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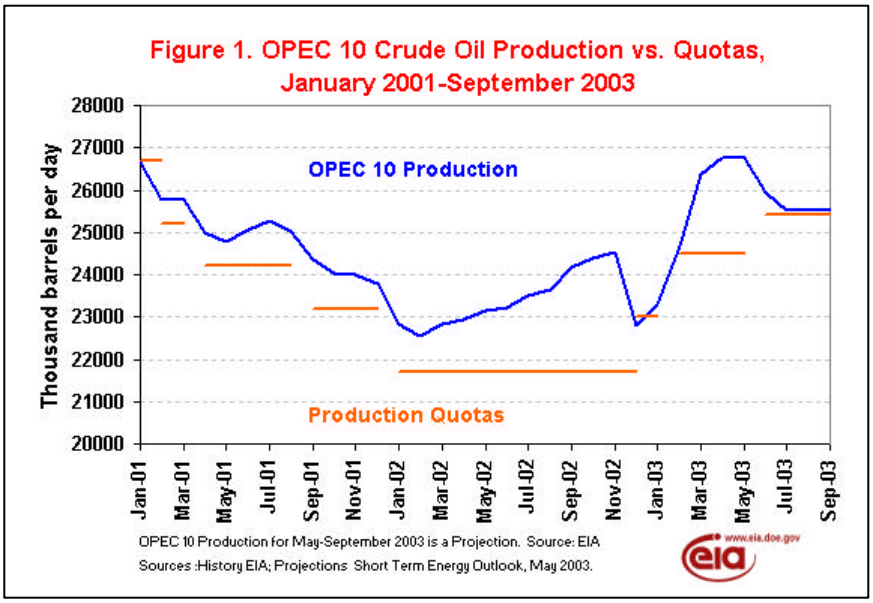
Energy Information Administration

Short-Term Energy Outlook

May 2003



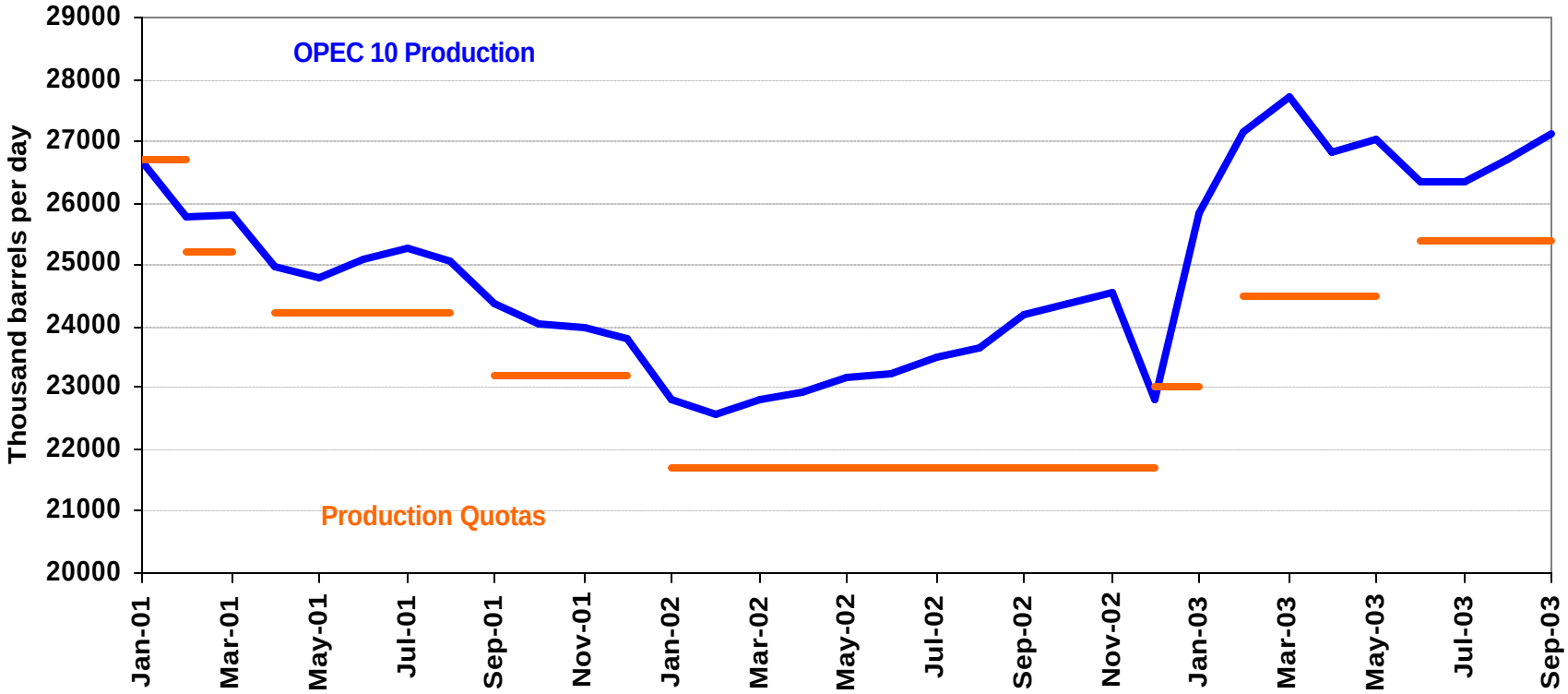
Overview

World Oil Markets. The April 24 meeting of the Organization of Petroleum Exporting Countries (OPEC) raised official quotas for members (excluding Iraq) by 0.9 million barrels per day from the previous (suspended) quota to 25.4 million barrels per day. OPEC members also sought tighter compliance with quotas, calling for production cuts of 2 million barrels per day from April levels. We expect these measures to result in an average total OPEC (including Iraq) crude oil production rate of about 26.7 million barrels per day in the second and third quarters. This production level is not significantly different from our base case assumptions in last month's report. Individual OPEC country shares of these output levels will depend upon the speed with which Iraqi production recovers through 2003 and the extent to which Nigerian and Venezuelan production return to more normal levels (Figure 1).

U.S. Natural Gas Markets. While well below the winter peaks in recent weeks, the natural gas spot price at the Henry Hub has remained high in historical terms for this time of the year. Spot natural gas prices have fluctuated between $4.90 and $5.60 per million btu (mmbtu) over the last several weeks, and levels of natural gas in underground storage remain quite low one month into the injection season. At the end of April, working gas in storage stood about 52 percent below end-of-April 2002 levels and 41 percent below the previous 5-year average. Natural gas prices will likely stay near $5.00 per mmbtu through the entire year. The exceptionally large current shortfall in natural gas storage relative to normal levels continues to place unusually strong upward pressure on near-term gas prices because companies will need to obtain large amounts of natural gas from other uses in order to refill storage for the next heating season. Moreover, if abnormally warm weather prevails this summer the current market may become highly sensitive to demand, particularly in the Western and South Central United States, where natural gas is heavily used for power generation. Such conditions could cause a mid-year spike in prices to above $6 per mmbtu (monthly average).

Summer Motor Gasoline Outlook. Weekly motor gasoline prices (regular, self service) have declined for 7 weeks in a row from their March 17 peak of $1.73 per gallon. The sharp fall in crude oil prices since mid-winter and the general belief that world oil supplies are increasing sufficiently to relieve the tight oil inventory situation over the next 2 quarters has taken substantial pressure off U.S. gasoline and other product markets. Domestic gasoline markets could tighten again if world oil markets fail to continue to ease or if domestic refining and distribution facilities are disrupted in some way, but it appears most likely that prices will range below the averages set out in earlier *Outlooks*. Regular gasoline is now projected to

Figure 1. OPEC 10 Crude Oil Production vs. Quotas, January 2000-September 2003



Please note that May-September 2003 figures are projections. Source: EIA

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

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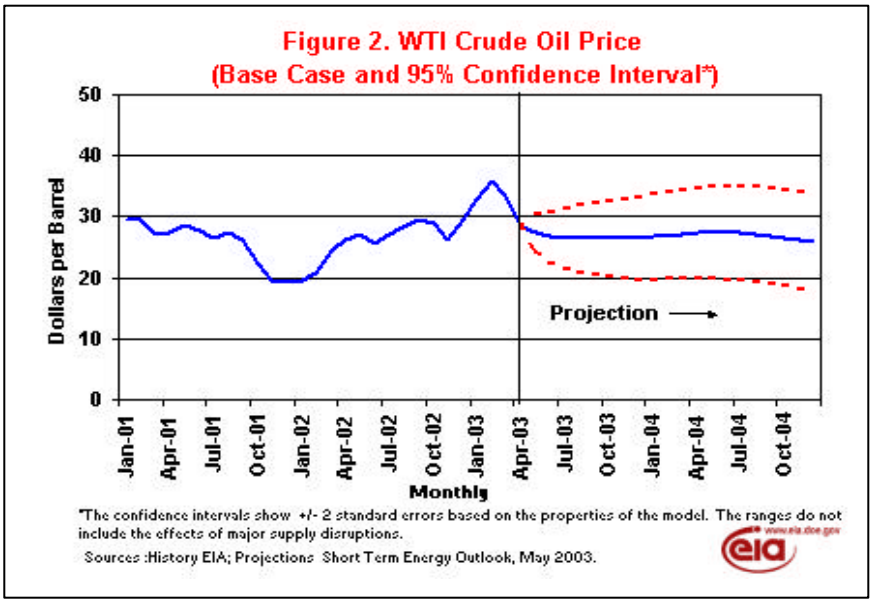
average $1.46 per gallon during the driving season (April through September), less than 10 cents per gallon above last year's average.

Data Notes. This edition of the *Outlook* contains more detailed information on the energy sources and outputs of electricity-generating facilities. Estimates for some monthly values in 2001 and 2002, first provided in our December 2003 *Outlook*, have now been replaced with actual values from recent EIA publications (See EIA's April **Monthly Energy Review** for detailed displays.) The regular electricity table (Table 10) has been expanded to 3 tables to show more sectoral detail on electricity production and related fuel consumption. Refer to the document "Note on Electricity Output and Related Fuel Consumption in EIA's Short-Term Energy Outlook" for more information. Also, updates to estimated demand for natural gas in the industrial sector have increased the demand total for 2002 sufficiently to reduce the discrepancy between estimated supply and demand to near zero (see Tables 8 and A6).

Details

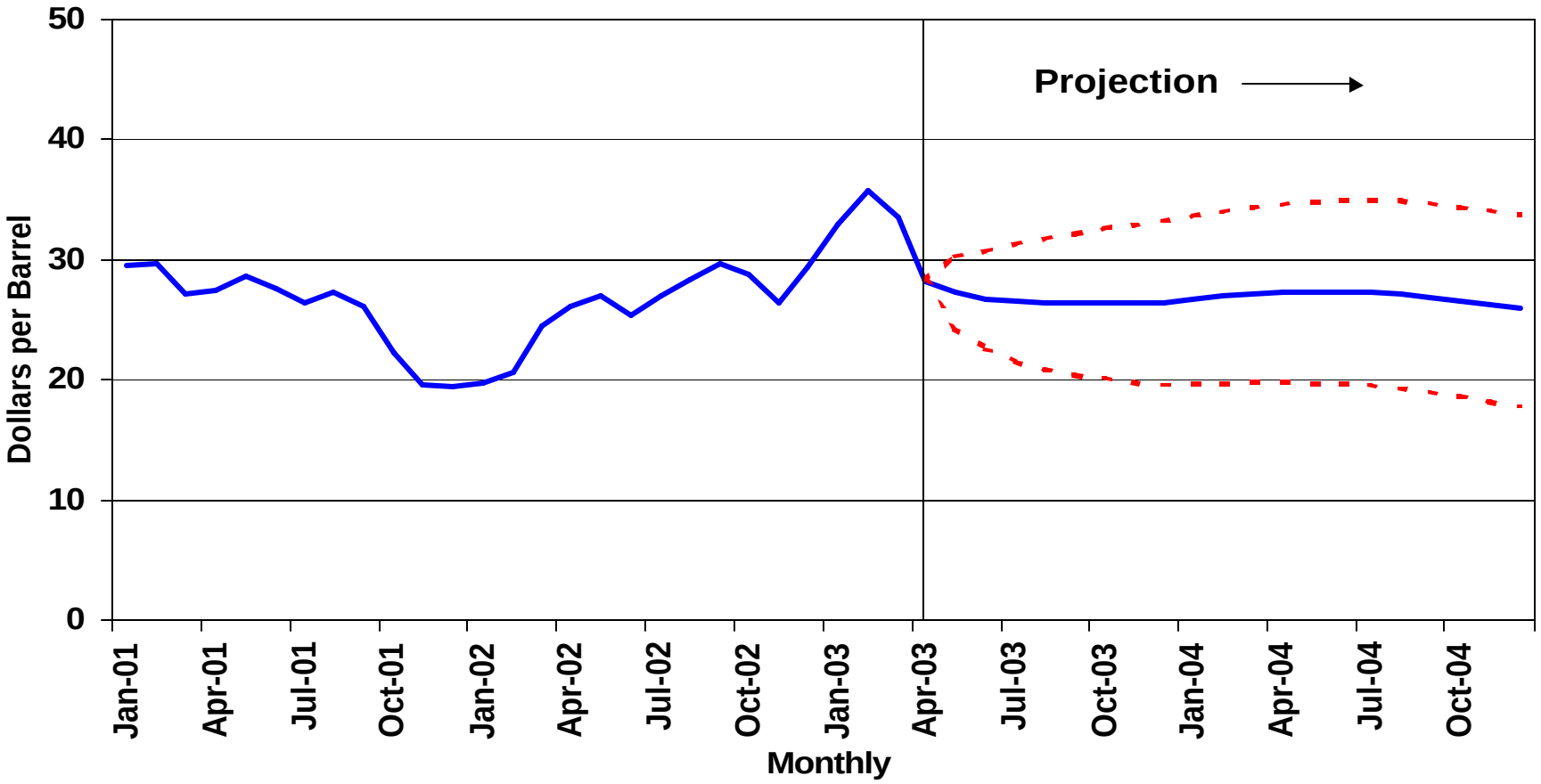
International Oil Markets

World Oil Markets. The April 24 meeting of the Organization of Petroleum Exporting Countries (OPEC) raised official quotas for members (excluding Iraq) by 0.9 million barrels per day from the previous (suspended) quota to 25.4 million barrels per day. OPEC members also sought tighter compliance with quotas, calling for production cuts of 2 million barrels per day from April levels. We expect these measures to result in an average total OPEC (including Iraq) crude oil production rate of about 26.7 million barrels per day in the second and third quarters. These production levels differ only slightly from our base case assumptions in last month's report. Individual OPEC country shares of these output levels will depend upon the speed with which Iraqi production recovers through 2003 and the extent to which Nigerian and Venezuelan production complete return to more normal levels.



Crude Oil Prices. Average crude oil prices for April fell about $5 per barrel from March averages. The market reacted to prospects for greater oil supplies from Iraq, Nigeria and Venezuela as well as OPEC's surprise increases in production quotas. For example, West Texas Intermediate (WTI) spot prices averaged about $28 per barrel in April, $5 per barrel lower than the March average, and by end-April WTI prices were $12 per barrel lower than levels reached just two months earlier in anticipation of the start of the war in Iraq (Figure 2). Prices have since stabilized as people realize that, while the war was quick, it may take several months for Iraqi oil exports to resume in large volumes. Oil markets will be watching how other OPEC members respond to the return of supplies from Iraq, Nigeria and Venezuela. EIA's baseline outlook assumes that OPEC production will be sufficient to allow commercial oil inventories to build from their current very low levels (Figure 3), but that OPEC will cut back production to accommodate the return of Iraqi oil exports. Until these inventories are rebuilt above observed 5-year lows, WTI oil futures prices

Figure 2. 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, May 2003.

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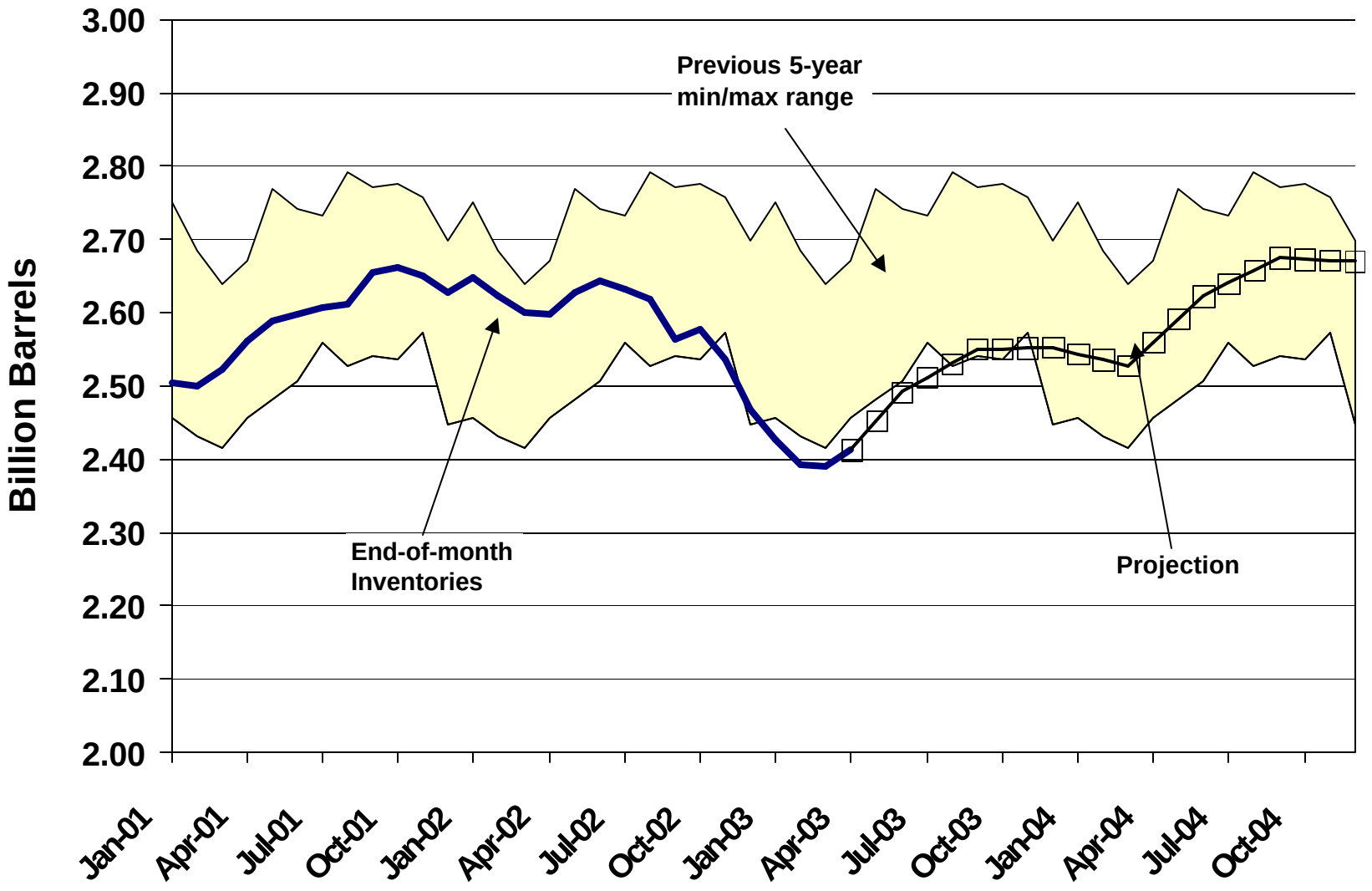
Figure 3. OECD Commercial Oil Stocks



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

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should remain around current levels and then gradually slide toward about $24 per barrel by the end of 2004 as Iraqi oil exports return.

