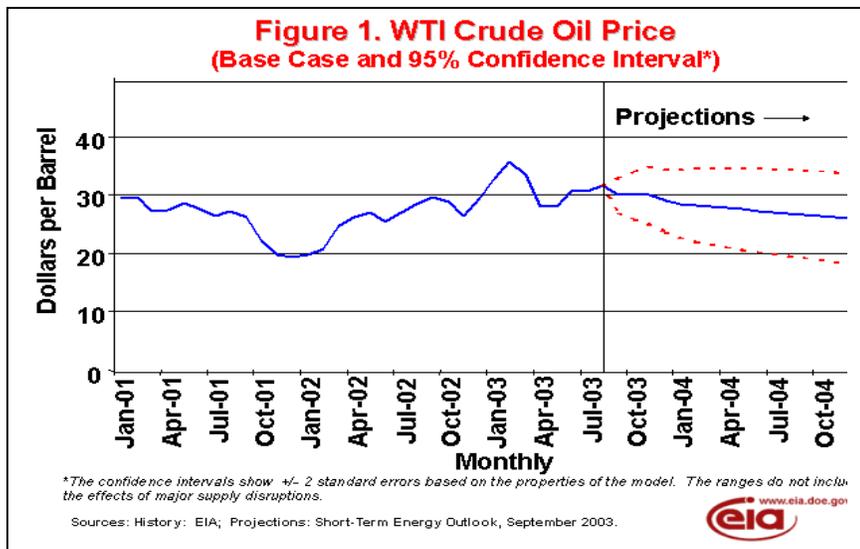


Short-Term Energy Outlook

September 2003



Overview

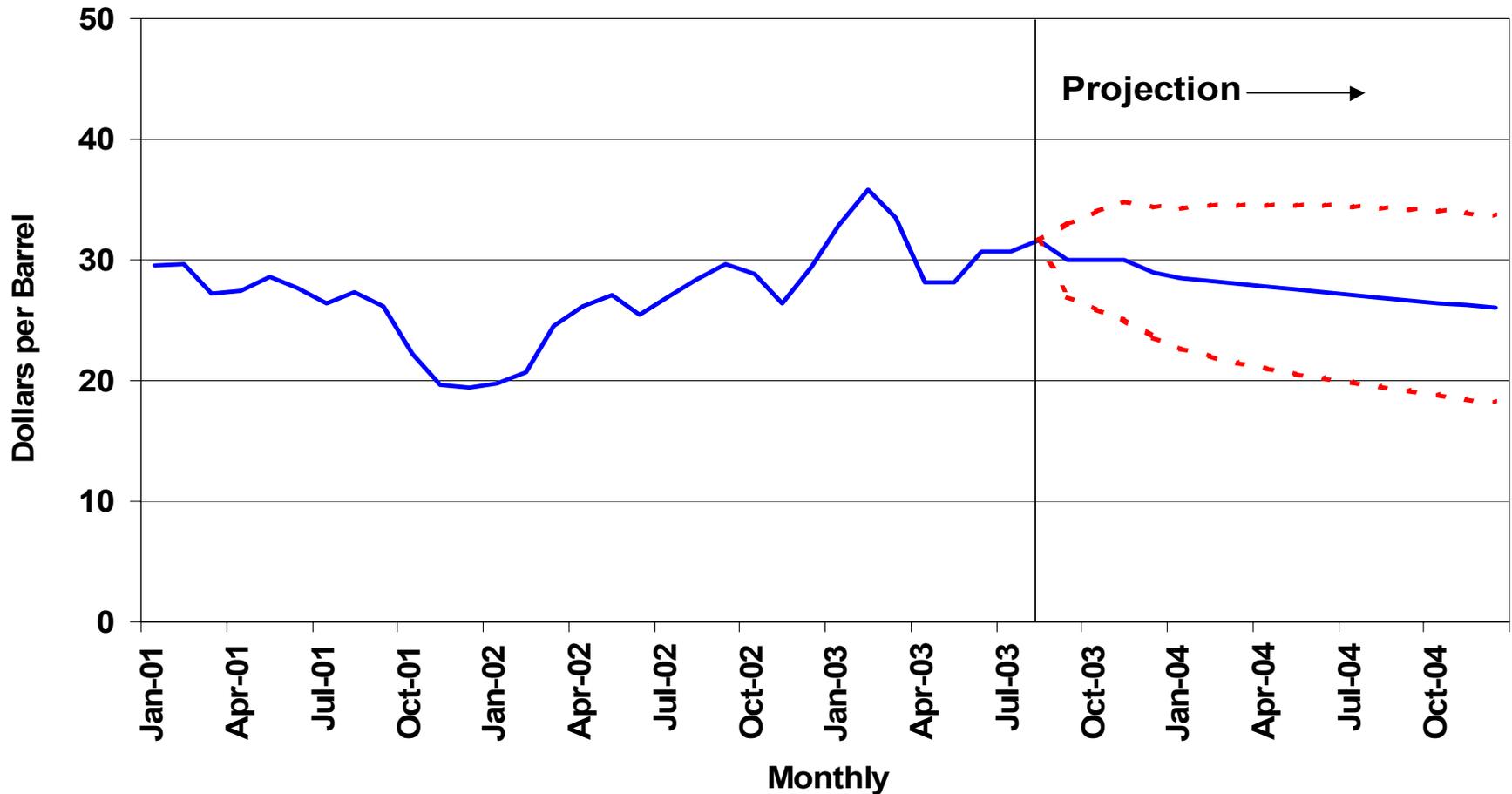
World Oil Markets. The August average West Texas Intermediate (WTI) crude oil price of \$31.57 per barrel was almost \$1 per barrel higher than it was in July (Figure 1). Crude oil prices declined slightly in early September as pressure to buy oil dropped at the end of the summer driving season. Still, OECD oil inventories remain low, leaving the market susceptible to price uncertainty. We do not see market fundamentals as favoring sustained price reductions and we expect prices to remain relatively firm for the rest of

