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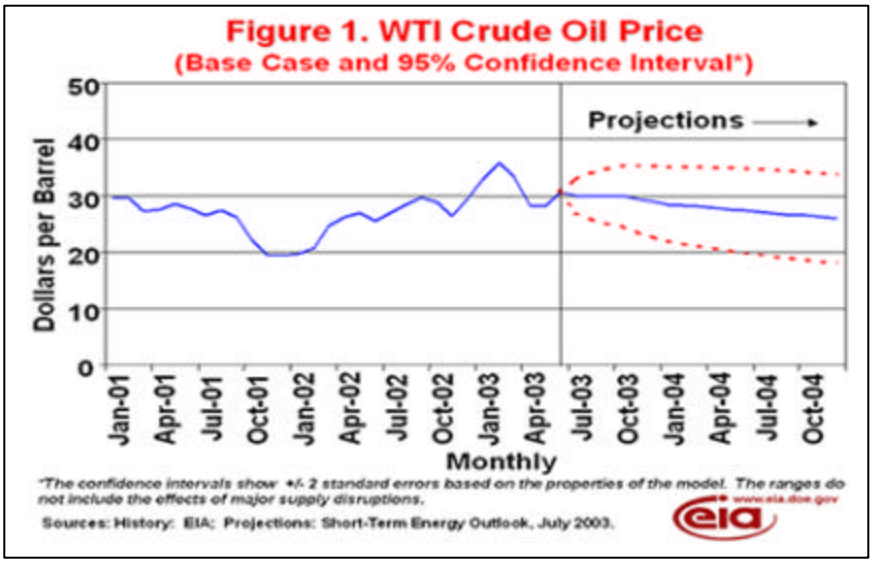
Energy Information Administration

Short-Term Energy Outlook

July 2003



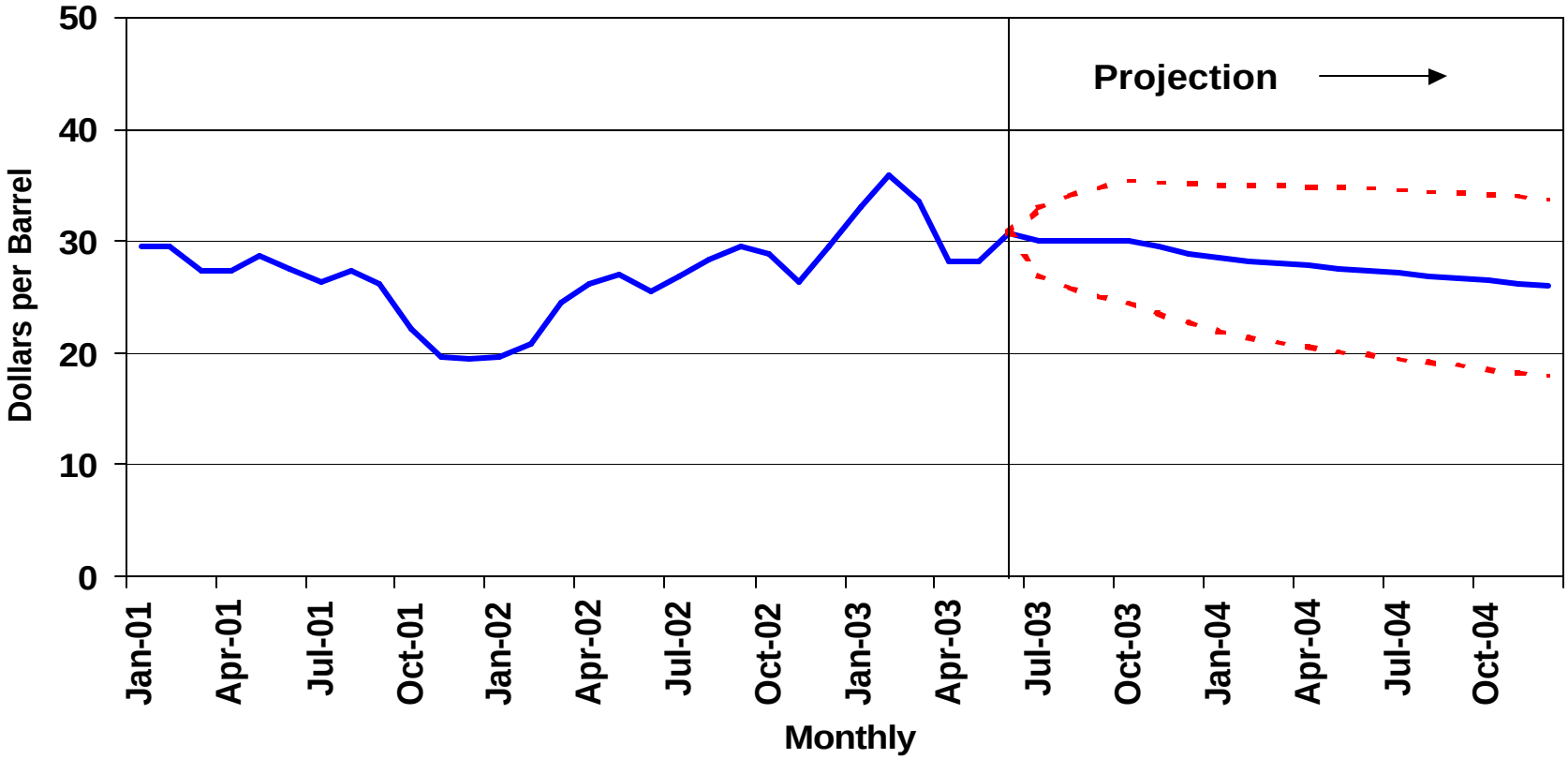
Overview

World Oil Markets. The average West Texas Intermediate (WTI) crude oil price for June was up by about $2.50 per barrel from the May average, in part because OECD oil inventories remain low by historical standards. Oil prices are not likely to fall significantly until commercial inventories rise to levels observed in recent years. EIA's *Outlook* is for prices to remain firm throughout the rest of 2003 (in the $29-$30 per barrel range for WTI) then gradually slide toward $26 per barrel by the end of 2004 as Iraqi oil exports return to near pre-war levels (Figure1).

U.S. Natural Gas Markets. Working gas storage injections for June made up considerable ground following a slow start in early spring, posting a record increase of 487 billion cubic feet for the month and reducing the storage-level deficit relative to the 5-year average from 28 percent in May to 16 percent at the end of June. Spot natural gas prices responded, falling by 15-20 percent ($0.90-$1.25 per million Btu) between the first week of June and the first week of July. A combination of reduced demand and increased new supply accounted for the improvement in the storage situation, although demand reductions probably accounted for the bulk of the surge in storage fill. Still, prospects for some increased domestic production this year and in 2004 continued to strengthen as drilling activity remained strong, with active rigs drilling for natural gas surpassing 900 in June and likely to exceed 1000 in the next month or two. On the imports side, pipeline gas from Canada is down slightly on a year-over-year basis for the first quarter, but prospects for increased imports of liquefied natural gas (LNG) are good, already posting an increase to about 75 billion cubic feet (bcf) in the first 3 months of 2003 compared with 26 bcf in 2002. While expanded LNG imports could conservatively add about 140 billion cubic feet of additional natural gas supply in 2003, total LNG volumes this year are still likely to contribute less than 10 percent to total natural gas imports into the United States.

Summer Motor Gasoline Outlook. If crude oil prices stabilize at current levels, motor gasoline prices may average about $1.50 per gallon during the peak of the driving season (July-September). By the end of June, gasoline inventories remained just beneath the 5-year min/max range. The current price of regular motor gasoline in California is $1.78 per gallon, which is about 29 cents per gallon higher than the average price for the nation. The California price is down somewhat from the 45-50 cents per gallon price differential seen in April, when unexpected refinery shutdowns and the phase-out of MTBE (methyl tertiary butyl

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



**The confidence intervals show +/- 2 standard errors based on the properties of the model. The ranges do not include the effects of major supply disruptions.*

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

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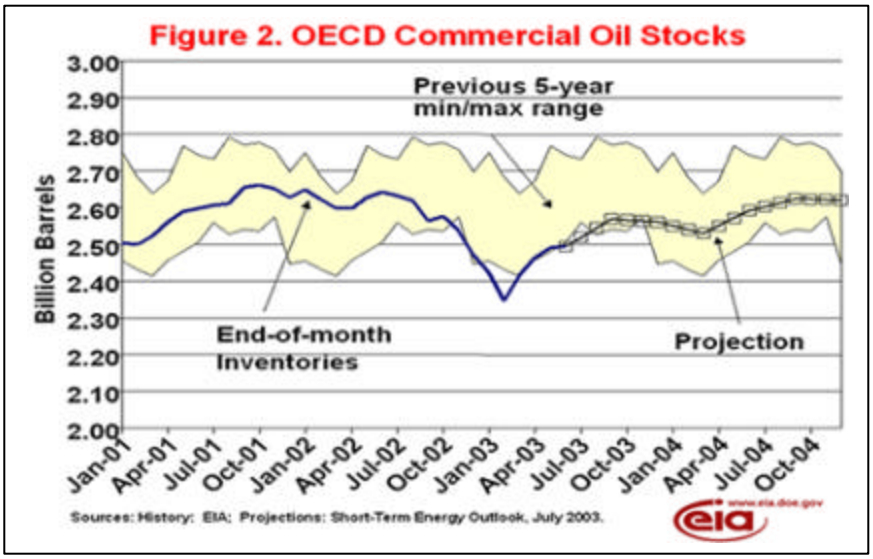
ether) created supply problems that boosted the price. Recent market supply adjustments and improved economies of scale in the refining and blending process have now narrowed the price difference between California and national gasoline prices.

Data Notes

The Climate Prediction Center (CPC) of the National Oceanographic and Atmospheric Administration (NOAA) indicated on its website that incorrect temperature calculations led to errors in a broad range of regional and national degree-day calculations since last July, some of which were used to estimate degree-days for selected regions in nearby months in previous *Outlooks*. These data have been corrected and are included in this report. One result is that last winter was actually more severe than previously thought. For example, first quarter 2003 national population-weighted heating degree-days are now estimated to be 2,297, 6.5 percent higher than previously reported. The first quarter result is highly significant and indicates that fuel demand strength and price pressures early this year were far more weather-related than originally thought. This is particularly important for natural gas, since we now understand that last winter's price spike was much more of a demand shock phenomenon and less of a supply constraint issue than previously believed.

An additional issue for natural gas is a significant revision in the reported level of industrial natural gas for 2002. Industrial natural gas demand (including combined heat and power facilities but excluding lease and plant fuel) was reported in the June *Outlook*, based on preliminary data estimates, at 7.85 trillion cubic feet (tcf) for 2002. Industrial natural gas demand for 2002 in the July STEO has now been revised to 7.12 tcf, as reported in the *Natural Gas Monthly* (April 2002). This revision significantly affects the projections for industrial natural gas and creates a sizeable discrepancy between estimated supply and estimated demand (see Tables 8 and A6). Given the new demand numbers, the implication arises once again that the level of domestic supply is overestimated.

Details



International Oil Markets

Crude Oil Prices. The average June WTI crude oil price was up by $2.50 per barrel from the May average. However, oil prices at end-June were roughly the same as at end-May. Prices initially rose in response to continued reports of low oil inventories, contrary to expectations following the end of the war in Iraq. Prices later declined in response to the news that the International Energy Agency had made a significant upward revision to their previous estimate of OECD commercial oil inventory levels.

Even with this upward revision, OECD oil inventories remain low by historical standards (Figure 2), and oil prices are not likely to fall significantly until commercial inventories rise to levels observed in recent years. Prices have also firmed on negative news for oil supplies. OPEC producers, mainly Saudi Arabia, cut output in June. Hopes that Iraqi production would quickly return to pre-war levels faded on the news that post-war looting would postpone the return of the Iraqi oil sector to normal operations. In addition, the market remains sensitive to the possibility that the strike in Nigeria could impact oil supplies. By early July, the OPEC basket price had risen again to the upper end of OPEC's target range of $22-$28 per barrel.

EIA's *Outlook* is for prices to remain firm throughout the rest of 2003, even with likely large increases in non-OPEC oil supplies, largely because of the tight OECD commercial inventory situation. Until these inventories are rebuilt above observed 5-year lows, which is not expected to occur until end-summer, WTI oil futures prices should remain near current levels, and gradually slide toward $26 per barrel by the end of 2004 as Iraqi oil exports return to near pre-war levels.

If Iraqi exports were able to increase faster than expected, there would be additional downward pressure on prices. However, OPEC continues to monitor the situation in Iraq, and could agree to reduce its own production to counter any Iraqi increases at either of its next two meetings on July 31 and September 24. Prices are expected to fall only if OPEC fails to cut back its production accordingly. This could happen if OPEC members focus on getting higher quota allocations rather than higher prices. Movement toward the lower end of EIA's price range, where WTI prices average between $15-$20 per barrel in 2004, would be consistent with OPEC allowing market share considerations to gain ground over effective price maintenance.

International Oil Supply. OPEC 10 oil production (excluding Iraq) in June was an estimated 25.8 million barrels per day, about 1 million barrels per day below May levels, and 0.4 million barrels per day above the new OPEC production targets that took effect June 1 (Figure 3). The bulk of this cut came from Saudi Arabia, which reduced production by an estimated 0.7 million barrels per day from May levels. No further substantial cuts are expected from OPEC over the summer, as OPEC members decided to keep production targets unchanged at their June 11 meeting. OPEC noted that production would remain unchanged because world oil inventories remain low, the return of Iraqi production to pre-war levels has been delayed, and the OPEC basket price is moving toward the upper part of its range.

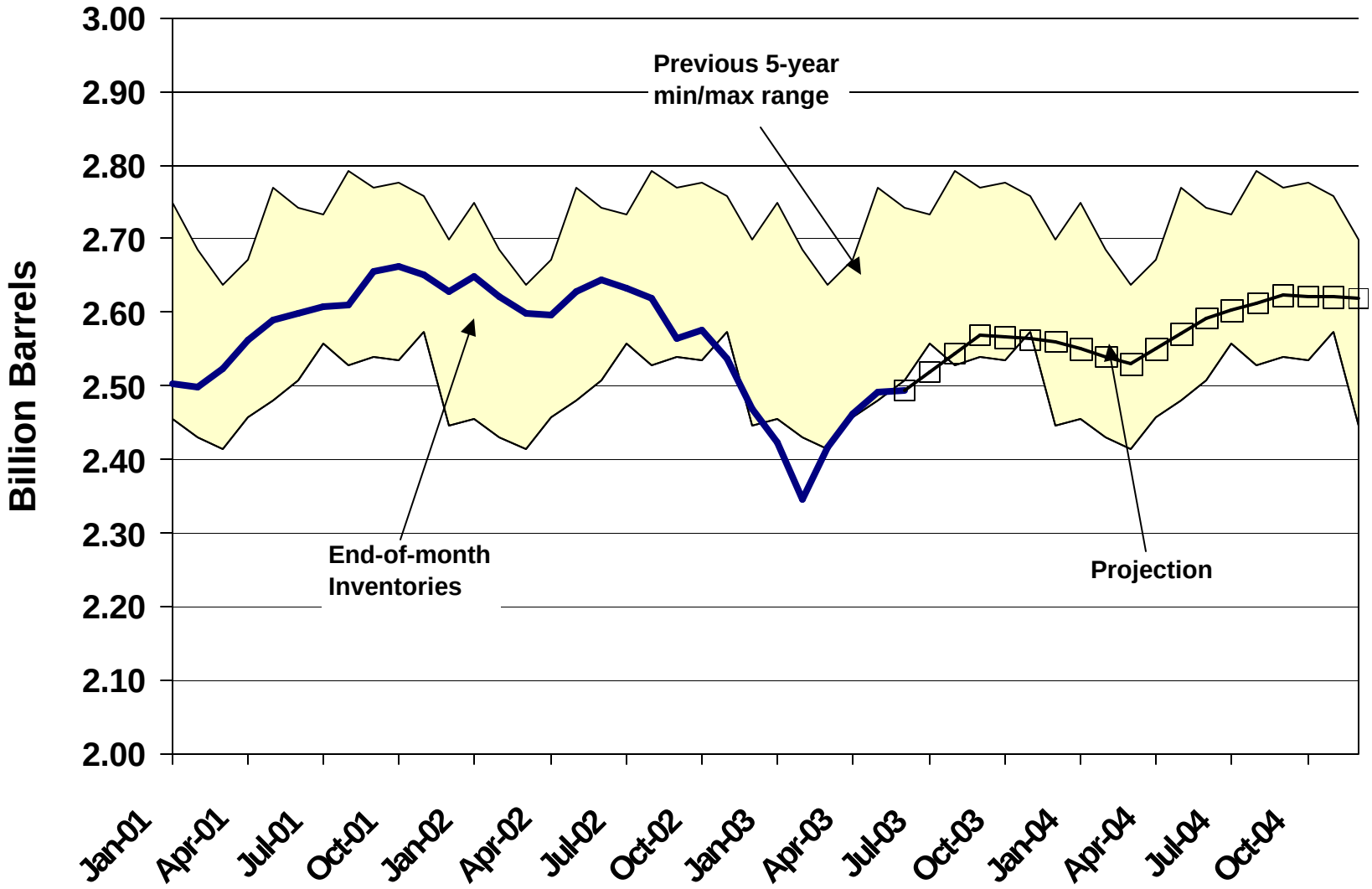
Non-OPEC production is expected to grow by 1.1 million barrels per day in 2003-2004, exceeding the 1 million barrels per day growth seen in 2002. Most of this growth is expected to come from Russia and the Caspian Sea region, with supplies from these countries expected to increase by over 700,000 barrels per day in 2003.

International Oil Demand. World oil demand is projected to grow by about 0.9 million barrels per day in 2003 (Figure 4), slightly less than EIA projected last month. About 1/3 of the growth in 2003 world oil demand 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 percent per year increase in the U.S. economy, world oil demand could increase by as much as 1.2 million barrels per day.