International Oil Supply. OPEC crude oil production (including Iraq) fell by 0.9 million barrels per day in April to below 27 million barrels per day, as further production increases from the OPEC 10 were not sufficient to offset the loss of Iraqi production following the war in that country. OPEC production is expected to remain at about the same level in May before declining in response to OPEC's efforts to adhere to the new production quotas in June. However, even with this cutback, year-over-year increases of 1.1 million barrels per day for OPEC crude oil production are still expected for the third quarter (albeit from low 2002 levels). This trend, combined with an expected aggregate increase in non-OPEC supply in 2003 of 1.1 million barrels per day, indicate a total world oil supply increase in 2003 of 2.5 million barrels per day, which is expected to allow for a global stock build this year.

International Oil Demand. EIA revised its projected world oil demand growth slightly downward for 2003, partly in response to the slowdown in the growth of jet-fuel demand that followed increased tensions in the Middle East and the SARS epidemic. However, world oil demand is still projected to grow by 1.1 million barrels per day. About half of the growth in world oil demand in 2003 is projected to come from the U.S., with China and other non-OECD countries projected to provide a total of another 0.5 million barrels per day of demand growth next year. As world economic growth continues in 2004, led by a projected 4.2 percent per year increase in the U.S. economy, world oil demand growth could increase by as much as 1.4 million barrels per day (Figure 4).

U. S. Energy Prices

The end of major combat operations in Iraq has coincided with WTI crude prices receding by more than $7.00 per barrel from their February peak. Now that the outcome of the war is no longer uncertain, producers and users are more confident that the world supply of crude oil will expand sufficiently to relieve the tight inventory situation worldwide. Petroleum product prices have also eased.

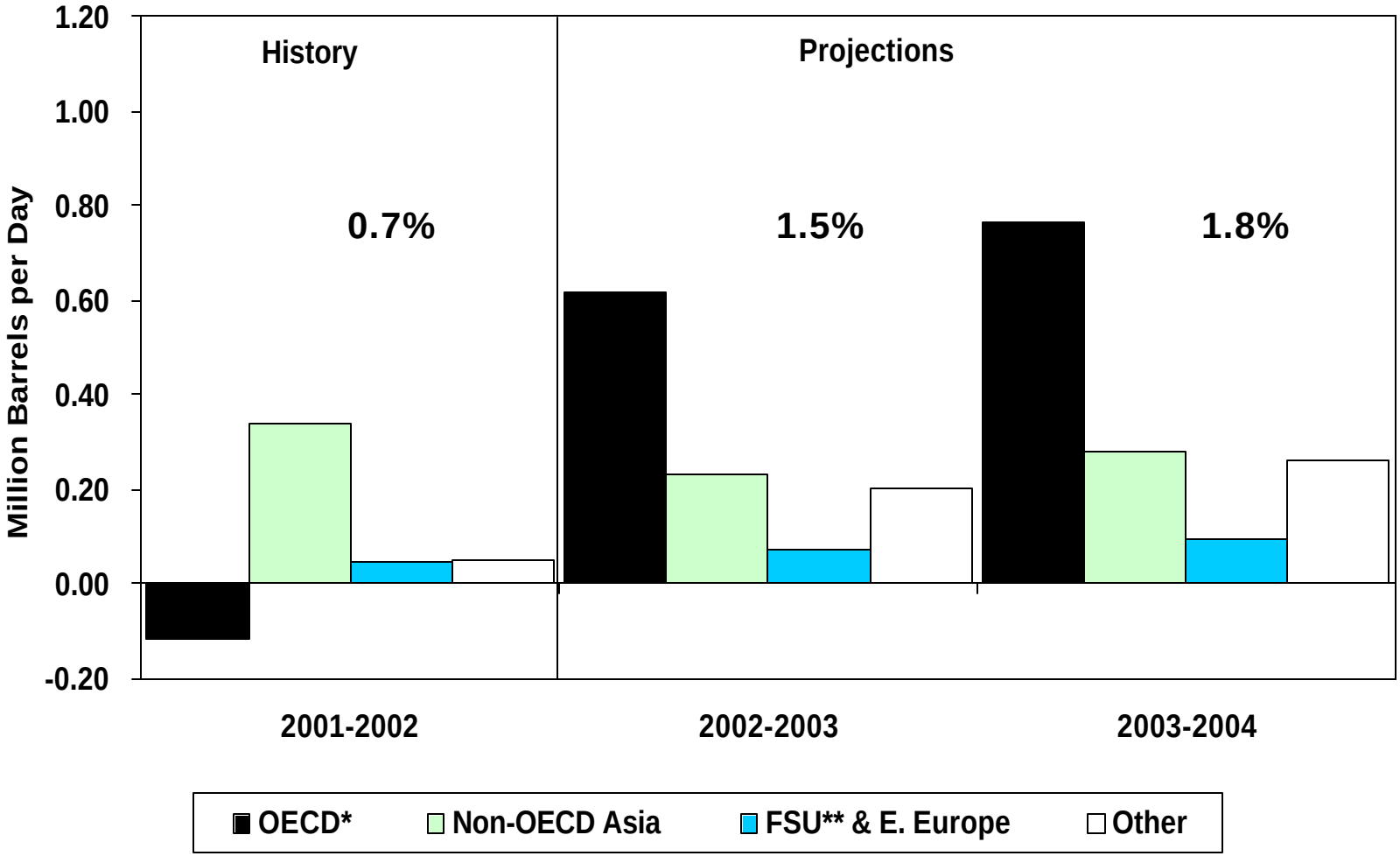
Motor Gasoline: Following their peak on March 17, weekly motor gasoline prices (regular, self service) have declined for 7 weeks in a row. Normally, gasoline prices do not peak as early as March, but that is the likely situation shaping up for 2003. This development is not unprecedented and often results from volatile world oil market behavior. This year, the added factor of regional market tightness early in the season (West Coast) contributed to high first-quarter gasoline prices.

Once the driving season is underway, pump prices normally rise through the second quarter and stabilize during the summer. However, crude oil prices fell by more than $7.00 per barrel, on a monthly basis, from February to April. If crude oil prices continue to recede or stabilize at current levels, further downward price movements are likely at the pump. Pump prices are expected to average about $1.46 per gallon during the driving season (April through September) (Figure 5)**.** This projection is partly indicative of the recovery in refiner margins from relatively weak levels last year. In 2004, the annual average pump price is projected to be $1.41 per gallon, with the drop due to the expected decline in crude oil prices and a slight decline in both refiner and retail annual average margins. Refiner margins (the difference between the refiner price of gasoline and the refiner acquisition cost of crude oil), which were weak last summer, rebounded in March and now are expected to slip a bit as inventories grow, but still stay relatively strong compared to the last season as demand for gasoline rises. At the end of April, gasoline inventories moved toward the middle of the 5-year min / max range (Figure 6).

The price of motor gasoline in California is currently about 45 cents per gallon higher than the average price for the rest of the nation because of several supply-side constraints, such as longer-than-planned refinery

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, May 2003.

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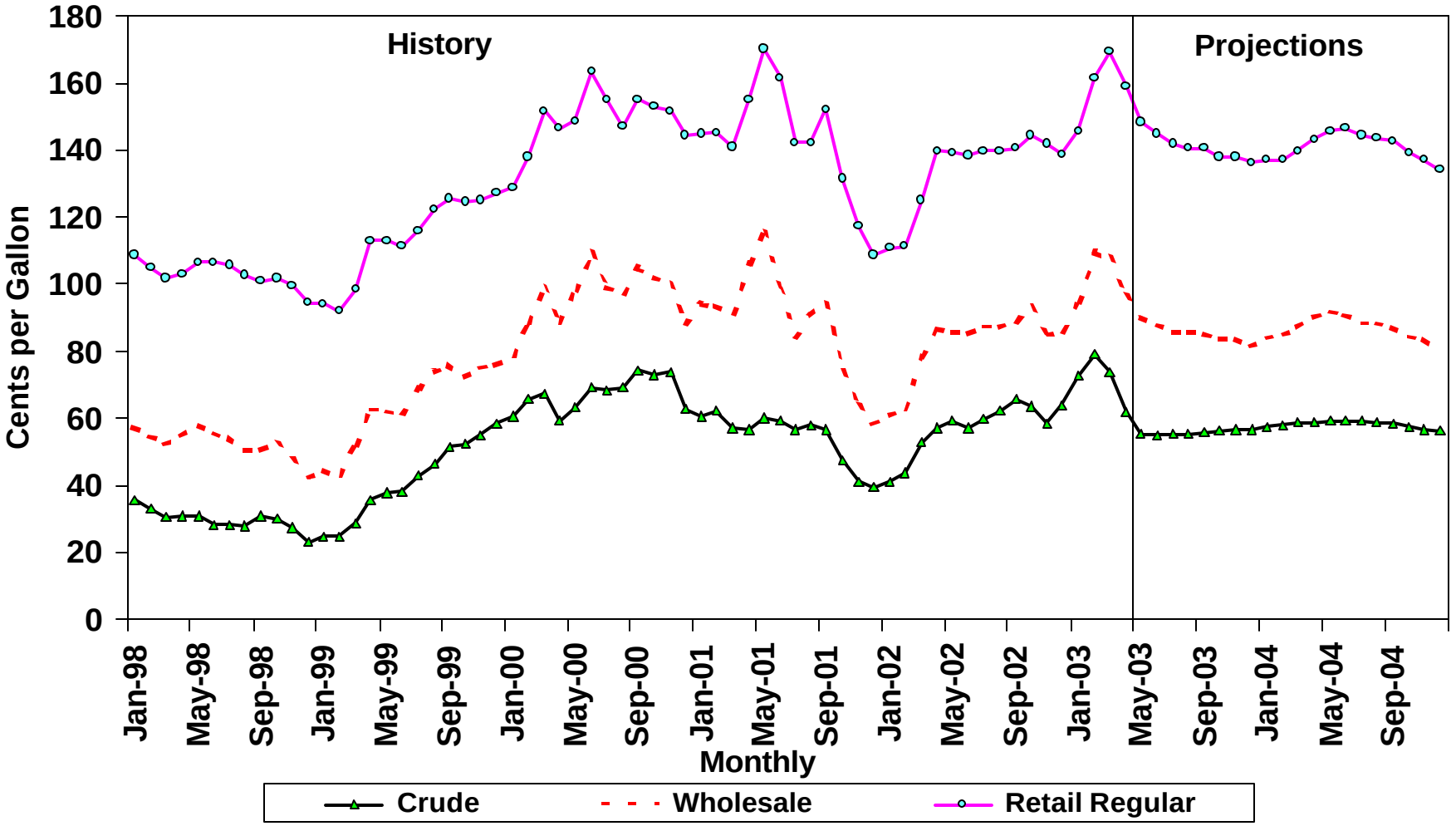
Figure 5. Gasoline Prices and Crude Oil Costs



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

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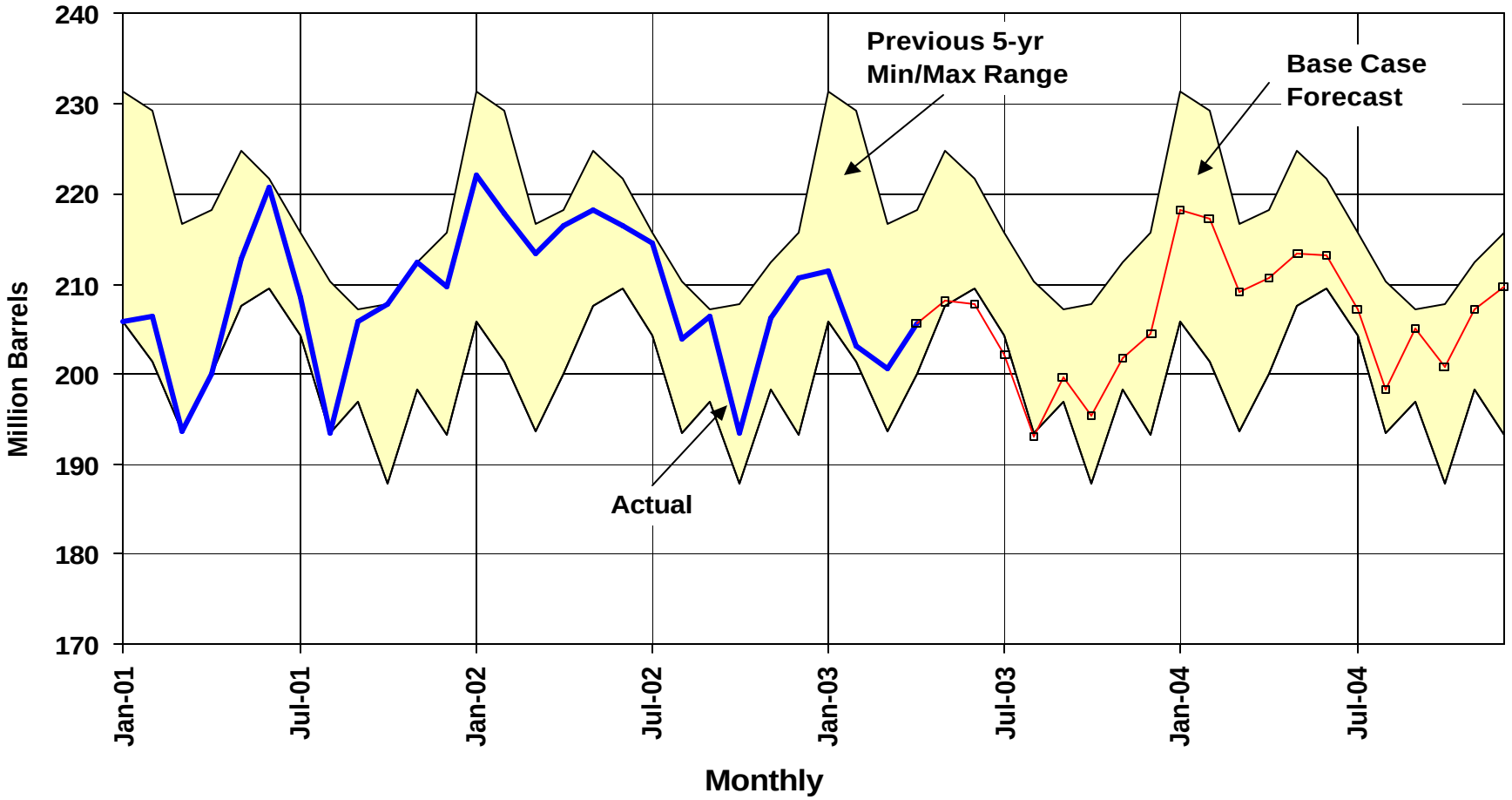
Figure 6. U.S. Gasoline Inventories



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

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shutdowns for maintenance during the first quarter and the phase-out of MTBE (methyl tertiary butyl ether). MTBE is being replaced with ethanol in California gasoline. The transition from MTBE to ethanol creates two essentially incompatible distribution systems, which exacerbates the tight gasoline market. Earlier in the spring this difference was more than 50 cents per gallon, but over time, market supply adjustments and improved economies of scale in the refining and blending process narrowed the price differences.

Distillate Fuel Oil (Diesel Fuel and Heating Oil): Average monthly diesel fuel oil prices peaked in March at $1.71 per gallon in response to rising crude prices and cold weather. Moreover, fuel switching from natural gas in the electric utility and industrial sectors contributed to strength in the no.2 fuel oil market since natural gas has been very expensive and in short supply. The heating oil price spike, which occurred in the first quarter of 2003 and which continued until April, the crude oil price path projected for the year, plus continued low levels of distillate stocks throughout the year are behind EIA's estimate that annual average retail prices for heating oil and diesel fuel in 2003 will be about 18-25 cents per gallon higher than in 2002 (Figure 7). At the end of April, distillate fuel oil inventories were about 97 million barrels, a figure under the lower band (100 million barrels) of the 5-year min/max range (Figure 8).

Natural Gas: The natural gas spot price at the Henry Hub, while remaining well below the winter peaks in recent weeks, remains high in historical terms for this time of the year (Figure 9). Since the middle of March 2003, spot natural gas prices have fluctuated between $4.90 and $5.60 per million btu (mmbtu) at the Henry Hub. Levels of natural gas in underground storage remain quite low one month into the injection season. At the end of April, working gas in storage stood about 52 percent below end-of-April 2002 levels and 41 percent below the previous 5-year average. Natural gas prices will likely stay near $5.00 per mmbtu through the entire year. The exceptionally large current shortfall in natural gas storage relative to normal levels continues to place unusually strong upward pressure on near-term gas prices because companies will need to obtain large amounts of natural gas from other uses in order to refill storage for the next heating season. Moreover, if abnormally warm weather prevails this summer the current market may become highly sensitive to demand, particularly in the Western and South Central United States, where natural gas is heavily used for power generation. Such conditions could cause a mid-year spike in prices to above $6 per mmbtu (monthly average).

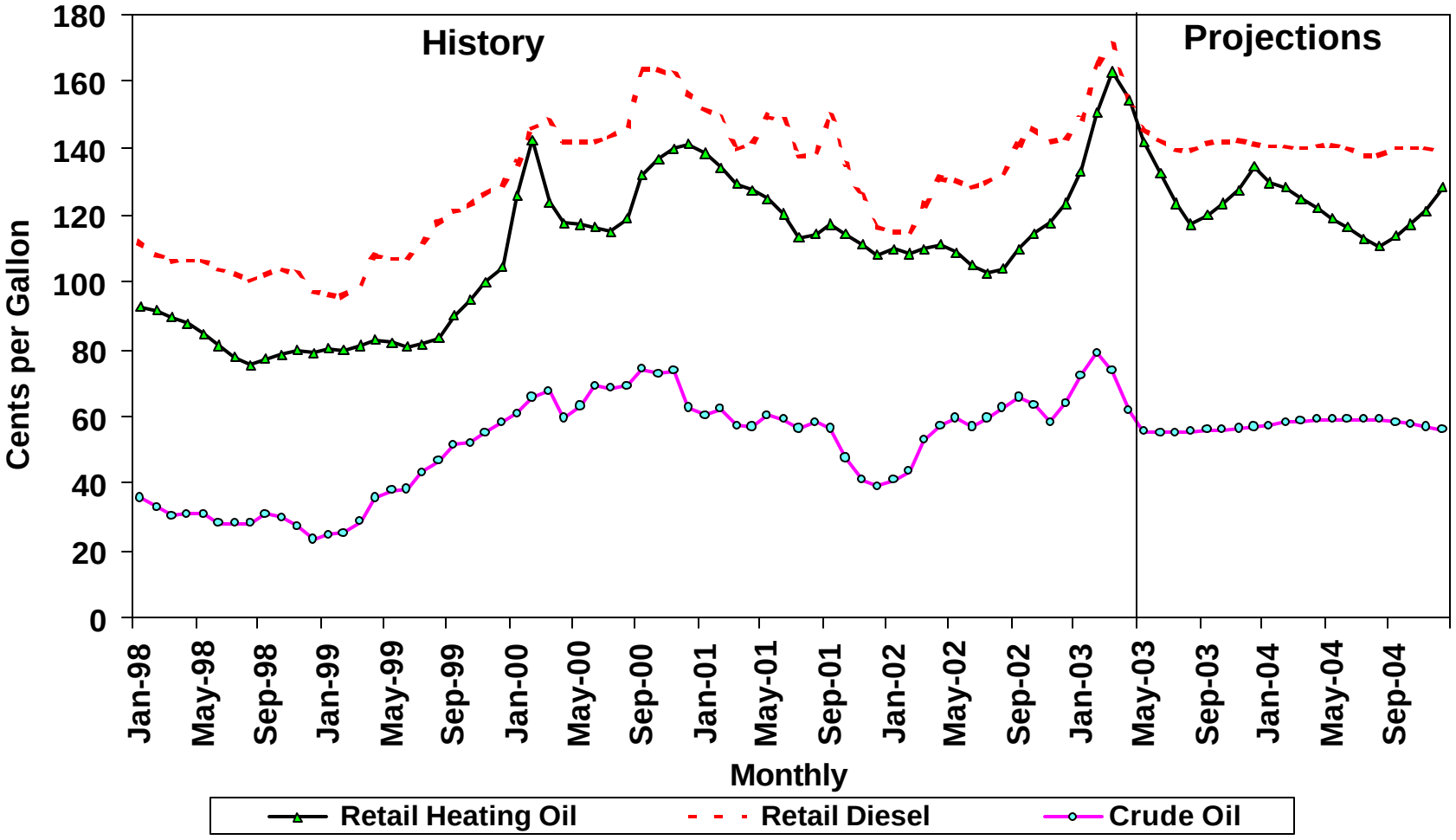
In 2003, wellhead prices are projected to show an increase of about $1.80 per thousand cubic feet over the 2002 annual average, pushing the annual average for the year to nearly $5.00 per thousand cubic feet. This projection is based on the expectation of lower volumes of underground gas in storage for 2003 compared with 2002.