the year, even with the expected increases in Iraqi oil supplies, largely because of tight OECD commercial inventories. WTI crude oil prices should remain near current levels of between \$28 and \$30 per barrel through December and gradually slide to roughly \$26 per barrel after Iraqi oil exports return to near pre-war levels in 2004.

U.S. Natural Gas Markets. Demand for natural gas this summer is currently estimated to have been 2.6 percent lower than last summer's level, due largely to the 11 percent fewer cooling degree-days compared with last summer and the effect of high natural gas prices on consumption in the industrial and electricity-generating sectors. Summer natural gas wellhead prices are estimated to have risen about 60-70 percent above last year. These factors dampened demand and enabled the record high levels of natural gas storage injections seen in the past few months, when weekly net storage additions exceeded the 5-year average in 18 of the past 20 weeks. However, at the end of August, working natural gas in storage stood at about 2.4 trillion cubic feet (tcf), or 13 percent, below the year-ago level, but close to normal. Barring any disruptions, aggregate working gas storage is expected to reach 3.0 trillion cubic feet by the end of October.

Motor Gasoline Markets. Pump prices were relatively steady for much of July and the first week of August. However, during a recent three-week period, prices at the pump surged by over 20 cents per gallon. In fact, EIA's August 25 gasoline price survey recorded a new nominal (unadjusted for inflation) high for motor gasoline prices of \$1.75 (U.S average regular, self service). Several converging factors contributed to this late summer price spike: tight supplies, heavy demand and a series of local supply disruptions, including the loss of electric power on August 14, which shut down several refineries in the Midwest. Not only did nominal retail gasoline prices hit record levels, but the 12 cents per gallon price rise (US average) between August 18th and August 25th was the largest weekly price increase since EIA began its weekly gasoline price survey. Pump prices should begin to recede this month, as many of the local supply problems have been alleviated and as the driving season winds down following the Labor Day weekend. Spot gasoline prices (New York Harbor) fell about 25-30 cents per gallon by the first week in September compared to mid-August, a development that should contribute to declining retail gasoline prices in coming weeks. However, because prices rose so rapidly in August, EIA's projected average retail price for