U. S. Energy Prices

Motor Gasoline: After hitting a record price of nearly $1.73 per gallon on March 17, weekly motor gasoline prices (U.S. average regular, self service) fell during 10 of the following 11 weeks. But over the past month

Figure 2. OECD Commercial Oil Stocks



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

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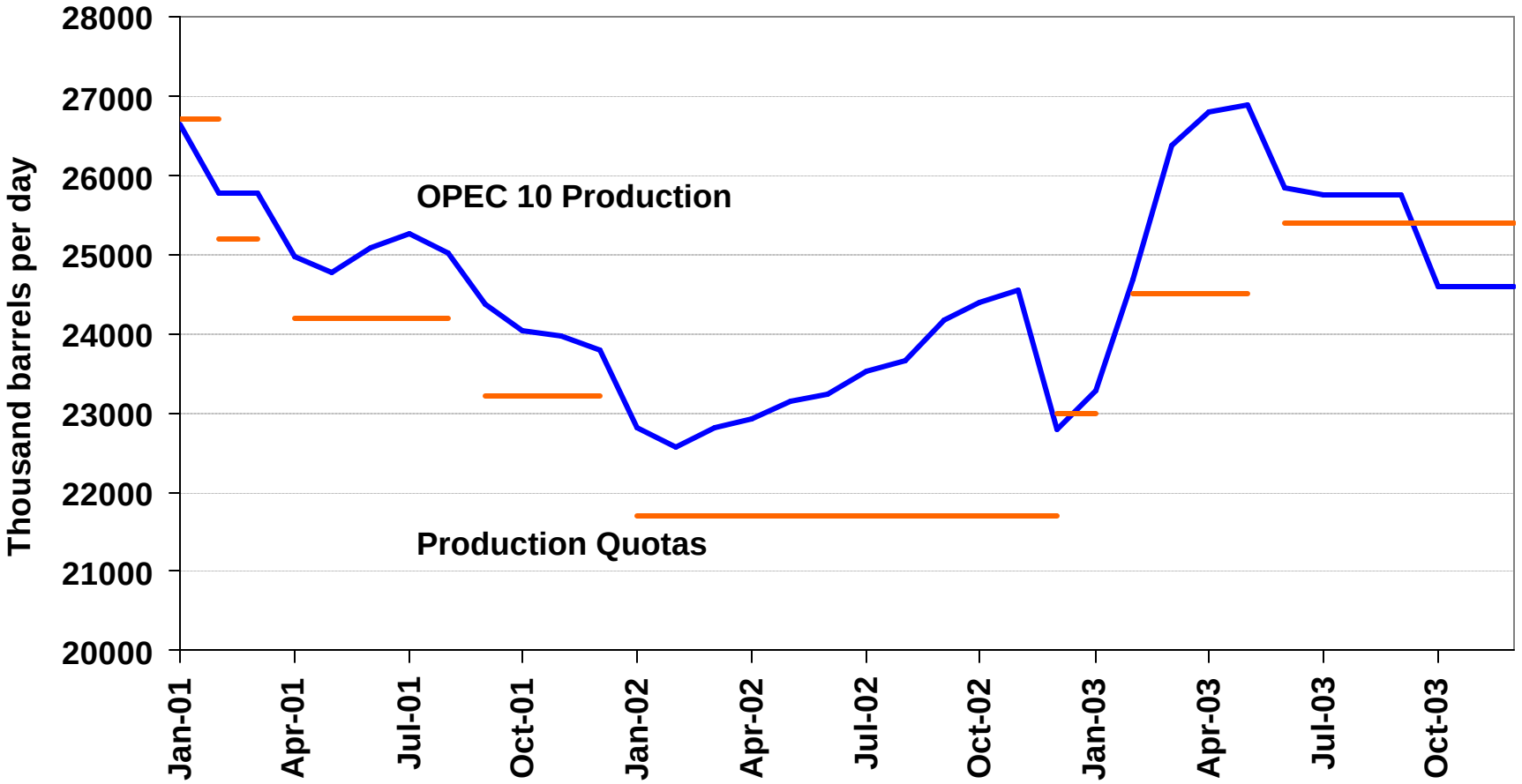
Figure 3. OPEC 10 Crude Oil Production vs. Quotas, January 2001-September 2003



OPEC 10 Production for July-December 2003 is a Projection. The quota shown for June-December 2003 is the most recent quota. Source: EIA

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

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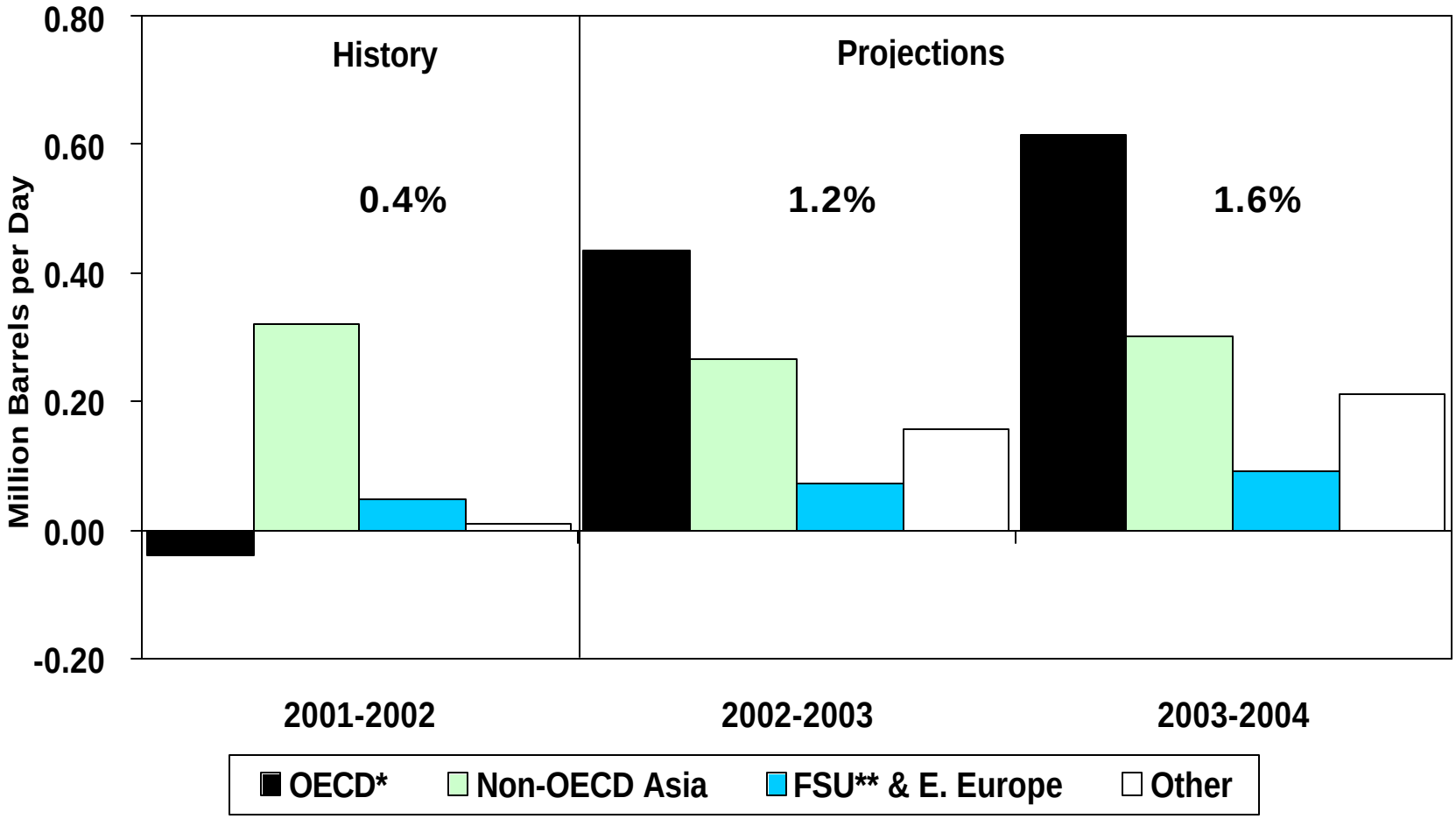
Figure 4. World Oil Demand Growth
(Change from Year Ago)



* 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, July 2003.

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pump prices have fluctuated by a few cents in response to changes in crude oil prices (Figure 5). Some local and regional prices rose in June, in part because of refinery problems, such as occurred at the Shell and Tesoro refineries in Martinez, California. If crude oil prices stabilize at current levels, motor gasoline prices could average $1.50 per gallon during the peak of the driving season (July-September). In 2004, the annual average pump price is projected to be about $1.44 per gallon (down 10 cents per gallon from the projected 2003 average), as crude oil prices decline and refiner and retail margins ease slightly. Refiner margins (the difference between the refiner price of gasoline and the refiner acquisition cost of crude oil), which were relatively weak last summer, soared in March and April. They have since retreated and may stabilize during the course of the driving season. By the end of June, gasoline inventories remained just beneath the 5-year min/max range (Figure 6).

The current price of regular motor gasoline in California is $1.78 per gallon, about 29 cents per gallon higher than the average price of $1.49 per gallon for the nation as a whole. However, this marks a significant drop from the 45-50 cents per gallon price differential seen in April, when unexpected refinery shutdowns and the phase-out of MTBE (methyl tertiary butyl ether) in California created supply problems that boosted gasoline prices across the state. The transition from MTBE to ethanol in California has created two essentially incompatible distribution systems, which exacerbate the tight gasoline market. However, market supply adjustments and improved economies of scale in the refining and blending process have narrowed the price differences.

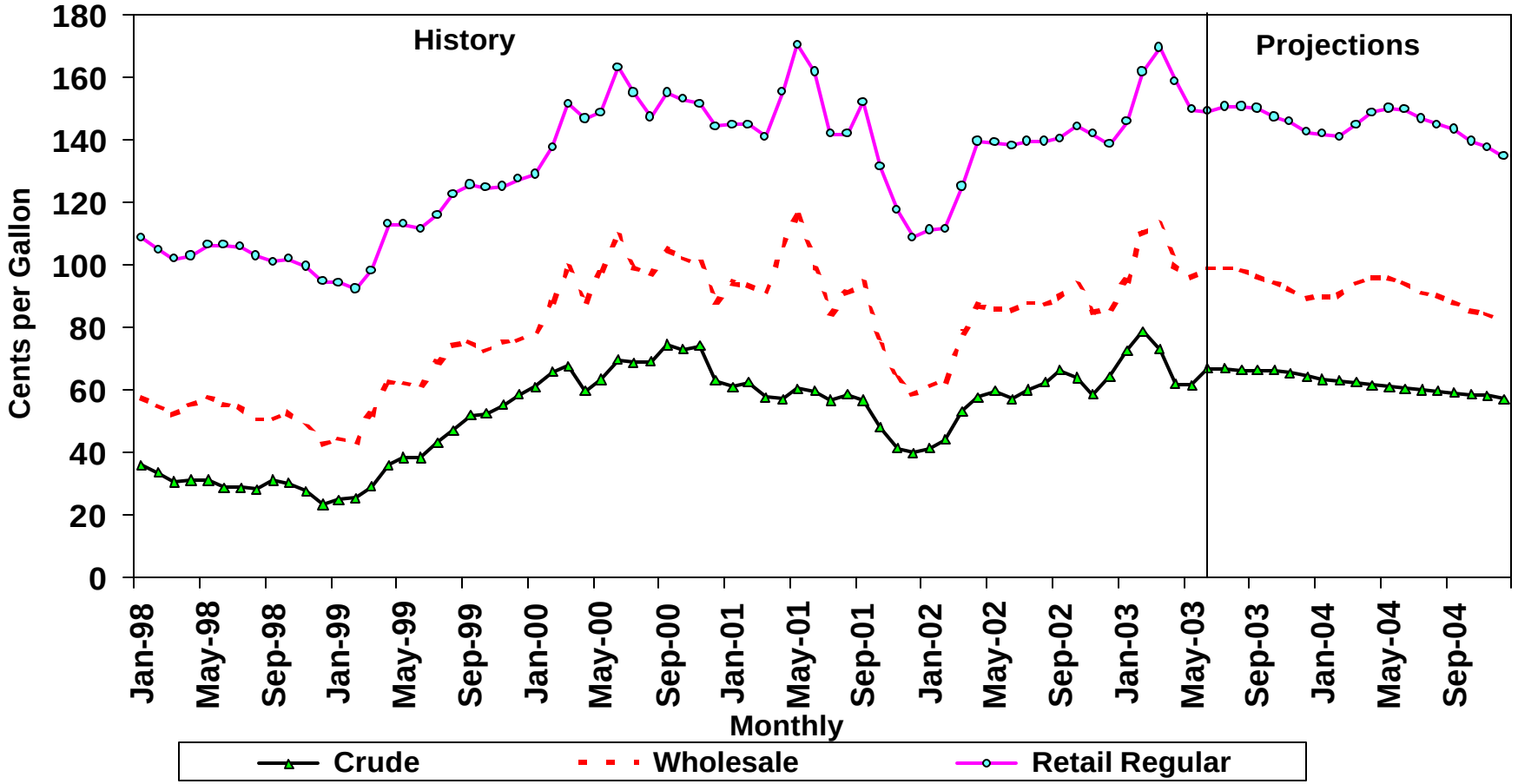
Distillate Fuel Oil (Diesel Fuel and Heating Oil): Diesel fuel oil prices are expected to stabilize through the next several months. Retail heating oil prices, on the other hand, should decline through the summer (assuming normal weather) (Figure 7). Residential heating oil prices will then increase, averaging about $1.29 per gallon for the 2003/2004 winter. At the end of June, distillate fuel oil inventories totaled about 110 million barrels, a level at the lower band of the 5-year min/max range (Figure 8).

Natural Gas: With a few exceptions, the natural gas spot price at the Henry Hub has been above $5 per million btu on a monthly basis since the beginning of the year (Figure 9). The price topped $6 in late May and early June, as concerns escalated about the ability of the industry to rebuild underground storage supplies. Natural gas prices are likely to remain high as long as above-normal storage injection demand competes with industrial and power sector demand for gas. However, natural gas storage injections were about 40 percent above normal in June. Displacement of natural gas demand (including fuel switching) due to high natural gas prices since winter set the stage for record storage builds in June and falling spot prices through the month.

Despite the improvement in the storage situation, above-average prices and strong gas-directed drilling efforts this year will still be required to guarantee that natural gas in storage reaches sufficient levels by the beginning of the heating season. If the summer heats up, particularly in the Western and South Central regions, where natural gas is heavily used for the power generation needed to meet cooling demand, storage builds could become more restrained. In fact, occasional sharp price increases could occur if the difficulty of building adequate storage stocks increases. Assuming normal weather, spot prices in the $4.80-$5.10 per million btu range are expected for the rest of 2003.

At the end of June, working gas in storage was about 26 percent below end-of-June 2002 levels and 16 percent below the previous 5-year average. In 2003, wellhead prices are projected to show an increase of about $2.00 per thousand cubic feet (the largest U.S. annual wellhead price increase on record) over the 2002

Figure 5. Gasoline Prices and Crude Oil Costs



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

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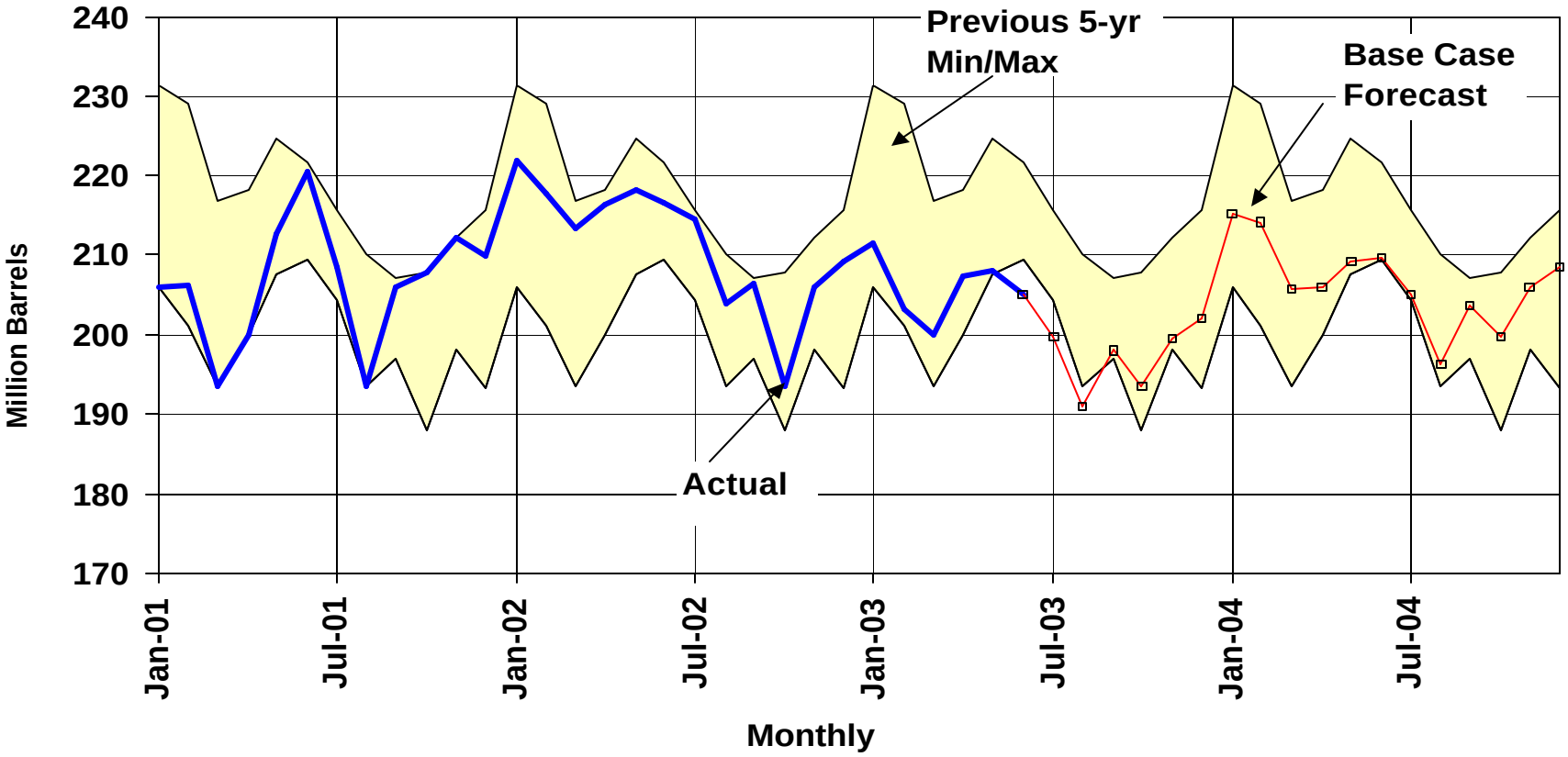
Figure 6. U.S. Gasoline Inventories



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

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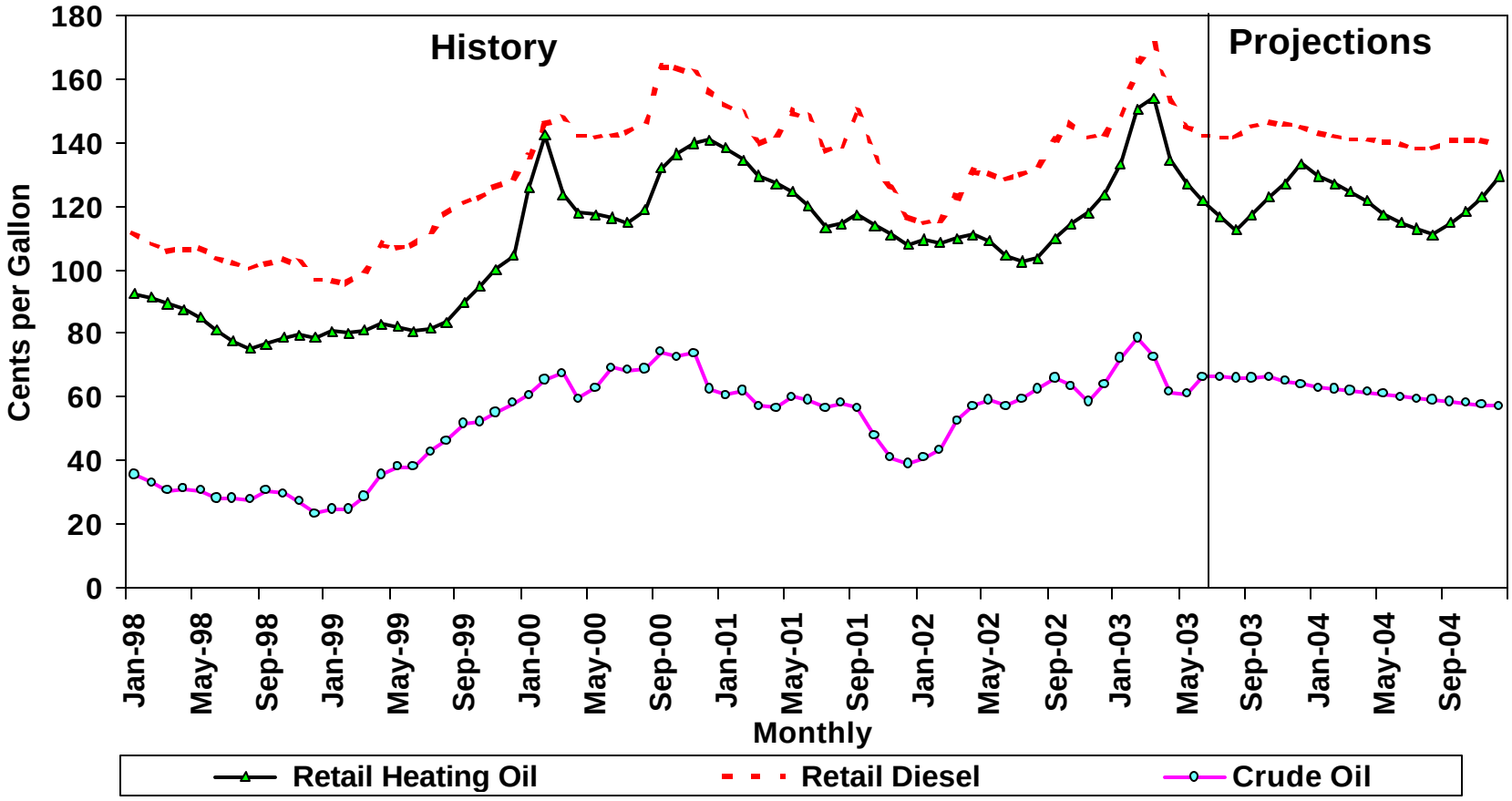
Figure 7. Distillate Fuel Prices