U. S. Oil Demand

Total annual U.S. petroleum demand is projected to increase an average of about 460,000 barrels per day, or 2.3 percent, per year in 2003 and 2004 (Figure 10). Petroleum product consumption is projected to vary widely in a manner similar to the varied product-specific demand patterns seen in the previous two years due to weakness in industrial activity, the effects of the terrorist attacks of 9/11, year-to-year shifts in weather patterns and substantial shifts in product prices. Continued moderate economic recovery, the assumption of normal weather patterns and increasing supply/demand tightness in natural gas markets are all expected to contribute to the rise in petroleum demand.

Motor gasoline demand will likely increase by an average of 2.7 percent per year during the forecast period, reflecting average growth of 2.2 percent in vehicle miles traveled and continued losses in fleet-wide fuel efficiencies brought about by consumer preference for large vehicles. Reflecting shifts in travel patterns over the past several years, growth in highway travel is projected to be substantially less than the 3.6-

Figure 7. Distillate Fuel Prices



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

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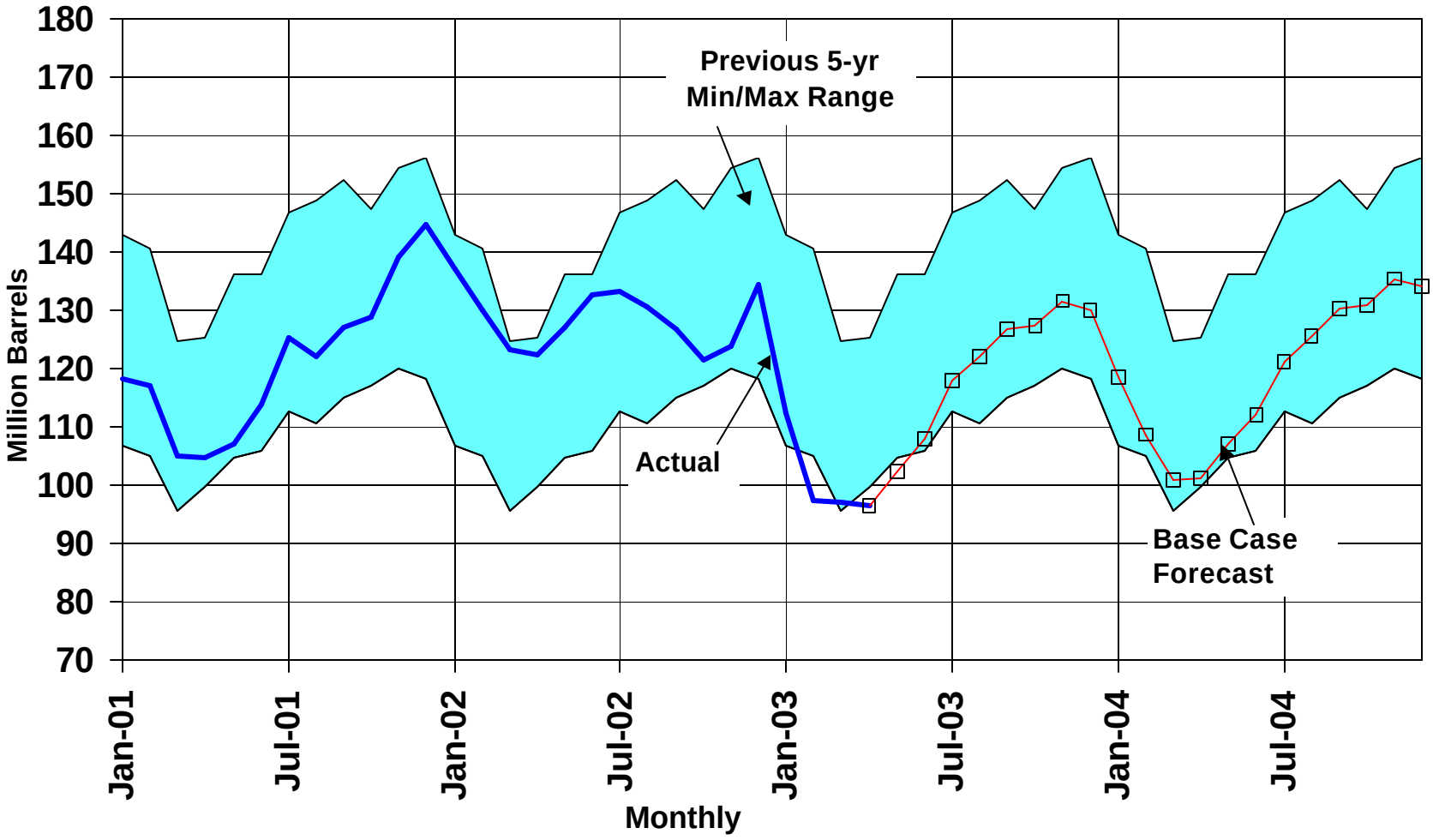
Figure 8. Distillate Fuel Inventories



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

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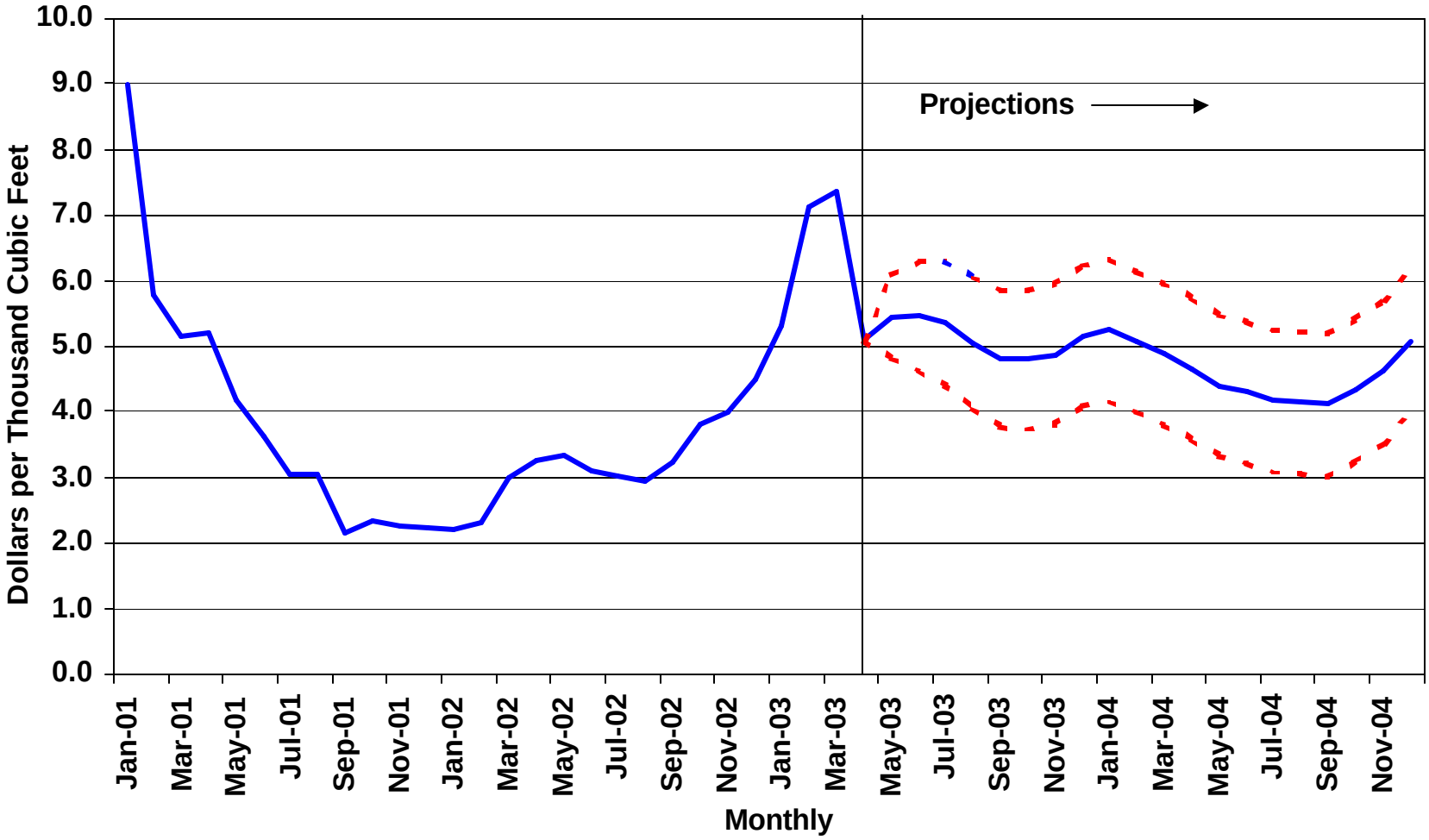
Figure 9. Natural Gas Spot Prices
(Base Case and 95% Confidence Interval*)



**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: Natural Gas Week; Projections: Short-Term Energy Outlook, May 2003.

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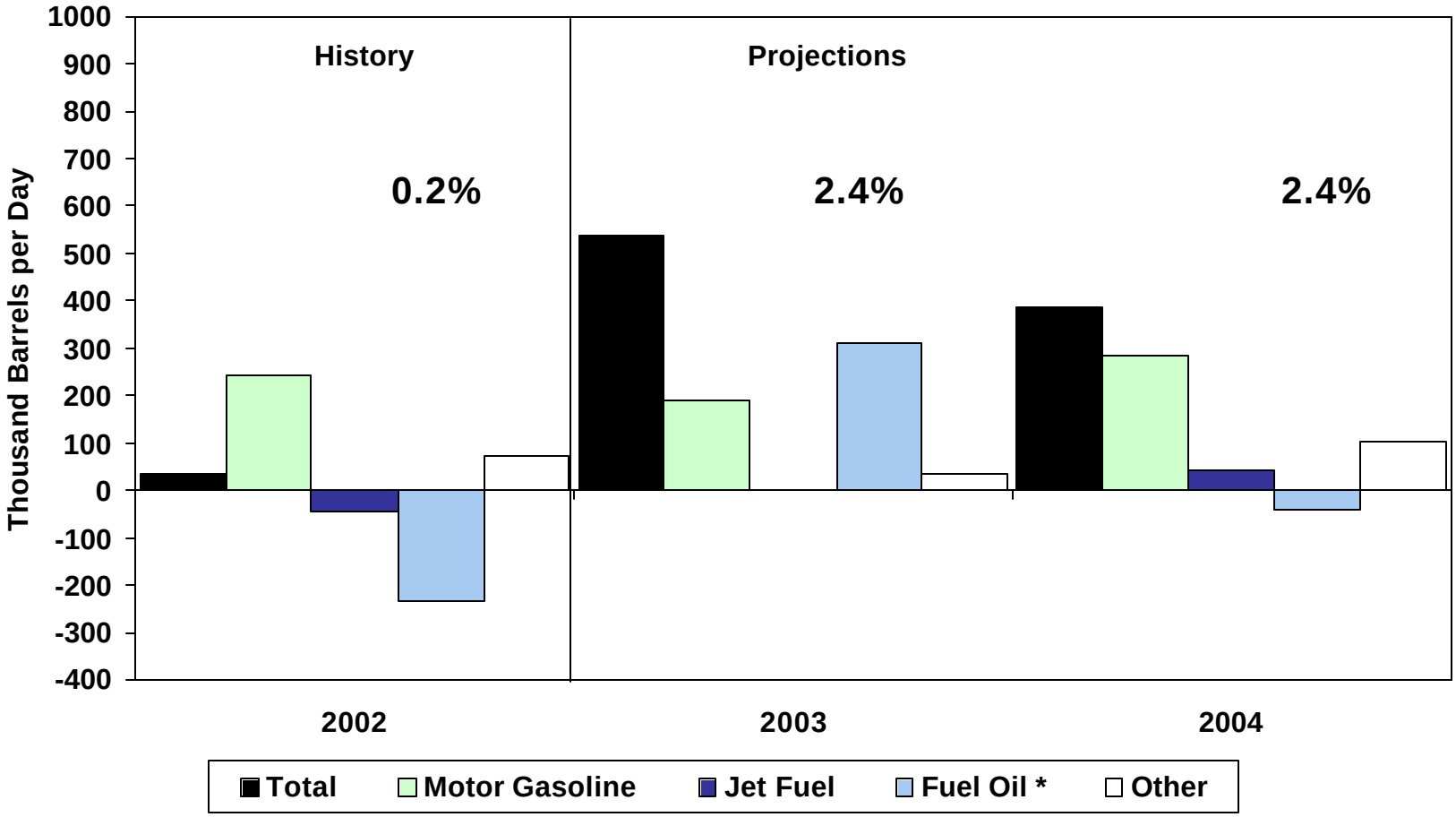
Figure 10. Petroleum Products Demand Growth
(Change from Year Ago)



* Sum of distillate and residual fuel.

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

percent average annual growth in real disposable income. It should be noted that, despite the current retreat of retail gasoline prices from the peaks in March, the 9.0 percent increase in retail prices is expected to constrain growth in motor fuel demand somewhat in the current year. The acceleration in real disposable income growth and continued downward drift in retail prices is projected to boost growth in motor gasoline demand in 2004.

Commercial jet-fuel demand is projected to grow only slightly in the current year, reflecting persistent fears about terrorist attacks since the onset of the war in Iraq and the current fears about SARS. For example, most major carriers curtailed a number of overseas flights. However, jet fuel markets are projected to recover moderately next year.

Distillate fuel oil demand, boosted by accelerating growth in industrial output, is expected to increase at an annual average rate of 3.2 percent between 2002 and 2004 under assumptions of normal weather patterns. It should be noted, however, that part of the 5.0-percent increase projected for the current year stems in part from the substantial declines in both weather- and transportation-related demand in 2002.

Residual fuel oil deliveries are projected to grow more than 10 percent to 725,000 barrels per day in 2003 on the strength of first quarter demand and continued firmness in natural gas prices. The continued decline in residual fuel oil prices is expected to result in a nearly identical level of demand for this fuel in 2004. Liquefied petroleum gas demand growth during the forecast interval is projected to average 1.8 percent, reflecting continued growth in petrochemical demand and the decline in feedstock prices, especially in 2004.

U.S. Oil Supply

Average domestic oil production in 2003 is expected to decrease by 12 thousand barrels per day, or 0.2 percent, to a level of 5.81 million barrels of oil per day. A 0.8 percent decrease is expected in 2004, resulting in an average production rate of some 5.76 million barrels of oil per day for the year (Figure 11).

Lower-48 States oil production is expected to increase by 18 thousand barrels per day to a rate of 4.85 million barrels per day in 2003, followed by a decrease of 39,000 barrels per day in 2004. Oil production from the Mars, Mad Dog, Na Kika, Ursa and Dianna-Hoover Federal Offshore fields is expected to account for about 8.0 percent of the lower-48 oil production by the 4th quarter of 2004.

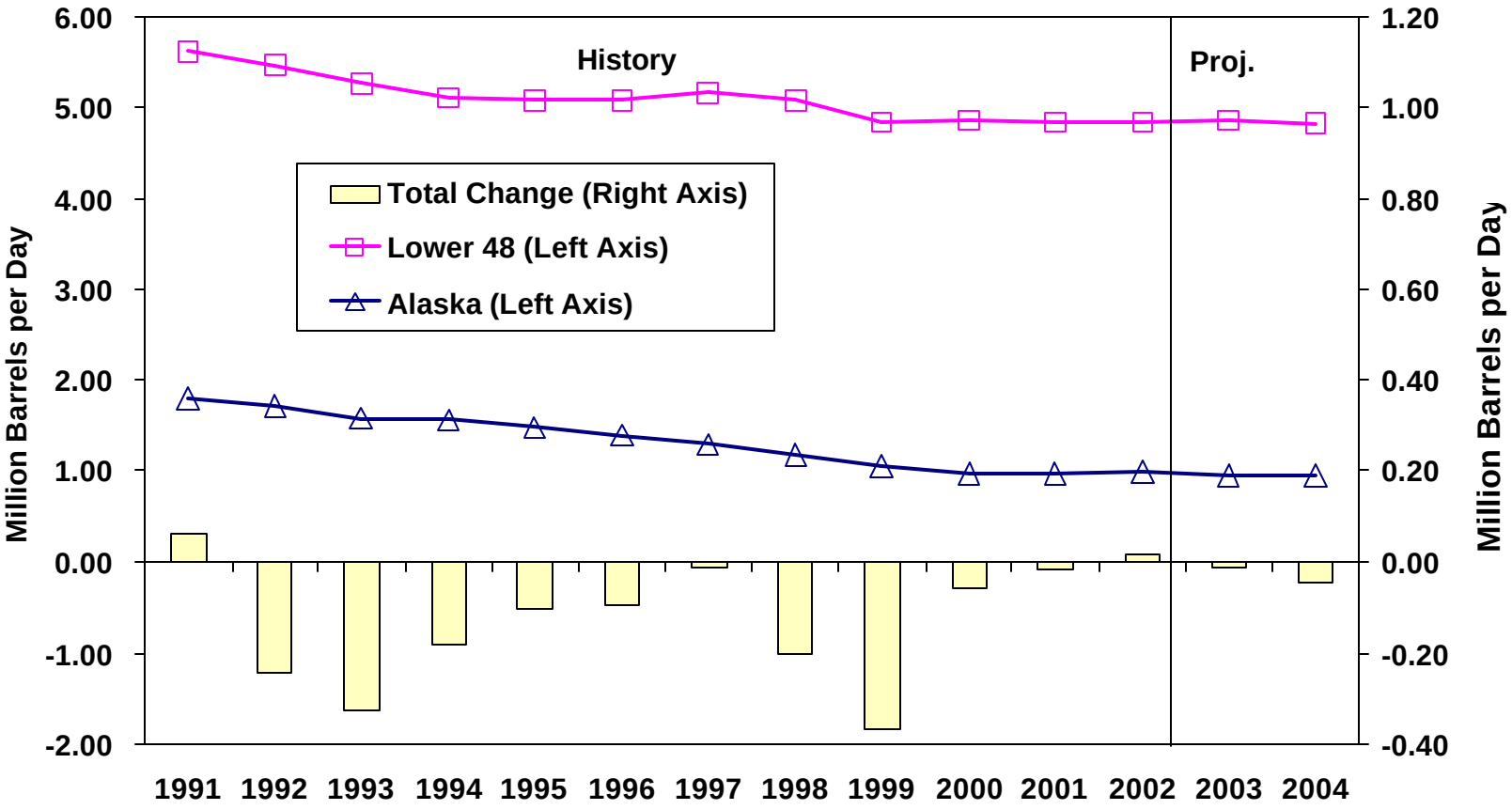
Alaska is expected to account for 16.5 percent of total U.S. oil production in 2004. Alaskan oil production is expected to decrease by 3.0 percent in 2003 and decrease by 0.7 percent in 2004. The combined production rate from the two significant satellite fields, Alpine and North Star, averaged nearly 170 thousand barrels per day during February 2003. Production from the Kuparuk River field plus like production from West Sak, Tabasco, Tarn and Meltwater fields is expected to stay at an average of 215 thousand barrels per day in the 2003 and 2004 forecast periods.

