(dollars per million Btu)	**1.23**	**1.24**	**1.23**	*1.21*	*1.20*	*1.20*	*1.18*	*1.17*	*1.18*	*1.19*	*1.17*	*1.16*	*1.23*	*1.19*	*1.18*
Heavy Fuel Oil [e]															
(dollars per million Btu)	**4.22**	**3.82**	**3.50**	*3.13*	*2.95*	*2.89*	*2.99*	*3.17*	*3.28*	*3.28*	*3.35*	*3.42*	*3.73*	*2.99*	*3.33*
Natural Gas															
(dollars per million Btu)	**7.26**	**4.96**	**3.47**	*2.99*	*2.61*	*2.20*	*2.05*	*2.39*	*2.79*	*2.61*	*2.84*	*3.31*	*4.43*	*2.26*	*2.86*
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	**10.09**	**10.64**	**10.64**	*7.16*	*6.36*	*6.90*	*8.11*	*6.31*	*6.30*	*7.24*	*8.78*	*7.21*	*9.50*	*6.57*	*6.89*
Electricity															
(cents per kilowatthour)	**7.96**	**8.62**	**8.85**	*8.37*	*7.91*	*8.48*	*8.68*	*8.19*	*7.89*	*8.49*	*8.74*	*8.30*	*8.45*	*8.33*	*8.37*

[a]Refiner acquisition cost (RAC) of imported crude oil.
[b]West Texas Intermediate.
[c]Average self-service cash prices.
[d]Average for all sulfur contents.
[e]Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

Notes: Data are estimated for the fourth quarter of 2000. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