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



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

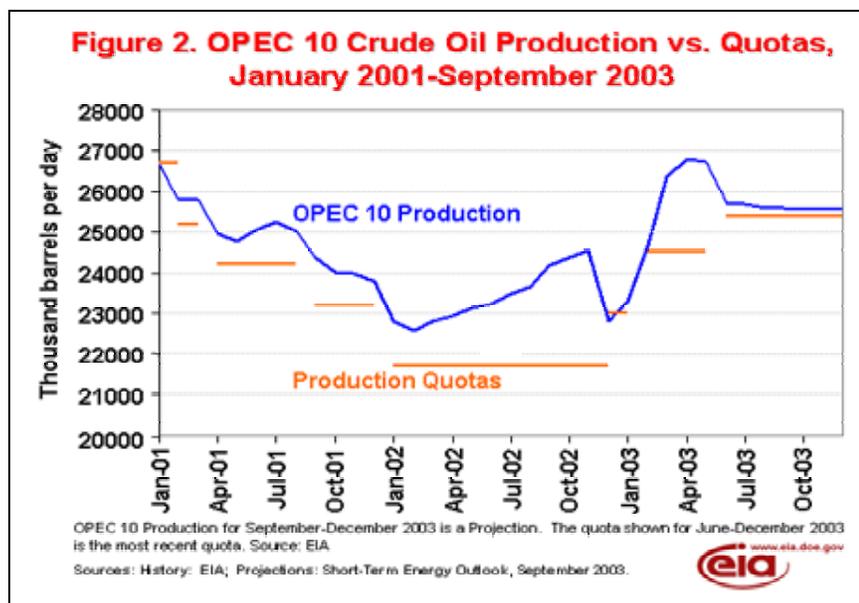
Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2003.



regular gasoline in September (\$1.67) remains above the corresponding average price for August (\$1.62). Looking ahead, we anticipate that retail regular gasoline will average about \$1.55 in October, then fall below \$1.50 in November.

Details

World Oil Markets



International Oil Supply. August OPEC 10 oil production (excluding Iraq) stabilized at an estimated 25.6 million barrels per day, about the same as their estimated production levels in June and July, and only 0.2 million barrels per day above the OPEC production targets that took effect June 1 (Figure 2). No cuts in OPEC's