Natural Gas Supply and Demand

In this *Outlook*, updates to estimated demand for natural gas in the industrial sector have increased the demand total for 2002 sufficiently to reduce the discrepancy between estimated supply and demand to near zero (see Tables 8 and A6).

With high natural gas prices, growth in natural gas demand is expected to fall by 0.8 percent in 2003 (Figure 12). Negative growth this year is likely despite sharply higher weather-related demand during the first

Figure 11. U.S. Crude Oil Production Trends



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

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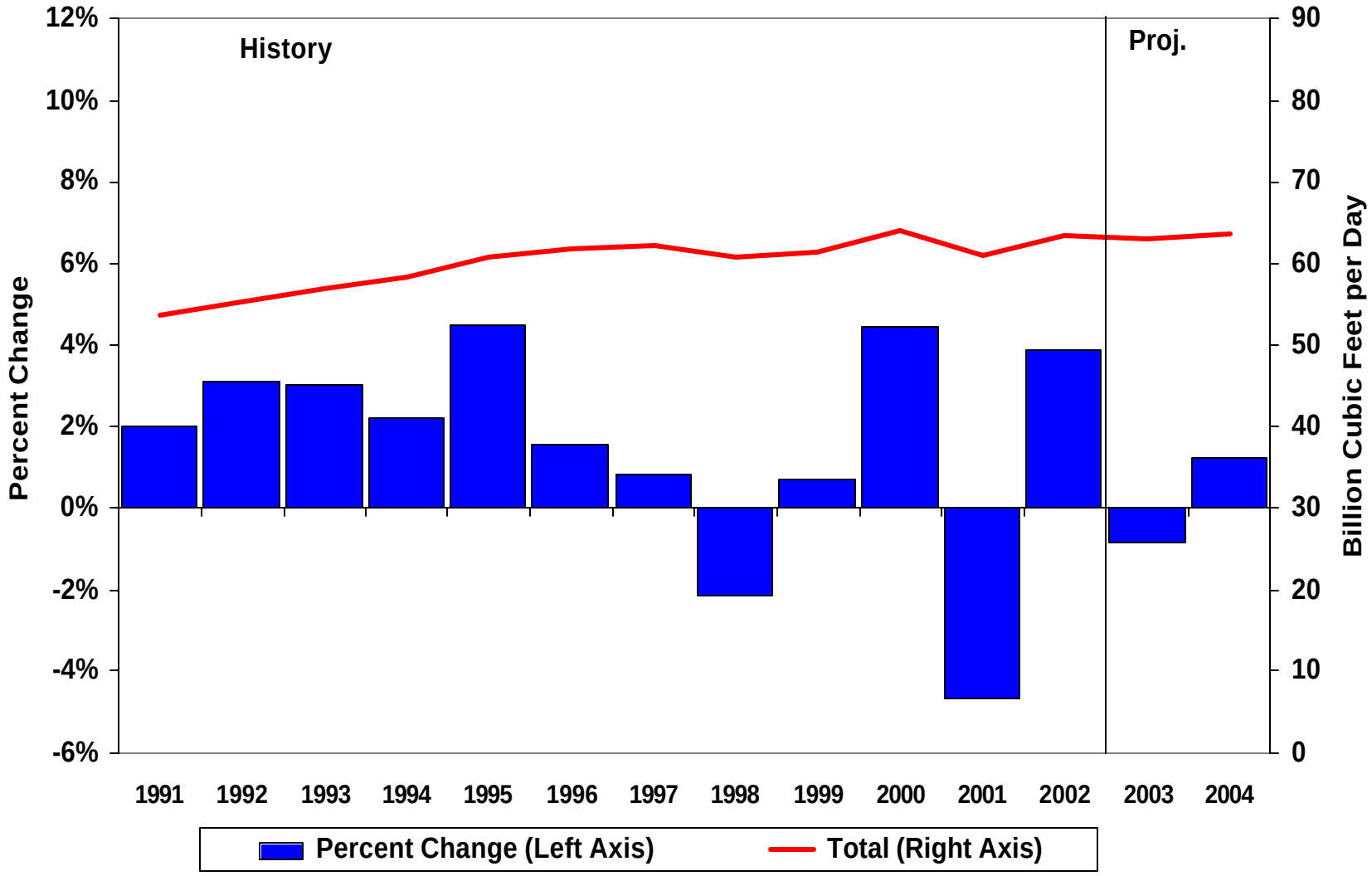
Figure 12. Total Natural Gas Demand Growth Patterns



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

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

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quarter of 2003. Natural gas demand in 2004 is expected to rise as industrial demand recovers from its 2002/2003 lows.

Demand for natural gas this summer is expected to fall by 4.1 percent from last summer's level. This is largely due to summer weather effects (in the power sector). Cooling degree-days for the season (Q2 2003 and Q3 2003) under our assumption of normal weather will be close to 10 percent below year-ago levels. In the event of a hotter than normal summer this year, natural gas prices would jump as cooling demand would compete with the need to build storage inventories.

Working natural gas in storage stood at about 789 billion cubic feet (bcf) at the end of April, about 52 percent below the year-ago level (Figure 13). This is the lowest aggregate inventory level for the end of April recorded by EIA. Eastern and producing regions stocks, in particular, are at record lows. Demand for natural gas to refill working gas storage in 2003 will be larger than average, which means that price volatility can be expected to continue in these tight market conditions.

The average April spot price for natural gas traded at New York City was $5.94, down considerably from the $8.81 seen last month (Figure 14), a result of the usual change in seasonal demand levels.

Our estimate of the 2002 decline in domestic annual natural gas production was moderated this month to 1.8 percent as additional data became available. Production is expected to increase by 1.6 percent this year. High natural gas prices and sharply higher oil and natural gas field revenues are expected to drive a resurgence in natural gas-directed drilling activity this year following a downturn in 2002 (Figure 15). Monthly oil and natural gas field revenues are expected to continue to average close to $400 million this year (Figure 16). Domestic production growth should continue in 2004 but, given recent experience, the extra effort might result in increases of less than 2 percent. 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.

Electricity Demand and Supply

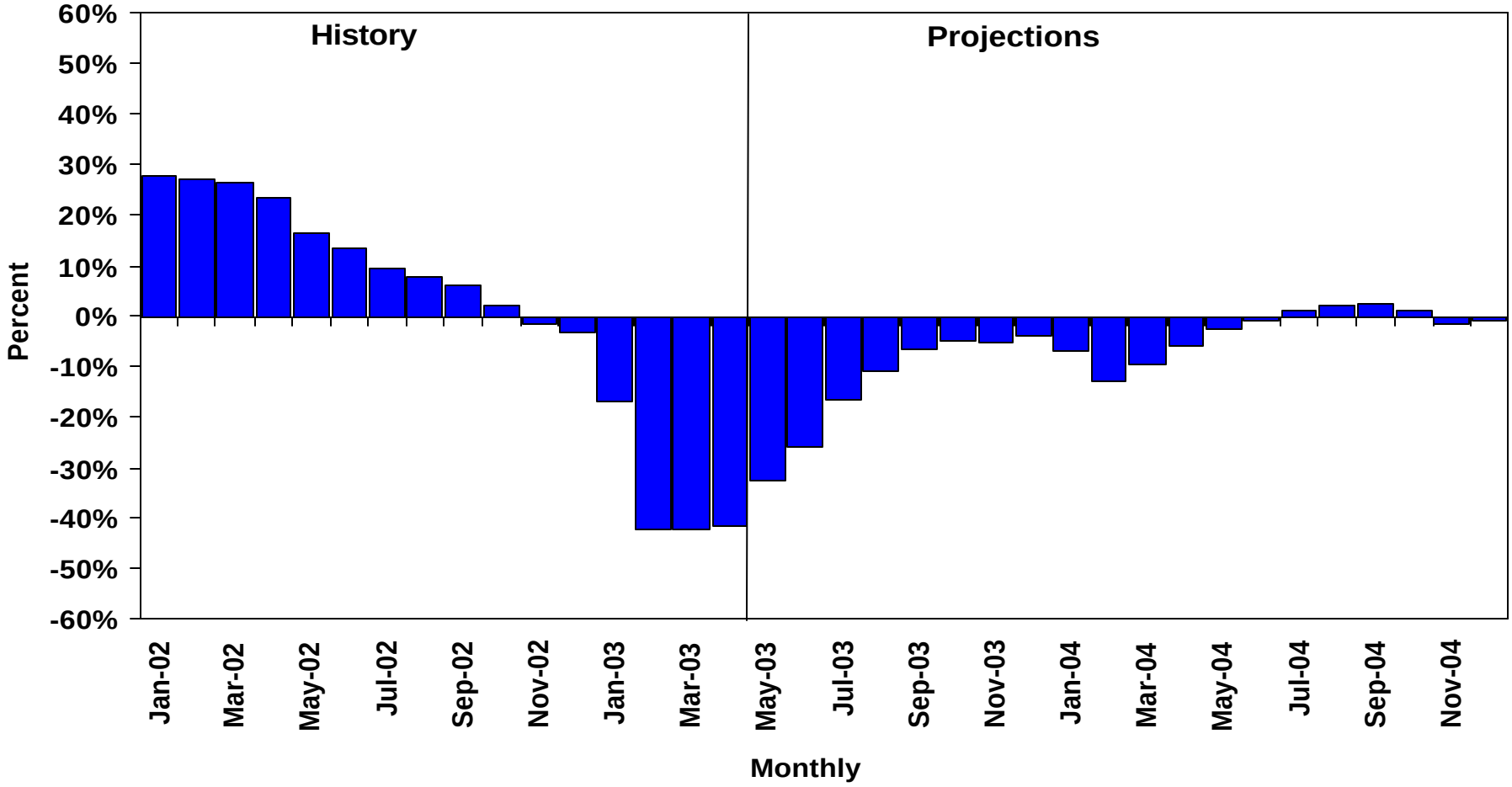
With the economy projected to continue to recover in 2003, electricity demand is expected to increase by 1.8 percent (Figure 17). If our assumption of normal temperatures for the remainder of the year proves true, little or no net weather-related demand growth is expected. This situation contrasts sharply with the hot weather conditions and economic-related factors that prevailed in 2002. In 2004, annual electricity demand is projected to continue to grow.

Natural gas-generated electricity production is expected to show no growth in 2003, while petroleum-generated electricity production is expected to increase by 28 percent. This is due in large measure to the relative advantage that oil prices enjoy over natural gas prices so far this year, a condition that likely will prevail through the year. Hydroelectric generation, 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 11 percent overall in 2003. Nuclear generation is about the same as last year.

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).

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



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

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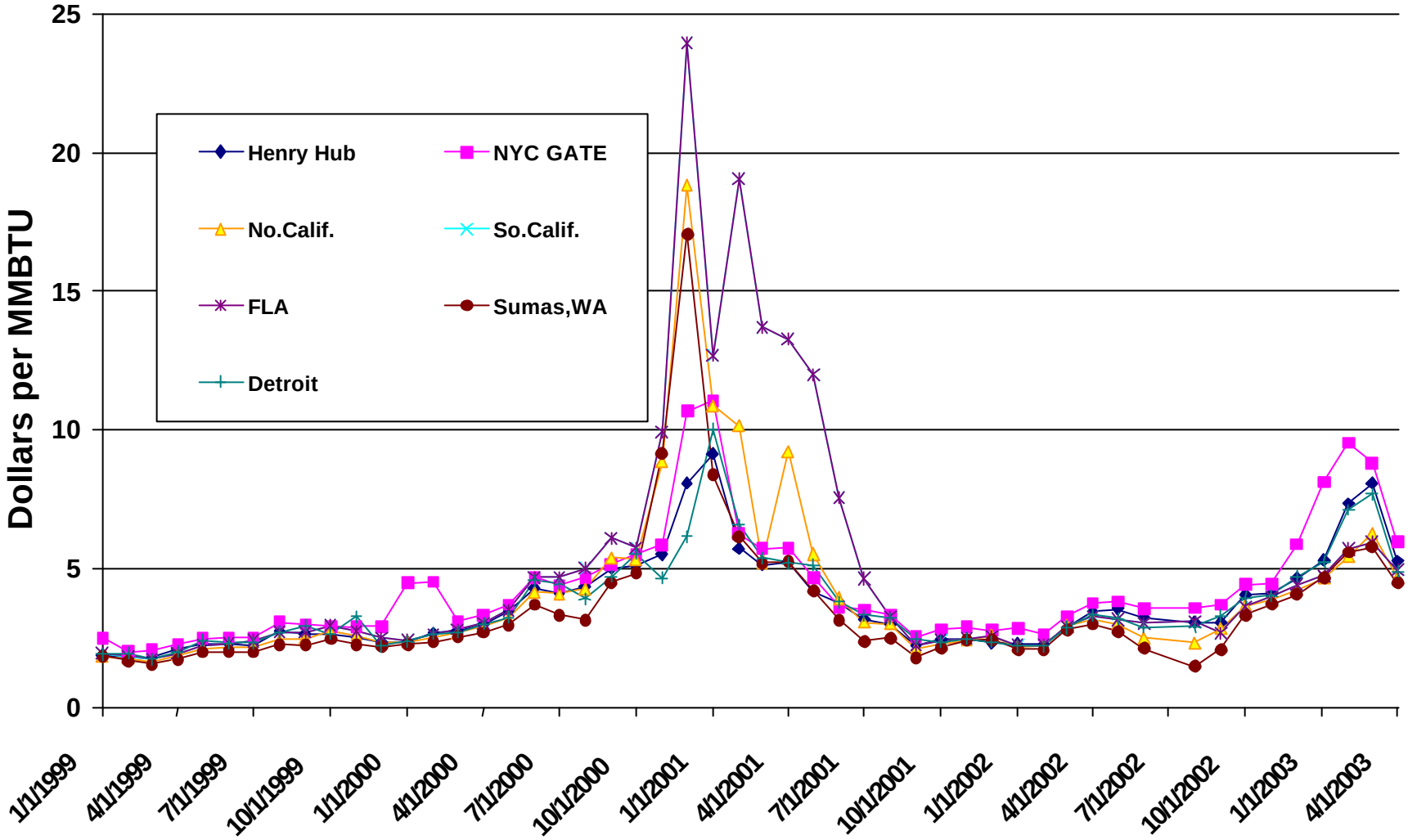
Figure 14 . Selected Natural Gas Spot Prices



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

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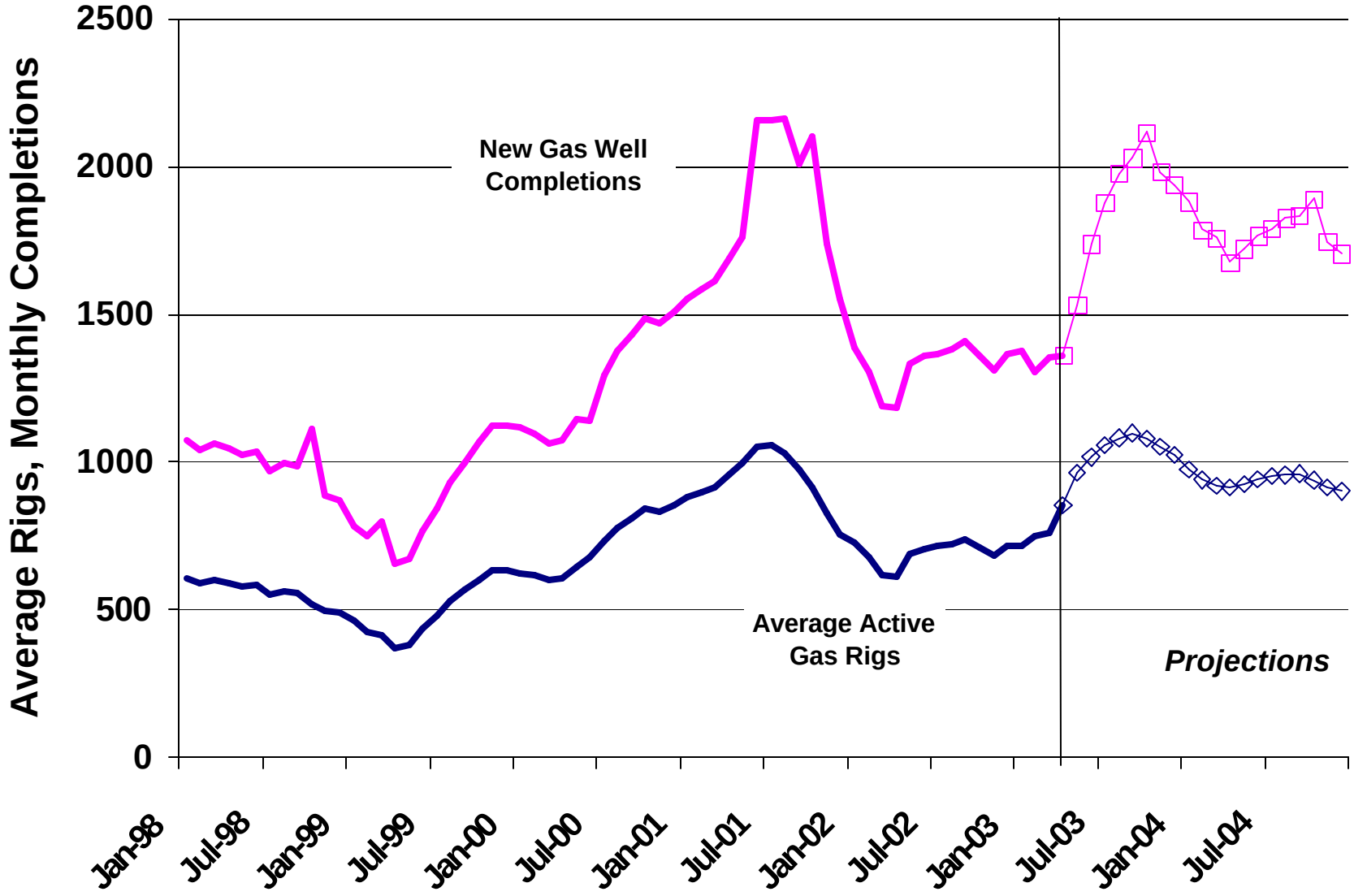
Figure 15. U.S. Natural Gas-Directed Drilling Activity