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

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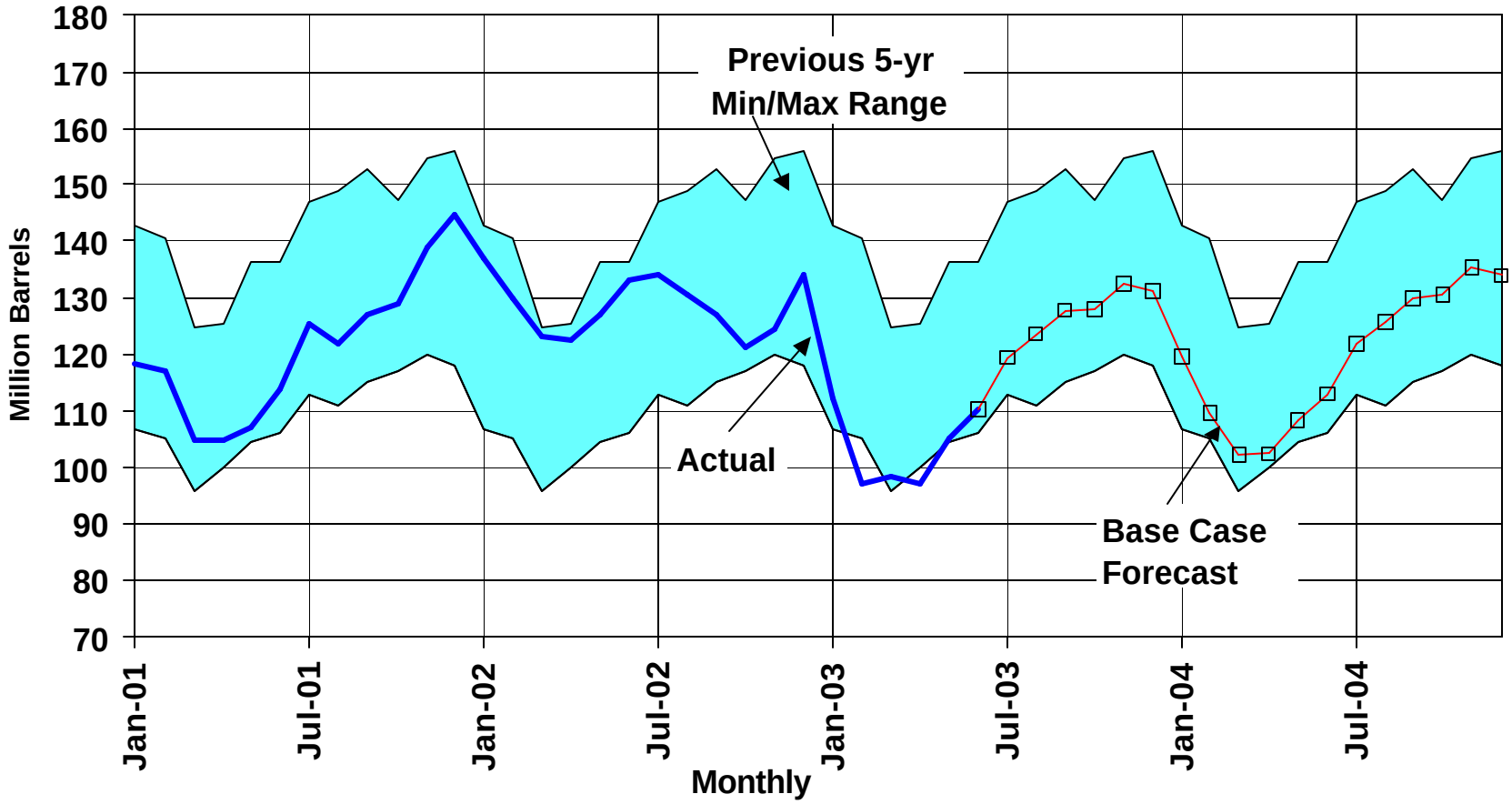
Figure 8. Distillate Fuel Inventories



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

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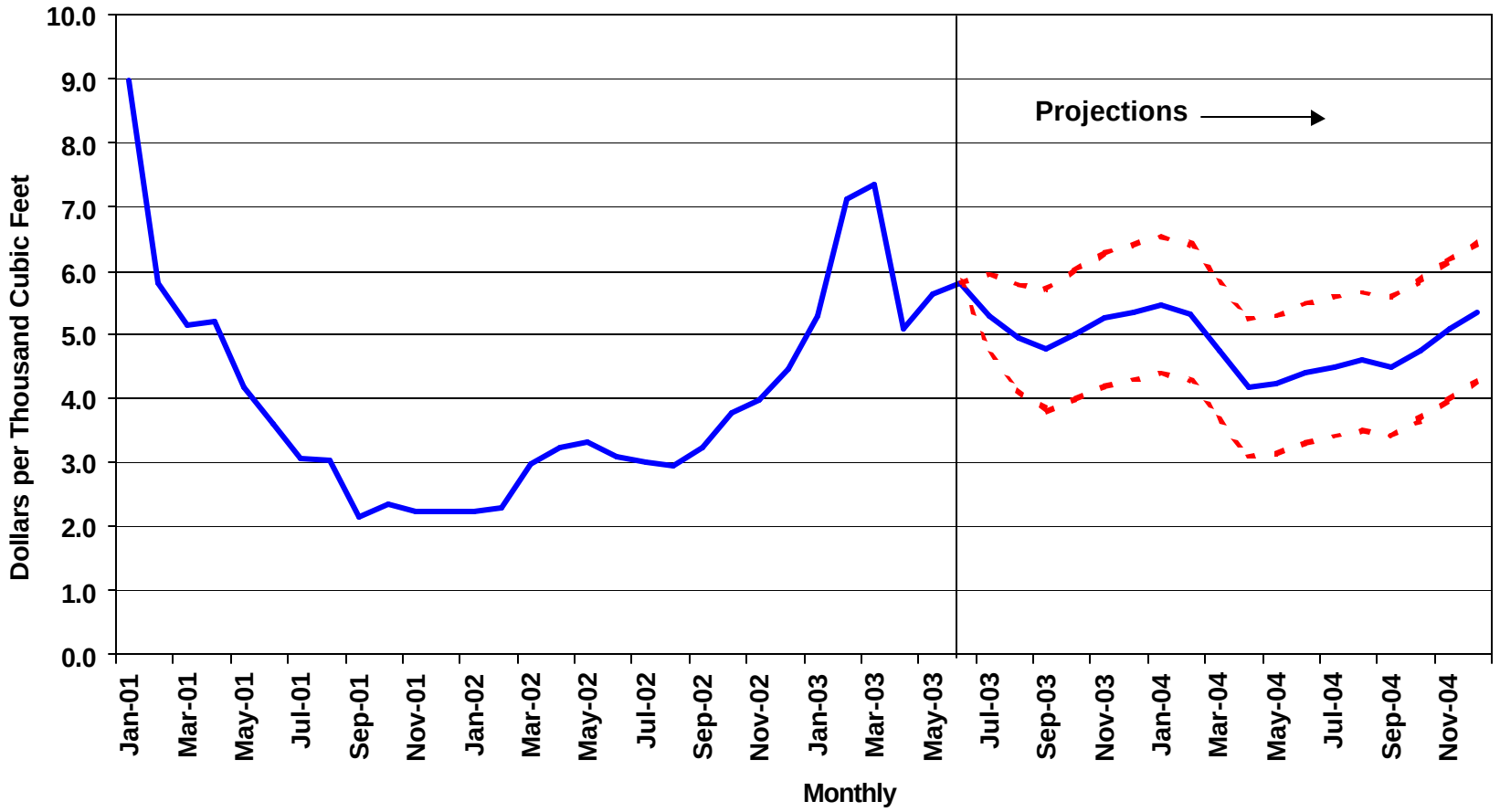
Figure 9. Natural Gas Spot Prices
(Base Case and 95% Confidence Interval*)



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

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annual average, pushing the annual average for the year to about $5.00 per thousand cubic feet. In 2004, prices are projected to drop by about 13 percent, as the overall supply situation improves slightly, assuming normal weather.

U. S. Oil Demand

Petroleum demand in 2003 is projected to grow by 240,000 barrels per day, or 1.2 percent (Figure 10), with patterns varying widely by product. On the growth side are residual fuel oil (11.8) percent) and distillate (4.8 percent) with motor gasoline about flat. On the negative side are liquefied petroleum gas (down by 0.1 percent) and jet fuel, which could post another annual decline of close to 3 percent. Fuel oil demand received a boost from high heating degree-days and a high price for natural gas relative to residual fuel oil. Available highway travel data are consistent with the apparent weakness in motor gasoline demand. That data show a year-over-year decline of 2.9 percent in February due largely to harsh weather, followed by a 0.3-percent decline in March. Preliminary data show only modest growth in April motor gasoline demand, and, based largely on weekly data, overall Q2 2003 gasoline demand is well below the year-ago level. The impact of SARS and the Iraqi campaign appeared to have further battered the already-lagging jet-fuel market, deferring its recovery until later in the year. Despite the year-to-year change in weather patterns, liquefied petroleum gas demand declined slightly as a result of weakness in petrochemical activity and the high supply costs due to high natural gas prices.

Growth in petroleum demand is expected to accelerate in 2004 to 390,000 barrels per day, or 1.9 percent. All the major products are expected to contribute to that growth, with the exception of residual fuel oil. The acceleration in growth in 2004 reflects in part an improvement in economic conditions from those of 2003. Motor gasoline demand is projected to increase by 2.7 percent, reflecting a decline in prices and increases in real disposable income. Jet fuel demand, having declined for two consecutive years, is expected to increase by 2.8 percent to an average 1.61 million barrels per day, still below the 2001 average. Distillate fuel demand growth is projected to moderate to 1.9 percent as year-to-year weather patterns partly offset the acceleration of growth in the transportation sector. Residual fuel oil demand, having staged a robust recovery through the end of 2003, is expected to contract by 11.2 percent, reflecting the assumptions of normal weather and a steady decline in the relative price of natural gas.

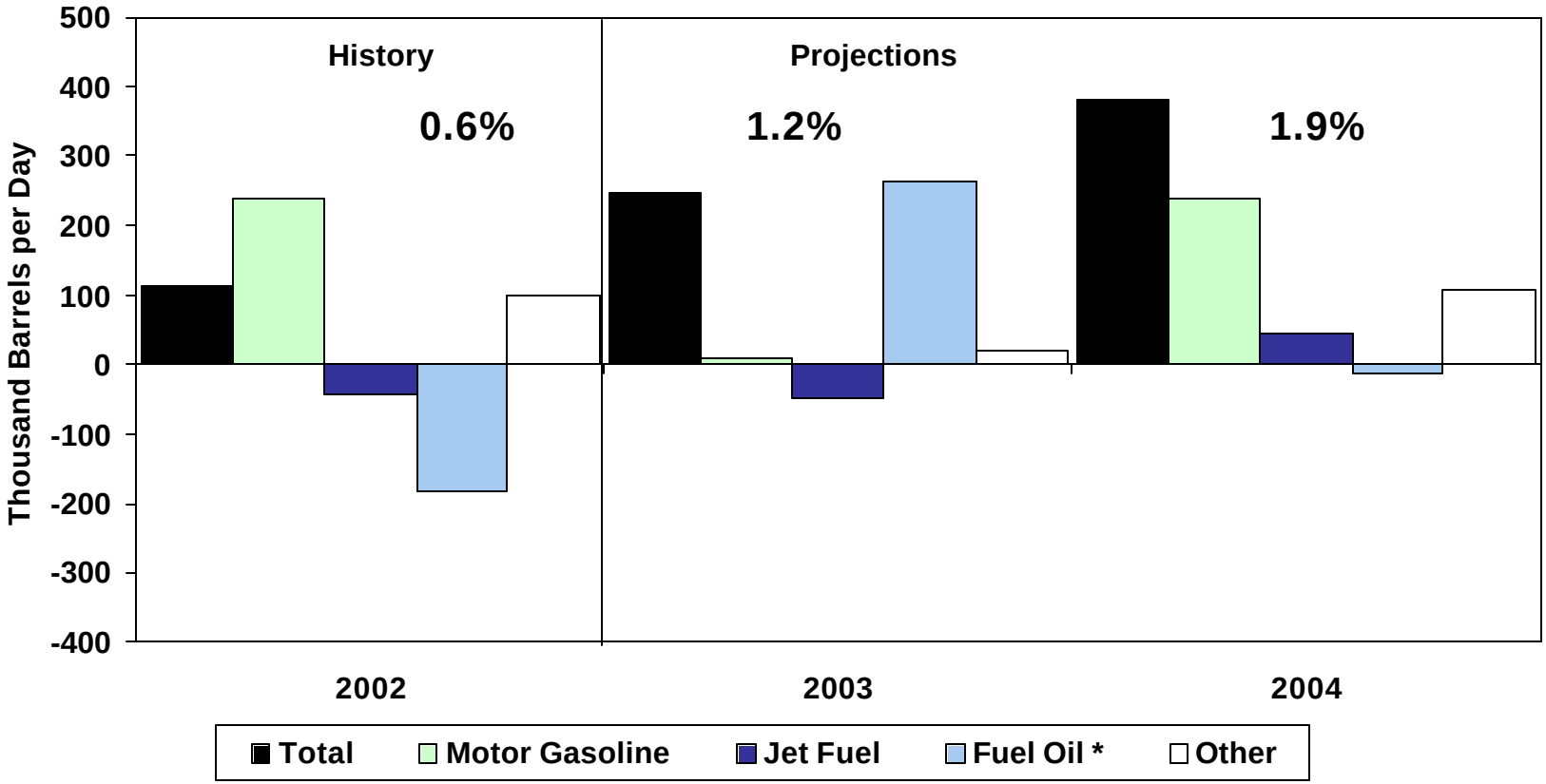
Oil Supply

Average domestic oil production in 2003 is expected to increase by about 70 thousand barrels per day, or 1.1 percent, to a level of 5.81 million barrels of oil per day. For 2004, a 0.4 percent decrease is expected, resulting in an average production rate of 5.79 million barrels of oil per day for the year (Figure 11).

Lower-48 States oil production is expected to increase by 90 thousand barrels per day to a rate of 4.85 million barrels per day in 2003, followed by a slight decrease of about 10 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 7.9 percent of the lower-48 oil production by the fourth quarter of 2004.

Alaska is expected to account for 16.4 percent of total U.S. oil production in 2004. Alaskan oil production is expected to decrease by 2.6 percent in 2003 and decrease by 1.1 percent in 2004. The combined production rate from the two significant satellite fields, Alpine and North Star, averaged nearly 150 thousand barrels per day during April 2003. Production from the Kuparuk River field plus like production from West Sak,

Figure 10. Petroleum Products Demand Growth
(Change from Year Ago)



* Sum of distillate and residual fuel.

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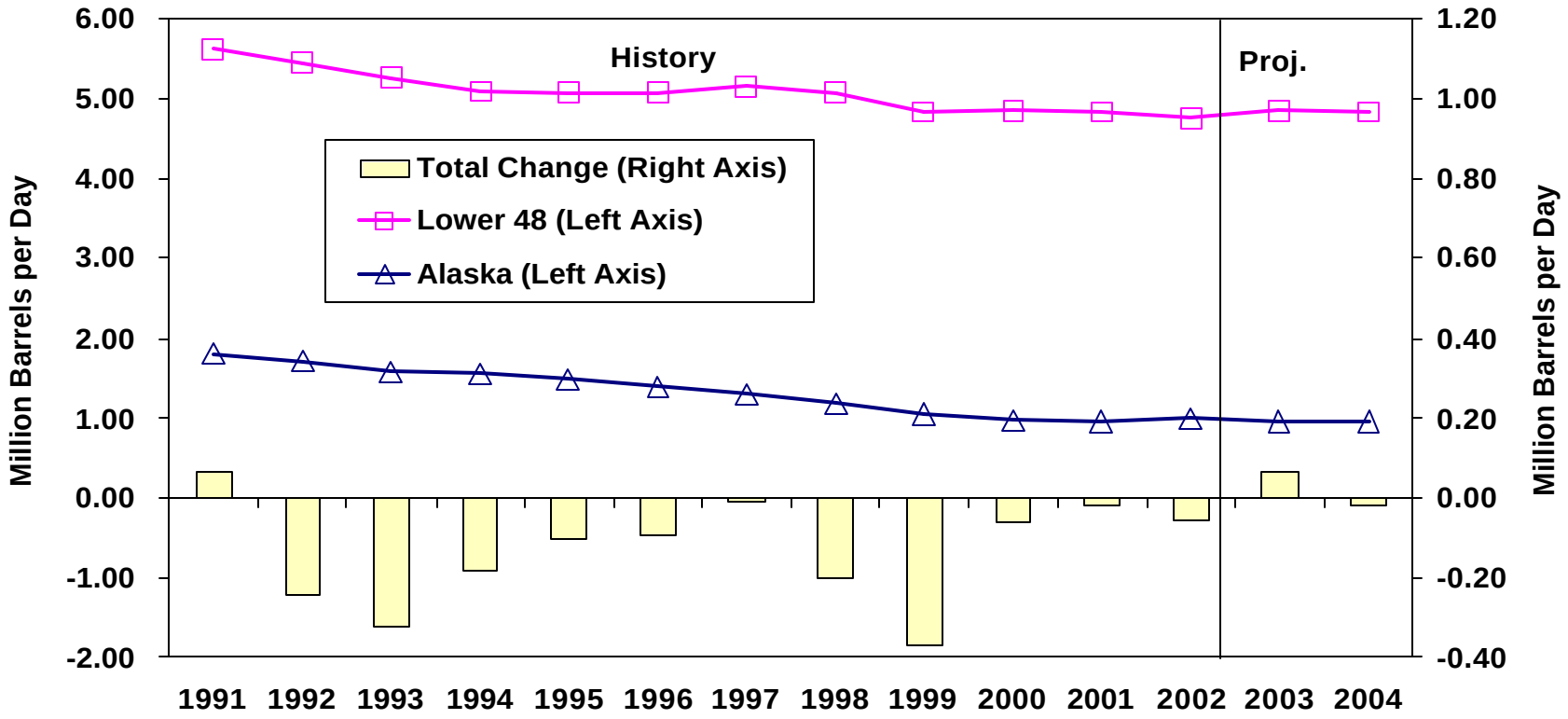
Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2003.

Figure 11. U.S. Crude Oil Production Trends



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

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Tabasco, Tarn and Meltwater fields is expected to stay at an average of 215 thousand barrels per day in 2003 and 2004.

Natural Gas Supply and Demand

Natural gas demand is expected to remain flat in 2003 despite the sharply higher weather-related demand during the first quarter of 2003 (Figure 12). In 2004, growth of perhaps 1 percent from 2003 levels is projected, mainly because of somewhat weaker prices and higher electric power sector demand.

Demand for natural gas this summer is expected to fall by over 3 percent from last summer's level, due largely to the effect of higher prices on the industrial and electricity-generating sectors. Also, cooling degree-days for the season (Q2 2003 and Q3 2003) under our assumption of normal weather would be about 12 percent below year-ago levels. Summer natural gas wellhead prices are projected to be 65 percent higher than they were last summer. In the event of a hotter-than-normal summer this year, natural gas prices could go even higher, as expanded natural gas-fired electric generation to meet cooling demand would compete with the need to build storage inventories.