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

(Million Barrels per Day, Except Closing Stocks)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Crude Oil Supply															
Domestic Production [a]	**5.85**	**5.84**	**5.82**	*5.89*	*5.88*	*5.83*	*5.79*	*5.84*	*5.85*	*5.76*	*5.68*	*5.68*	*5.85*	*5.83*	*5.74*
Alaska	**0.99**	**0.96**	**0.94**	*0.97*	*0.97*	*0.92*	*0.91*	*0.99*	*1.03*	*0.96*	*0.93*	*0.97*	*0.96*	*0.95*	*0.97*
Lower 48	**4.86**	**4.88**	**4.88**	*4.92*	*4.91*	*4.90*	*4.88*	*4.85*	*4.82*	*4.80*	*4.76*	*4.71*	*4.89*	*4.89*	*4.77*
Net Imports (including SPR) [b]	**9.02**	**9.59**	**9.26**	*8.95*	*8.67*	*9.56*	*9.59*	*9.21*	*9.25*	*9.95*	*9.97*	*9.67*	*9.21*	*9.26*	*9.71*
Other SPR Supply	**0.00**	**0.00**	**0.01**	*0.05*	*0.11*	*0.18*	*0.15*	*0.19*	*0.16*	*0.10*	*0.10*	*0.10*	*0.02*	*0.16*	*0.11*
SPR Stock Withdrawn or Added (-)	**-0.02**	**-0.01**	**-0.02**	*-0.05*	*-0.07*	*-0.18*	*-0.15*	*-0.19*	*-0.16*	*-0.10*	*-0.10*	*-0.10*	*-0.02*	*-0.15*	*-0.11*
Other Stock Withdrawn or Added (-)	**-0.24**	**0.00**	**-0.01**	*-0.04*	*-0.18*	*-0.01*	*0.16*	*0.03*	*-0.20*	*-0.01*	*0.16*	*0.04*	*-0.07*	*0.00*	*0.00*
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	**0.13**	**0.23**	**0.17**	*0.17*	*0.28*	*0.22*	*0.22*	*0.21*	*0.21*	*0.22*	*0.22*	*0.22*	*0.17*	*0.23*	*0.22*
Total Crude Oil Supply	**14.75**	**15.65**	**15.23**	*14.92*	*14.58*	*15.42*	*15.61*	*15.10*	*14.95*	*15.82*	*15.94*	*15.50*	*15.14*	*15.18*	*15.56*
Other Supply															
NGL Production	**1.64**	**1.89**	**1.95**	*1.96*	*1.89*	*1.95*	*1.95*	*1.95*	*1.95*	*1.99*	*1.97*	*2.00*	*1.86*	*1.94*	*1.98*
Other Inputs	**0.38**	**0.39**	**0.40**	*0.40*	*0.40*	*0.41*	*0.43*	*0.44*	*0.42*	*0.42*	*0.43*	*0.44*	*0.40*	*0.42*	*0.43*
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	**0.91**	**0.90**	**0.89**	*0.95*	*0.92*	*0.94*	*0.93*	*0.91*	*0.90*	*0.94*	*0.93*	*0.91*	*0.91*	*0.92*	*0.92*
Net Product Imports [c]	**2.07**	**1.59**	**1.36**	*1.15*	*1.27*	*1.28*	*1.35*	*1.25*	*1.56*	*1.35*	*1.56*	*1.37*	*1.54*	*1.29*	*1.46*
Product Stock Withdrawn or Added (-)	**0.12**	**-0.87**	**-0.14**	*0.11*	*0.41*	*-0.50*	*-0.26*	*0.42*	*0.43*	*-0.51*	*-0.27*	*0.42*	*-0.20*	*0.01*	*0.01*
Total Supply	**19.87**	**19.55**	**19.71**	*19.49*	*19.45*	*19.50*	*20.01*	*20.07*	*20.21*	*20.02*	*20.56*	*20.64*	*19.65*	*19.76*	*20.36*
Demand															
Motor Gasoline	**8.27**	**8.66**	**8.83**	*8.62*	*8.39*	*8.90*	*9.02*	*8.88*	*8.59*	*9.05*	*9.12*	*8.98*	*8.60*	*8.80*	*8.94*
Jet Fuel	**1.73**	**1.72**	**1.67**	*1.52*	*1.60*	*1.60*	*1.66*	*1.69*	*1.72*	*1.69*	*1.78*	*1.80*	*1.66*	*1.64*	*1.75*
Distillate Fuel Oil	**4.21**	**3.72**	**3.64**	*3.78*	*3.90*	*3.56*	*3.52*	*3.79*	*4.09*	*3.72*	*3.71*	*3.98*	*3.84*	*3.69*	*3.87*
Residual Fuel Oil	**1.03**	**0.99**	**0.97**	*0.79*	*0.83*	*0.74*	*0.83*	*0.76*	*0.87*	*0.71*	*0.86*	*0.79*	*0.94*	*0.79*	*0.81*
Other Oils [d]	**4.62**	**4.46**	**4.60**	*4.79*	*4.73*	*4.70*	*4.98*	*4.95*	*4.92*	*4.85*	*5.09*	*5.08*	*4.62*	*4.84*	*4.99*
Total Demand	**19.86**	**19.55**	**19.71**	*19.50*	*19.45*	*19.50*	*20.01*	*20.07*	*20.21*	*20.02*	*20.56*	*20.64*	*19.65*	*19.76*	*20.36*
Total Petroleum Net Imports	**11.09**	**11.18**	**10.62**	*10.10*	*9.93*	*10.84*	*10.94*	*10.46*	*10.81*	*11.31*	*11.54*	*11.04*	*10.74*	*10.54*	*11.17*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**307**	**306**	**307**	*310*	*326*	*327*	*312*	*309*	*327*	*328*	*313*	*309*	*310*	*309*	*309*
Total Motor Gasoline	**194**	**220**	**206**	*208*	*209*	*209*	*200*	*203*	*206*	*207*	*199*	*202*	*208*	*203*	*202*
Finished Motor Gasoline	**145**	**169**	**158**	*158*	*157*	*162*	*155*	*159*	*157*	*162*	*155*	*159*	*158*	*159*	*159*
Blending Components	**49**	**51**	**48**	*49*	*52*	*47*	*44*	*44*	*49*	*45*	*44*	*44*	*49*	*44*	*44*
Jet Fuel	**40**	**43**	**43**	*41*	*38*	*39*	*41*	*41*	*38*	*40*	*41*	*42*	*41*	*41*	*42*
Distillate Fuel Oil	**105**	**114**	**127**	*140*	*115*	*126*	*145*	*147*	*117*	*128*	*146*	*148*	*140*	*147*	*148*
Residual Fuel Oil	**39**	**43**	**37**	*41*	*39*	*40*	*41*	*42*	*39*	*40*	*41*	*41*	*41*	*42*	*41*
Other Oils [e]	**253**	**290**	**311**	*283*	*274*	*308*	*320*	*276*	*269*	*302*	*315*	*270*	*283*	*276*	*270*
Total Stocks (excluding SPR)	**938**	**1017**	**1030**	*1023*	*1002*	*1049*	*1058*	*1017*	*996*	*1044*	*1053*	*1012*	*1023*	*1017*	*1012*
Crude Oil in SPR	**542**	**543**	**545**	*550*	*556*	*572*	*586*	*603*	*617*	*626*	*636*	*645*	*550*	*603*	*645*
Heating Oil Reserve	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Total Stocks (including SPR)	**1480**	**1560**	**1575**	*1573*	*1558*	*1621*	*1644*	*1620*	*1613*	*1670*	*1689*	*1657*	*1573*	*1620*	*1657*

[a] Includes lease condensate.

[b] Net imports equals gross imports plus SPR imports minus exports.

[c] Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

[d] Includes 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.

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding, 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.