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

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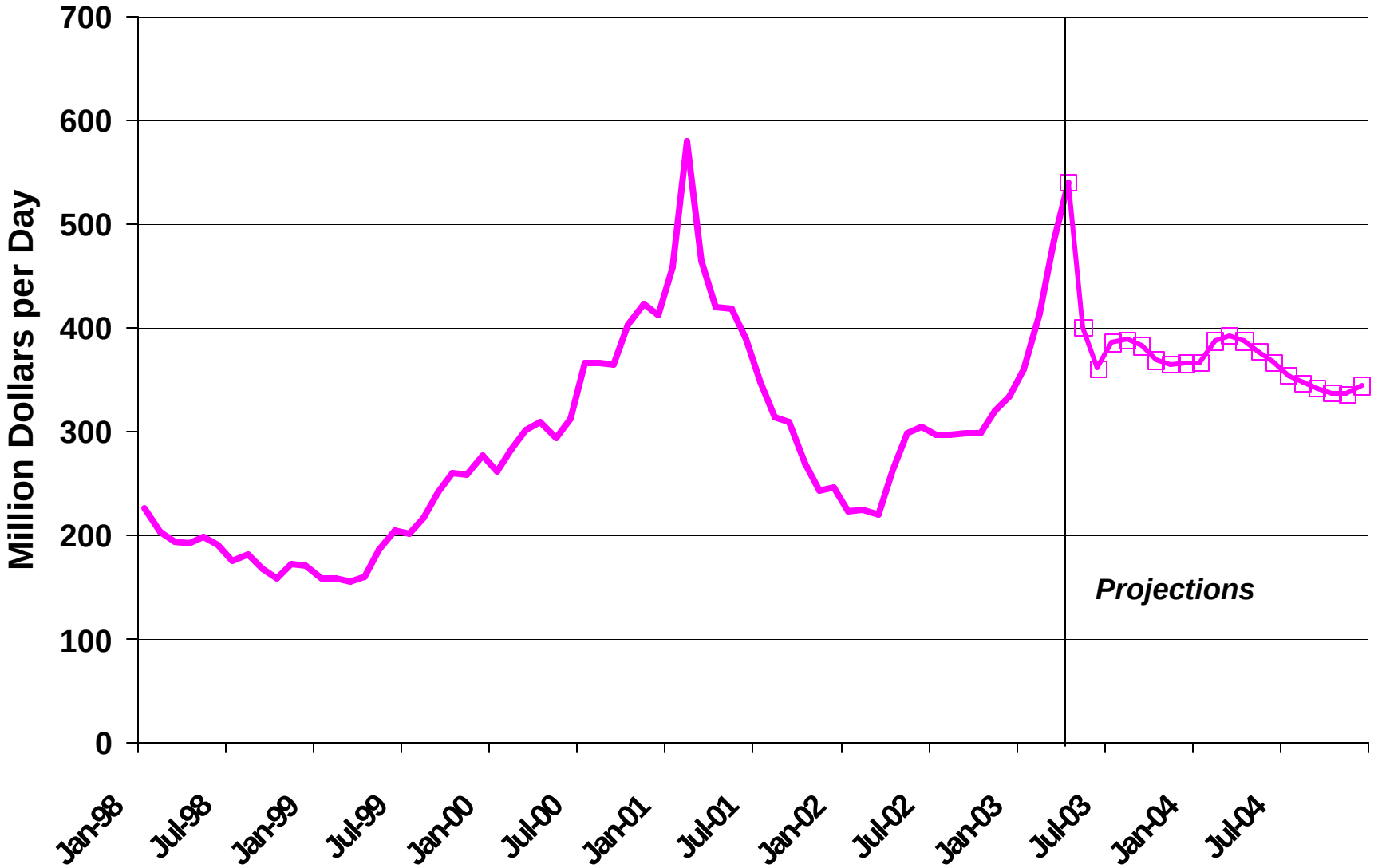
Figure 16. U.S. Oil and Gas Production Revenues



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

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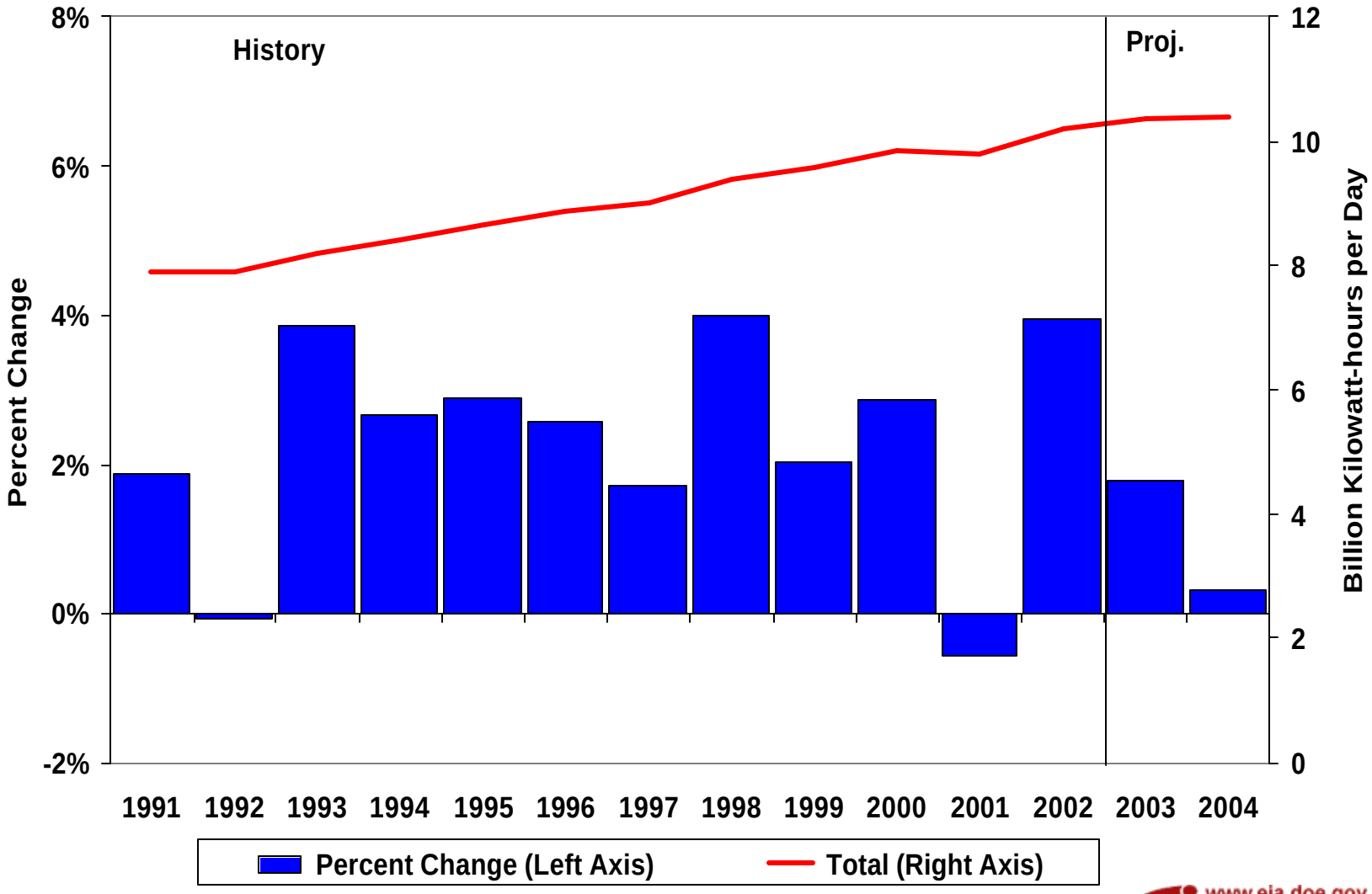
Figure 17. Total Electricity Demand Growth Patterns



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

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Confidence intervals presented in 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 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**	*9690*	*10098*	*2.4*	*2.6*	*4.2*
Imported Crude Oil Price [a]							
(nominal dollars per barrel)	**22.00**	**23.68**	*25.01*	*23.98*	*7.6*	*5.6*	*-4.1*
Petroleum Supply (million barrels per day)							
Crude Oil Production [b]	**5.80**	**5.82**	*5.80*	*5.76*	*0.3*	*-0.2*	*-0.8*
Total Petroleum Net Imports							
(including SPR)	**10.90**	**10.49**	*11.13*	*11.51*	*-3.8*	*6.1*	*3.5*
Energy Demand							
World Petroleum							
(million barrels per day)	**76.9**	**77.5**	*78.6*	*80.0*	*0.7*	*1.5*	*1.8*
Petroleum							
(million barrels per day)	**19.65**	**19.68**	*20.22*	*20.61*	*0.2*	*2.7*	*1.9*
Natural Gas							
(trillion cubic feet)	**22.30**	**23.17**	*22.99*	*23.29*	*3.9*	*-0.8*	*1.3*
Coal [c]							
(million short tons)	**1060**	**1065**	*1081*	*1092*	*0.5*	*1.5*	*1.0*
Electricity (billion kilowatthours)							
Retail Sales [d]	**3370**	**3485**	*3528*	*3546*	*3.4*	*1.2*	*0.5*
Other Use/Sales [e]	**205**	**231**	*255*	*258*	*12.3*	*10.8*	*0.8*
Total	**3575**	**3716**	*3783*	*3804*	*3.9*	*1.8*	*0.5*
Total Energy Demand [f]							
(quadrillion Btu)	**97.0**	**98.0**	*99.4*	*100.9*	*1.0*	*1.5*	*1.5*
Total Energy Demand per Dollar of GDP							
(thousand Btu per 1996 Dollar)	**10.52**	**10.38**	*10.26*	*9.99*	*-1.4*	*-1.1*	*-2.6*
Renewable Energy as Percent of Total [g]	**5.8%**	**6.4%**	*6.7%*	*6.9%*			

[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 CONTROL0303.

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**	**9519**	*9573*	*9641*	*9726*	*9820*	*9952*	*10061*	*10149*	*10228*	*9440*	*9690*	*10098*
Percentage Change from Prior Year	**1.4**	**2.2**	**3.3**	**2.9**	*2.2*	*2.6*	*2.5*	*3.2*	*4.0*	*4.4*	*4.3*	*4.2*	*2.4*	*2.6*	*4.2*
Annualized Percent Change from Prior Quarter	**5.0**	**1.2**	**4.0**	**1.4**	*2.3*	*2.8*	*3.5*	*3.9*	*5.4*	*4.4*	*3.5*	*3.1*			
GDP Implicit Price Deflator (Index, 1996=1.000)	**1.101**	**1.105**	**1.108**	**1.112**	*1.116*	*1.120*	*1.126*	*1.133*	*1.138*	*1.142*	*1.149*	*1.156*	*1.106*	*1.124*	*1.146*
Percentage Change from Prior Year	**1.4**	**1.1**	**0.8**	**1.3**	*1.3*	*1.4*	*1.7*	*1.9*	*1.9*	*1.9*	*2.0*	*2.0*	*1.1*	*1.6*	*2.0*
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	**6961**	**7027**	**7082**	**7129**	*7151*	*7202*	*7318*	*7346*	*7523*	*7562*	*7578*	*7623*	*7050*	*7254*	*7571*
Percentage Change from Prior Year	**3.8**	**5.0**	**3.2**	**5.9**	*2.7*	*2.5*	*3.3*	*3.0*	*5.2*	*5.0*	*3.6*	*3.8*	*4.5*	*2.9*	*4.4*
Manufacturing Production (Index, 1997=100.0)	**110.8**	**111.8**	**112.6**	**111.7**	*112.0*	*112.5*	*114.1*	*115.9*	*118.0*	*120.9*	*124.0*	*126.7*	*111.7*	*113.6*	*122.4*
Percentage Change from Prior Year	**-4.0**	**-1.5**	**0.5**	**1.3**	*1.1*	*0.6*	*1.3*	*3.7*	*5.4*	*7.4*	*8.6*	*9.4*	*-0.9*	*1.7*	*7.7*
OECD Economic Growth (percent) [b]													*1.8*	*2.4*	*3.0*
Weather [c]															
Heating Degree-Days															
U.S.	**2098**	**498**	**44**	**1639**	*2157*	*515*	*86*	*1622*	*2254*	*517*	*85*	*1621*	*4279*	*4379*	*4477*
New England	**2796**	**869**	**119**	**2396**	*3292*	*906*	*167*	*2236*	*3205*	*880*	*167*	*2235*	*6180*	*6601*	*6488*
Middle Atlantic	**2481**	**653**	**36**	**2213**	*3117*	*737*	*105*	*2001*	*2919*	*697*	*106*	*2001*	*5383*	*5961*	*5723*
U.S. Gas-Weighted	**2181**	**558**	**43**	**1736**	*2317*	*555*	*90*	*1713*	*2373*	*554*	*90*	*1713*	*4518*	*4676*	*4730*
Cooling Degree-Days (U.S.)	**31**	**372**	**882**	**81**	*27*	*349*	*783*	*76*	*33*	348	*784*	*76*	*1366*	*1235*	*1240*

[a] Macroeconomic projections from DRI/McGraw -Hill 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 CONTROL0303.

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**	**1589**	*1595*	*1608*	*1620*	*1633*	*1662*	*1698*	*1738*	*1769*	*1577*	*1614*	*1717*
Real Exchange Rate (index)	**1.194**	**1.153**	**1.106**	**1.103**	*1.051*	*1.037*	*1.057*	*1.047*	*1.039*	*1.031*	*1.023*	*1.015*	*1.139*	*1.048*	*1.027*
Business Inventory Change (billion chained 1996 dollars-SAAR)	**-31.9**	**-14.1**	**-2.6**	**0.2**	*-3.3*	*2.6*	*2.8*	*5.6*	*14.0*	*21.2*	*24.6*	*24.0*	*-12.1*	*1.9*	*21.0*
Producer Price Index (index, 1982=1.000)	**1.292**	**1.308**	**1.313**	**1.332**	*1.356*	*1.363*	*1.365*	*1.365*	*1.366*	*1.365*	*1.376*	*1.381*	*1.311*	*1.362*	*1.372*
Consumer Price Index (index, 1982-1984=1.000)	**1.780**	**1.795**	**1.805**	**1.814**	*1.828*	*1.838*	*1.846*	*1.855*	*1.862*	*1.869*	*1.880*	*1.892*	*1.799*	*1.842*	*1.876*
Petroleum Product Price Index (index, 1982=1.000)	**0.656**	**0.810**	**0.839**	**0.877**	*0.966*	*0.892*	*0.852*	*0.868*	*0.845*	*0.829*	*0.847*	*0.850*	*0.795*	*0.895*	*0.843*
Non-Farm Employment (millions)	**130.8**	**130.7**	**130.8**	**130.8**	*130.7*	*130.8*	*131.0*	*131.6*	*132.4*	*133.0*	*133.8*	*134.5*	*130.8*	*131.0*	*133.4*
Commercial Employment (millions)	**92.1**	**92.2**	**92.3**	**92.4**	*92.4*	*92.6*	*93.1*	*93.8*	*94.6*	*95.3*	*95.9*	*96.4*	*92.3*	*93.0*	*95.5*
Total Industrial Production (index, 1997=100.0)	**109.3**	**110.5**	**111.4**	**110.6**	*111.2*	*111.5*	*112.8*	*114.2*	*116.1*	*118.5*	*121.0*	*123.3*	*110.4*	*112.4*	*119.7*
Housing Stock (millions)	**119.2**	**119.5**	**119.8**	**120.5**	*121.0*	*121.3*	*121.6*	*121.9*	*122.2*	*122.5*	*122.7*	*123.0*	*119.8*	*121.4*	*122.6*
Miscellaneous															
Gas Weighted Industrial Production (index, 1997=100.0)	**100.4**	**101.0**	**101.6**	**101.1**	*101.5*	*102.2*	*103.4*	*104.2*	*105.2*	*106.6*	*107.9*	*109.0*	*101.0*	*102.8*	*107.2*
Vehicle Miles Traveled [b] (million miles/day)	**7266**	**8027**	**8052**	**7642**	*7381*	*8060*	*8257*	*7842*	*7556*	*8329*	*8473*	*8015*	*7748*	*7887*	*8094*
Vehicle Fuel Efficiency (index, 1999=1.000)	**0.997**	**1.040**	**1.034**	**1.005**	*1.005*	*1.043*	*1.029*	*0.986*	*0.984*	*1.035*	*1.035*	*0.988*	*1.019*	*1.016*	*1.011*
Real Vehicle Fuel Cost (cents per mile)	**3.31**	**3.75**	**3.77**	**3.91**	*4.31*	*4.02*	*3.71*	*3.75*	*3.78*	*3.76*	*3.70*	*3.67*	*3.69*	*3.94*	*3.72*
Air Travel Capacity (mill. available ton-miles/day)	**435.0**	**475.3**	**457.5**	**452.4**	*460.1*	*464.5*	*466.7*	*466.3*	*462.0*	*476.3*	*486.3*	*490.4*	*455.1*	*464.4*	*478.8*
Aircraft Utilization (mill. revenue ton-miles/day)	**237.6**	**268.7**	**270.6**	**255.2**	*247.2*	*260.3*	*275.4*	*259.6*	*257.2*	*280.5*	*292.4*	*280.2*	*258.1*	*260.7*	*277.6*
Airline Ticket Price Index (index, 1982-1984=1.000)	**2.317**	**2.377**	**2.334**	**2.235**	*2.252*	*2.366*	*2.471*	*2.519*	*2.581*	*2.605*	*2.620*	*2.629*	*2.316*	*2.402*	*2.609*
Raw Steel Production (million tons)	**23.92**	**25.03**	**26.34**	**25.68**	*24.72*	*23.51*	*24.04*	*23.39*	*25.73*	*26.61*	*27.14*	*26.03*	*100.98*	*95.67*	*105.51*