production targets are expected at their next meeting on September 24 because oil prices are still near the upper end of OPEC's target range. In addition, OPEC has maintained a wait-and-see attitude regarding the return of Iraqi oil exports, which have not risen as

quickly as expected.

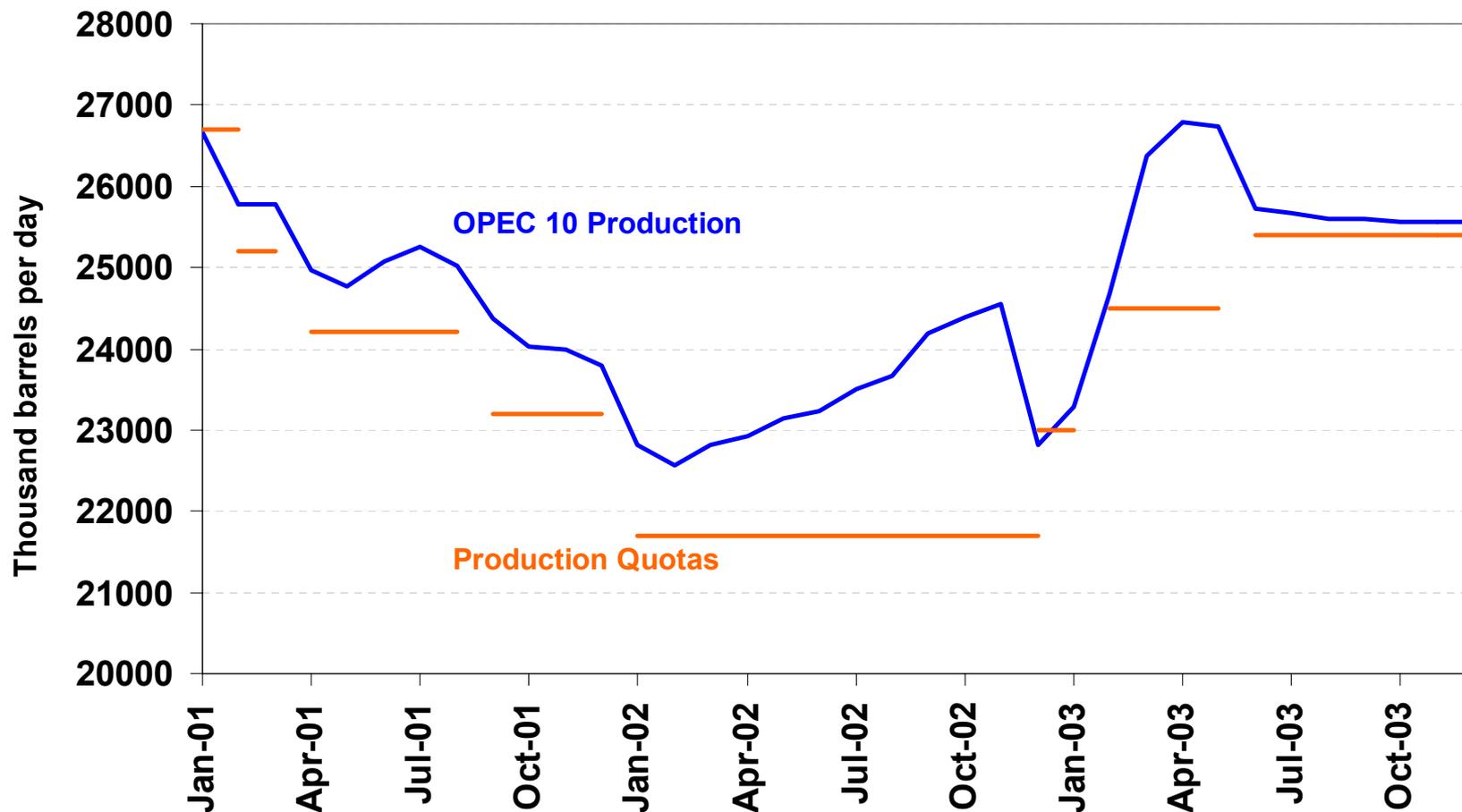
Non-OPEC production will likely grow by 1 million barrels per day in 2003 and by 1.3 million barrels per day in 2004. Most of this growth is expected to come from Russia and the Caspian Sea region, with supplies from these countries expected to increase by over 800,000 barrels per day in 2003 and 2004. Additional increments from this region are not expected to come until new export pipeline capacity is added after the end of the projection period for the *Short-Term Energy Outlook*.