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

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

(Percent Deviation Base Case)

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

[a]Percent change in demand quantity resulting from specified percent changes in model inputs.
[b]Short-Term Integrated Forecasting System.
[c]Refiner acquisitions cost of imported crude oil.
[d]Average unit value of marketed natural gas production reported by States.
[e]Refers to percent changes in degree-days.
[f]Response 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	*5.90*	*5.47*	*0.43*	*0.07*	*0.36*
Lower 48 States	*4.91*	*4.50*	*0.40*	*0.05*	*0.35*
Alaska	*0.99*	*0.97*	*0.03*	*0.01*	*0.01*

Note: Components provided are for the fourth quarter 2003. Totals may not add to sum of components due to independent rounding.
Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

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

(Trillion Cubic Feet)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Total Dry Gas Production	**4.86**	**4.86**	**4.84**	*4.79*	*4.60*	*4.63*	*4.67*	*4.78*	*4.76*	*4.80*	*4.84*	*4.95*	*19.35*	*18.68*	*19.36*
Net Imports	**0.97**	**0.90**	**0.94**	*0.81*	*0.87*	*0.89*	*0.91*	*0.97*	*1.02*	*0.98*	*1.01*	*1.03*	*3.62*	*3.64*	*4.03*
Supplemental Gaseous Fuels	**0.04**	**0.03**	**0.03**	*0.03*	*0.03*	*0.02*	*0.02*	*0.02*	*0.03*	*0.02*	*0.02*	*0.02*	*0.12*	*0.09*	*0.09*
Total New Supply	**5.87**	**5.78**	**5.81**	*5.62*	*5.50*	*5.54*	*5.60*	*5.78*	*5.81*	*5.80*	*5.86*	*6.00*	*23.08*	*22.41*	*23.47*
Working Gas in Storage															
Opening	**1.72**	**0.74**	**1.88**	*2.94*	*2.85*	*1.50*	*2.11*	*2.97*	*2.51*	*1.30*	*2.06*	*2.94*	*1.72*	*2.85*	*2.51*
Closing	**0.74**	**1.88**	**2.94**	*2.85*	*1.50*	*2.11*	*2.97*	*2.51*	*1.30*	*2.06*	*2.94*	*2.50*	*2.85*	*2.51*	*2.50*
Net Withdrawals	**0.98**	**-1.14**	**-1.06**	*0.09*	*1.35*	*-0.61*	*-0.86*	*0.45*	*1.21*	*-0.76*	*-0.88*	*0.44*	*-1.13*	*0.34*	*0.01*
Total Supply	**6.84**	**4.64**	**4.75**	*5.72*	*6.85*	*4.93*	*4.74*	*6.23*	*7.02*	*5.04*	*4.98*	*6.45*	*21.95*	*22.75*	*23.49*
Balancing Item [a]	**0.28**	**-0.01**	**-0.29**	*-0.48*	*-0.01*	*-0.01*	*-0.01*	*-0.41*	*0.27*	*0.03*	*-0.13*	*-0.59*	*-0.49*	*-0.45*	*-0.42*
Total Primary Supply	**7.13**	**4.63**	**4.47**	*5.24*	*6.84*	*4.92*	*4.72*	*5.82*	*7.29*	*5.06*	*4.85*	*5.86*	*21.46*	*22.30*	*23.07*
Demand															
Lease and Plant Fuel	**0.29**	**0.29**	**0.29**	*0.29*	*0.27*	*0.27*	*0.28*	*0.29*	*0.28*	*0.28*	*0.29*	*0.30*	*1.15*	*1.11*	*1.15*
Pipeline Use	**0.20**	**0.13**	**0.13**	*0.15*	*0.20*	*0.13*	*0.13*	*0.17*	*0.21*	*0.14*	*0.13*	*0.17*	*0.62*	*0.62*	*0.64*
Residential	**2.46**	**0.77**	**0.37**	*1.18*	*2.24*	*0.83*	*0.37*	*1.45*	*2.42*	*0.84*	*0.38*	*1.40*	*4.77*	*4.89*	*5.04*
Commercial	**1.37**	**0.63**	**0.46**	*0.79*	*1.27*	*0.63*	*0.47*	*0.86*	*1.37*	*0.64*	*0.47*	*0.87*	*3.24*	*3.24*	*3.35*
Industrial (Incl. Nonutility Use)	**2.34**	**2.10**	**2.25**	*2.30*	*2.39*	*2.30*	*2.50*	*2.51*	*2.52*	*2.39*	*2.58*	*2.57*	*8.99*	*9.69*	*10.07*
Electric Utilities	***0.47***	***0.71***	***0.97***	*0.54*	*0.47*	*0.75*	*0.98*	*0.55*	*0.49*	*0.77*	*1.01*	*0.55*	*2.68*	*2.75*	*2.81*
Total Demand	**7.13**	**4.63**	**4.47**	*5.24*	*6.84*	*4.92*	*4.72*	*5.82*	*7.29*	*5.06*	*4.85*	*5.86*	*21.46*	*22.30*	*23.07*