[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)	**19.4**	**19.6**	**19.8**	**19.8**	*20.1*	*19.8*	*20.4*	*20.6*	*20.5*	*20.3*	*20.8*	*21.0*	*19.7*	*20.2*	*20.6*
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**	**2.0**	*2.0*	*1.9*	*2.1*	*2.1*	*2.1*	*2.0*	*2.2*	*2.1*	*2.0*	*2.0*	*2.1*
Europe	**15.2**	**14.6**	**15.2**	**15.4**	*15.4*	*14.4*	*15.0*	*15.7*	*15.6*	*14.6*	*15.2*	*15.9*	*15.1*	*15.1*	*15.3*
Japan	**5.7**	**4.6**	**5.0**	**5.9**	*5.9*	*4.8*	*5.0*	*5.5*	*5.9*	*4.9*	*5.1*	*5.5*	*5.3*	*5.3*	*5.3*
Other OECD	**5.3**	**4.9**	**5.0**	**5.3**	*5.1*	*5.0*	*5.3*	*5.3*	*5.1*	*5.1*	*5.4*	*5.4*	*5.1*	*5.2*	*5.2*
Total OECD	**47.9**	**46.1**	**47.4**	**48.8**	*48.8*	*46.2*	*48.1*	*49.5*	*49.5*	*47.1*	*48.9*	*50.1*	*47.5*	*48.1*	*48.9*
Non-OECD															
Former Soviet Union	**4.0**	**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**	*5.4*	*5.4*	*5.3*	*5.4*	*5.5*	*5.5*	*5.4*	*5.5*	*5.3*	*5.4*	*5.5*
Other Asia	**7.7**	**7.7**	**7.5**	**7.9**	*7.9*	*7.9*	*7.6*	*8.0*	*8.0*	*8.0*	*7.8*	*8.1*	*7.7*	*7.8*	*8.0*
Other Non-OECD	**12.1**	**12.3**	**12.4**	**12.3**	*12.3*	*12.5*	*12.6*	*12.5*	*12.6*	*12.8*	*12.9*	*12.8*	*12.3*	*12.5*	*12.8*
Total Non-OECD	**30.0**	**30.0**	**29.7**	**30.1**	*30.5*	*30.4*	*30.3*	*30.6*	*31.1*	*31.1*	*30.9*	*31.2*	*29.9*	*30.4*	*31.1*
Total World Demand	**77.8**	**76.0**	**77.1**	**78.8**	*79.2*	*76.6*	*78.4*	*80.1*	*80.6*	*78.3*	*79.8*	*81.3*	*77.5*	*78.6*	*80.0*
Supply [b]															
OECD															
U.S. (50 States)	**9.1**	**9.2**	**8.9**	**9.0**	*9.0*	*9.0*	*9.0*	*9.1*	*9.1*	*9.0*	*9.0*	*9.1*	*9.1*	*9.0*	*9.1*
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**	*6.4*	*6.0*	*6.1*	*6.4*	*6.3*	*6.0*	*6.1*	*6.4*	*6.2*	*6.3*	*6.2*
Other OECD	**1.6**	**1.6**	**1.6**	**1.6**	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*	*1.6*
Total OECD	**23.6**	**23.6**	**22.9**	**23.7**	*23.8*	*23.4*	*23.6*	*24.1*	*24.0*	*23.6*	*23.9*	*24.2*	*23.5*	*23.7*	*24.0*
Non-OECD															
OPEC	**28.5**	**27.9**	**28.8**	**29.5**	*30.1*	*30.1*	*30.1*	*30.2*	*30.2*	*30.2*	*30.2*	*30.1*	*28.7*	*30.1*	*30.2*
Former Soviet Union	**9.0**	**9.2**	**9.6**	**9.8**	*9.9*	*10.1*	*10.3*	*10.3*	*10.4*	*10.5*	*10.7*	*10.8*	*9.4*	*10.1*	*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*	*11.3*	*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**	**53.2**	**54.1**	*54.8*	*54.9*	*55.4*	*55.7*	*55.7*	*56.0*	*56.4*	*56.6*	*52.9*	*55.2*	*56.2*
Total World Supply	**75.9**	**75.6**	**76.2**	**77.8**	*78.6*	*78.4*	*79.0*	*79.8*	*79.7*	*79.6*	*80.3*	*80.8*	*76.4*	*78.9*	*80.1*
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**	**0.4**	**0.3**	*0.9*	*-0.9*	*-0.4*	*0.1*	*0.0*	*-0.6*	*-0.2*	*0.3*	*0.1*	*-0.1*	*-0.1*
Other	**1.4**	**0.5**	**0.1**	**0.4**	*-0.7*	*-1.3*	*-0.6*	*-0.1*	*0.4*	*-1.1*	*-0.7*	*-0.2*	*0.6*	*-0.7*	*-0.4*
Total Stock Withdrawals	**1.5**	**0.0**	**0.5**	**0.7**	*0.3*	*-2.2*	*-1.0*	*0.0*	*0.4*	*-1.7*	*-0.9*	*0.1*	*0.7*	*-0.7*	*-0.5*
OECD Comm. Stocks, End (bill. bbls.)	**2.6**	**2.6**	**2.6**	**2.5**	*2.4*	*2.5*	*2.6*	*2.6*	*2.5*	*2.6*	*2.7*	*2.7*	*2.5*	*2.6*	*2.7*
Non-OPEC Supply	**47.4**	**47.7**	**47.4**	**48.2**	*48.5*	*48.2*	*48.9*	*49.5*	*49.5*	*49.4*	*50.1*	*50.7*	*47.7*	*48.8*	*50.0*
Net Exports from Former Soviet Union	**2.4**	**2.8**	**3.3**	**3.5**	*3.1*	*3.6*	*3.9*	*3.9*	*3.4*	*3.8*	*4.1*	*4.2*	*3.0*	*3.6*	*3.9*

[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 Net herlands, New Zealand, Norway, Poland, Portugal, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

OPEC: Organization of Petroleum Exporting Countries: Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

SPR: Strategic Petroleum Reserve

Former Soviet Union: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

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

Sources: Energy Information Administration: latest data available from EIA databases supporting the following reports: *International Petroleum Monthly*, DOE/EIA-0520; Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

Table 4. U.S. Energy Prices: Base Case

(Nominal Dollars)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Crude Oil Prices (dollars per barrel)															
Imported Average [a]	**19.33**	**23.84**	**25.88**	**25.39**	*31.22*	*23.64*	*22.82*	*23.24*	*23.93*	*24.35*	*24.21*	*23.40*	*23.68*	*25.01*	*23.98*
WTI [b] Spot Average	**21.66**	**26.25**	**28.34**	**28.22**	*34.10*	*27.46*	*26.43*	*26.42*	*26.93*	*27.32*	*27.14*	*26.23*	*26.12*	*28.60*	*26.90*
Natural Gas Wellhead (dollars per thousand cubic feet)	**2.34**	**3.00**	**2.88**	**3.60**	*5.54*	*4.60*	*4.71*	*4.31*	*4.57*	*4.16*	*3.79*	*3.91*	*2.96*	*4.79*	*4.11*
Petroleum Products															
Gasoline Retail [c] (dollars per gallon)															
All Grades	**1.20**	**1.43**	**1.44**	**1.46**	*1.63*	*1.54*	*1.44*	*1.40*	*1.41*	*1.49*	*1.47*	*1.40*	*1.39*	*1.50*	*1.44*
Regular Unleaded	**1.16**	**1.39**	**1.40**	**1.42**	*1.59*	*1.51*	*1.41*	*1.37*	*1.38*	*1.45*	*1.43*	*1.37*	*1.34*	*1.47*	*1.41*
No. 2 Diesel Oil, Retail (dollars per gallon)	**1.18**	**1.30**	**1.35**	**1.44**	*1.62*	*1.47*	*1.40*	*1.42*	*1.41*	*1.41*	*1.39*	*1.40*	*1.32*	*1.48*	*1.40*
No. 2 Heating Oil, Wholesale (dollars per gallon)	**0.60**	**0.68**	**0.73**	**0.79**	*1.00*	*0.88*	*0.78*	*0.82*	*0.82*	*0.80*	*0.78*	*0.79*	*0.69*	*0.88*	*0.80*
No. 2 Heating Oil, Retail (dollars per gallon)	**1.09**	**1.09**	**1.06**	**1.19**	*1.46*	*1.47*	*1.20*	*1.30*	*1.28*	*1.20*	*1.13*	*1.24*	*1.11*	*1.38*	*1.24*
No. 6 Residual Fuel Oil, Retail [d] (dollars per barrel)	**19.35**	**24.11**	**25.70**	**26.20**	*34.00*	*32.30*	*30.42*	*30.06*	*29.70*	*27.31*	*26.67*	*26.07*	*23.81*	*31.75*	*27.49*
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*	*1.17*	*1.22*	*1.23*	*1.19*
Heavy Fuel Oil [e] (dollars per million Btu)	**2.73**	**3.58**	**3.67**	**4.20**	*4.83*	*5.42*	*4.94*	*4.71*	*4.59*	*4.61*	*4.34*	*4.09*	*3.58*	*4.97*	*4.41*
Natural Gas (dollars per million Btu)	**3.22**	**3.71**	**3.49**	**4.39**	*5.88*	*6.13*	*5.64*	*5.15*	*5.38*	*4.78*	*4.38*	*4.61*	*3.67*	*5.71*	*4.72*
Other Residential															
Natural Gas (dollars per thousand cubic feet)	**7.13**	**8.18**	**10.10**	**8.09**	*8.45*	*10.43*	*11.52*	*9.26*	*8.89*	*9.84*	*10.96*	*8.78*	*7.83*	*9.21*	*9.16*
Electricity (cents per kilowatthour)	**8.08**	**8.52**	**8.70**	**8.32**	*8.10*	*8.74*	*9.01*	*8.60*	*8.13*	*8.74*	*8.96*	*8.52*	*8.42*	*8.62*	*8.60*

[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]	**5.93**	**5.89**	**5.66**	**5.79**	*5.89*	*5.77*	*5.72*	*5.84*	*5.83*	*5.76*	*5.71*	*5.73*	*5.82*	*5.80*	*5.76*
Alaska	**1.03**	**1.01**	**0.93**	**0.97**	*1.00*	*0.93*	*0.89*	*1.00*	*1.00*	*0.95*	*0.91*	*0.93*	*0.98*	*0.95*	*0.95*
Lower 48	**4.89**	**4.88**	**4.73**	**4.82**	*4.88*	*4.84*	*4.83*	*4.84*	*4.83*	*4.81*	*4.80*	*4.81*	*4.83*	*4.85*	*4.81*
Net Commercial Imports [b]	**8.74**	**9.29**	**9.17**	**9.19**	*8.66*	*9.86*	*10.06*	*9.57*	*9.45*	*9.92*	*10.02*	*9.71*	*9.10*	*9.54*	*9.77*
Net SPR Withdrawals	**-0.13**	**-0.16**	**-0.12**	**-0.11**	*0.00*	*-0.08*	*-0.11*	*-0.11*	*-0.13*	*0.00*	*0.00*	*0.00*	*-0.13*	*-0.08*	*-0.03*
Net Commercial Withdrawals	**-0.24**	**0.19**	**0.50**	**-0.08**	*-0.01*	*-0.09*	*0.11*	*-0.05*	*-0.22*	*-0.03*	*0.14*	*-0.04*	*0.09*	*-0.01*	*-0.04*
Product Supplied and Losses	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Unaccounted-for Crude Oil	**0.11**	**0.09**	**-0.04**	**-0.01**	*0.01*	*0.19*	*0.17*	*0.12*	*0.17*	*0.19*	*0.17*	*0.12*	*0.04*	*0.12*	*0.16*
Total Crude Oil Supply	**14.41**	**15.30**	**15.18**	**14.77**	*14.54*	*15.66*	*15.95*	*15.37*	*15.09*	*15.83*	*16.04*	*15.52*	*14.92*	*15.38*	*15.62*
Other Supply															
NGL Production	**1.86**	**1.91**	**1.89**	**1.84**	*1.83*	*1.91*	*1.87*	*1.95*	*1.97*	*1.96*	*1.97*	*2.01*	*1.88*	*1.89*	*1.98*
Other Hydrocarbon and Alcohol Inputs	**0.37**	**0.44**	**0.45**	**0.43**	*0.40*	*0.39*	*0.42*	*0.41*	*0.38*	*0.38*	*0.40*	*0.41*	*0.43*	*0.41*	*0.39*
Crude Oil Product Supplied	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
Processing Gain	**0.95**	**0.95**	**0.93**	**0.97**	*0.90*	*0.94*	*0.96*	*0.96*	*0.93*	*0.94*	*0.96*	*0.97*	*0.95*	*0.94*	*0.95*
Net Product Imports [c]	**1.34**	**1.51**	**1.33**	**1.34**	*1.53*	*1.60*	*1.61*	*1.60*	*1.73*	*1.76*	*1.74*	*1.68*	*1.38*	*1.59*	*1.73*
Product Stock Withdrawn or Added (-)	**0.52**	**-0.48**	**0.06**	**0.46**	*0.93*	*-0.72*	*-0.41*	*0.27*	*0.36*	*-0.62*	*-0.34*	*0.34*	*0.14*	*0.01*	*-0.06*
Total Supply	**19.45**	**19.63**	**19.84**	**19.81**	*20.14*	*19.78*	*20.41*	*20.56*	*20.46*	*20.27*	*20.77*	*20.93*	*19.68*	*20.22*	*20.61*
Demand															
Motor Gasoline	**8.49**	**8.99**	**9.07**	**8.85**	*8.55*	*9.00*	*9.34*	*9.27*	*8.95*	*9.37*	*9.53*	*9.44*	*8.85*	*9.04*	*9.32*
Jet Fuel	**1.57**	**1.61**	**1.63**	**1.64**	*1.57*	*1.56*	*1.64*	*1.68*	*1.63*	*1.61*	*1.67*	*1.70*	*1.61*	*1.61*	*1.65*
Distillate Fuel Oil	**3.79**	**3.70**	**3.71**	**3.88**	*4.26*	*3.82*	*3.79*	*4.06*	*4.22*	*3.88*	*3.83*	*4.11*	*3.77*	*3.98*	*4.01*
Residual Fuel Oil	**0.68**	**0.65**	**0.57**	**0.72**	*0.84*	*0.70*	*0.77*	*0.71*	*0.74*	*0.62*	*0.73*	*0.65*	*0.65*	*0.76*	*0.69*
Other Oils [d]	**4.91**	**4.68**	**4.87**	**4.72**	*4.92*	*4.70*	*4.86*	*4.84*	*4.92*	*4.78*	*5.00*	*5.02*	*4.80*	*4.83*	*4.93*
Total Demand	**19.45**	**19.63**	**19.84**	**19.81**	*20.14*	*19.78*	*20.40*	*20.55*	*20.46*	*20.26*	*20.77*	*20.93*	*19.68*	*20.22*	*20.61*
Total Petroleum Net Imports	**10.10**	**10.82**	**10.49**	**10.53**	*10.18*	*11.47*	*11.67*	*11.17*	*11.18*	*11.68*	*11.76*	*11.39*	*10.49*	*11.13*	*11.50*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**333**	**316**	**270**	**278**	*279*	*286*	*276*	*281*	*301*	*304*	*291*	*294*	*278*	*281*	*294*
Total Motor Gasoline	**213**	**217**	**206**	**211**	*201*	*208*	*200*	*204*	*209*	*213*	*205*	*210*	*211*	*204*	*210*
Finished Motor Gasoline	**160**	**168**	**158**	**164**	*146*	*155*	*149*	*154*	*153*	*161*	*154*	*159*	*164*	*154*	*159*
Blending Components	**53**	**48**	**48**	**47**	*55*	*53*	*51*	*51*	*56*	*53*	*51*	*51*	*47*	*51*	*51*
Jet Fuel	**42**	**39**	**41**	**40**	*36*	*38*	*40*	*41*	*39*	*41*	*43*	*44*	*40*	*41*	*44*
Distillate Fuel Oil	**123**	**133**	**127**	**134**	*97*	*108*	*127*	*130*	*101*	*112*	*130*	*134*	*134*	*130*	*134*
Residual Fuel Oil	**34**	**33**	**33**	**31**	*31*	*33*	*35*	*37*	*35*	*36*	*38*	*39*	*31*	*37*	*39*
Other Oils [e]	**265**	**301**	**309**	**258**	*225*	*269*	*291*	*256*	*252*	*289*	*307*	*265*	*258*	*256*	*265*
Total Stocks (excluding SPR)	**1011**	**1038**	**986**	**951**	*869*	*942*	*969*	*949*	*937*	*996*	*1014*	*986*	*951*	*949*	*986*
Crude Oil in SPR	**561**	**576**	**587**	**599**	*599*	*607*	*617*	*627*	*639*	*639*	*639*	*639*	*599*	*627*	*639*
Heating Oil Reserve	**2**	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*
Total Stocks (incl SPR and HOR)	**1574**	**1616**	**1575**	**1553**	*1470*	*1551*	*1588*	*1579*	*1578*	*1637*	*1655*	*1627*	*1553*	*1579*	*1627*

[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**	**4.79**	*4.78*	*4.82*	*4.83*	*4.86*	*4.91*	*4.88*	*4.88*	*4.88*	*19.03*	*19.29*	*19.55*
Net Imports	**0.88**	**0.83**	**0.90**	**0.89**	*0.94*	*0.98*	*0.95*	*0.92*	*0.98*	*0.93*	*0.96*	*0.94*	*3.49*	*3.79*	*3.80*
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*	*0.07*	*0.08*
Total New Supply	**5.59**	**5.61**	**5.70**	**5.70**	*5.74*	*5.81*	*5.80*	*5.80*	*5.91*	*5.82*	*5.85*	*5.84*	*22.60*	*23.15*	*23.43*
Working Gas in Storage															
Opening	**2.90**	**1.52**	**2.31**	**3.04**	*2.38*	*0.70*	*1.49*	*2.64*	*2.31*	*1.02*	*1.94*	*2.84*	*2.90*	*2.38*	*2.31*
Closing	**1.52**	**2.31**	**3.04**	**2.38**	*0.70*	*1.49*	*2.64*	*2.31*	*1.02*	*1.94*	*2.84*	*2.34*	*2.38*	*2.31*	*2.34*
Net Withdrawals	**1.39**	**-0.79**	**-0.73**	**0.67**	*1.68*	*-0.79*	*-1.15*	*0.33*	*1.29*	*-0.91*	*-0.90*	*0.50*	*0.53*	*0.06*	*-0.02*
Total Supply	**6.97**	**4.82**	**4.96**	**6.37**	*7.42*	*5.02*	*4.64*	*6.13*	*7.20*	*4.91*	*4.95*	*6.34*	*23.13*	*23.21*	*23.41*
Balancing Item [a]	**0.06**	**0.29**	**0.09**	**-0.40**	*-0.08*	*0.06*	*0.03*	*-0.23*	*0.26*	*0.09*	*-0.11*	*-0.37*	*0.05*	*-0.23*	*-0.12*
Total Primary Supply	**7.04**	**5.11**	**5.05**	**5.97**	*7.34*	*5.08*	*4.67*	*5.90*	*7.46*	*5.01*	*4.84*	*5.98*	*23.17*	*22.99*	*23.29*
Demand															
Residential	**2.19**	**0.84**	**0.37**	**1.51**	*2.38*	*0.78*	*0.34*	*1.35*	*2.44*	*0.82*	*0.36*	*1.37*	*4.92*	*4.86*	*4.99*
Commercial	**1.20**	**0.61**	**0.42**	**0.91**	*1.27*	*0.58*	*0.41*	*0.84*	*1.29*	*0.62*	*0.45*	*0.89*	*3.15*	*3.10*	*3.25*
Industrial	**2.34**	**2.18**	**2.17**	**2.29**	*2.41*	*2.20*	*1.99*	*2.37*	*2.43*	*2.10*	*1.97*	*2.37*	*8.98*	*8.97*	*8.87*
Lease and Plant Fuel	**0.28**	**0.28**	**0.28**	**0.29**	*0.29*	*0.31*	*0.31*	*0.31*	*0.31*	*0.30*	*0.30*	*0.30*	*1.13*	*1.22*	*1.21*
Other Industrial	**2.06**	**1.89**	**1.89**	**2.00**	*2.12*	*1.89*	*1.68*	*2.06*	*2.13*	*1.80*	*1.67*	*2.06*	*7.85*	*7.74*	*7.66*
CHP [b]	**0.32**	**0.31**	**0.35**	**0.29**	*0.31*	*0.32*	*0.33*	*0.29*	*0.32*	*0.32*	*0.34*	*0.30*	*1.28*	*1.23*	*1.29*
Non-CHP	**1.74**	**1.58**	**1.54**	**1.71**	*1.81*	*1.57*	*1.36*	*1.77*	*1.81*	*1.48*	*1.33*	*1.76*	*6.57*	*6.51*	*6.38*
Transportation [c]	**0.19**	**0.13**	**0.12**	**0.16**	*0.17*	0.11	0.11	0.15	0.20	0.12	0.12	0.16	0.59	0.54	0.60
Electric Power [d]	**1.12**	**1.35**	**1.97**	**1.11**	*1.07*	1.41	1.83	1.18	1.10	1.34	1.94	1.20	5.55	5.49	5.58
Total Demand	**7.04**	**5.11**	**5.05**	**5.97**	*7.34*	*5.08*	*4.67*	*5.90*	*7.46*	*5.01*	*4.84*	*5.98*	*23.17*	*22.99*	*23.29*