International Oil Demand. World oil demand is projected to grow by about 1 million barrels per day in both 2003 and 2004 (Figure 3). About one-fifth of the growth in world oil demand in 2003 is projected to come from the U.S., with about one-third coming from other OECD countries (including a temporary increase in Japan of about 200,000 barrels per day due to nuclear outages). China and other non-OECD countries combined are projected to provide an additional 0.5 million barrels per day of demand growth. Similar growth is expected in 2004, with more of the total net growth coming from outside the OECD as Japanese consumption declines as nuclear output returns to normal.

Crude Oil Prices. Average monthly WTI prices rose for the third consecutive month in August, up approximately \$1 from July. In fact, the OPEC basket price averaged \$28.69 per barrel in August, exceeding the upper end of OPEC's target range of \$28 per barrel in all but one day in August.

EIA's *Outlook* analysts expect prices to decline only slightly throughout the rest of 2003, even with the anticipated increases in Iraqi oil supplies, largely because OECD commercial inventories remain tight (Figure 4). Until these inventories are rebuilt above observed 5-year lows, which is not likely to happen until the end of the year, WTI crude oil prices should remain near current levels, then gradually slide to roughly \$25 per barrel after Iraqi oil exports return to near pre-war levels in 2004.

Figure 2. OPEC 10 Crude Oil Production vs. Quotas, January 2001-September 2003

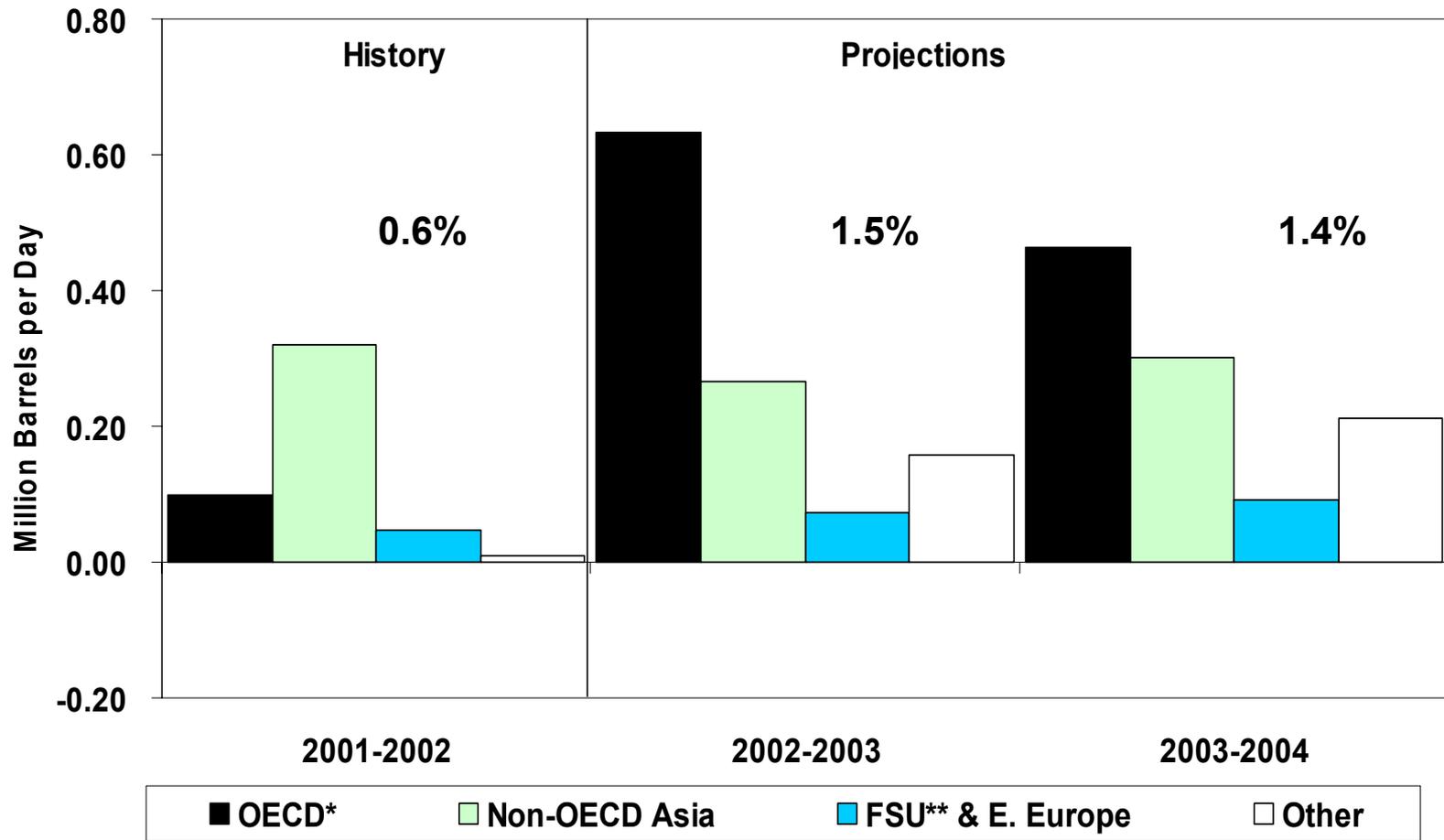


OPEC 10 Production for September-December 2003 is a Projection. The quota shown for June-December 2003 is the most recent quota. Source: EIA