[a] The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

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

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

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

(Million Short Tons)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Production	**283.6**	**278.3**	**278.1**	*278.3*	*285.2*	*266.0*	*289.4*	*291.8*	*283.1*	*277.0*	*295.6*	*296.4*	*1118.3*	*1132.4*	*1152.2*
Appalachia	**110.8**	**109.0**	**104.1**	*100.3*	*109.5*	*102.1*	*103.7*	*106.8*	*106.7*	*104.2*	*103.3*	*106.1*	*424.1*	*422.0*	*420.2*
Interior	**37.5**	**37.0**	**37.9**	*39.2*	*36.0*	*33.8*	*35.8*	*34.5*	*33.9*	*33.6*	*34.7*	*33.2*	*151.6*	*140.1*	*135.3*
Western	**135.3**	**132.3**	**136.1**	*138.8*	*139.8*	*130.1*	*149.9*	*150.5*	*142.6*	*139.3*	*157.6*	*157.2*	*542.5*	*570.3*	*596.6*
Primary Stock Levels [a]															
Opening	**31.9**	**39.2**	**38.3**	*37.0*	*33.9*	*40.7*	*35.0*	*33.1*	*32.5*	*32.8*	*31.6*	*33.0*	*31.9*	*33.9*	*32.5*
Closing	**39.2**	**38.3**	**37.0**	*33.9*	*40.7*	*35.0*	*33.1*	*32.5*	*32.8*	*31.6*	*33.0*	*32.7*	*33.9*	*32.5*	*32.7*
Net Withdrawals	**-7.3**	**0.9**	**1.2**	*3.1*	*-6.8*	*5.7*	*1.9*	*0.6*	*-0.2*	*1.1*	*-1.4*	*0.3*	*-2.0*	*1.4*	*-0.2*
Imports	**3.9**	**4.1**	**6.0**	*4.5*	*5.6*	*5.6*	*5.6*	*5.6*	*6.6*	*6.6*	*6.6*	*6.7*	*18.6*	*22.4*	*26.5*
Exports	**11.8**	**13.5**	**11.7**	*14.0*	*12.8*	*13.0*	*13.3*	*13.2*	*13.1*	*13.3*	*13.5*	*13.5*	*51.0*	*52.3*	*53.4*
Total Net Domestic Supply	**268.4**	**269.9**	**273.7**	*271.9*	*271.2*	*264.2*	*283.6*	*284.8*	*276.4*	*271.5*	*287.3*	*290.0*	*1083.9*	*1103.9*	*1125.2*
Secondary Stock Levels [b]															
Opening	**108.1**	**113.9**	**128.6**	*117.6*	*126.2*	*132.7*	*137.4*	*120.3*	*114.6*	*118.2*	*125.0*	*105.9*	*108.1*	*126.2*	*114.6*
Closing	**113.9**	**128.6**	**117.6**	*126.2*	*132.7*	*137.4*	*120.3*	*114.6*	*118.2*	*125.0*	*105.9*	*100.4*	*126.2*	*114.6*	*100.4*
Net Withdrawals	**-5.8**	**-14.7**	**11.0**	*-8.6*	*-6.5*	*-4.7*	*17.1*	*5.7*	*-3.6*	*-6.8*	*19.1*	*5.5*	*-18.1*	*11.6*	*14.2*
Waste Coal Supplied to IPPs [c]	**2.6**	**2.6**	**2.6**	*2.6*	*2.8*	*2.8*	*2.8*	*2.8*	*2.9*	*2.9*	*2.9*	*2.9*	*10.6*	*11.1*	*11.6*
Total Supply	**265.2**	**257.9**	**287.3**	*266.0*	*267.4*	*262.4*	*303.5*	*293.3*	*275.7*	*267.6*	*309.2*	*298.3*	*1076.4*	*1126.6*	*1150.9*
Demand															
Coke Plants	**6.8**	**7.0**	**6.8**	*6.0*	*6.5*	*6.3*	*6.6*	*6.3*	*6.5*	*6.3*	*6.5*	*6.1*	*26.6*	*25.7*	*25.4*
Electricity Production															
Electric Utilities	**203.9**	**196.1**	**223.7**	*205.0*	*196.9*	*196.3*	*231.4*	*221.1*	*204.4*	*201.0*	*236.4*	*225.6*	*828.8*	*845.6*	*867.3*
Nonutilities (Excl. Cogen.) [d]	**36.7**	**34.7**	**40.8**	*38.5*	*37.7*	*35.7*	*41.5*	*39.2*	*38.5*	*36.4*	*42.5*	*40.1*	*150.6*	*154.1*	*157.5*
Retail and General Industry [e]	**17.8**	**16.2**	**24.8**	*26.7*	*26.4*	*24.1*	*24.1*	*26.7*	*26.3*	*24.0*	*23.9*	*26.5*	*85.5*	*101.3*	*100.7*
Total Demand [f]	**265.3**	**254.0**	**296.0**	*276.2*	*267.4*	*262.4*	*303.5*	*293.3*	*275.7*	*267.6*	*309.2*	*298.3*	*1091.5*	*1126.6*	*1150.9*
Discrepancy [g]	**0.0**	**3.9**	**-8.8**	*-10.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*-15.1*	*0.0*	*0.0*

[a] Primary stocks are held at the mines, preparation plants, and distribution points.