[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**	*260.3*	*258.1*	*281.6*	*289.1*	*279.6*	*260.1*	*283.7*	*279.1*	*1093.8*	*1089.0*	*1102.5*
Appalachia	**108.3**	**99.1**	**95.2**	**94.2**	*93.9*	*92.7*	*100.7*	*103.1*	*102.7*	*91.9*	*99.1*	*97.4*	*396.8*	*390.4*	*391.2*
Interior	**36.8**	**37.3**	**36.6**	**35.6**	*33.7*	*34.3*	*34.4*	*32.1*	*32.9*	*33.2*	*32.9*	*29.2*	*146.2*	*134.4*	*128.2*
Western	**137.6**	**131.2**	**138.9**	**143.1**	*132.7*	*129.7*	*146.4*	*153.9*	*144.0*	*135.0*	*151.6*	*152.5*	*550.8*	*562.6*	*583.2*
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**	*4.5*	*4.5*	*4.5*	*4.5*	*4.7*	*4.6*	*4.6*	*4.7*	*16.9*	*17.9*	*18.6*
Exports	**9.3**	**11.0**	**9.3**	**10.0**	*9.6*	*10.0*	*10.1*	*10.2*	*10.0*	*10.1*	*10.3*	*10.3*	*39.6*	*39.9*	*40.7*
Total Net Domestic Supply	**273.0**	**259.4**	**271.8**	**270.8**	*255.9*	*252.8*	*277.3*	*281.2*	*275.1*	*254.2*	*280.1*	*270.9*	*1075.0*	*1067.1*	*1080.2*
Secondary Stock Levels [b]															
Opening	**146.0**	**152.9**	**158.0**	**142.7**	*148.9*	*142.7*	*153.7*	*143.5*	*158.2*	*161.4*	*170.7*	*156.2*	*146.0*	*148.9*	*158.2*
Closing	**152.9**	**158.0**	**142.7**	**148.9**	*142.7*	*153.7*	*143.5*	*158.2*	*161.4*	*170.7*	*156.2*	*160.7*	*148.9*	*158.2*	*160.7*
Net Withdrawals	**-6.9**	**-5.1**	**15.3**	**-6.2**	*6.2*	*-10.9*	*10.1*	*-14.7*	*-3.2*	*-9.4*	*14.5*	*-4.5*	*-2.9*	*-9.3*	*-2.5*
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**	*265.0*	*244.7*	*290.3*	*269.4*	*275.6*	*248.6*	*298.2*	*270.0*	*1083.2*	*1069.4*	*1092.5*
Demand															
Coke Plants	**5.4**	**5.6**	**5.6**	**5.9**	*6.8*	*6.5*	*6.4*	*5.7*	*6.0*	*5.8*	*6.2*	*5.5*	*22.5*	*25.5*	*23.6*
Electric Power Sector [d]	**231.6**	**231.1**	**267.0**	**245.6**	*253.7*	*224.2*	*269.5*	*247.1*	*253.4*	*229.0*	*278.0*	*248.3*	*975.4*	*994.6*	*1008.7*
Retail and General Industry	**17.6**	**16.0**	**16.1**	**17.7**	*16.2*	*14.0*	*14.3*	*16.5*	*16.2*	*13.7*	*14.0*	*16.2*	*67.4*	*61.1*	*60.2*
Total Demand [e]	**254.6**	**252.8**	**288.7**	**269.2**	*276.8*	*244.7*	*290.3*	*269.4*	*275.6*	*248.6*	*298.2*	*270.0*	*1065.4*	*1081.2*	*1092.5*
Discrepancy [f]	**14.2**	**4.2**	**1.1**	**-1.8**	*-11.8*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*17.8*	*-11.8*	*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	**453.8**	**451.8**	**519.0**	**478.9**	*483.5*	*434.3*	*521.0*	*477.0*	*489.3*	*442.5*	*536.9*	*479.5*	*1903.4*	*1915.8*	*1948.2*
Petroleum	**18.0**	**21.5**	**24.3**	**19.7**	*28.0*	*24.4*	*33.3*	*21.6*	*22.8*	*21.2*	*31.0*	*17.4*	*83.6*	*107.3*	*92.3*
Natural Gas	**121.9**	**143.9**	**211.3**	**123.4**	*117.9*	*153.3*	*199.7*	*129.4*	*120.4*	*146.8*	*212.7*	*131.6*	*600.5*	*600.2*	*611.5*
Nuclear	**195.6**	**187.8**	**205.7**	**190.9**	*192.7*	*190.8*	*205.3*	*190.4*	*195.1*	*191.4*	*206.2*	*191.5*	*780.1*	*779.2*	*784.2*
Hydroelectric	**59.9**	**76.8**	**59.4**	**54.7**	*67.2*	*81.3*	*65.6*	*64.6*	*71.1*	*81.2*	*64.7*	*65.1*	*250.8*	*278.7*	*282.1*
Geothermal and Other [b]	**13.4**	**14.2**	**14.3**	**13.1**	*9.8*	*8.6*	*9.5*	*9.5*	*10.6*	*9.8*	*10.4*	*10.3*	*55.0*	*37.3*	*41.1*
Subtotal	**862.5**	**896.1**	**1034.0**	**880.8**	*899.1*	*892.6*	*1034.3*	*892.6*	*909.2*	*892.9*	*1061.9*	*895.3*	*3673.4*	*3718.5*	*3759.2*
Other Sectors [c]	**40.6**	**39.7**	**43.9**	**38.2**	*39.4*	*39.6*	*42.4*	*40.4*	*40.8*	*40.8*	*43.7*	*41.9*	*162.4*	*161.9*	*167.2*
Total Generation	**903.1**	**935.7**	**1077.9**	**919.0**	*938.5*	*932.3*	*1076.6*	*933.0*	*950.0*	*933.7*	*1105.6*	*937.1*	*3835.7*	*3880.4*	*3926.5*
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	**909.0**	**940.0**	**1086.0**	**921.9**	*944.6*	*940.0*	*1087.7*	*939.6*	*960.5*	*945.8*	*1121.1*	*948.1*	*3856.9*	*3911.9*	*3975.6*
Losses and Unaccounted for [e]	**23.9**	**50.5**	**36.5**	**30.2**	*17.2*	*27.7*	*34.1*	*50.4*	*18.4*	*55.8*	*51.4*	*45.0*	*141.1*	*129.4*	*170.6*
Demand															
Retail Sales [f]															
Residential	**311.3**	**281.7**	**382.7**	**292.5**	*336.6*	*289.6*	*380.3*	*287.3*	*342.0*	*272.7*	*388.4*	*292.7*	*1268.2*	*1293.7*	*1295.8*
Commercial	**256.8**	**275.9**	**316.6**	**268.9**	*265.9*	*281.1*	*315.5*	*265.7*	*267.0*	*278.2*	*322.5*	*272.1*	*1118.1*	*1128.2*	*1139.8*
Industrial	**236.3**	**249.1**	**262.3**	**246.1**	*238.1*	*249.8*	*258.9*	*247.4*	*241.5*	*249.4*	*259.9*	*248.6*	*993.8*	*994.2*	*999.3*
Other	**23.9**	**25.3**	**29.9**	**26.0**	*25.8*	*27.6*	*30.3*	*27.1*	*27.4*	*27.0*	*30.7*	*27.4*	*105.1*	*110.8*	*112.5*
Subtotal	**828.3**	**832.0**	**991.5**	**833.5**	*866.4*	*848.1*	*985.0*	*827.4*	*877.8*	*827.2*	*1001.6*	*840.7*	*3485.2*	*3526.9*	*3547.4*
Other Use/Sales [g]	**56.8**	**57.5**	**58.1**	**58.1**	*61.0*	*64.2*	*68.6*	*61.8*	*64.3*	*62.8*	*68.2*	*62.3*	*230.6*	*255.6*	*257.6*
Total Demand	**885.1**	**889.5**	**1049.6**	**891.6**	*927.3*	*912.3*	*1053.6*	*889.2*	*942.2*	*890.0*	*1069.8*	*903.1*	*3715.8*	*3782.5*	*3805.0*

[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	**453.8**	**451.8**	**519.0**	**478.9**	*483.5*	*434.3*	*521.0*	*477.0*	*489.3*	*442.5*	*536.9*	*479.5*	*1903.4*	*1915.8*	*1948.2*
Petroleum	**18.0**	**21.5**	**24.3**	**19.7**	*28.0*	*24.4*	*33.3*	*21.6*	*22.8*	*21.2*	*31.0*	*17.4*	*83.6*	*107.3*	*92.3*
Natural Gas	**121.9**	**143.9**	**211.3**	**123.4**	*117.9*	*153.3*	*199.7*	*129.4*	*120.4*	*146.8*	*212.7*	*131.6*	*600.5*	*600.2*	*611.5*
Other [b]	**268.9**	**278.8**	**279.4**	**258.7**	*269.7*	*280.6*	*280.3*	*264.6*	*276.8*	*282.4*	*281.3*	*266.8*	*1085.8*	*1095.2*	*1107.3*
Subtotal	**862.5**	**896.1**	**1034.0**	**880.8**	*899.1*	*892.6*	*1034.3*	*892.6*	*909.2*	*892.9*	*1061.9*	*895.3*	*3673.4*	*3718.5*	*3759.2*
Commercial															
Coal	**0.3**	**0.2**	**0.3**	**0.3**	*0.3*	*0.2*	*0.2*	*0.3*	*0.3*	*0.3*	*0.2*	*0.3*	*1.0*	*1.0*	*1.1*
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*	*0.5*	*0.5*
Natural Gas	**1.1**	**1.0**	**2.4**	**1.0**	*1.1*	*1.1*	*1.8*	*1.1*	*1.3*	*1.3*	*1.9*	*1.2*	*5.4*	*5.1*	*5.6*
Other [b]	**0.4**	**0.5**	**0.5**	**0.5**	*0.4*	*0.5*	*0.4*	*0.6*	*0.5*	*0.6*	*0.4*	*0.6*	*1.9*	*1.9*	*2.0*
Subtotal	**1.8**	**1.8**	**3.3**	**1.8**	*1.9*	*2.0*	*2.5*	*2.1*	*2.2*	*2.2*	*2.7*	*2.2*	*8.7*	*8.5*	*9.2*
Industrial															
Coal	**4.9**	**4.8**	**5.1**	**5.0**	*4.8*	*4.6*	*5.0*	*5.1*	*4.9*	*4.8*	*5.2*	*5.3*	*19.8*	*19.6*	*20.3*
Petroleum	**1.2**	**1.2**	**1.2**	**1.3**	*1.6*	*1.3*	*1.6*	*1.5*	*1.4*	*1.2*	*1.5*	*1.2*	*4.9*	*6.0*	*5.3*
Natural Gas	**21.0**	**19.5**	**21.4**	**17.9**	*19.8*	*19.8*	*20.4*	*18.0*	*20.3*	*20.4*	*21.4*	*19.0*	*79.9*	*78.0*	*81.1*
Other [b]	**11.7**	**12.3**	**12.8**	**12.3**	*11.3*	*11.9*	*12.8*	*13.8*	*12.0*	*12.2*	*12.9*	*14.2*	*49.2*	*49.8*	*51.3*
Subtotal	**38.8**	**37.8**	**40.6**	**36.4**	*37.5*	*37.6*	*39.9*	*38.4*	*38.6*	*38.6*	*41.1*	*39.7*	*153.6*	*153.4*	*158.0*
Total	**903.1**	**935.7**	**1077.9**	**919.0**	*938.5*	*932.3*	*1076.6*	*933.0*	*950.0*	*933.7*	*1105.6*	*937.1*	*3835.7*	*3880.4*	*3926.5*

[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	**4.572**	**4.493**	**5.106**	**4.524**	*4.822*	*4.357*	*5.152*	*4.552*	*4.770*	*4.449*	*5.315*	*4.573*	*18.7*	*18.9*	*19.1*
Petroleum	**0.191**	**0.223**	**0.259**	**0.212**	*0.300*	*0.263*	*0.356*	*0.232*	*0.241*	*0.227*	*0.330*	*0.186*	*0.9*	*1.2*	*1.0*
Natural Gas	**1.173**	**1.319**	**1.959**	**1.080**	*1.039*	*1.381*	*1.796*	*1.154*	*1.066*	*1.313*	*1.911*	*1.177*	*5.5*	*5.4*	*5.5*
Other [b]	**2.929**	**3.042**	**3.074**	**2.834**	*3.119*	*3.216*	*3.227*	*3.040*	*3.216*	*3.250*	*3.245*	*3.070*	*11.9*	*12.6*	*12.8*
Subtotal	**8.865**	**9.076**	**10.398**	**8.651**	*9.281*	*9.218*	*10.530*	*8.978*	*9.293*	*9.238*	*10.801*	*9.007*	*37.0*	*38.0*	*38.3*
Commercial															
Coal	**0.003**	**0.003**	**0.004**	**0.003**	*0.003*	*0.003*	*0.003*	*0.003*	*0.004*	*0.003*	*0.003*	*0.004*	*0.013*	*0.012*	*0.014*
Petroleum	**0.001**	**0.001**	**0.001**	**0.001**	*0.002*	*0.001*	*0.002*	*0.002*	*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*	*0.010*	*0.015*	*0.009*	*0.010*	*0.011*	*0.016*	*0.010*	*0.046*	*0.043*	*0.047*
Other [b]	**0.006**	**0.007**	**0.007**	**0.007**	*0.006*	*0.008*	*0.005*	*0.008*	*0.007*	*0.009*	*0.006*	*0.009*	*0.028*	*0.028*	*0.031*
Subtotal	**0.019**	**0.020**	**0.031**	**0.020**	*0.021*	*0.022*	*0.025*	*0.023*	*0.023*	*0.024*	*0.027*	*0.024*	*0.091*	*0.091*	*0.098*
Industrial															
Coal	**0.057**	**0.056**	**0.058**	**0.057**	*0.056*	*0.053*	*0.059*	*0.059*	*0.057*	*0.056*	*0.061*	*0.061*	*0.229*	*0.228*	*0.235*
Petroleum	**0.014**	**0.013**	**0.014**	**0.015**	*0.020*	*0.015*	*0.020*	*0.018*	*0.016*	*0.014*	*0.018*	*0.014*	*0.057*	*0.073*	*0.063*
Natural Gas	**0.183**	**0.175**	**0.196**	**0.157**	*0.176*	*0.175*	*0.182*	*0.161*	*0.179*	*0.179*	*0.191*	*0.170*	*0.711*	*0.693*	*0.719*
Other [b]	**0.157**	**0.161**	**0.167**	**0.160**	*0.153*	*0.152*	*0.166*	*0.176*	*0.156*	*0.158*	*0.168*	*0.181*	*0.645*	*0.648*	*0.662*
Subtotal	**0.411**	**0.405**	**0.436**	**0.390**	*0.405*	*0.396*	*0.426*	*0.414*	*0.408*	*0.406*	*0.438*	*0.427*	*1.641*	*1.641*	*1.679*
Total	**9.295**	**9.501**	**10.865**	**9.061**	*9.707*	*9.635*	*10.982*	*9.414*	*9.725*	*9.668*	*11.265*	*9.457*	*38.723*	*39.738*	*40.116*
							(Physical Units)								
Electric Power [a]															
Coal (Million Short Tons)	**231.1**	**230.7**	**266.4**	**245.1**	*253.2*	*223.7*	*268.9*	*246.6*	*252.9*	*228.5*	*277.4*	*247.8*	*973.3*	*992.4*	*1006.5*
Petroleum (Million Barrels per Day)	**0.348**	**0.399**	**0.459**	**0.375**	*0.547*	*0.476*	*0.630*	*0.415*	*0.437*	*0.415*	*0.585*	*0.334*	*0.396*	*0.517*	*0.443*
Natural Gas (Trillion Cubic Feet)	**1.059**	**1.294**	**1.909**	**1.058**	*1.019*	*1.354*	*1.751*	*1.130*	*1.056*	*1.288*	*1.863*	*1.152*	*5.319*	*5.253*	*5.359*
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*	*0.2*	*0.5*	*0.5*	*0.6*
Petroleum (Million Barrels per Day)	**0.002**	**0.002**	**0.002**	**0.002**	*0.005*	*0.002*	*0.003*	*0.003*	*0.004*	*0.002*	*0.003*	*0.003*	*0.002*	*0.003*	*0.003*
Natural Gas (Trillion Cubic Feet)	**0.009**	**0.009**	**0.019**	**0.008**	*0.009*	*0.010*	*0.015*	*0.009*	*0.010*	*0.011*	*0.016*	*0.010*	*0.045*	*0.043*	*0.047*
Industrial															
Coal (Million Short Tons)	**2.6**	**2.6**	**2.7**	**2.7**	*2.6*	*2.5*	*2.7*	*2.8*	*2.7*	*2.6*	*2.8*	*2.9*	*10.6*	*10.6*	*11.0*
Petroleum (Million Barrels per Day)	**0.027**	**0.025**	**0.026**	**0.028**	*0.038*	*0.029*	*0.036*	*0.032*	*0.030*	*0.026*	*0.034*	*0.027*	*0.026*	*0.034*	*0.029*
Natural Gas (Trillion Cubic Feet)	**0.179**	**0.174**	**0.192**	**0.153**	*0.172*	*0.174*	*0.178*	*0.157*	*0.177*	*0.178*	*0.187*	*0.165*	*0.698*	*0.681*	*0.708*

[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]	**2.181**	**2.675**	*3.004*	*3.029*	**22.7**	*12.3*	*0.8*
Geothermal, Solar and Wind Energy [b]	**0.363**	**0.406**	*0.418*	*0.499*	**11.8**	*3.0*	*19.4*
Biofuels [c]	**0.452**	**0.461**	*0.462*	*0.487*	**2.0**	*0.2*	*5.4*
Total	**2.995**	**3.542**	*3.884*	*4.015*	**18.3**	*9.7*	*3.4*
Other Sectors [d]							
Residential and Commercial [e]	**0.574**	**0.593**	*0.613*	*0.644*	**3.3**	*3.4*	*5.1*
Residential	**0.475**	**0.496**	*0.517*	*0.539*	**4.4**	*4.2*	*4.3*
Commercial	**0.098**	**0.097**	*0.096*	*0.104*	**-1.0**	*-1.0*	*8.3*
Industrial [f]	**1.816**	**1.916**	*1.919*	*1.963*	**5.5**	*0.2*	*2.3*
Transportation [g]	**0.147**	**0.175**	*0.202*	*0.205*	**19.0**	*15.4*	*1.5*
Total	**2.536**	**2.684**	*2.734*	*2.812*	**5.8**	*1.9*	*2.9*
Total Renewable Energy Demand	**5.532**	**6.226**	**6.618**	*6.827*	**12.5**	*6.3*	*3.2*

[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*	*9690*	*10098*
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**	*23.68*	*25.01*	*23.98*
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**	*5.82*	*5.80*	*5.76*
Total Petroleum Net Imports (including SPR)															
(million barrels per day)	**7.16**	**6.42**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	**10.42**	**10.90**	*10.49*	*11.13*	*11.51*
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*	*78.6*	*80.0*
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**	*19.68*	*20.22*	*20.61*
Natural Gas															
(trillion cubic feet)	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.73**	**22.24**	**22.39**	**23.46**	**22.30**	*23.17*	*22.99*	*23.29*
Coal															
(million short tons)	**904**	**899**	**908**	**944**	**951**	**962**	**1006**	**1030**	**1037**	**1039**	**1084**	**1060**	*1065*	*1081*	*1092*
Electricity (billion kilowatthours)															
Retail Sales [c]	**2713**	**2762**	**2763**	**2861**	**2935**	**3013**	**3101**	**3146**	**3264**	**3312**	**3421**	**3370**	*3485*	*3528*	*3546*
Other Use/Sales [d]	**115**	**118**	**122**	**128**	**134**	**144**	**146**	**148**	**161**	**183**	**183**	**205**	*231*	*255*	*258*
Total	**2827**	**2880**	**2886**	**2989**	**3069**	**3157**	**3247**	**3294**	**3425**	**3495**	**3605**	**3575**	*3716*	*3783*	*3804*
Total Energy Demand [e]															
(quadrillion Btu)	**84.6**	**84.6**	**86.1**	**87.8**	**89.6**	**91.5**	**94.5**	**95.0**	**95.3**	**97.0**	**99.3**	**97.0**	*98.0*	*99.4*	*100.9*
Total Energy Demand per Dollar of GDP															
(thousand Btu per 1996 Dollar)	**12.61**	**12.68**	**12.51**	**12.43**	**12.19**	**12.13**	**12.10**	**11.66**	**11.20**	**10.95**	**10.81**	**10.52**	*10.38*	*10.26*	*9.99*

[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/EI A-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 CONTROL0303.