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



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



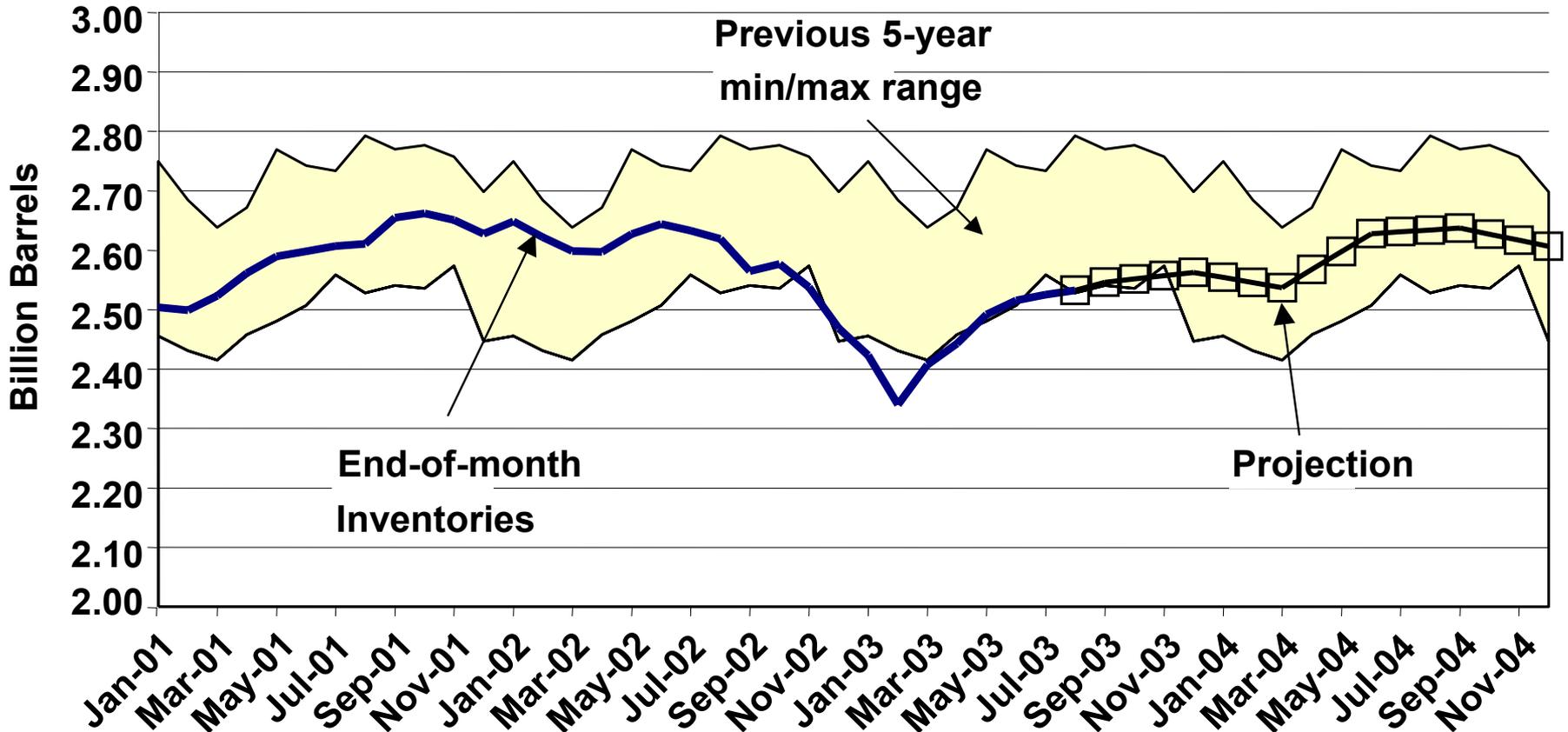
* Note: OECD now defined to include the Czech Republic, Hungary, Mexico, Poland and South Korea in EIA's statistics.

** FSU = Former Soviet Union

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



Figure 4. OECD Commercial Oil Stocks



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



EIA assumes that OPEC will adjust its production to keep prices at its preferred levels. Since October 1999, in 41 out of the past 46 months, the monthly average OPEC basket price has been within OPEC's target range. OPEC has been monitoring the situation in Iraq and is expected to reduce its own production as the level of Iraqi exports increases.