[b] Secondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.

[c] Estimated independent power producers' (IPPs) consumption of waste coal. This item includes waste coal and coal slurry reprocessed into briquettes.

[d] Estimates 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 2000 and projections for 2001 and 2002 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999 and 2000, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

[e] Beginnning in July 2001, includes data and forecasts of coal consumed at 22 synfuel plants; January-June 2001 consumption will be adjusted in a later release.

[f] Total Demand includes estimated IPP consumption.

[g] The 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: Mid World Oil Price Case

(Billion Kilowatt-hours)

	2001				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Net Utility Generation															
Coal	**399.8**	**383.2**	**431.7**	*388.4*	*372.5*	*373.0*	*439.5*	*423.6*	*388.9*	*383.2*	*450.3*	*433.4*	*1603.1*	*1608.7*	*1655.7*
Petroleum	**24.2**	**21.8**	**21.6**	*14.1*	*16.8*	*10.9*	*21.2*	*11.8*	*17.2*	*10.9*	*23.0*	*14.0*	*81.7*	*60.7*	*65.1*
Natural Gas	**45.7**	**69.1**	**95.0**	*52.0*	*44.7*	*70.8*	*93.4*	*51.8*	*46.6*	*72.7*	*95.6*	*52.3*	*261.8*	*260.6*	*267.1*
Nuclear	**135.8**	**130.1**	**140.4**	*128.2*	*130.5*	*127.6*	*137.2*	*127.4*	*130.8*	*128.0*	*137.7*	*127.8*	*534.4*	*522.8*	*524.3*
Hydroelectric	**50.4**	**50.8**	**46.6**	*51.1*	*64.3*	*69.4*	*59.8*	*60.8*	*70.7*	*74.6*	*62.6*	*61.7*	*198.9*	*254.3*	*269.6*
Geothermal and Other [a]	**0.6**	**0.6**	**0.6**	*0.5*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*2.4*	*2.3*	*2.4*
Subtotal	**656.5**	**655.5**	**736.0**	*634.2*	*629.3*	*652.2*	*751.7*	*676.1*	*654.8*	*670.0*	*769.8*	*689.7*	*2682.2*	*2709.4*	*2784.3*
Nonutility Generation [b]															
Coal	**93.5**	**81.1**	**96.1**	*69.3*	*91.8*	*79.5*	*90.7*	*66.1*	*95.9*	*81.5*	*93.0*	*67.6*	*340.0*	*328.1*	*338.0*
Petroleum	**17.0**	**12.0**	**11.9**	*9.9*	*12.0*	*6.5*	*11.1*	*8.5*	*12.3*	*6.5*	*12.0*	*10.1*	*50.8*	*38.1*	*40.9*
Natural Gas	**78.4**	**83.9**	**109.1**	*87.0*	*81.2*	*86.7*	*106.9*	*89.6*	*84.9*	*89.1*	*109.3*	*90.5*	*358.3*	*364.5*	*373.8*
Other Gaseous Fuels [c]	**4.0**	**4.3**	**5.6**	*4.7*	*4.4*	*4.5*	*5.4*	*4.7*	*4.4*	*4.5*	*5.4*	*4.7*	*18.6*	*19.0*	*19.0*
Nuclear	**56.2**	**55.3**	**60.4**	*59.2*	*59.9*	*58.6*	*63.0*	*58.4*	*59.9*	*58.7*	*63.1*	*58.5*	*231.1*	*239.8*	*240.2*
Hydroelectric	**5.3**	**6.4**	**3.3**	*3.7*	*6.5*	*8.8*	*4.3*	*5.7*	*7.5*	*9.5*	*4.5*	*5.8*	*18.8*	*25.3*	*27.3*
Geothermal and Other [d]	**20.4**	**21.5**	**22.2**	*20.9*	*20.4*	*21.2*	*22.3*	*20.9*	*20.5*	*21.2*	*22.4*	*20.9*	*85.0*	*84.8*	*85.0*
Subtotal	**275.0**	**264.5**	**308.6**	*254.6*	*276.1*	*265.8*	*303.8*	*253.9*	*285.4*	*271.0*	*309.8*	*258.0*	*1102.7*	*1099.5*	*1124.2*
Total Generation	**931.4**	**920.0**	**1044.6**	*888.9*	*905.4*	*918.1*	*1055.5*	*930.0*	*940.3*	*941.0*	*1079.5*	*947.7*	*3784.9*	*3808.9*	*3908.5*
Net Imports [e]	**3.6**	**7.2**	**5.0**	*7.9*	*7.1*	*6.7*	*9.9*	*4.2*	*6.2*	*7.6*	*10.9*	*6.7*	*23.8*	*28.0*	*31.5*
Total Supply	**936.4**	**927.8**	**1049.6**	*896.8*	*912.5*	*924.8*	*1065.4*	*934.2*	*946.4*	*948.6*	*1090.5*	*954.4*	*3810.6*	*3836.9*	*3939.9*
Losses and Unaccounted for [f]	**38.7**	**76.4**	**55.7**	*60.5*	*40.6*	*68.5*	*65.5*	*63.1*	*42.5*	*70.5*	*67.1*	*64.5*	*231.3*	*237.6*	*244.6*
Demand															
Retail Sales [g]															
Residential	**322.0**	**264.1**	**354.4**	*265.4*	*308.3*	*273.4*	*357.0*	*285.1*	*323.8*	*280.9*	*366.3*	*291.3*	*1205.9*	*1223.8*	*1262.3*
Commercial	**253.1**	**264.6**	**307.8**	*261.9*	*258.9*	*263.0*	*302.9*	*263.2*	*261.7*	*266.1*	*306.0*	*265.7*	*1087.4*	*1087.9*	*1099.5*
Industrial	**248.5**	**248.9**	**248.6**	*238.7*	*234.4*	*249.3*	*261.3*	*251.3*	*244.3*	*256.8*	*268.3*	*257.8*	*984.7*	*996.3*	*1027.2*
Other	**26.4**	**28.0**	**33.4**	*28.0*	*27.4*	*27.6*	*30.8*	*28.1*	*27.9*	*28.3*	*31.5*	*28.6*	*115.8*	*114.0*	*116.3*
Subtotal	**850.1**	**805.6**	**944.2**	*794.0*	*829.1*	*813.4*	*952.0*	*827.6*	*857.8*	*832.0*	*972.1*	*843.4*	*3393.9*	*3422.1*	*3505.3*
Nonutility Use/Sales [h]	**47.6**	**45.8**	**49.8**	*42.3*	*42.8*	*42.9*	*48.0*	*43.5*	*46.1*	*46.0*	*51.3*	*46.6*	*185.4*	*177.2*	*189.9*
Total Demand	**897.7**	**851.4**	**993.9**	*836.3*	*871.9*	*856.3*	*1000.0*	*871.1*	*903.9*	*878.0*	*1023.4*	*890.0*	*3579.3*	*3599.2*	*3695.3*
Memo:															
Nonutility Sales to Electric Utilities [b]	**227.3**	**218.8**	**258.8**	*212.3*	*233.2*	*222.9*	*255.8*	*210.4*	*239.4*	*225.0*	*258.5*	*211.4*	*917.3*	*922.4*	*934.2*