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*	*9690*	*10098*
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**	*1.106*	*1.124*	*1.146*
Real Disposable Personal Income (billion chained 1996 Dollars)	**5014**	**5033**	**5189**	**5261**	**5397**	**5539**	**5678**	**5854**	**6169**	**6328**	**6630**	**6748**	*7050*	*7254*	*7571*
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**	*111.737*	*113.615*	*122.392*
Real Fixed Investment (billion chained 1996 dollars)	**895**	**833**	**886**	**958**	**1046**	**1109**	**1213**	**1329**	**1480**	**1595**	**1692**	**1627**	*1577*	*1614*	*1717*
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**	*1.139*	*1.048*	*1.027*
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**	*-12.1*	*1.9*	*21.0*
Producer Price Index (index, 1982=1.000)	**1.163**	**1.165**	**1.172**	**1.189**	**1.205**	**1.247**	**1.277**	**1.276**	**1.244**	**1.255**	**1.327**	**1.342**	*1.311*	*1.362*	*1.372*
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*	*1.842*	*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*	*0.895*	*0.843*
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*	*131.0*	*133.4*
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*	*93.0*	*95.5*
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*	*112.4*	*119.7*
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*	*121.4*	*122.6*
Weather [a]															
Heating Degree-Days															
U.S.	**4016**	**4200**	**4441**	**4700**	**4483**	**4531**	**4713**	**4542**	**3951**	**4169**	**4460**	**4223**	*4279*	*4379*	*4477*
New England	**5848**	**5960**	**6844**	**6728**	**6672**	**6559**	**6679**	**6662**	**5680**	**5952**	**6489**	**6059**	*6180*	*6601*	*6488*
Middle Atlantic	**4998**	**5177**	**5964**	**5948**	**5934**	**5831**	**5986**	**5809**	**4812**	**5351**	**5774**	**5297**	*5383*	*5961*	*5723*
U.S. Gas-Weighted	**4139**	**4337**	**4458**	**4754**	**4659**	**4707**	**4980**	**4802**	**4183**	**4399**	**4680**	**4451**	*4518*	*4676*	*4730*
Cooling Degree-Days (U.S.)	**1260**	**1331**	**1040**	**1218**	**1220**	**1293**	**1180**	**1156**	**1410**	**1297**	**1229**	**1256**	*1366*	*1235*	*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 CONTROL0303.

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**	**23.57**	*22.87*	*22.77*	*23.05*
Natural Gas	**18.36**	**18.23**	**18.38**	**18.58**	**19.35**	**19.10**	**19.36**	**19.39**	**19.61**	**19.34**	**19.69**	**19.86**	*19.50*	*19.75*	*20.05*
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**	*12.31*	*12.29*	*12.23*
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*	*2.58*	*2.70*
Nuclear	**6.10**	**6.42**	**6.48**	**6.41**	**6.69**	**7.08**	**7.09**	**6.68**	**7.16**	**7.61**	**7.86**	**8.07**	*8.40*	*8.45*	*8.48*
Hydroelectric	**3.03**	**3.00**	**2.60**	**2.88**	**2.67**	**3.19**	**3.57**	**3.62**	**3.28**	**3.56**	**3.14**	**2.55**	*2.96*	*3.33*	*3.36*
Other Renewables	**3.08**	**3.13**	**3.28**	**3.25**	**3.37**	**3.45**	**3.53**	**3.42**	**3.25**	**3.30**	**3.37**	**3.31**	*3.50*	*3.55*	*3.73*
Total	**70.78**	**70.38**	**69.95**	**68.28**	**70.68**	**71.18**	**72.49**	**72.48**	**72.89**	**71.98**	**71.66**	**72.20**	*72.11*	*72.72*	*73.60*
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*	*-0.59*
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*	*3.89*	*3.89*
Crude Oil	**12.50**	**12.60**	**13.00**	**14.43**	**15.07**	**15.36**	**16.20**	**17.88**	**18.96**	**19.06**	**19.94**	**20.58**	*20.13*	*21.09*	*21.66*
Petroleum Products	**2.79**	**1.62**	**1.96**	**1.97**	**2.19**	**1.53**	**2.02**	**1.76**	**1.98**	**2.12**	**2.44**	**2.72**	*2.38*	*2.84*	*2.98*
Electricity	**0.01**	**0.07**	**0.09**	**0.09**	**0.15**	**0.13**	**0.14**	**0.12**	**0.09**	**0.10**	**0.12**	**0.07**	*0.07*	*0.11*	*0.17*
Coal Coke	**0.00**	**0.01**	**0.03**	**0.03**	**0.06**	**0.06**	**0.04**	**0.06**	**0.08**	**0.07**	**0.08**	**0.04**	*0.07*	*0.05*	*0.06*
Total	**14.06**	**13.19**	**14.44**	**16.99**	**18.30**	**17.69**	**19.06**	**20.71**	**22.30**	**23.55**	**24.98**	**26.32**	*25.63*	*27.40*	*28.18*
Adjustments [a]	**-0.28**	**1.06**	**1.66**	**2.51**	**0.59**	**2.63**	**2.97**	**1.77**	**0.15**	**1.43**	**2.68**	**-1.54**	*0.24*	*-0.72*	*-0.82*
Consumption															
Coal	**19.17**	**18.99**	**19.12**	**19.84**	**19.91**	**20.09**	**21.00**	**21.44**	**21.66**	**21.62**	**22.58**	**21.85**	*20.89*	*21.06*	*21.16*
Natural Gas	**19.72**	**20.15**	**20.83**	**21.35**	**21.84**	**22.78**	**23.20**	**23.33**	**22.93**	**23.01**	**24.04**	**21.13**	*22.02*	*21.83*	*22.06*
Petroleum	**33.69**	**32.91**	**33.72**	**33.83**	**34.66**	**34.56**	**35.76**	**36.27**	**36.93**	**37.96**	**38.40**	**38.33**	*38.24*	*39.27*	*40.15*
Nuclear	**6.10**	**6.42**	**6.48**	**6.41**	**6.69**	**7.08**	**7.09**	**6.68**	**7.16**	**7.61**	**7.86**	**8.07**	*8.40*	*8.45*	*8.48*
Other	**5.88**	**6.17**	**5.89**	**6.35**	**6.47**	**7.00**	**7.48**	**7.25**	**6.66**	**6.77**	**6.43**	**7.60**	*8.42*	*8.79*	*9.10*
Total	**84.57**	**84.64**	**86.05**	**87.78**	**89.57**	**91.50**	**94.52**	**94.97**	**95.34**	**96.97**	**99.32**	**96.98**	*97.97*	*99.40*	*100.95*

[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**	*23.68*	*25.01*	*23.98*
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*	*28.60*	*26.90*
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**	**4.12**	*2.96*	*4.79*	*4.11*
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*	*1.50*	*1.44*
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*	*1.47*	*1.41*
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*	*1.48*	*1.40*
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*	*0.88*	*0.80*
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*	*1.38*	*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*	*31.75*	*27.49*
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*	*1.19*
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*	*4.97*	*4.41*
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**	*3.67*	*5.71*	*4.72*
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*	*9.21*	*9.16*
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**	*8.42*	*8.62*	*8.60*

[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**	*5.82*	*5.80*	*5.76*
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*	*0.95*	*0.95*
Lower 48	**5.58**	**5.62**	**5.46**	**5.26**	**5.10**	**5.08**	**5.07**	**5.16**	**5.08**	**4.83**	**4.85**	**4.84**	*4.83*	*4.85*	*4.81*
Net Commercial Imports [b]	**5.76**	**5.67**	**5.98**	**6.67**	**6.95**	**7.14**	**7.40**	**8.12**	**8.60**	**8.60**	**9.01**	**9.30**	*9.10*	*9.54*	*9.77*
Net SPR Withdrawals	**0.06**	**0.05**	**-0.01**	**-0.02**	**0.00**	**0.00**	**0.07**	**0.01**	**-0.02**	**0.02**	**0.08**	**-0.02**	*-0.13*	*-0.08*	*-0.03*
Net Commercial Withdrawals	**0.00**	**-0.01**	**0.02**	**-0.05**	**-0.01**	**0.09**	**0.05**	**-0.06**	**-0.05**	**0.11**	**0.00**	**-0.07**	*0.09*	*-0.01*	*-0.04*
Product Supplied and Losses	**-0.02**	**-0.02**	**-0.01**	**-0.01**	**-0.01**	**-0.01**	**-0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*
Unaccounted-for Crude Oil	**0.26**	**0.20**	**0.26**	**0.17**	**0.27**	**0.19**	**0.22**	**0.14**	**0.11**	**0.19**	**0.15**	**0.12**	*0.04*	*0.12*	*0.16*
Total Crude Oil Supply	**13.41**	**13.30**	**13.41**	**13.61**	**13.87**	**13.97**	**14.19**	**14.66**	**14.89**	**14.80**	**15.07**	**15.13**	*14.92*	*15.38*	*15.62*
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*	*1.89*	*1.98*
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**	*0.43*	*0.41*	*0.39*
Crude Oil Product Supplied	**0.02**	**0.02**	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*
Processing Gain	**0.68**	**0.71**	**0.77**	**0.77**	**0.77**	**0.77**	**0.84**	**0.85**	**0.89**	**0.89**	**0.95**	**0.90**	*0.95*	*0.94*	*0.95*
Net Product Imports [c]	**1.38**	**0.76**	**0.94**	**0.93**	**1.09**	**0.75**	**1.10**	**1.04**	**1.17**	**1.30**	**1.40**	**1.59**	*1.38*	*1.59*	*1.73*
Product Stock Withdrawn	**-0.14**	**-0.04**	**0.06**	**-0.05**	**0.00**	**0.15**	**0.03**	**-0.09**	**-0.17**	**0.30**	**0.00**	**-0.23**	*0.14*	*0.01*	*-0.06*
Total Supply	**17.04**	**16.56**	**17.10**	**17.26**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	**19.70**	**19.65**	*19.68*	*20.22*	*20.61*
Demand															
Motor Gasoline [d]	**7.31**	**7.23**	**7.38**	**7.48**	**7.60**	**7.79**	**7.89**	**8.02**	**8.25**	**8.43**	**8.47**	**8.61**	*8.85*	*9.04*	*9.32*
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*	*1.61*	*1.65*
Distillate Fuel Oil	**3.02**	**2.92**	**2.98**	**3.04**	**3.16**	**3.21**	**3.37**	**3.44**	**3.46**	**3.57**	**3.72**	**3.85**	*3.77*	*3.98*	*4.01*
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**	*0.65*	*0.76*	*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**	*4.80*	*4.83*	*4.93*
Total Demand	**17.04**	**16.77**	**17.10**	**17.24**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	**19.70**	**19.65**	*19.68*	*20.22*	*20.61*
Total Petroleum Net Imports	**7.16**	**6.42**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	**10.42**	**10.90**	*10.49*	*11.13*	*11.50*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**323**	**325**	**318**	**335**	**337**	**303**	**284**	**305**	**324**	**284**	**286**	**312**	*278*	*281*	*294*
Total Motor Gasoline	**220**	**219**	**216**	**226**	**215**	**202**	**195**	**210**	**216**	**193**	**196**	**210**	*211*	*204*	*210*
Jet Fuel	**52**	**49**	**43**	**40**	**47**	**40**	**40**	**44**	**45**	**41**	**45**	**42**	*40*	*41*	*44*
Distillate Fuel Oil	**132**	**144**	**141**	**141**	**145**	**130**	**127**	**138**	**156**	**125**	**118**	**145**	*134*	*130*	*134*
Residual Fuel Oil	**49**	**50**	**43**	**44**	**42**	**37**	**46**	**40**	**45**	**36**	**36**	**41**	*31*	*37*	*39*
Other Oils [f]	**227**	**251**	**292**	**237**	**274**	**348**	**280**	**204**	**212**	**396**	**246**	**178**	*342*	*258*	*229*

[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**	**18.85**	**18.90**	**19.02**	**18.83**	**19.21**	**19.37**	*19.03*	*19.29*	*19.55*
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*	*3.79*	*3.80*
Supplemental Gaseous Fuels	**0.12**	**0.11**	**0.12**	**0.12**	**0.11**	**0.11**	**0.11**	**0.10**	**0.10**	**0.08**	**0.08**	**0.08**	*0.08*	*0.07*	*0.08*
Total New Supply	**19.38**	**19.45**	**19.88**	**20.42**	**21.39**	**21.40**	**21.75**	**21.84**	**22.12**	**22.34**	**22.83**	**23.06**	*22.60*	*23.15*	*23.43*
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*	*2.31*
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*	*2.31*	*2.34*
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*	*0.06*	*-0.02*
Total Supply	**19.16**	**19.70**	**20.11**	**20.70**	**21.11**	**21.85**	**21.73**	**21.84**	**21.56**	**22.54**	**23.64**	**21.87**	*23.13*	*23.21*	*23.41*
Balancing Item [a]	**0.01**	**-0.14**	**0.12**	**0.09**	**0.13**	**0.35**	**0.87**	**0.89**	**0.67**	**-0.15**	**-0.18**	**0.43**	*0.05*	*-0.23*	*-0.12*
Total Primary Supply	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.73**	**22.24**	**22.39**	**23.46**	**22.30**	*23.17*	*22.99*	*23.29*
Demand															
Residential	**4.39**	**4.56**	**4.69**	**4.96**	**4.85**	**4.85**	**5.24**	**4.98**	**4.52**	**4.73**	**4.99**	**4.81**	*4.92*	*4.86*	*4.99*
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*	*3.10*	*3.25*
Industrial	**8.25**	**8.36**	**8.70**	**8.87**	**8.91**	**9.38**	**9.69**	**9.71**	**9.49**	**9.16**	**9.40**	**8.52**	*8.98*	*8.97*	*8.87*
Lease and Plant Fuel	**1.24**	**1.13**	**1.17**	**1.17**	**1.12**	**1.22**	**1.25**	**1.20**	**1.17**	**1.08**	**1.14**	**1.15**	*1.13*	*1.22*	*1.21*
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**	*7.85*	*7.74*	*7.66*
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*	*1.23*	*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**	*6.57*	*6.51*	*6.38*
Transportation [c]	**0.66**	**0.60**	**0.59**	**0.63**	**0.69**	**0.70**	**0.72**	**0.76**	**0.64**	**0.66**	**0.66**	**0.61**	*0.59*	*0.54*	*0.60*
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*	*5.49*	*5.58*
Total Demand	**19.17**	**19.56**	**20.23**	**20.79**	**21.24**	**22.20**	**22.60**	**22.73**	**22.24**	**22.39**	**23.46**	**22.30**	*23.17*	*22.99*	*23.29*

[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*	*1089.1*	*1102.3*
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*	*390.5*	*391.1*
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*	*134.5*	*128.2*
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*	*583.1*
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*	*17.9*	*18.6*
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*	*39.9*	*40.7*
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*	*1067.1*	*1080.0*
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*	*158.1*
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*	*158.1*	*160.7*
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*	*-9.2*	*-2.6*
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*	*1069.6*	*1092.2*
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*	*25.5*	*23.6*
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*	*994.8*	*1008.4*
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*	*61.1*	*60.2*
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*	*3.9*	*3.8*
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*	*57.2*	*56.4*
CHP [e]	**27.8**	**27.0**	**28.2**	**28.9**	**29.7**	**29.4**	**29.4**	**29.9**	**28.6**	**27.8**	**28.0**	**25.8**	*25.6*	*25.1*	*26.0*
Non-CHP	**48.5**	**48.4**	**45.8**	**46.0**	**45.5**	**43.7**	**42.3**	**41.7**	**38.9**	**37.0**	**37.2**	**39.4**	*37.5*	*32.2*	*30.4*
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*	*1081.4*	*1092.2*
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*	*-11.8*	*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**	*1903.4*	*1915.8*	*1948.2*
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**	*83.6*	*107.3*	*92.3*
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*	*600.2*	*611.5*
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*	*779.2*	*784.2*
Hydroelectric	**286.2**	**281.5**	**245.8**	**273.5**	**250.6**	**302.7**	**338.1**	**346.6**	**313.4**	**308.6**	**265.8**	**204.9**	*250.8*	*278.7*	*282.1*
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**	*55.0*	*37.3*	*41.1*
Subtotal	**2900.1**	**2934.2**	**2933.1**	**3042.8**	**3087.5**	**3193.2**	**3283.0**	**3328.1**	**3456.1**	**3528.7**	**3636.2**	**3580.0**	*3673.4*	*3718.5*	*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**	*162.4*	*161.9*	*167.2*
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**	*3835.7*	*3880.4*	*3926.5*
Net Imports [d]	**2.3**	**19.6**	**25.4**	**27.8**	**44.8**	**39.2**	**40.2**	**34.1**	**26.3**	**28.9**	**34.0**	**20.3**	*21.1*	*31.4*	*49.2*
Total Supply	**3039.0**	**3092.1**	**3108.0**	**3223.9**	**3291.1**	**3391.7**	**3483.2**	**3525.0**	**3645.3**	**3722.4**	**3834.8**	**3756.9**	*3856.9*	*3911.9*	*3975.6*
Losses and Unaccounted for [e]	**211.9**	**212.0**	**222.4**	**234.9**	**222.4**	**234.4**	**236.2**	**230.9**	**220.1**	**227.8**	**230.0**	**181.8**	*141.1*	*129.4*	*170.6*
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*	*1293.7*	*1295.8*
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**	*1118.1*	*1128.2*	*1139.8*
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*	*994.2*	*999.3*
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**	*105.1*	*110.8*	*112.5*
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**	*3485.2*	*3526.9*	*3547.4*
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*	*255.6*	*257.6*
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**	*3715.8*	*3782.5*	*3805.0*

[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.