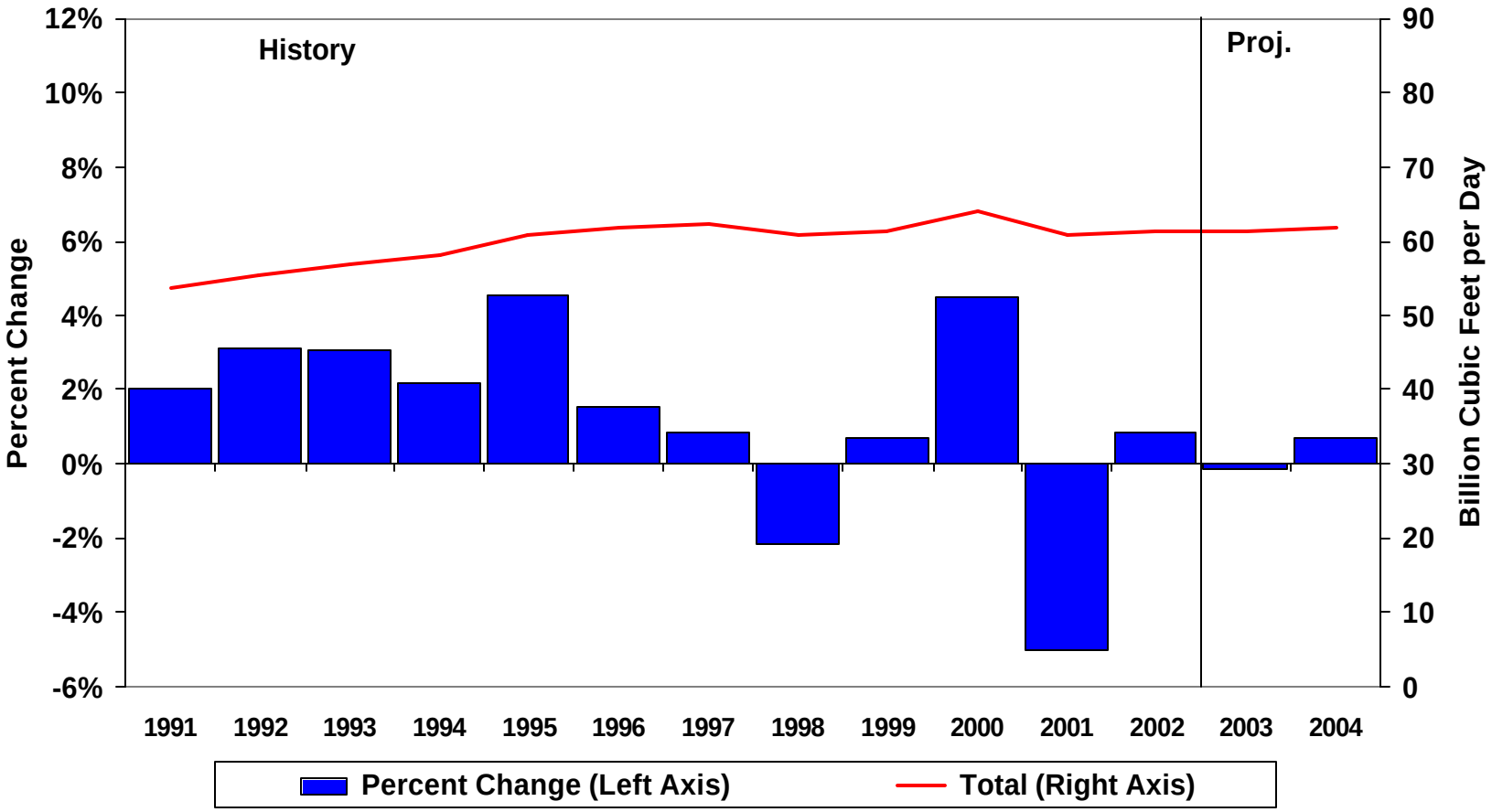
Working natural gas in storage stood at about 1,704 billion cubic feet (bcf) at the end of June, 26 percent below the year-ago level (Figure 13). Despite a record build in storage last month, this is still the second lowest aggregate inventory level for the end of June recorded by EIA (the lowest was in 1996 at 1,529 bcf). The need for relatively large volumes of natural gas to refill working gas storage in 2003 remains high and this means that high price volatility can be expected to continue. However, a definite improvement in the supply situation has occurred and the probability of reaching adequate storage levels by November has risen.

Natural gas production is expected to increase by 3 percent this year. High natural gas prices and sharply higher oil and natural gas field revenues are driving the resurgence in natural gas-directed drilling activity this year following the downturn in 2002 (Figure 14). Monthly oil and natural gas field revenues are expected to continue to average over $400 million this year (Figure 15). The prospects for significant reductions in natural gas wellhead prices over the forecast period from the current high levels could hinge on the productivity of the expected upsurge in drilling in terms of expected output. An average natural gas wellhead price of about $4.34 is projected for 2004, partly based on our belief that natural gas production will rise modestly in 2003 and hold at improved levels in 2004.

Electricity Demand and Supply

Electricity demand is expected to increase by 1.3 percent this year (Figure 16). Most of the 2003 increase, as it turns out, stems from high demand in the first quarter, driven largely by weather factors (heating demand) which, with corrections to the degree-day data from the National Oceanographic and Atmospheric Administration (NOAA), were noticeably more important than previously thought. If normal temperatures prevail for the remainder of the year, little or no additional net weather-related demand growth is expected. This situation contrasts sharply with the hot weather conditions that prevailed in 2002. In 2004, annual electricity demand is projected to continue to grow by about 1.3 percent, a slower rate than might be indicated by economic growth, due to relatively weak heating market increases in the first and second quarters compared with those quarters in 2003.

Figure 12. Total Natural Gas Demand Growth Patterns



Note: This chart replaces a previous Figure 12 because of revised data for July 2003.

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

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Figure 13. Working Gas in Storage
(Difference from Previous 5-Year Average)

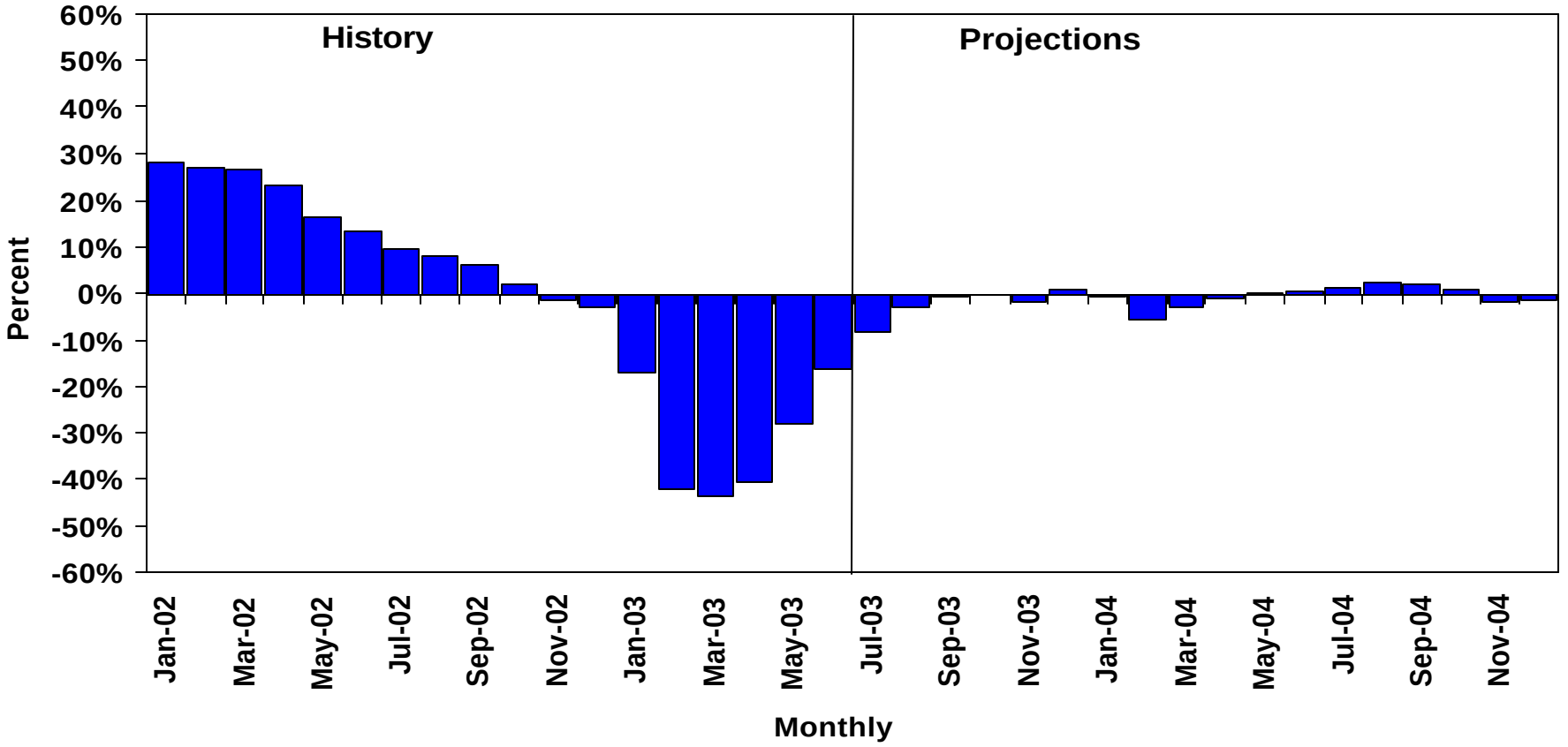

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Figure 14. U.S. Natural Gas-Directed Drilling Activity

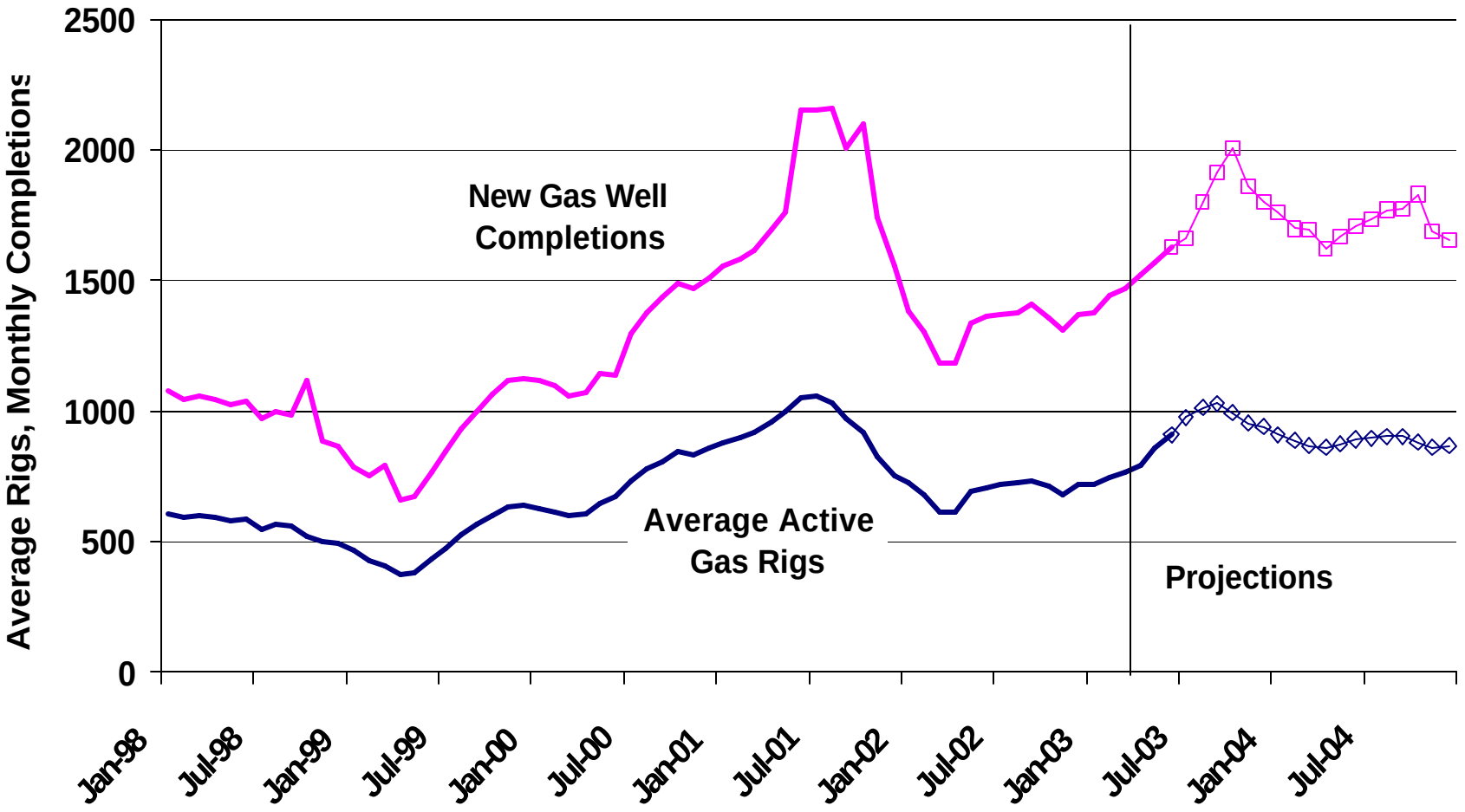

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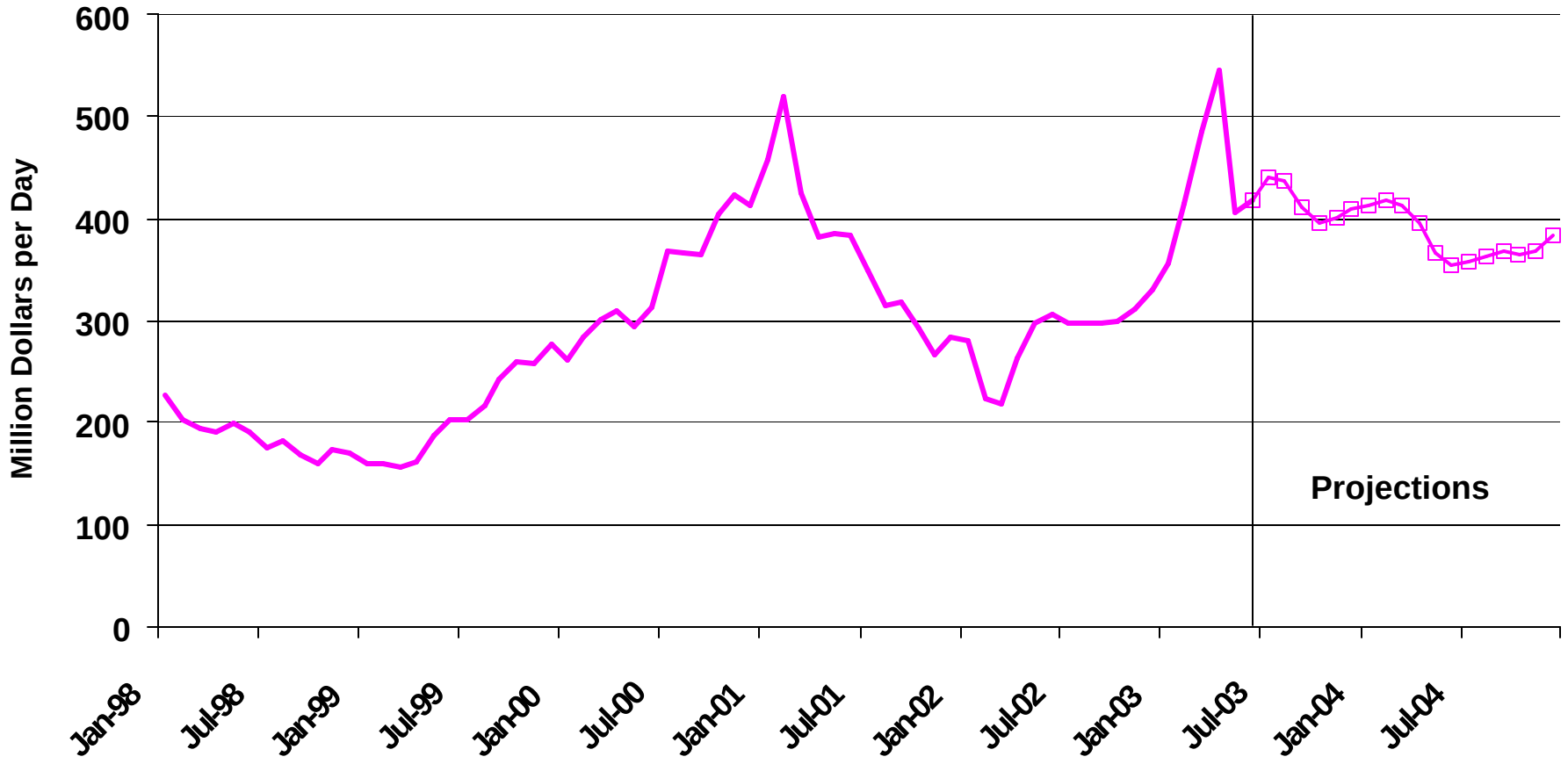
Figure 15. U.S. Oil and Gas Production Revenues



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

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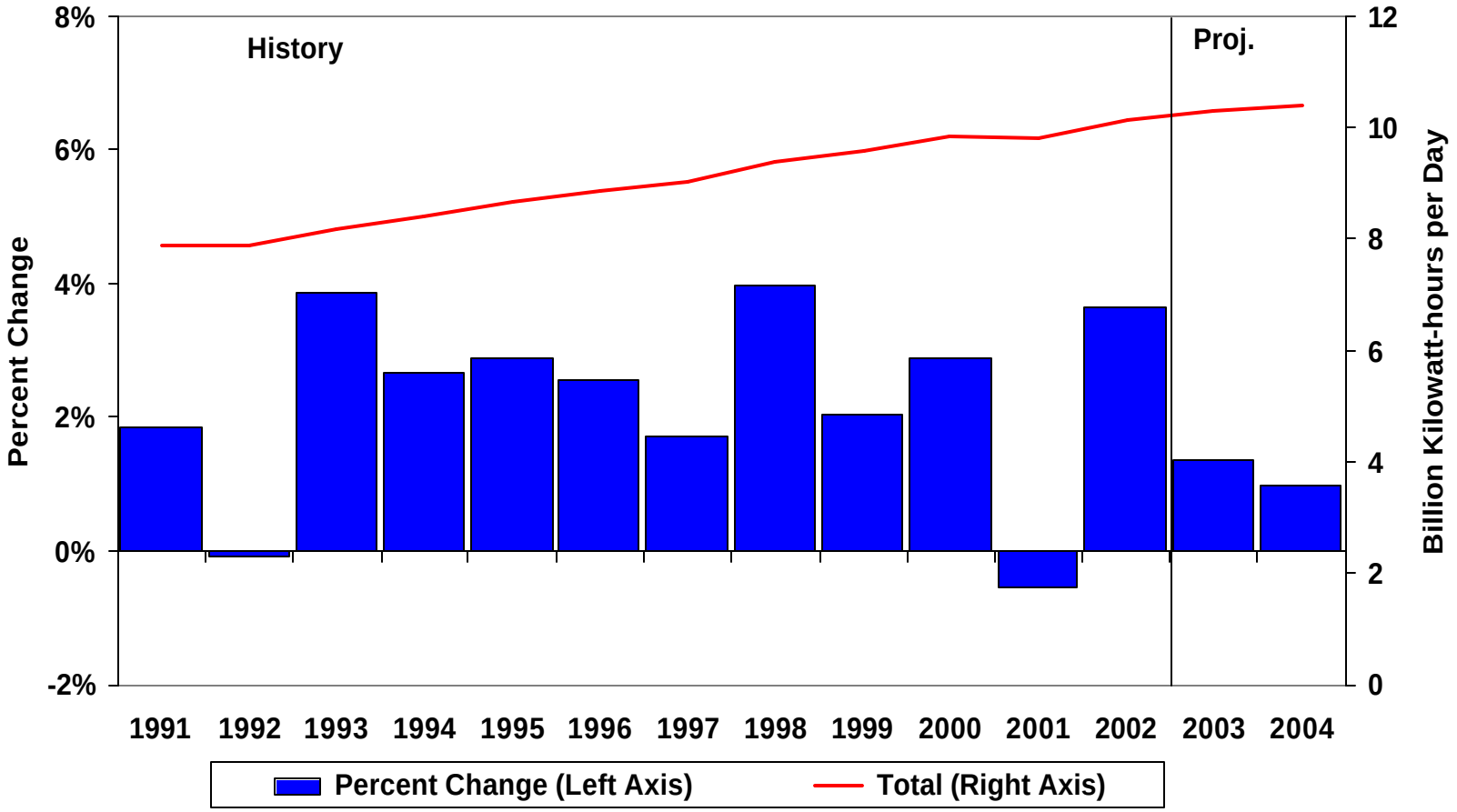
Figure 16. Total Electricity Demand Growth Patterns



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

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Natural gas-generated electricity production is expected to decline slightly in 2003. This is in part due to fuel substitution related to high natural gas prices, increasing oil-fired plant utilization (where possible) beyond what otherwise would have prevailed. In 2003, petroleum-generated electricity production is expected to increase by about 43 percent. In 2004, petroleum-generated electricity production is projected to fall back but still remain above 2002 levels. Hydroelectric generation in 2003, while down in the Pacific Northwest, is up in other parts of the country due to high water levels and is expected to increase by 6 percent overall. Nuclear generation is expected to be somewhat lower than last year, as first-half statistics from EIA and the Nuclear Regulatory Commission indicate a decline from the first half of 2002 of about 3 percent.