[a] "Other" includes generation from wind, wood, waste, and solar sources.
[b] Electricity(net Generation) from nonutility sources, including cogenerators and small power producers.
[c] Includes refinery still gas and other process or waste gases and liquefied petroleum gases.
[d] Includes geothermal, solar, wind, wood, waste, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.
[e] Data for 2000 are estimates.
[f] Balancing item, mainly transmission and distribution losses.
[g] Total 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 2000 are estimated.
[h] Defined as the sum of nonutility facility use of onsite net electricity generation plus direct sales of power by nonutility generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2000 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: Mid World Oil Price Case

(Quadrillion Btu)

	Year				Annual Percentage Change		
	2000	2001	2002	2003	2000-2001	2001-2002	2002-2003
Electric Utilities							
Hydroelectric Power [a]	**2.600**	*2.084*	*2.664*	*2.824*	**-19.8**	*27.8*	*6.0*
Geothermal, Solar and Wind Energy [b]	**0.004**	*0.004*	*0.004*	*0.005*	**0.0**	*0.0*	*25.0*
Biofuels [c]	**0.021**	*0.022*	*0.021*	*0.021*	**4.8**	*-4.5*	*0.0*
Total	**2.625**	*2.110*	*2.690*	*2.851*	**-19.6**	*27.5*	*6.0*
Nonutility Power Generators							
Hydroelectric Power [a]	**0.149**	*0.194*	*0.262*	*0.283*	**30.2**	*35.1*	*8.0*
Geothermal, Solar and Wind Energy [b]	**0.355**	*0.372*	*0.378*	*0.382*	**4.8**	*1.6*	*1.1*
Biofuels [c]	**0.523**	*0.655*	*0.651*	*0.651*	**25.2**	*-0.6*	*0.0*
Total	**1.027**	*1.222*	*1.291*	*1.316*	**19.0**	*5.6*	*1.9*
Total Power Generation	**3.652**	*3.332*	*3.981*	*4.167*	**-8.8**	*19.5*	*4.7*
Other Sectors [d]							
Residential and Commercial [e]	**0.570**	*0.560*	*0.560*	*0.590*	**-1.8**	*0.0*	*5.4*
Industrial [f]	**2.410**	*2.410*	*2.470*	*2.540*	**0.0**	*2.5*	*2.8*
Transportation [g]	**0.114**	*0.116*	*0.117*	*0.132*	**1.8**	*0.9*	*12.8*
Total	**3.094**	*3.086*	*3.147*	*3.262*	**-0.3**	*2.0*	*3.7*
Net Imported Electricity [h]	**0.244**	*0.171*	*0.201*	*0.225*	**-29.9**	*17.5*	*11.9*
Total Renewable Energy Demand	**6.990**	*6.589*	*7.328*	*7.654*	**-5.7**	*11.2*	*4.4*

[a] Conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

[b] Also 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.