Representation of Uncertainty in STEO Using the STIFS Model

The EIA uses its Short-Term Integrated Forecasting System (STIFS) model to analyze monthly trends in U.S. energy demands and prices, both nationally and by sector, and to generate its monthly *Short-Term Energy Outlook* (*STEO*). This model consists of approximately 920 endogenous variables, 216 of which are stochastic (i.e., have error distributions associated with them).

Confidence intervals presented in the *STEO* for a selected STIFS variable, such as the crude oil price, gasoline price and natural gas spot price, are analytically calculated using information about the error distribution of the modeled variable and the error distributions of any endogenous variables that may affect the variable of interest. These confidence intervals, based on +/- 2 standard errors within the STIFS model, do not include the impact of major supply disruptions and other phenomena not represented in the model.

To the extent that supply disruptions in world oil markets and/or other phenomena not included in the STIFS model do significantly affect future market developments, confidence intervals presented in the *STEO* likely will be less than the usual 95 percent, all other factors being equal.

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**	**9440**	*9658*	*10040*	*2.4*	*2.3*	*4.0*
Imported Crude Oil Price [a]							
(nominal dollars per barrel)	**22.00**	**23.69**	*27.43*	*24.74*	*7.7*	*15.8*	*-9.8*
Petroleum Supply (million barrels per day)							
Crude Oil Production [b]	**5.80**	**5.75**	*5.81*	*5.79*	*-1.0*	*1.1*	*-0.4*
Total Petroleum Net Imports							
(including SPR)	**10.90**	**10.54**	*10.93*	*11.32*	*-3.3*	*3.7*	*3.5*
Energy Demand							
World Petroleum							
(million barrels per day)	**77.1**	**77.5**	*78.4*	*79.6*	*0.4*	*1.2*	*1.6*
Petroleum							
(million barrels per day)	**19.65**	**19.76**	*20.01*	*20.39*	*0.6*	*1.2*	*1.9*
Natural Gas							
(trillion cubic feet)	**22.23**	**22.42**	*22.39*	*22.62*	*0.8*	*-0.1*	*1.0*
Coal [c]							
(million short tons)	**1060**	**1065**	*1079*	*1076*	*0.5*	*1.2*	*-0.3*
Electricity (billion kilowatthours)							
Retail Sales [d]	**3370**	**3475**	*3501*	*3531*	*3.1*	*0.7*	*0.9*
Other Use/Sales [e]	**205**	**231**	*254*	*272*	*12.3*	*10.4*	*6.8*
Total	**3575**	**3706**	*3756*	*3803*	*3.7*	*1.3*	*1.3*
Total Energy Demand [f]							
(quadrillion Btu)	**96.3**	**97.6**	*98.6*	*100.1*	*1.3*	*1.1*	*1.5*
Total Energy Demand per Dollar of GDP							
(thousand Btu per 1996 Dollar)	**10.45**	**10.34**	*10.21*	*9.97*	*-1.1*	*-1.2*	*-2.4*
Renewable Energy as Percent of Total [g]	**5.6%**	**6.2%**	*6.3%*	*6.7%*			

[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 2001 are estimates.

[e] Defined 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.

[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 Global Insight Forecast CONTROL0503.

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**	**9518**	*9556*	*9598*	*9692*	*9786*	*9904*	*9999*	*10097*	*10162*	*9440*	*9658*	*10040*
Percentage Change from Prior Year	**1.4**	**2.2**	**3.3**	**2.9**	*2.1*	*2.2*	*2.2*	*2.8*	*3.6*	*4.2*	*4.2*	*3.8*	*2.4*	*2.3*	*4.0*
Annualized Percent Change from Prior Quarter	**5.0**	**1.2**	**4.0**	**1.4**	*1.6*	*1.7*	*3.9*	*3.9*	*4.8*	*3.8*	*3.9*	*2.6*			
GDP Implicit Price Deflator (Index, 1996=1.000)	**1.101**	**1.105**	**1.108**	**1.112**	*1.120*	*1.123*	*1.128*	*1.134*	*1.140*	*1.145*	*1.151*	*1.158*	*1.107*	*1.126*	*1.149*
Percentage Change from Prior Year	**1.4**	**1.1**	**0.8**	**1.3**	*1.6*	*1.7*	*1.9*	*2.0*	*1.8*	*1.9*	*2.1*	*2.1*	*1.1*	*1.8*	*2.0*
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	**6961**	**7027**	**7058**	**7101**	*7119*	*7161*	*7229*	*7301*	*7434*	*7470*	*7509*	*7532*	*7037*	*7202*	*7486*
Percentage Change from Prior Year	**3.8**	**5.0**	**2.8**	**5.5**	*2.3*	*1.9*	*2.4*	*2.8*	*4.4*	*4.3*	*3.9*	*3.2*	*4.3*	*2.4*	*3.9*
Manufacturing Production (Index, 1997=100.0)	**110.8**	**111.8**	**112.6**	**111.5**	*111.2*	*110.2*	*112.0*	*114.0*	*116.3*	*118.8*	*121.1*	*123.1*	*111.7*	*111.9*	*119.8*
Percentage Change from Prior Year	**-4.0**	**-1.5**	**0.5**	**1.2**	*0.4*	*-1.4*	*-0.6*	*2.2*	*4.5*	*7.8*	*8.2*	*7.9*	*-1.0*	*0.2*	*7.1*
OECD Economic Growth (percent) [b]													*1.8*	*2.4*	*3.0*
Weather [c]															
Heating Degree-Days															
U.S.	**2098**	**498**	**49**	**1673**	*2297*	*550*	*86*	*1622*	*2254*	*517*	*85*	*1621*	*4318*	*4554*	*4477*
New England	**2796**	**869**	**71**	**2372**	*3504*	*1079*	*167*	*2236*	*3205*	*880*	*167*	*2235*	*6108*	*6986*	*6488*
Middle Atlantic	**2481**	**653**	**45**	**2158**	*3207*	*843*	*105*	*2001*	*2919*	*697*	*106*	*2001*	*5337*	*6157*	*5723*
U.S. Gas-Weighted	**2181**	**558**	**48**	**1773**	*2464*	*655*	*90*	*1713*	*2373*	*554*	*90*	*1713*	*4560*	*4923*	*4730*
Cooling Degree-Days (U.S.)	**31**	**387**	**902**	**73**	*28*	*346*	*783*	*76*	*33*	348	*784*	*76*	*1393*	*1233*	*1240*

[a] Macroeconomic projections from Global Insight model forecasts are seasonally adjusted at annual rates and modified as appropriate to the base 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 Global Insight, "World Economic Outlook," Volume 1. Macroeconomic projections are based on Global Insight Forecast CONTROL0503.

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**	**1588**	*1591*	*1598*	*1605*	*1617*	*1639*	*1664*	*1698*	*1728*	*1577*	*1603*	*1682*
Real Exchange Rate (index)	**1.193**	**1.152**	**1.106**	**1.102**	*1.048*	*1.031*	*1.020*	*1.017*	*1.020*	*1.014*	*1.007*	*0.999*	*1.138*	*1.029*	*1.010*
Business Inventory Change (billion chained 1996 dollars-SAAR)	**-31.9**	**-14.1**	**-2.6**	**2.8**	*-1.5*	*-2.0*	*-5.0*	*-2.5*	*5.1*	*14.4*	*21.9*	*23.8*	*-11.5*	*-2.7*	*16.3*
Producer Price Index (index, 1982=1.000)	**1.291**	**1.306**	**1.313**	**1.335**	*1.385*	*1.395*	*1.403*	*1.402*	*1.403*	*1.402*	*1.412*	*1.419*	*1.311*	*1.396*	*1.409*
Consumer Price Index (index, 1982-1984=1.000)	**1.780**	**1.795**	**1.805**	**1.814**	*1.831*	*1.835*	*1.842*	*1.854*	*1.861*	*1.870*	*1.881*	*1.892*	*1.799*	*1.841*	*1.876*
Petroleum Product Price Index (index, 1982=1.000)	**0.656**	**0.810**	**0.839**	**0.877**	*0.934*	*0.812*	*0.901*	*0.937*	*0.866*	*0.825*	*0.875*	*0.882*	*0.795*	*0.896*	*0.862*
Non-Farm Employment (millions)	**130.8**	**130.7**	**130.8**	**130.8**	*130.6*	*130.4*	*130.6*	*131.1*	*131.9*	*132.6*	*133.3*	*133.8*	*130.8*	*130.7*	*132.9*
Commercial Employment (millions)	**92.1**	**92.2**	**92.3**	**92.4**	*92.3*	*92.2*	*92.6*	*93.1*	*93.9*	*94.6*	*95.3*	*95.7*	*92.3*	*92.5*	*94.9*
Total Industrial Production (index, 1997=100.0)	**109.3**	**110.5**	**111.4**	**110.4**	*110.5*	*109.6*	*111.0*	*112.6*	*114.6*	*116.7*	*118.6*	*120.2*	*110.4*	*110.9*	*117.5*
Housing Stock (millions)	**119.3**	**119.6**	**119.8**	**120.5**	*121.0*	*121.3*	*121.6*	*121.9*	*122.2*	*122.5*	*122.8*	*123.0*	*119.8*	*121.5*	*122.6*
Miscellaneous															
Gas Weighted Industrial Production (index, 1997=100.0)	**100.4**	**101.0**	**101.6**	**100.8**	*100.3*	*100.8*	*101.8*	*102.9*	*104.0*	*105.2*	*106.4*	*107.5*	*100.9*	*101.5*	*105.8*
Vehicle Miles Traveled [b] (million miles/day)	**7268**	**8033**	**8060**	**7641**	*7216*	*7987*	*8119*	*7687*	*7426*	*8214*	*8333*	*7888*	*7752*	*7754*	*7966*
Vehicle Fuel Efficiency (index, 1999=1.000)	**0.997**	**1.040**	**1.037**	**1.006**	*0.984*	*1.046*	*1.046*	*1.000*	*0.989*	*1.044*	*1.046*	*0.999*	*1.020*	*1.020*	*1.020*
Real Vehicle Fuel Cost (cents per mile)	**3.31**	**3.75**	**3.76**	**3.91**	*4.42*	*3.91*	*3.94*	*3.96*	*3.93*	*3.86*	*3.72*	*3.66*	*3.69*	*4.05*	*3.79*
Air Travel Capacity (mill. available ton-miles/day)	**435.0**	**475.3**	**427.2**	**421.1**	*427.6*	*436.1*	*447.7*	*454.6*	*450.8*	*459.9*	*478.2*	*487.9*	*439.6*	*441.6*	*469.3*
Aircraft Utilization (mill. revenue ton-miles/day)	**237.6**	**268.7**	**270.6**	**255.2**	*251.5*	*265.7*	*268.7*	*259.2*	*255.9*	*284.9*	*298.2*	*284.8*	*258.1*	*261.3*	*281.0*
Airline Ticket Price Index (index, 1982-1984=1.000)	**2.317**	**2.377**	**2.334**	**2.235**	*2.252*	*2.340*	*2.455*	*2.428*	*2.344*	*2.276*	*2.252*	*2.245*	*2.316*	*2.369*	*2.279*
Raw Steel Production (million tons)	**23.92**	**25.03**	**26.34**	**25.68**	*24.69*	*23.04*	*22.43*	*22.30*	*24.83*	*25.85*	*26.55*	*25.59*	*100.98*	*92.45*	*102.82*

[a] Macroeconomic projections from Global Insight model forecasts are seasonally adjusted at annual rates and modified as appropriate to the base 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: 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)	**19.5**	**19.7**	**19.9**	**19.9**	*20.0*	*19.8*	*20.2*	*20.2*	*20.4*	*20.2*	*20.6*	*20.7*	*19.8*	*20.0*	*20.5*
U.S. Territories	**0.3**	**0.3**	**0.3**	**0.3**	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*
Canada	**2.0**	**1.9**	**2.0**	**2.1**	*2.0*	*1.9*	*2.1*	*2.1*	*2.0*	*2.0*	*2.2*	*2.1*	*2.0*	*2.0*	*2.1*
Europe	**15.2**	**14.6**	**15.2**	**15.4**	*15.1*	*14.4*	*15.0*	*15.7*	*15.5*	*14.5*	*15.1*	*15.8*	*15.1*	*15.0*	*15.2*
Japan	**5.7**	**4.6**	**5.0**	**5.9**	*6.2*	*4.8*	*5.0*	*5.5*	*5.9*	*4.9*	*5.1*	*5.5*	*5.3*	*5.4*	*5.3*
Other OECD	**5.3**	**4.9**	**4.9**	**5.4**	*5.4*	*5.0*	*5.3*	*5.3*	*5.1*	*5.1*	*5.3*	*5.4*	*5.1*	*5.2*	*5.2*
Total OECD	**48.0**	**46.1**	**47.4**	**48.8**	*49.1*	*46.1*	*47.9*	*49.0*	*49.3*	*46.9*	*48.6*	*49.7*	*47.6*	*48.0*	*48.6*
Non-OECD															
Former Soviet Union	**4.1**	**3.9**	**3.9**	**3.9**	*4.1*	*3.9*	*3.9*	*4.0*	*4.2*	*4.0*	*4.0*	*4.0*	*3.9*	*4.0*	*4.1*
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	**5.3**	**5.3**	**5.2**	**5.3**	*5.5*	*5.4*	*5.4*	*5.4*	*5.7*	*5.6*	*5.5*	*5.6*	*5.3*	*5.4*	*5.6*
Other Asia	**7.7**	**7.7**	**7.5**	**7.8**	*7.8*	*7.8*	*7.6*	*8.0*	*8.0*	*8.0*	*7.7*	*8.1*	*7.7*	*7.8*	*7.9*
Other Non-OECD	**12.1**	**12.3**	**12.4**	**12.3**	*12.2*	*12.4*	*12.5*	*12.5*	*12.4*	*12.7*	*12.8*	*12.6*	*12.3*	*12.4*	*12.6*
Total Non-OECD	**29.9**	**29.9**	**29.7**	**30.0**	*30.4*	*30.3*	*30.2*	*30.6*	*31.0*	*31.0*	*30.8*	*31.1*	*29.9*	*30.4*	*31.0*
Total World Demand	**77.8**	**76.1**	**77.1**	**78.9**	*79.5*	*76.5*	*78.0*	*79.6*	*80.3*	*78.0*	*79.4*	*80.8*	*77.5*	*78.4*	*79.6*
Supply [b]															
OECD															
U.S. (50 States)	**9.1**	**9.2**	**8.9**	**8.8**	*9.0*	*8.9*	*8.9*	*9.1*	*9.1*	*9.0*	*9.0*	*9.1*	*9.0*	*9.0*	*9.0*
Canada	**2.9**	**2.9**	**2.9**	**3.0**	*3.0*	*3.0*	*3.1*	*3.2*	*3.1*	*3.1*	*3.2*	*3.3*	*2.9*	*3.1*	*3.2*
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**	**6.3**	**5.8**	**6.4**	*6.3*	*6.0*	*6.1*	*6.4*	*6.3*	*6.0*	*6.1*	*6.4*	*6.2*	*6.2*	*6.2*
Other OECD	**1.8**	**1.7**	**1.8**	**1.7**	*1.7*	*1.7*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.8*	*1.6*	*1.6*
Total OECD	**23.7**	**23.8**	**23.1**	**23.5**	*23.8*	*23.3*	*23.6*	*24.0*	*24.0*	*23.6*	*23.8*	*24.2*	*23.5*	*23.7*	*23.9*
Non-OECD															
OPEC	**28.5**	**27.9**	**28.8**	**29.5**	*30.1*	*30.1*	*30.1*	*29.6*	*29.8*	*29.5*	*29.7*	*29.9*	*28.7*	*30.0*	*29.7*
Crude Oil Portion	**25.2**	**24.6**	**25.5**	**26.3**	*26.9*	*26.8*	*26.8*	*26.2*	*26.4*	*26.1*	*26.3*	*26.5*	*25.4*	*26.7*	*26.4*
Former Soviet Union	**9.0**	**9.2**	**9.6**	**9.8**	*9.9*	*10.2*	*10.3*	*10.3*	*10.4*	*10.5*	*10.7*	*10.8*	*9.4*	*10.2*	*10.6*
China	**3.3**	**3.4**	**3.4**	**3.4**	*3.4*	*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**	*11.4*	*11.5*	*11.5*	*11.7*	*11.8*	*11.9*	*12.1*	*12.3*	*11.4*	*11.5*	*12.0*
Total Non-OECD	**52.3**	**52.0**	**53.3**	**54.1**	*54.7*	*55.3*	*55.4*	*55.0*	*55.3*	*55.3*	*55.9*	*56.4*	*52.9*	*55.1*	*55.7*
Total World Supply	**76.0**	**75.7**	**76.3**	**77.6**	*78.5*	*78.6*	*78.9*	*79.0*	*79.3*	*78.9*	*79.8*	*80.6*	*76.4*	*78.8*	*79.6*
Additional unaccounted for supply	**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*	*0.4*	*0.4*
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	**0.2**	**-0.5**	**0.5**	**0.3**	*0.8*	*-0.7*	*-0.4*	*0.2*	*0.0*	*-0.7*	*-0.2*	*0.3*	*0.1*	*0.0*	*-0.1*
Other	**1.3**	**0.4**	**-0.1**	**0.5**	*-0.2*	*-1.8*	*-0.9*	*0.0*	*0.6*	*-0.7*	*-0.6*	*-0.4*	*0.5*	*-0.7*	*-0.3*
Total Stock Withdrawals	**1.4**	**-0.1**	**0.4**	**0.8**	*0.6*	*-2.5*	*-1.3*	*0.2*	*0.6*	*-1.4*	*-0.8*	*-0.1*	*0.6*	*-0.8*	*-0.4*
OECD Comm. Stocks, End (bill. bbls.)	**2.6**	**2.6**	**2.6**	**2.5**	*2.4*	*2.6*	*2.6*	*2.6*	*2.6*	*2.7*	*2.7*	*2.7*	*2.5*	*2.6*	*2.7*
Non-OPEC Supply	**47.5**	**47.8**	**47.5**	**48.1**	*48.4*	*48.5*	*48.8*	*49.5*	*49.5*	*49.4*	*50.1*	*50.7*	*47.7*	*48.8*	*49.9*