[c] Biofuels are fuelwood, wood byproducts, waste wood, municipal solid waste, manufacturing process waste, and alcohol fuels.

[d] Renewable 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.

[e] Includes biofuels and solar energy consumed in the residential and commercial sectors.

[f] consists primarily of biofuels for use other than in electricity cogeneration.

[g] Ethanol blended into gasoline.

[h] Represents 69.3 percent of total electricity net imports, which is the proportion of total 1999 net imported electricity (0.300 quadrillion Btu) attributable to renewable sources (0.208 quadrillion Btu). See EIA's Monthly Energy Review, Table 1.5

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

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

	Year														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Real Gross Domestic Product (GDP)															
(billion chained 1996 dollars)	**6592**	**6708**	**6676**	**6880**	**7063**	**7348**	**7544**	**7813**	**8159**	**8509**	**8857**	**9224**	*9319*	*9406*	*9780*
Imported Crude Oil Price [a]															
(nominal dollars per barrel)	**18.08**	**21.75**	**18.70**	**18.20**	**16.14**	**15.52**	**17.14**	**20.61**	**18.50**	**12.08**	**17.22**	**27.72**	*22.06*	*17.54*	*21.52*
Petroleum Supply															
Crude Oil Production [b]															
(million barrels per day)	**7.61**	**7.36**	**7.42**	**7.17**	**6.85**	**6.66**	**6.56**	**6.46**	**6.45**	**6.25**	**5.88**	**5.82**	*5.85*	*5.83*	*5.74*
Total Petroleum Net Imports (including SPR)															
(million barrels per day)	**7.20**	**7.16**	**6.63**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	**10.42**	*10.74*	*10.54*	*11.17*
Energy Demand															
World Petroleum															
(million barrels per day)	**65.9**	**66.0**	**66.6**	**66.8**	**67.0**	**68.3**	**69.9**	**71.4**	**72.9**	**73.6**	**75.0**	**75.7**	*75.7*	*75.8*	*76.5*
U.S. Petroleum															
(million barrels per day)	**17.37**	**17.04**	**16.77**	**17.10**	**17.24**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	**19.70**	*19.65*	*19.76*	*20.36*
Natural Gas															
(trillion cubic feet)	**18.80**	**18.72**	**19.03**	**19.54**	**20.28**	**20.71**	**21.58**	**21.96**	**21.95**	**21.26**	**21.61**	**22.54**	*21.46*	*22.30*	*23.07*
Coal															
(million short tons)	**889**	**896**	**893**	**901**	**943**	**950**	**962**	**1006**	**1030**	**1038**	**1045**	**1081**	*1092*	*1127*	*1151*
Electricity (billion kilowatthours)															
Retail Sales [c]	**2647**	**2713**	**2762**	**2763**	**2861**	**2935**	**3013**	**3101**	**3146**	**3264**	**3312**	**3413**	*3394*	*3422*	*3505*
Nonutility Own Use [d]	**NA**	**104**	**111**	**122**	**127**	**141**	**149**	**149**	**149**	**160**	**189**	**187**	*185*	*177*	*190*
Total	**2747**	**2817**	**2873**	**2885**	**2988**	**3075**	**3162**	**3250**	**3295**	**3424**	**3501**	**3599**	*3579*	*3599*	*3695*
Total Energy Demand [e]															
(quadrillion Btu)	**84.2**	**84.2**	**84.5**	**85.6**	**87.4**	**89.2**	**90.9**	**93.9**	**94.2**	**95.2**	**97.1**	**99.6**	*98.1*	*100.4*	*103.2*
Total Energy Demand per Dollar of GDP															
(thousand Btu per 1996 Dollar)	**NA**	**12.55**	**12.66**	**12.44**	**12.37**	**12.14**	**12.05**	**12.04**	**11.54**	**11.19**	**10.96**	**10.80**	*10.53*	*10.68*	*10.56*

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

[b]Includes lease condensate.

[c]Total 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 2000 are estimates.

[d]Defined as the sum of nonutility facility use of onsite net electricity generation plus direct sales of power by nonutility generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2000 are estimates.

[e]"Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, Annual Energy Review, 1999, DOE/EIA-0384(97) (AER), Table 1.1. Prior to 1990, some components of renewable energy consumption, particularly relating to consumption at nonutility electric generating facilities, were not available. For those years, a less compehensive measure of total energy demand can be found in EIA's AER. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, Monthly Energy Review (MER). Consequently, the historical data may not precisely match those published in the MER or the AER.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; 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 DRI-WEFA Forecast CONTROL1201.