[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: 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]	**19.34**	**23.84**	**25.88**	**25.39**	*30.58*	*25.35*	*27.25*	*26.91*	*25.77*	*25.09*	*24.41*	*23.73*	*23.69*	*27.43*	*24.74*
WTI [b] Spot Average	**21.66**	**26.25**	**28.34**	**28.22**	*34.10*	*28.98*	*30.00*	*29.50*	*28.27*	*27.59*	*26.91*	*26.23*	*26.12*	*30.65*	*27.25*
Natural Gas Wellhead (dollars per thousand cubic feet)	**2.34**	**2.99**	**2.88**	**3.60**	*5.55*	*4.96*	*4.73*	*4.65*	*4.76*	*3.96*	*4.13*	*4.49*	*2.96*	*4.97*	*4.34*
Petroleum Products															
Gasoline Retail [c] (dollars per gallon)															
All Grades	**1.20**	**1.43**	**1.44**	**1.46**	*1.63*	*1.57*	*1.55*	*1.50*	*1.48*	*1.54*	*1.50*	*1.41*	*1.39*	*1.56*	*1.48*
Regular Unleaded	**1.16**	**1.39**	**1.40**	**1.42**	*1.59*	*1.53*	*1.50*	*1.45*	*1.43*	*1.50*	*1.45*	*1.37*	*1.34*	*1.52*	*1.44*
No. 2 Diesel Oil, Retail (dollars per gallon)	**1.18**	**1.30**	**1.35**	**1.44**	*1.62*	*1.47*	*1.43*	*1.46*	*1.42*	*1.41*	*1.39*	*1.41*	*1.32*	*1.49*	*1.41*
No. 2 Heating Oil, Wholesale (dollars per gallon)	**0.60**	**0.68**	**0.73**	**0.79**	*1.00*	*0.75*	*0.72*	*0.80*	*0.81*	*0.78*	*0.78*	*0.80*	*0.69*	*0.84*	*0.79*
No. 2 Heating Oil, Retail (dollars per gallon)	**1.09**	**1.09**	**1.06**	**1.19**	*1.44*	*1.30*	*1.16*	*1.29*	*1.28*	*1.19*	*1.13*	*1.25*	*1.11*	*1.35*	*1.24*
No. 6 Residual Fuel Oil, Retail [d] (dollars per barrel)	**19.34**	**24.11**	**25.73**	**26.22**	*33.76*	*26.66*	*28.05*	*28.17*	*27.66*	*25.55*	*25.03*	*25.15*	*23.81*	*29.22*	*25.90*
Electric Utility Fuels															
Coal (dollars per million Btu)	**1.22**	**1.21**	**1.22**	**1.21**	*1.23*	*1.25*	*1.22*	*1.21*	*1.21*	*1.21*	*1.19*	*1.18*	*1.22*	*1.23*	*1.20*
Heavy Fuel Oil [e] (dollars per million Btu)	**2.73**	**3.58**	**3.67**	**4.19**	*4.82*	*4.54*	*4.77*	*4.54*	*4.19*	*4.12*	*4.21*	*4.00*	*3.58*	*4.69*	*4.15*
Natural Gas (dollars per million Btu)	**3.22**	**3.71**	**3.49**	**4.61**	*6.32*	*6.35*	*5.59*	*5.45*	*5.57*	*4.59*	*4.73*	*5.20*	*3.71*	*5.90*	*4.97*
Other Residential															
Natural Gas (dollars per thousand cubic feet)	**7.13**	**8.18**	**10.11**	**8.09**	*8.60*	*9.43*	*11.60*	*9.44*	*9.21*	*9.95*	*11.08*	*9.23*	*7.83*	*9.16*	*9.47*
Electricity (cents per kilowatthour)	**8.14**	**8.58**	**8.74**	**8.30**	*8.08*	*8.71*	*8.95*	*8.51*	*8.18*	*8.74*	*8.92*	*8.47*	*8.45*	*8.57*	*8.59*

[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 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]	**5.87**	**5.90**	**5.67**	**5.55**	*5.88*	*5.79*	*5.72*	*5.85*	*5.85*	*5.79*	*5.75*	*5.77*	*5.75*	*5.81*	*5.79*
Alaska	**1.03**	**1.01**	**0.93**	**0.97**	*1.01*	*0.95*	*0.88*	*1.00*	*1.00*	*0.95*	*0.91*	*0.93*	*0.98*	*0.96*	*0.95*
Lower 48	**4.83**	**4.89**	**4.74**	**4.59**	*4.87*	*4.84*	*4.84*	*4.85*	*4.85*	*4.84*	*4.83*	*4.85*	*4.76*	*4.85*	*4.84*
Net Commercial Imports [b]	**8.72**	**9.30**	**9.16**	**9.28**	*8.64*	*9.84*	*9.79*	*9.12*	*9.24*	*9.75*	*9.84*	*9.45*	*9.12*	*9.35*	*9.57*
Net SPR Withdrawals	**-0.10**	**-0.15**	**-0.12**	**-0.11**	*0.00*	*-0.08*	*-0.11*	*-0.11*	*-0.13*	*0.00*	*0.00*	*0.00*	*-0.12*	*-0.08*	*-0.03*
Net Commercial Withdrawals	**-0.24**	**0.18**	**0.51**	**-0.08**	*-0.03*	*-0.01*	*0.11*	*-0.05*	*-0.23*	*-0.05*	*0.13*	*-0.03*	*0.09*	*0.00*	*-0.05*
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	**0.19**	**0.12**	**-0.01**	**0.13**	*0.07*	*0.15*	*0.17*	*0.12*	*0.17*	*0.19*	*0.17*	*0.12*	*0.11*	*0.13*	*0.16*
Total Crude Oil Supply	**14.44**	**15.34**	**15.21**	**14.78**	*14.55*	*15.68*	*15.69*	*14.93*	*14.90*	*15.68*	*15.89*	*15.31*	*14.95*	*15.21*	*15.44*
Other Supply															
NGL Production	**1.88**	**1.91**	**1.89**	**1.84**	*1.76*	*1.76*	*1.83*	*1.89*	*1.97*	*1.97*	*1.90*	*1.95*	*1.88*	*1.81*	*1.95*
Other Hydrocarbon and Alcohol Inputs	**0.37**	**0.44**	**0.43**	**0.43**	*0.44*	*0.40*	*0.41*	*0.41*	*0.38*	*0.38*	*0.40*	*0.41*	*0.42*	*0.42*	*0.40*
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	**0.96**	**0.96**	**0.95**	**0.97**	*0.91*	*0.93*	*0.93*	*0.93*	*0.92*	*0.93*	*0.93*	*0.95*	*0.96*	*0.93*	*0.93*
Net Product Imports [c]	**1.37**	**1.56**	**1.37**	**1.36**	*1.47*	*1.62*	*1.62*	*1.63*	*1.76*	*1.75*	*1.77*	*1.71*	*1.42*	*1.59*	*1.74*
Product Stock Withdrawn or Added (-)	**0.51**	**-0.49**	**0.06**	**0.49**	*0.87*	*-0.61*	*-0.35*	*0.32*	*0.35*	*-0.62*	*-0.34*	*0.32*	*0.15*	*0.05*	*-0.08*
Total Supply	**19.53**	**19.72**	**19.92**	**19.87**	*20.02*	*19.77*	*20.12*	*20.11*	*20.28*	*20.08*	*20.55*	*20.65*	*19.76*	*20.01*	*20.39*
Demand															
Motor Gasoline	**8.49**	**9.00**	**9.05**	**8.85**	*8.54*	*8.89*	*9.04*	*8.95*	*8.75*	*9.16*	*9.28*	*9.19*	*8.85*	*8.86*	*9.10*
Jet Fuel	**1.57**	**1.61**	**1.63**	**1.65**	*1.55*	*1.50*	*1.58*	*1.64*	*1.55*	*1.57*	*1.64*	*1.69*	*1.61*	*1.57*	*1.61*
Distillate Fuel Oil	**3.80**	**3.70**	**3.71**	**3.89**	*4.22*	*3.82*	*3.80*	*4.00*	*4.22*	*3.87*	*3.91*	*4.13*	*3.78*	*3.96*	*4.03*
Residual Fuel Oil	**0.73**	**0.69**	**0.62**	**0.76**	*0.83*	*0.80*	*0.80*	*0.69*	*0.77*	*0.62*	*0.71*	*0.67*	*0.70*	*0.78*	*0.69*
Other Oils [d]	**4.93**	**4.72**	**4.91**	**4.73**	*4.88*	*4.77*	*4.90*	*4.82*	*4.99*	*4.86*	*5.01*	*4.96*	*4.82*	*4.84*	*4.95*
Total Demand	**19.53**	**19.72**	**19.92**	**19.87**	*20.03*	*19.77*	*20.12*	*20.10*	*20.27*	*20.08*	*20.55*	*20.64*	*19.76*	*20.01*	*20.39*
Total Petroleum Net Imports	**10.11**	**10.87**	**10.54**	**10.64**	*10.11*	*11.45*	*11.41*	*10.75*	*11.00*	*11.50*	*11.61*	*11.16*	*10.54*	*10.93*	*11.32*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**334**	**318**	**271**	**278**	*280*	*282*	*272*	*277*	*298*	*302*	*290*	*293*	*278*	*277*	*293*
Total Motor Gasoline	**213**	**217**	**206**	**209**	*200*	*205*	*198*	*202*	*206*	*210*	*204*	*209*	*209*	*202*	*209*
Finished Motor Gasoline	**160**	**168**	**157**	**162**	*145*	*152*	*147*	*151*	*150*	*157*	*152*	*157*	*162*	*151*	*157*
Blending Components	**54**	**49**	**49**	**47**	*55*	*53*	*51*	*51*	*56*	*52*	*52*	*52*	*47*	*51*	*52*
Jet Fuel	**42**	**39**	**41**	**39**	*37*	*39*	*41*	*40*	*39*	*41*	*42*	*41*	*39*	*40*	*41*
Distillate Fuel Oil	**123**	**133**	**127**	**134**	*99*	*110*	*128*	*131*	*102*	*113*	*130*	*134*	*134*	*131*	*134*
Residual Fuel Oil	**34**	**33**	**33**	**31**	*32*	*34*	*35*	*36*	*33*	*34*	*35*	*36*	*31*	*36*	*36*
Other Oils [e]	**265**	**301**	**309**	**258**	*225*	*260*	*279*	*242*	*240*	*279*	*297*	*259*	*258*	*242*	*259*
Total Stocks (excluding SPR)	**1011**	**1040**	**987**	**949**	*873*	*930*	*953*	*929*	*918*	*979*	*999*	*973*	*949*	*929*	*973*
Crude Oil in SPR	**561**	**576**	**587**	**599**	*599*	*608*	*618*	*628*	*640*	*640*	*640*	*640*	*599*	*628*	*640*
Heating Oil Reserve	**2**	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Total Stocks (incl SPR and HOR)	**1575**	**1618**	**1576**	**1550**	*1475*	*1540*	*1573*	*1559*	*1560*	*1621*	*1641*	*1615*	*1550*	*1559*	*1615*

[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 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%

[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	*5.69*	*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**	**4.81**	*4.82*	*4.92*	*4.96*	*4.91*	*4.89*	*4.86*	*4.92*	*4.97*	*19.05*	*19.60*	*19.64*
Net Imports	**0.88**	**0.83**	**0.90**	**0.89**	*0.85*	*0.84*	*0.90*	*0.90*	*0.93*	*0.87*	*0.90*	*0.91*	*3.49*	*3.49*	*3.61*
Supplemental Gaseous Fuels	**0.02**	**0.02**	**0.02**	**0.02**	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.08*	*0.08*	*0.08*
Total New Supply	**5.59**	**5.62**	**5.69**	**5.72**	*5.69*	*5.78*	*5.87*	*5.83*	*5.84*	*5.75*	*5.84*	*5.90*	*22.62*	*23.17*	*23.33*
Working Gas in Storage															
Opening	**2.90**	**1.52**	**2.31**	**3.04**	*2.38*	*0.68*	*1.70*	*2.85*	*2.47*	*1.17*	*2.04*	*2.92*	*2.90*	*2.38*	*2.47*
Closing	**1.52**	**2.31**	**3.04**	**2.38**	*0.68*	*1.70*	*2.85*	*2.47*	*1.17*	*2.04*	*2.92*	*2.42*	*2.38*	*2.47*	*2.42*
Net Withdrawals	**1.39**	**-0.79**	**-0.73**	**0.67**	*1.70*	*-1.03*	*-1.15*	*0.38*	*1.30*	*-0.88*	*-0.88*	*0.51*	*0.53*	*-0.09*	*0.05*
Total Supply	**6.98**	**4.83**	**4.96**	**6.38**	*7.39*	*4.75*	*4.73*	*6.22*	*7.14*	*4.87*	*4.96*	*6.41*	*23.15*	*23.08*	*23.38*
Balancing Item [a]	**-0.13**	**0.13**	**-0.09**	**-0.64**	*-0.09*	*0.11*	*-0.10*	*-0.62*	*0.08*	*0.06*	*-0.16*	*-0.75*	*-0.73*	*-0.69*	*-0.76*
Total Primary Supply	**6.84**	**4.96**	**4.87**	**5.75**	*7.29*	*4.86*	*4.63*	*5.60*	*7.23*	*4.92*	*4.80*	*5.66*	*22.42*	*22.39*	*22.62*
Demand															
Residential	**2.19**	**0.84**	**0.37**	**1.51**	*2.51*	*0.81*	*0.34*	*1.35*	*2.42*	*0.82*	*0.36*	*1.36*	*4.92*	*5.00*	*4.96*
Commercial	**1.20**	**0.61**	**0.42**	**0.91**	*1.32*	*0.58*	*0.39*	*0.84*	*1.29*	*0.62*	*0.45*	*0.88*	*3.15*	*3.14*	*3.24*
Industrial	**2.14**	**2.01**	**1.97**	**2.05**	*2.16*	*1.99*	*1.97*	*2.09*	*2.17*	*1.98*	*1.97*	*2.11*	*8.18*	*8.20*	*8.23*
Lease and Plant Fuel	**0.26**	**0.26**	**0.26**	**0.27**	*0.27*	*0.27*	*0.26*	*0.27*	*0.26*	*0.26*	*0.26*	*0.27*	*1.05*	*1.06*	*1.06*
Other Industrial	**1.88**	**1.75**	**1.71**	**1.79**	*1.89*	*1.72*	*1.70*	*1.82*	*1.91*	*1.72*	*1.71*	*1.84*	*7.12*	*7.14*	*7.18*
CHP [b]	**0.32**	**0.31**	**0.35**	**0.29**	*0.32*	*0.30*	*0.33*	*0.30*	*0.34*	*0.31*	*0.34*	*0.30*	*1.28*	*1.25*	*1.29*
Non-CHP	**1.56**	**1.44**	**1.36**	**1.50**	*1.57*	*1.42*	*1.37*	*1.53*	*1.57*	*1.40*	*1.37*	*1.53*	*5.84*	*5.89*	*5.89*
Transportation [c]	**0.20**	**0.14**	**0.14**	**0.17**	*0.21*	0.15	0.13	0.17	0.21	0.14	0.13	0.17	0.64	0.66	0.65
Electric Power [d]	**1.12**	**1.35**	**1.97**	**1.11**	*1.09*	1.33	1.80	1.15	1.13	1.37	1.89	1.14	5.55	5.38	5.53
Total Demand	**6.84**	**4.96**	**4.87**	**5.75**	*7.29*	*4.86*	*4.63*	*5.60*	*7.23*	*4.92*	*4.80*	*5.66*	*22.42*	*22.39*	*22.62*

[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.

[b]Natural 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.

[c]Pipeline fuel use plus natural gas used as vehicle fuel.

[d]Natural 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	**282.6**	**267.6**	**270.8**	**272.8**	*264.1*	*265.0*	*279.1*	*285.5*	*274.7*	*258.9*	*276.0*	*272.6*	*1093.8*	*1093.7*	*1082.1*
Appalachia	**108.3**	**99.1**	**95.2**	**94.2**	*95.4*	*96.0*	*99.8*	*101.9*	*100.9*	*91.5*	*96.4*	*95.2*	*396.8*	*393.1*	*383.9*
Interior	**36.8**	**37.3**	**36.6**	**35.6**	*36.1*	*34.7*	*34.1*	*31.7*	*32.3*	*33.0*	*32.0*	*28.5*	*146.2*	*136.6*	*125.9*
Western	**137.6**	**131.2**	**138.9**	**143.1**	*132.5*	*133.0*	*145.2*	*151.9*	*141.5*	*134.4*	*147.6*	*148.9*	*550.8*	*562.7*	*572.3*
Primary Stock Levels [a]															
Opening	**35.9**	**40.3**	**41.3**	**35.7**	*32.0*	*31.3*	*31.1*	*29.7*	*32.0*	*31.2*	*31.6*	*29.5*	*35.9*	*32.0*	*32.0*
Closing	**40.3**	**41.3**	**35.7**	**32.0**	*31.3*	*31.1*	*29.7*	*32.0*	*31.2*	*31.6*	*29.5*	*32.2*	*32.0*	*32.0*	*32.2*
Net Withdrawals	**-4.4**	**-1.0**	**5.6**	**3.7**	*0.7*	*0.2*	*1.4*	*-2.3*	*0.8*	*-0.4*	*2.0*	*-2.7*	*3.9*	*(S)*	*-0.2*
Imports	**4.0**	**3.9**	**4.7**	**4.4**	*5.0*	*5.3*	*5.1*	*4.7*	*5.5*	*5.9*	*5.4*	*5.0*	*16.9*	*20.0*	*21.8*
Exports	**9.3**	**11.0**	**9.3**	**10.0**	*8.5*	*11.3*	*11.1*	*10.8*	*9.4*	*10.0*	*9.8*	*9.6*	*39.6*	*41.7*	*38.8*
Total Net Domestic Supply	**273.0**	**259.4**	**271.8**	**270.8**	*261.2*	*259.3*	*274.4*	*277.2*	*271.6*	*254.4*	*273.5*	*265.4*	*1075.0*	*1072.1*	*1064.9*
Secondary Stock Levels [b]															
Opening	**146.0**	**152.9**	**158.0**	**142.7**	*148.9*	*144.0*	*155.6*	*146.8*	*161.8*	*164.7*	*174.9*	*160.9*	*146.0*	*148.9*	*161.8*
Closing	**152.9**	**158.0**	**142.7**	**148.9**	*144.0*	*155.6*	*146.8*	*161.8*	*164.7*	*174.9*	*160.9*	*165.7*	*148.9*	*161.8*	*165.7*
Net Withdrawals	**-6.9**	**-5.1**	**15.3**	**-6.2**	*4.9*	*-11.6*	*8.8*	*-15.0*	*-2.9*	*-10.2*	*14.0*	*-4.8*	*-2.9*	*-12.9*	*-3.8*
Waste Coal Supplied to IPPs [c]	**2.8**	**2.8**	**2.8**	**2.8**	*2.9*	*2.9*	*2.9*	*2.9*	*3.7*	*3.7*	*3.7*	*3.7*	*11.1*	*11.6*	*14.8*
Total Supply	**268.8**	**257.1**	**289.9**	**267.4**	*269.0*	*250.6*	*286.1*	*265.0*	*272.4*	*247.9*	*291.2*	*264.2*	*1083.2*	*1070.8*	*1075.8*
Demand															
Coke Plants	**5.4**	**5.6**	**5.6**	**5.9**	*6.0*	*6.4*	*6.4*	*5.6*	*5.8*	*5.7*	*6.1*	*5.5*	*22.5*	*24.4*	*23.1*
Electric Power Sector [d]	**231.6**	**231.1**	**267.0**	**245.6**	*252.0*	*231.3*	*265.4*	*243.0*	*250.4*	*228.3*	*271.1*	*242.6*	*975.4*	*991.7*	*992.4*
Retail and General Industry	**17.6**	**16.0**	**16.1**	**17.7**	*17.4*	*14.3*	*14.4*	*16.5*	*16.2*	*13.9*	*14.0*	*16.2*	*67.4*	*62.6*	*60.4*
Total Demand [e]	**254.6**	**252.8**	**288.7**	**269.2**	*275.5*	*252.0*	*286.1*	*265.0*	*272.4*	*247.9*	*291.2*	*264.2*	*1065.4*	*1078.6*	*1075.8*
Discrepancy [f]	**14.2**	**4.2**	**1.1**	**-1.8**	*-6.5*	*-1.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*17.8*	*-7.9*	*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] Coal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

[e] Total Demand includes estimated IPP consumption.

[f] 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 10a. 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	**454.2**	**452.0**	**519.5**	**479.0**	*485.9*	*449.6*	*515.2*	*471.3*	*485.1*	*442.9*	*525.8*	*470.4*	*1904.7*	*1922.0*	*1924.2*
Petroleum	**18.0**	**21.6**	**24.9**	**20.2**	*32.8*	*33.6*	*35.5*	*19.1*	*24.8*	*17.5*	*29.8*	*18.2*	*84.6*	*121.0*	*90.4*
Natural Gas	**121.9**	**143.8**	**211.3**	**123.5**	*119.5*	*144.7*	*196.2*	*126.2*	*123.1*	*148.9*	*206.5*	*124.7*	*600.5*	*586.6*	*603.1*
Nuclear	**195.6**	**187.8**	**205.7**	**190.9**	*190.2*	*181.8*	*205.3*	*190.4*	*195.1*	*191.4*	*206.3*	*191.5*	*780.1*	*767.7*	*784.3*
Hydroelectric	**59.9**	**76.8**	**59.4**	**54.7**	*63.2*	*76.9*	*62.5*	*63.0*	*77.7*	*83.8*	*66.9*	*68.2*	*250.8*	*265.6*	*296.6*
Geothermal and Other [b]	**13.3**	**14.1**	**14.2**	**13.1**	*12.9*	*13.4*	*14.4*	*14.1*	*15.1*	*14.8*	*15.6*	*15.1*	*54.7*	*54.9*	*60.6*
Subtotal	**863.0**	**896.1**	**1035.0**	**881.3**	*904.6*	*900.0*	*1029.0*	*884.2*	*920.8*	*899.4*	*1050.9*	*888.1*	*3675.4*	*3717.8*	*3759.2*
Other Sectors [c]	**40.5**	**39.8**	**44.1**	**38.6**	*41.1*	*40.4*	*43.0*	*40.9*	*41.2*	*40.8*	*43.3*	*41.0*	*163.1*	*165.4*	*166.2*
Total Generation	**903.5**	**935.9**	**1079.2**	**920.0**	*945.7*	*940.5*	*1072.0*	*925.1*	*962.0*	*940.1*	*1094.2*	*929.1*	*3838.6*	*3883.2*	*3925.4*
Net Imports [d]	**5.9**	**4.3**	**8.1**	**2.8**	*6.1*	*7.7*	*11.1*	*6.6*	*10.5*	*12.1*	*15.5*	*11.0*	*21.1*	*31.4*	*49.2*
Total Supply	**909.4**	**940.2**	**1087.3**	**922.8**	*951.8*	*948.2*	*1083.0*	*931.6*	*972.5*	*952.3*	*1109.7*	*940.1*	*3859.7*	*3914.6*	*3974.6*
Losses and Unaccounted for [e]	**26.0**	**53.6**	**40.9**	**33.3**	*23.1*	*51.4*	*43.7*	*40.7*	*31.0*	*59.5*	*48.2*	*32.8*	*153.9*	*159.0*	*171.6*
Demand															
Retail Sales [f]															
Residential	**311.3**	**281.7**	**382.7**	**292.5**	*340.7*	*294.9*	*383.1*	*289.4*	*340.6*	*273.3*	*389.9*	*294.1*	*1268.2*	*1308.0*	*1297.9*
Commercial	**255.1**	**273.0**	**313.4**	**266.7**	*262.6*	*263.8*	*310.3*	*261.9*	*263.8*	*273.4*	*317.2*	*268.5*	*1108.1*	*1098.6*	*1122.8*
Industrial	**236.3**	**249.0**	**262.3**	**246.2**	*237.3*	*246.7*	*255.5*	*246.8*	*242.5*	*250.8*	*259.9*	*247.8*	*993.8*	*986.3*	*1001.0*
Other	**23.9**	**25.3**	**30.0**	**26.0**	*25.4*	*26.8*	*29.6*	*26.5*	*26.5*	*26.3*	*29.9*	*26.7*	*105.2*	*108.3*	*109.5*
Subtotal	**826.5**	**829.1**	**988.2**	**831.4**	*865.9*	*832.3*	*978.5*	*824.6*	*873.4*	*823.7*	*996.9*	*837.2*	*3475.2*	*3501.2*	*3531.3*
Other Use/Sales [g]	**56.8**	**57.5**	**58.1**	**58.1**	*62.7*	*64.5*	*60.8*	*66.4*	*68.1*	*69.0*	*64.6*	*70.0*	*230.6*	*254.4*	*271.7*
Total Demand	**883.4**	**886.5**	**1046.4**	**889.5**	*928.6*	*896.8*	*1039.3*	*891.0*	*941.5*	*892.7*	*1061.5*	*907.2*	*3705.8*	*3755.7*	*3803.0*

[a] Electric Utilities and independent power producers.

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

[c] Electricity generation from combined heat and power facilities and electricity-only plants in the industrial and commercial sectors.

[d] Data for 2001 are estimates.

[e] Balancing item, mainly transmission and distribution losses.

[f] 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 2001 are estimated.

[g] Defined 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 10b. U.S. Electricity Generation by Sector: Base Case

(Billion Kilowatt-hours)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Electricity Generation by Sector															
Electric Power [a]															
Coal	**454.2**	**452.0**	**519.5**	**479.0**	*485.9*	*449.6*	*515.2*	*471.3*	*485.1*	*442.9*	*525.8*	*470.4*	*1904.7*	*1922.0*	*1924.2*
Petroleum	**18.0**	**21.6**	**24.9**	**20.2**	*32.8*	*33.6*	*35.5*	*19.1*	*24.8*	*17.5*	*29.8*	*18.2*	*84.6*	*121.0*	*90.4*
Natural Gas	**121.9**	**143.8**	**211.3**	**123.5**	*119.5*	*144.7*	*196.2*	*126.2*	*123.1*	*148.9*	*206.5*	*124.7*	*600.5*	*586.6*	*603.1*
Other [b]	**268.8**	**278.7**	**279.3**	**258.7**	*266.3*	*272.1*	*282.2*	*267.6*	*287.8*	*290.1*	*288.8*	*274.8*	*1085.5*	*1088.2*	*1141.5*
Subtotal	**863.0**	**896.1**	**1035.0**	**881.3**	*904.6*	*900.0*	*1029.0*	*884.2*	*920.8*	*899.4*	*1050.9*	*888.1*	*3675.4*	*3717.8*	*3759.2*
Commercial															
Coal	**0.3**	**0.2**	**0.3**	**0.3**	*0.3*	*0.2*	*0.2*	*0.3*	*0.3*	*0.2*	*0.2*	*0.3*	*1.0*	*1.0*	*1.0*
Petroleum	**0.1**	**0.1**	**0.1**	**0.1**	*0.2*	*0.1*	*0.1*	*0.1*	*0.2*	*0.1*	*0.1*	*0.1*	*0.4*	*0.6*	*0.4*
Natural Gas	**1.1**	**1.0**	**2.4**	**1.0**	*1.1*	*1.1*	*1.7*	*1.0*	*1.1*	*1.2*	*1.8*	*1.1*	*5.4*	*4.9*	*5.2*
Other [b]	**0.4**	**0.5**	**0.5**	**0.5**	*0.4*	*0.5*	*0.3*	*0.5*	*0.4*	*0.5*	*0.4*	*0.5*	*1.9*	*1.8*	*1.9*
Subtotal	**1.8**	**1.8**	**3.3**	**1.8**	*2.0*	*1.9*	*2.4*	*1.9*	*2.0*	*2.0*	*2.5*	*2.0*	*8.7*	*8.2*	*8.5*
Industrial															
Coal	**4.9**	**5.0**	**5.4**	**5.3**	*5.3*	*5.0*	*5.4*	*5.5*	*5.2*	*5.0*	*5.4*	*5.5*	*20.7*	*21.2*	*21.0*
Petroleum	**1.2**	**1.1**	**1.2**	**1.3**	*1.9*	*1.8*	*1.7*	*1.3*	*1.4*	*0.9*	*1.4*	*1.2*	*4.9*	*6.7*	*5.0*
Natural Gas	**21.0**	**19.5**	**21.4**	**17.9**	*20.7*	*18.8*	*20.6*	*18.9*	*21.1*	*19.8*	*21.1*	*19.0*	*79.9*	*79.0*	*81.0*
Other [b]	**11.6**	**12.3**	**12.8**	**12.3**	*11.3*	*12.9*	*12.9*	*13.3*	*11.4*	*13.0*	*12.8*	*13.3*	*49.0*	*50.3*	*50.6*
Subtotal	**38.7**	**38.0**	**40.9**	**36.8**	*39.2*	*38.5*	*40.6*	*39.0*	*39.1*	*38.7*	*40.8*	*39.0*	*154.4*	*157.2*	*157.7*
Total	**903.5**	**935.9**	**1079.2**	**920.0**	*945.7*	*940.5*	*1072.0*	*925.1*	*962.0*	*940.1*	*1094.2*	*929.1*	*3838.6*	*3883.2*	*3925.4*

[a] Electric Utilities and independent power producers.

[b] "Other" includes nuclear, hydroelectric, geothermal, wood, waste, wind and solar power sources.

Note: Commercial and industrial categories include electricity output from CHP facilities and some electric-only plants.

Table 10c. U.S. Fuel Consumption for Electricity Generation by Sector: Base Case

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Fuel Consumption for Electricity Generation by Sector									(Quadrillion Btu)						
Electric Power [a]															
Coal	**4.752**	**4.747**	**5.485**	**5.042**	5.102	4.732	5.422	4.956	5.103	4.660	5.531	4.948	20.0	20.2	20.2
Petroleum	**0.225**	**0.271**	**0.314**	**0.234**	0.378	0.369	0.385	0.209	0.270	0.192	0.324	0.200	1.0	1.3	1.0
Natural Gas	**1.087**	**1.326**	**1.957**	**1.084**	1.062	1.311	1.765	1.130	1.108	1.340	1.855	1.121	5.5	5.3	5.4
Other [b]	**3.103**	**3.159**	**3.238**	**2.926**	3.075	2.887	3.001	2.850	3.065	3.079	3.072	2.925	12.4	11.8	12.1
Subtotal	**9.167**	**9.503**	**10.994**	**9.286**	9.617	9.299	10.573	9.145	9.546	9.270	10.782	9.194	38.9	38.6	38.8
Commercial															
Coal	**0.003**	**0.003**	**0.004**	**0.003**	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.013	0.012	0.013
Petroleum	**0.001**	**0.001**	**0.001**	**0.001**	0.003	0.002	0.002	0.001	0.002	0.001	0.001	0.001	0.005	0.007	0.006
Natural Gas	**0.009**	**0.009**	**0.019**	**0.009**	0.009	0.009	0.014	0.009	0.010	0.010	0.015	0.009	0.047	0.041	0.044
Other [b]	**0.006**	**0.007**	**0.007**	**0.008**	0.006	0.008	0.005	0.008	0.007	0.008	0.006	0.008	0.029	0.027	0.029
Subtotal	**0.019**	**0.020**	**0.032**	**0.021**	0.021	0.021	0.024	0.021	0.022	0.022	0.025	0.022	0.093	0.088	0.091
Industrial															
Coal	**0.062**	**0.064**	**0.067**	**0.068**	0.066	0.063	0.068	0.069	0.065	0.063	0.068	0.069	0.261	0.267	0.265
Petroleum	**0.015**	**0.014**	**0.015**	**0.016**	0.023	0.021	0.020	0.015	0.016	0.011	0.017	0.014	0.059	0.080	0.058
Natural Gas	**0.183**	**0.179**	**0.197**	**0.157**	0.184	0.170	0.184	0.169	0.189	0.177	0.189	0.170	0.717	0.707	0.725
Other [b]	**0.141**	**0.146**	**0.156**	**0.172**	0.144	0.170	0.169	0.171	0.151	0.172	0.167	0.171	0.615	0.653	0.662
Subtotal	**0.402**	**0.402**	**0.435**	**0.412**	0.418	0.424	0.441	0.424	0.421	0.423	0.441	0.424	1.651	1.707	1.710
Total	**9.588**	**9.926**	**11.461**	**9.719**	10.056	9.744	11.038	9.591	9.989	9.716	11.249	9.640	40.693	40.428	40.594
									(Physical Units)						
Electric Power [a]															
Coal (Million Short Tons)	**231.0**	**230.8**	**266.7**	**245.1**	248.1	230.1	263.6	241.0	248.1	226.6	269.0	240.6	973.7	982.8	984.2
Petroleum (Million Barrels per Day)	**0.348**	**0.402**	**0.470**	**0.383**	0.527	0.661	0.676	0.369	0.481	0.342	0.568	0.352	0.401	0.558	0.436
Natural Gas (Trillion Cubic Feet)	**1.060**	**1.294**	**1.909**	**1.058**	1.036	1.279	1.722	1.102	1.081	1.307	1.810	1.093	5.321	5.139	5.291
Commercial															
Coal (Million Short Tons)	**0.1**	**0.1**	**0.1**	**0.1**	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.5
Petroleum (Million Barrels per Day)	**0.002**	**0.002**	**0.003**	**0.002**	0.004	0.003	0.003	0.002	0.004	0.002	0.002	0.002	0.002	0.003	0.003
Natural Gas (Trillion Cubic Feet)	**0.009**	**0.009**	**0.019**	**0.008**	0.009	0.009	0.014	0.009	0.010	0.010	0.015	0.009	0.045	0.040	0.043
Industrial															
Coal (Million Short Tons)	**2.7**	**2.7**	**2.9**	**2.9**	2.8	2.7	2.9	3.0	2.8	2.7	2.9	2.9	11.2	11.4	11.3
Petroleum (Million Barrels per Day)	**0.027**	**0.025**	**0.026**	**0.028**	0.033	0.000	0.036	0.027	0.030	0.020	0.030	0.025	0.026	0.024	0.026
Natural Gas (Trillion Cubic Feet)	**0.179**	**0.174**	**0.192**	**0.153**	0.180	0.165	0.179	0.165	0.184	0.173	0.184	0.165	0.699	0.689	0.707

[a] Electric Utilities and independent power producers.

[b] "Other" includes nuclear, hydroelectric, geothermal, wood, waste, wind and solar power sources.

Note: Commercial and industrial categories include electricity output from CHP facilities and some electric-only plants.

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]	**2.165**	**2.623**	*2.781*	*3.105*	**21.2**	*6.0*	*11.7*
Geothermal, Solar and Wind Energy [b]	**0.363**	**0.392**	*0.395*	*0.457*	**8.0**	*0.8*	*15.7*
Biofuels [c]	**0.450**	**0.466**	*0.476*	*0.497*	**3.6**	*2.1*	*4.4*
Total	**2.978**	**3.481**	*3.653*	*4.059*	**16.9**	*4.9*	*11.1*
Other Sectors [d]							
Residential and Commercial [e]	**0.567**	**0.513**	*0.528*	*0.550*	**-9.5**	*2.9*	*4.2*
Residential	**0.475**	**0.418**	*0.436*	*0.455*	**-12.0**	*4.3*	*4.4*
Commercial	**0.091**	**0.095**	*0.093*	*0.095*	**4.4**	*-2.1*	*2.2*
Industrial [f]	**1.641**	**1.734**	*1.761*	*1.749*	**5.7**	*1.6*	*-0.7*
Transportation [g]	**0.147**	**0.175**	*0.200*	*0.205*	**19.0**	*14.3*	*2.5*
Total	**2.354**	**2.422**	*2.490*	*2.504*	**2.9**	*2.8*	*0.6*
Total Renewable Energy Demand	**5.331**	**5.903**	*6.142*	*6.564*	**10.7**	*4.0*	*6.9*

[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.

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**	*9440*	*9658*	*10040*
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**	*23.69*	*27.43*	*24.74*
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**	*5.75*	*5.81*	*5.79*
Total Petroleum Net Imports (including SPR)															
(million barrels per day)	**7.16**	**6.63**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	**10.42**	**10.90**	*10.54*	*10.93*	*11.32*
Energy Demand															
World Petroleum															
(million barrels per day)	**66.0**	**63.3**	**63.1**	**63.1**	**64.1**	**65.7**	**67.0**	**73.1**	**73.9**	**75.7**	**76.9**	**77.1**	*77.5*	*78.4*	*79.6*
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**	*19.76*	*20.01*	*20.39*
Natural Gas															
(trillion cubic feet)	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.72**	**22.24**	**22.39**	**23.47**	**22.23**	*22.42*	*22.39*	*22.62*
Coal															
(million short tons)	**904**	**899**	**908**	**944**	**951**	**962**	**1006**	**1030**	**1037**	**1039**	**1084**	**1060**	*1065*	*1079*	*1076*
Electricity (billion kilowatthours)															
Retail Sales [c]	**2713**	**2762**	**2763**	**2861**	**2935**	**3013**	**3101**	**3146**	**3264**	**3312**	**3421**	**3370**	*3475*	*3501*	*3531*
Other Use/Sales [d]	**115**	**118**	**122**	**128**	**134**	**144**	**146**	**148**	**161**	**183**	**183**	**205**	*231*	*254*	*272*
Total	**2827**	**2880**	**2886**	**2989**	**3069**	**3157**	**3247**	**3294**	**3425**	**3495**	**3605**	**3575**	*3706*	*3756*	*3803*
Total Energy Demand [e]															
(quadrillion Btu)	**84.6**	**84.5**	**85.9**	**87.6**	**89.2**	**91.2**	**94.2**	**94.7**	**95.1**	**96.8**	**99.0**	**96.3**	*97.6*	*98.6*	*100.1*
Total Energy Demand per Dollar of GDP															
(thousand Btu per 1996 Dollar)	**12.62**	**12.66**	**12.48**	**12.40**	**12.15**	**12.09**	**12.06**	**11.63**	**11.18**	**10.92**	**10.78**	**10.45**	*10.34*	*10.21*	*9.97*

[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.
[d] Defined 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 CONTROL0503.

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**	*9440*	*9658*	*10040*
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**	*1.107*	*1.126*	*1.149*
Real Disposable Personal Income (billion chained 1996 Dollars)	**5014**	**5033**	**5189**	**5261**	**5397**	**5539**	**5678**	**5854**	**6169**	**6328**	**6630**	**6748**	*7037*	*7202*	*7486*
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**	*111.691*	*111.866*	*119.819*
Real Fixed Investment (billion chained 1996 dollars)	**895**	**833**	**886**	**958**	**1046**	**1109**	**1213**	**1329**	**1480**	**1595**	**1692**	**1627**	*1577*	*1603*	*1682*
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**	*1.138*	*1.029*	*1.010*
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**	*-11.5*	*-2.7*	*16.3*
Producer Price Index (index, 1982=1.000)	**1.163**	**1.165**	**1.172**	**1.189**	**1.205**	**1.248**	**1.277**	**1.276**	**1.244**	**1.255**	**1.328**	**1.342**	*1.311*	*1.396*	*1.409*
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**	*1.799*	*1.841*	*1.876*
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**	*0.795*	*0.896*	*0.862*
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**	*130.8*	*130.7*	*132.9*
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**	*92.3*	*92.5*	*94.9*
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**	*110.4*	*110.9*	*117.5*
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**	*119.8*	*121.5*	*122.6*
Weather [a]															
Heating Degree-Days															
U.S.	**4016**	**4200**	**4441**	**4700**	**4483**	**4531**	**4713**	**4542**	**3951**	**4169**	**4460**	**4223**	*4318*	*4554*	*4477*
New England	**5848**	**5960**	**6844**	**6728**	**6672**	**6559**	**6679**	**6662**	**5680**	**5952**	**6489**	**6059**	*6108*	*6986*	*6488*
Middle Atlantic	**4998**	**5177**	**5964**	**5948**	**5934**	**5831**	**5986**	**5809**	**4812**	**5351**	**5774**	**5297**	*5337*	*6157*	*5723*
U.S. Gas-Weighted	**4139**	**4337**	**4458**	**4754**	**4659**	**4707**	**4980**	**4802**	**4183**	**4399**	**4680**	**4451**	*4560*	*4923*	*4730*
Cooling Degree-Days (U.S.)	**1260**	**1331**	**1040**	**1218**	**1220**	**1293**	**1180**	**1156**	**1410**	**1297**	**1229**	**1256**	*1393*	*1233*	*1240*

[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 Global Insight Forecast CONTROL0503.