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

	Year														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Macroeconomic															
Real Gross Domestic Product (billion chained 1996 dollars)	**6592**	**6708**	**6676**	**6880**	**7063**	**7348**	**7544**	**7813**	**8159**	**8509**	**8857**	**9224**	*9319*	*9406*	*9780*
GDP Implicit Price Deflator (Index, 1996=1.000)	**0.833**	**0.865**	**0.897**	**0.919**	**0.941**	**0.960**	**0.981**	**1.000**	**1.019**	**1.032**	**1.047**	**1.070**	*1.094*	*1.109*	*1.133*
Real Disposable Personal Income (billion chained 1996 Dollars)	**4907**	**5014**	**5033**	**5189**	**5261**	**5397**	**5539**	**5678**	**5854**	**6169**	**6320**	**6539**	*6776*	*6932*	*7180*
Manufacturing Production (Index, 1996=1.000)	**0.816**	**0.812**	**0.792**	**0.824**	**0.854**	**0.906**	**0.953**	**1.000**	**1.076**	**1.134**	**1.191**	**1.247**	*1.191*	*1.169*	*1.266*
Real Fixed Investment (billion chained 1996 dollars)	**911**	**895**	**833**	**886**	**958**	**1046**	**1109**	**1213**	**1329**	**1480**	**1595**	**1716**	*1684*	*1616*	*1699*
Real Exchange Rate (Index, 1996=1.000)	**NA**	**0.913**	**0.915**	**0.923**	**0.958**	**0.938**	**0.875**	**0.920**	**0.990**	**1.040**	**1.039**	**1.076**	*1.127*	*1.118*	*1.090*
Business Inventory Change (billion chained 1996 dollars)	**14.2**	**8.9**	**-6.8**	**-4.7**	**3.6**	**12.1**	**14.1**	**10.1**	**14.8**	**27.2**	**13.3**	**13.1**	*-31.0*	*-5.5*	*11.6*
Producer Price Index (index, 1982=1.000)	**1.122**	**1.163**	**1.165**	**1.172**	**1.189**	**1.205**	**1.248**	**1.277**	**1.276**	**1.244**	**1.255**	**1.328**	*1.345*	*1.291*	*1.314*
Consumer Price Index (index, 1982-1984=1.000)	**1.240**	**1.308**	**1.363**	**1.404**	**1.446**	**1.483**	**1.525**	**1.570**	**1.606**	**1.631**	**1.667**	**1.723**	*1.773*	*1.800*	*1.843*
Petroleum Product Price Index (index, 1982=1.000)	**0.612**	**0.748**	**0.671**	**0.647**	**0.620**	**0.591**	**0.608**	**0.701**	**0.680**	**0.513**	**0.609**	**0.913**	*0.864*	*0.661*	*0.762*
Non-Farm Employment (millions)	**107.9**	**109.4**	**108.3**	**108.6**	**110.7**	**114.1**	**117.2**	**119.6**	**122.7**	**125.8**	**128.9**	**131.8**	*132.2*	*132.1*	*133.6*
Commercial Employment (millions)	**70.0**	**71.3**	**70.8**	**71.2**	**73.2**	**76.1**	**78.8**	**81.1**	**83.9**	**86.6**	**89.6**	**92.1**	*93.1*	*93.8*	*95.0*
Total Industrial Production (index, 1996=1.000)	**0.8**	**0.8**	**0.8**	**0.8**	**0.9**	**0.9**	**1.0**	**1.0**	**1.1**	**1.1**	**1.2**	**1.2**	*1.2*	*1.2*	*1.2*
Housing Stock (millions)	**102.8**	**103.4**	**104.4**	**105.4**	**106.7**	**108.0**	**109.6**	**110.9**	**112.3**	**114.1**	**115.7**	**116.2**	*117.8*	*118.8*	*120.3*
Weather [a]															
Heating Degree-Days															
U.S.	**4726**	**4016**	**4200**	**4441**	**4700**	**4483**	**4531**	**4713**	**4542**	**3951**	**4169**	**4460**	*4231*	*4335*	*4456*
New England	**6887**	**5848**	**5960**	**6844**	**6728**	**6672**	**6559**	**6679**	**6662**	**5680**	**5952**	**6489**	*6145*	*6267*	*6457*
Middle Atlantic	**6134**	**4998**	**5177**	**5964**	**5948**	**5934**	**5831**	**5986**	**5809**	**4812**	**5351**	**5774**	*5279*	*5507*	*5693*
U.S. Gas-Weighted	**4856**	**4139**	**4337**	**4458**	**4754**	**4659**	**4707**	**4980**	**4802**	**4183**	**4399**	**4680**	*4451*	*4578*	*4706*
Cooling Degree-Days (U.S.)	**1156.0**	**1260.0**	**1331.0**	**1040.0**	**1218.0**	**1220.0**	**1293.0**	**1180.0**	**1156.0**	**1410.0**	**1297.0**	**1229.0**	*1256.0*	*1233.9*	*1238.3*

[a]Population-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 DRI-WEFA Forecast CONTROL1201.