Table A3. U.S. Energy Supply and Demand: Base Case

(Quadrillion Btu except where noted)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Production															
Coal	**22.46**	**21.59**	**21.63**	**20.25**	**22.11**	**22.03**	**22.68**	**23.21**	**23.94**	**23.19**	**22.62**	**23.05**	*22.55*	*22.55*	*22.31*
Natural Gas	**18.33**	**18.23**	**18.38**	**18.58**	**19.35**	**19.08**	**19.27**	**19.32**	**19.61**	**19.34**	**19.66**	**20.23**	*19.58*	*20.15*	*20.19*
Crude Oil	**15.57**	**15.70**	**15.22**	**14.49**	**14.10**	**13.89**	**13.72**	**13.66**	**13.24**	**12.45**	**12.36**	**12.28**	*12.16*	*12.30*	*12.29*
Natural Gas Liquids	**2.17**	**2.31**	**2.36**	**2.41**	**2.39**	**2.44**	**2.53**	**2.50**	**2.42**	**2.53**	**2.61**	**2.55**	*2.56*	*2.47*	*2.67*
Nuclear	**6.10**	**6.42**	**6.48**	**6.41**	**6.69**	**7.08**	**7.09**	**6.60**	**7.07**	**7.61**	**7.86**	**8.03**	*8.15*	*8.02*	*8.19*
Hydroelectric	**3.04**	**2.99**	**2.60**	**2.87**	**2.67**	**3.20**	**3.58**	**3.62**	**3.27**	**3.23**	**2.78**	**2.12**	*2.59*	*2.75*	*3.07*
Other Renewables	**3.08**	**3.14**	**3.29**	**3.27**	**3.38**	**3.46**	**3.55**	**3.43**	**3.26**	**3.33**	**3.35**	**3.12**	*3.22*	*3.30*	*3.39*
Total	**70.75**	**70.38**	**69.96**	**68.29**	**70.70**	**71.17**	**72.42**	**72.34**	**72.80**	**71.67**	**71.24**	**71.38**	*70.82*	*71.54*	*72.11*
Net Imports															
Coal	**-2.70**	**-2.77**	**-2.59**	**-1.78**	**-1.69**	**-2.14**	**-2.19**	**-2.01**	**-1.87**	**-1.30**	**-1.21**	**-0.77**	*-0.61*	*-0.59*	*-0.47*
Natural Gas	**1.46**	**1.67**	**1.94**	**2.25**	**2.52**	**2.74**	**2.85**	**2.90**	**3.06**	**3.50**	**3.62**	**3.69**	*3.58*	*3.58*	*3.70*
Crude Oil	**12.50**	**12.22**	**13.00**	**14.43**	**15.07**	**15.36**	**16.20**	**17.88**	**18.96**	**19.06**	**19.94**	**20.58**	*20.17*	*20.67*	*21.22*
Petroleum Products	**2.79**	**2.00**	**1.96**	**1.97**	**2.19**	**1.53**	**2.02**	**1.76**	**1.98**	**2.12**	**2.44**	**2.72**	*2.49*	*2.86*	*3.03*
Electricity	**0.01**	**0.07**	**0.09**	**0.09**	**0.15**	**0.13**	**0.14**	**0.12**	**0.09**	**0.10**	**0.12**	**0.08**	*0.07*	*0.11*	*0.17*
Coal Coke	**0.00**	**0.01**	**0.03**	**0.03**	**0.06**	**0.06**	**0.02**	**0.05**	**0.07**	**0.06**	**0.07**	**0.03**	*0.06*	*0.05*	*0.05*
Total	**14.06**	**13.19**	**14.44**	**16.99**	**18.30**	**17.69**	**19.04**	**20.70**	**22.28**	**23.54**	**24.97**	**26.32**	*25.77*	*26.67*	*27.70*
Adjustments [a]	**-0.25**	**1.06**	**1.65**	**2.50**	**0.58**	**2.63**	**3.06**	**1.93**	**0.25**	**1.76**	**3.11**	**-1.62**	*0.67*	*0.11*	*0.00*
Consumption															
Coal	**19.19**	**18.99**	**19.12**	**19.84**	**19.91**	**20.09**	**21.00**	**21.45**	**21.66**	**21.62**	**22.58**	**21.66**	*21.98*	*22.24*	*22.17*
Natural Gas	**19.72**	**20.15**	**20.83**	**21.35**	**21.84**	**22.78**	**23.20**	**23.33**	**22.93**	**23.01**	**24.04**	**22.84**	*23.04*	*23.00*	*23.23*
Petroleum	**33.55**	**32.85**	**33.53**	**33.84**	**34.67**	**34.55**	**35.76**	**36.27**	**36.93**	**37.96**	**38.40**	**38.33**	*38.30*	*38.75*	*39.63*
Nuclear	**6.10**	**6.42**	**6.48**	**6.41**	**6.69**	**7.08**	**7.09**	**6.60**	**7.07**	**7.61**	**7.86**	**8.03**	*8.15*	*8.02*	*8.19*
Other	**6.00**	**6.23**	**6.09**	**6.34**	**6.46**	**7.00**	**7.48**	**7.33**	**6.75**	**6.77**	**6.43**	**5.22**	*5.80*	*6.33*	*6.60*
Total	**84.57**	**84.64**	**86.05**	**87.78**	**89.57**	**91.50**	**94.52**	**94.97**	**95.34**	**96.97**	**99.32**	**96.08**	*97.26*	*98.33*	*99.82*

[a] Balancing item. Includes stock changes, losses, gains, miscellaneous blending components, and unaccounted-for supply.

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**	*23.69*	*27.43*	*24.74*
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*	*30.65*	*27.25*
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**	**3.70**	**4.02**	*2.96*	*4.97*	*4.34*
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*	*1.56*	*1.48*
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*	*1.52*	*1.44*
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*	*1.49*	*1.41*
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*	*0.84*	*0.79*
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*	*1.35*	*1.24*
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*	*29.22*	*25.90*
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*	*1.23*	*1.20*
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**	**3.73**	*3.58*	*4.69*	*4.15*
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**	**4.34**	**4.44**	*3.71*	*5.90*	*4.97*
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**	**9.63**	*7.83*	*9.16*	*9.47*
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**	*8.45*	*8.57*	*8.59*

[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: 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**	*5.75*	*5.81*	*5.79*
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**	*0.98*	*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**	*4.76*	*4.85*	*4.84*
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**	*9.12*	*9.35*	*9.57*
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**	*-0.12*	*-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*	*-0.05*
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**	*0.11*	*0.13*	*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**	*14.95*	*15.21*	*15.44*
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*	*1.81*	*1.95*
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*	*0.42*	*0.40*
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**	*0.96*	*0.93*	*0.93*
Net Product Imports [c]	**1.38**	**0.96**	**0.94**	**0.93**	**1.09**	**0.75**	**1.10**	**1.04**	**1.17**	**1.30**	**1.40**	**1.59**	*1.42*	*1.59*	*1.74*
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**	*0.15*	*0.05*	*-0.08*
Total Supply	**17.04**	**16.76**	**17.10**	**17.26**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	**19.70**	**19.65**	*19.76*	*20.01*	*20.39*
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*	*8.86*	*9.10*
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*	*1.57*	*1.61*
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**	*3.78*	*3.96*	*4.03*
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**	*0.70*	*0.78*	*0.69*
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**	*4.82*	*4.84*	*4.95*
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**	*19.76*	*20.01*	*20.39*
Total Petroleum Net Imports	**7.16**	**6.63**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	**10.42**	**10.90**	*10.54*	*10.93*	*11.32*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**323**	**325**	**318**	**335**	**337**	**303**	**284**	**305**	**324**	**284**	**286**	**312**	*278*	*277*	*293*
Total Motor Gasoline	**220**	**219**	**216**	**226**	**215**	**202**	**195**	**210**	**216**	**193**	**196**	**210**	*209*	*202*	*209*
Jet Fuel	**52**	**49**	**43**	**40**	**47**	**40**	**40**	**44**	**45**	**41**	**45**	**42**	*39*	*40*	*41*
Distillate Fuel Oil	**132**	**144**	**141**	**141**	**145**	**130**	**127**	**138**	**156**	**125**	**118**	**145**	*134*	*131*	*134*
Residual Fuel Oil	**49**	**50**	**43**	**44**	**42**	**37**	**46**	**40**	**45**	**36**	**36**	**41**	*31*	*36*	*36*
Other Oils [f]	**227**	**251**	**292**	**237**	**274**	**348**	**280**	**204**	**212**	**396**	**246**	**178**	*345*	*262*	*215*

[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] For 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.

[e] 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.

[f] 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, 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**	**18.78**	**18.83**	**19.02**	**18.83**	**19.18**	**19.68**	*19.05*	*19.60*	*19.64*
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**	*3.49*	*3.49*	*3.61*
Supplemental Gaseous Fuels	**0.12**	**0.11**	**0.12**	**0.12**	**0.11**	**0.11**	**0.09**	**0.08**	**0.08**	**0.08**	**0.09**	**0.09**	*0.08*	*0.08*	*0.08*
Total New Supply	**19.38**	**19.45**	**19.88**	**20.42**	**21.39**	**21.40**	**21.66**	**21.74**	**22.10**	**22.34**	**22.81**	**23.37**	*22.62*	*23.17*	*23.33*
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**	*2.90*	*2.38*	*2.47*
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**	*2.38*	*2.47*	*2.42*
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**	*0.53*	*-0.09*	*0.05*
Total Supply	**19.16**	**19.70**	**20.11**	**20.70**	**21.11**	**21.85**	**21.64**	**21.74**	**21.54**	**22.54**	**23.61**	**22.18**	*23.15*	*23.08*	*23.38*
Balancing Item [a]	**0.01**	**-0.14**	**0.12**	**0.09**	**0.13**	**0.35**	**0.96**	**0.98**	**0.70**	**-0.15**	**-0.15**	**0.05**	*-0.73*	*-0.69*	*-0.76*
Total Primary Supply	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.72**	**22.24**	**22.39**	**23.47**	**22.23**	*22.42*	*22.39*	*22.62*
Demand															
Residential	**4.39**	**4.56**	**4.69**	**4.96**	**4.85**	**4.85**	**5.24**	**4.98**	**4.52**	**4.73**	**4.99**	**4.78**	*4.92*	*5.00*	*4.96*
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**	*3.15*	*3.14*	*3.24*
Industrial	**8.25**	**8.36**	**8.70**	**8.87**	**8.91**	**9.38**	**9.68**	**9.71**	**9.49**	**9.16**	**9.40**	**8.45**	*8.18*	*8.20*	*8.23*
Lease and Plant Fuel	**1.24**	**1.13**	**1.17**	**1.17**	**1.12**	**1.22**	**1.25**	**1.20**	**1.17**	**1.08**	**1.15**	**1.09**	*1.05*	*1.06*	*1.06*
Other Industrial	**7.02**	**7.23**	**7.53**	**7.70**	**7.79**	**8.16**	**8.44**	**8.51**	**8.32**	**8.08**	**8.25**	**7.36**	*7.12*	*7.14*	*7.18*
CHP [b]	**1.06**	**1.06**	**1.11**	**1.12**	**1.18**	**1.26**	**1.29**	**1.28**	**1.35**	**1.40**	**1.39**	**1.31**	*1.28*	*1.25*	*1.29*
Non-CHP	**5.96**	**6.17**	**6.42**	**6.58**	**6.61**	**6.90**	**7.15**	**7.23**	**6.97**	**6.68**	**6.87**	**6.05**	*5.84*	*5.89*	*5.89*
Transportation [c]	**0.66**	**0.60**	**0.59**	**0.63**	**0.69**	**0.70**	**0.72**	**0.76**	**0.64**	**0.66**	**0.66**	**0.64**	*0.64*	*0.66*	*0.65*
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**	**5.34**	*5.55*	*5.38*	*5.53*
Total Demand	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.72**	**22.24**	**22.39**	**23.47**	**22.23**	*22.42*	*22.39*	*22.62*

[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.

[b] Natural 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.

[c] Pipeline fuel use plus natural gas used as vehicle fuel.

[d] Natural 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**	*1093.8*	*1093.7*	*1082.1*
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**	*396.8*	*393.1*	*383.9*
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**	*146.2*	*136.6*	*125.9*
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**	*550.8*	*562.7*	*572.3*
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**	*35.9*	*32.0*	*32.0*
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**	*32.0*	*32.0*	*32.2*
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**	*3.9*	*S*	*-0.2*
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**	*16.9*	*20.0*	*21.8*
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**	*39.6*	*41.7*	*38.8*
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**	*1075.0*	*1072.1*	*1064.9*
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**	*146.0*	*148.9*	*161.8*
Closing	**170.1**	**170.2**	**166.8**	**123.1**	**139.6**	**138.0**	**126.0**	**108.8**	**131.6**	**149.1**	**108.5**	**146.0**	*148.9*	*161.8*	*165.7*
Net Withdrawals	**-23.0**	**-0.1**	**3.3**	**43.8**	**-16.5**	**1.5**	**12.0**	**17.2**	**-22.8**	**-17.5**	**40.7**	**-37.6**	*-2.9*	*-12.9*	*-3.8*
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**	*11.1*	*11.6*	*14.8*
Total Supply	**898.5**	**890.8**	**907.2**	**937.1**	**953.2**	**960.4**	**1007.1**	**1033.9**	**1031.8**	**1040.2**	**1086.0**	**1067.9**	*1083.2*	*1070.8*	*1075.8*
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**	*22.5*	*24.4*	*23.1*
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**	**964.5**	*975.4*	*991.7*	*992.4*
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**	**69.6**	*67.4*	*62.6*	*60.4*
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**	**4.4**	*4.4*	*4.4*	*4.1*
Industrial	**76.3**	**75.4**	**74.0**	**74.9**	**75.2**	**73.1**	**71.7**	**71.5**	**67.4**	**64.7**	**65.2**	**65.3**	*63.1*	*58.2*	*56.3*
CHP [e]	**27.8**	**27.0**	**28.2**	**28.9**	**29.7**	**29.4**	**29.4**	**29.9**	**28.6**	**27.8**	**28.0**	**26.4**	*26.5*	*26.4*	*26.4*
Non-CHP	**48.5**	**48.4**	**45.8**	**46.0**	**45.5**	**43.7**	**42.3**	**41.7**	**38.9**	**37.0**	**37.2**	**38.8**	*36.6*	*31.7*	*29.9*
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**	**1060.2**	*1065.4*	*1078.6*	*1075.8*
Discrepancy [g]	**-6.0**	**-8.5**	**-0.5**	**-7.0**	**1.9**	**-1.7**	**0.8**	**4.3**	**-5.3**	**1.6**	**1.9**	**7.7**	*17.8*	*-7.9*	*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 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).

[e] Coal 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 ie the industrial sector.

[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. 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**	**1882.8**	*1904.7*	*1922.0*	*1924.2*
Petroleum	**118.9**	**112.8**	**92.2**	**105.4**	**98.7**	**68.1**	**74.8**	**86.5**	**122.2**	**111.5**	**105.2**	**119.1**	*84.6*	*121.0*	*90.4*
Natural Gas	**309.5**	**317.8**	**334.3**	**342.2**	**385.7**	**419.2**	**378.8**	**399.6**	**449.3**	**473.0**	**518.0**	**554.9**	*600.5*	*586.6*	*603.1*
Nuclear	**576.9**	**612.6**	**618.8**	**610.3**	**640.4**	**673.4**	**674.7**	**628.6**	**673.7**	**728.3**	**753.9**	**768.8**	*780.1*	*767.7*	*784.3*
Hydroelectric	**286.2**	**281.5**	**245.8**	**273.5**	**250.6**	**302.7**	**338.1**	**346.6**	**313.4**	**308.6**	**265.8**	**204.9**	*250.8*	*265.6*	*296.6*
Geothermal and Other [b]	**36.5**	**40.8**	**44.3**	**45.9**	**45.8**	**43.7**	**44.7**	**46.0**	**47.3**	**48.7**	**50.2**	**49.4**	*54.7*	*54.9*	*60.6*
Subtotal	**2900.1**	**2934.2**	**2933.1**	**3042.8**	**3087.5**	**3193.2**	**3283.0**	**3328.1**	**3456.1**	**3528.7**	**3636.2**	**3580.1**	*3675.4*	*3717.8*	*3759.2*
Other Sectors [c]	**136.7**	**138.2**	**149.5**	**153.3**	**158.8**	**159.3**	**160.0**	**162.8**	**162.9**	**164.8**	**164.6**	**156.6**	*163.1*	*165.4*	*166.2*
Total	**3036.7**	**3072.5**	**3082.6**	**3196.1**	**3246.3**	**3352.5**	**3443.0**	**3490.9**	**3619.0**	**3693.5**	**3800.8**	**3736.6**	*3838.6*	*3883.2*	*3925.4*
Net Imports [d]	**2.3**	**19.6**	**25.4**	**27.8**	**44.8**	**39.2**	**40.2**	**34.1**	**25.8**	**29.0**	**34.0**	**22.0**	*21.1*	*31.4*	*49.2*
Total Supply	**3039.0**	**3092.1**	**3108.0**	**3223.9**	**3291.1**	**3391.7**	**3483.2**	**3525.0**	**3644.8**	**3722.5**	**3834.8**	**3758.7**	*3859.7*	*3914.6*	*3974.6*
Losses and Unaccounted for [e]	**211.9**	**212.0**	**222.4**	**234.9**	**222.4**	**234.4**	**236.2**	**230.9**	**219.7**	**227.9**	**230.0**	**183.5**	*153.9*	*159.0*	*171.6*
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**	**1202.6**	*1268.2*	*1308.0*	*1297.9*
Commercial	**751.0**	**765.7**	**761.3**	**794.6**	**820.3**	**862.7**	**887.4**	**928.6**	**979.4**	**1002.0**	**1055.2**	**1089.2**	*1108.1*	*1098.6*	*1122.8*
Industrial	**945.5**	**946.6**	**972.7**	**977.2**	**1008.0**	**1012.7**	**1033.6**	**1038.2**	**1051.2**	**1058.2**	**1064.2**	**964.2**	*993.8*	*986.3*	*1001.0*
Other	**92.0**	**94.3**	**93.4**	**94.9**	**97.8**	**95.4**	**97.5**	**102.9**	**103.5**	**107.0**	**109.5**	**113.8**	*105.2*	*108.3*	*109.5*
Subtotal	**2712.6**	**2762.0**	**2763.4**	**2861.5**	**2934.6**	**3013.3**	**3101.1**	**3145.6**	**3264.2**	**3312.1**	**3421.4**	**3369.8**	*3475.2*	*3501.2*	*3531.3*
Other Use/Sales [g]	**114.6**	**118.1**	**122.3**	**127.5**	**134.1**	**144.1**	**145.9**	**148.4**	**160.9**	**182.5**	**183.4**	**205.4**	*230.6*	*254.4*	*271.7*
Total Demand	**2827.1**	**2880.1**	**2885.6**	**2989.0**	**3068.7**	**3157.3**	**3247.0**	**3294.0**	**3425.1**	**3494.6**	**3604.8**	**3575.2**	*3705.8*	*3755.7*	*3803.0*

[a] Electric Utilities and independent power producers.

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

[c] Electricity generation from combined heat and power facilities and electricity-only plants in the industrial and commercial sectors.

[d] Data for 2001 are estimates.

[e] Balancing item, mainly transmission and distribution losses.

[f] 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 2001 are estimated.

[g] Defined 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.