U. S. Energy Prices

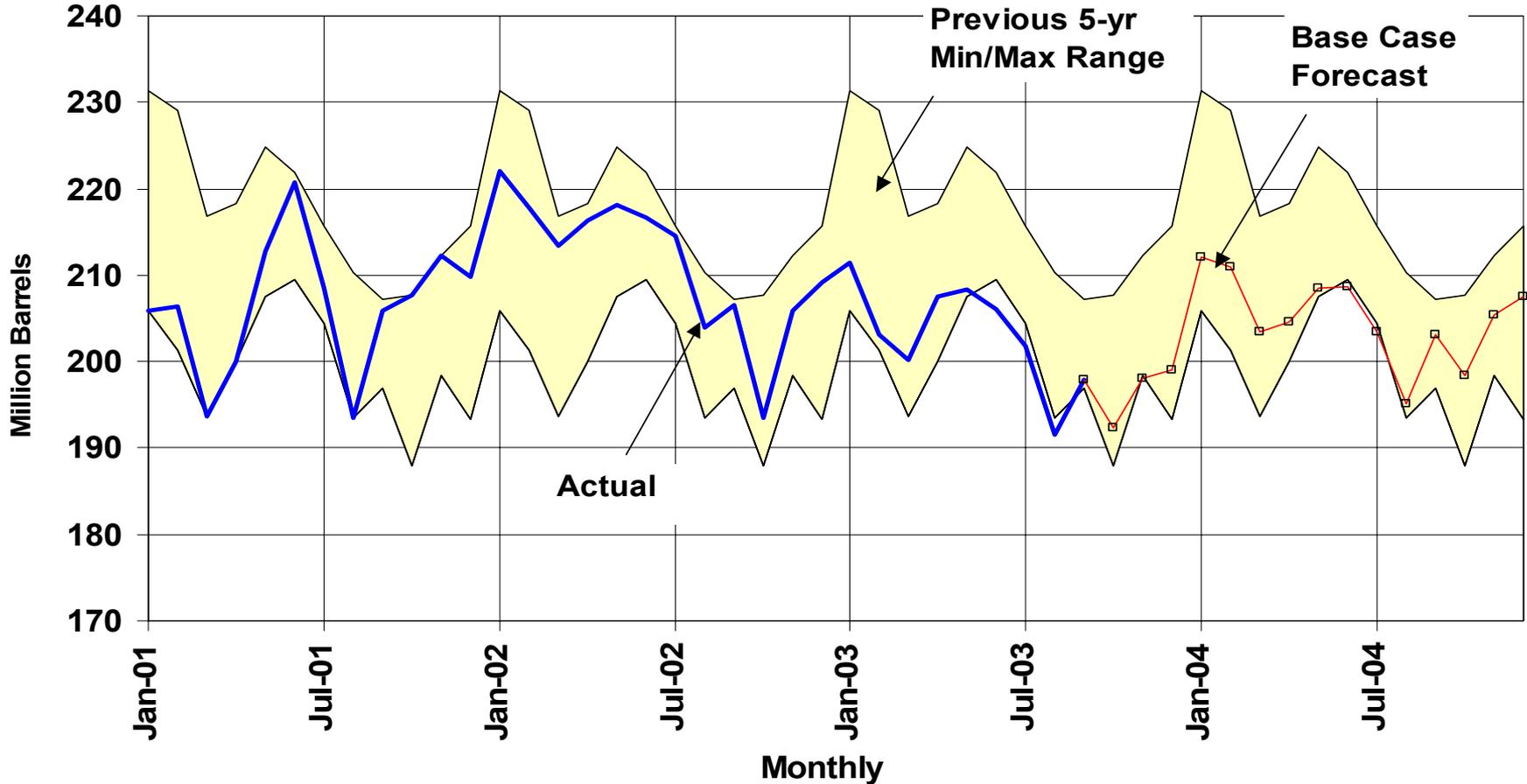
Motor Gasoline: Pump prices were relatively steady for much of July and the first week of August. However, during a recent three-week period, prices at the pump surged by over 20 cents per gallon. In fact, EIA's August 25 gasoline price survey set a new nominal (unadjusted for inflation) high for motor gasoline prices of \$1.75 (U.S average regular, self service). (We note that, adjusted for inflation, this price is still over \$1.00 per gallon less than the highest US average inflation-adjusted price set in March 1981). Several converging factors contributed to this late summer price spike. Since this past March, both domestic gasoline and crude oil inventories have remained below normal ([Figure 5](#)). Moreover, gasoline demand, which had been below normal for the first seven months of the year due to weather and a sluggish economy, increased in August in response to more agreeable weather and better economic news, and reached a record high. Given tight supplies and heavy demand, prices were poised to climb sharply if supplies of gasoline were further constrained. A series of local supply disruptions did just that: refinery shutdowns in California, a gasoline pipeline rupture in Phoenix, Arizona at the end of July, and the massive loss of electric power in the Northeast and Midwest on August 14 shut down several refineries in the Midwest. Consequently, retail gasoline prices hit record levels and the 12 cents per gallon price rise (US average) between August 18th and August 25th was the largest weekly price increase since EIA began its weekly gasoline price survey ([Figure 6](#)). Crude oil prices, which have remained high at between \$30-32 per barrel for WTI since the beginning of July, provided no relief.

This month, pump prices should begin to recede because many of the local supply problems have been alleviated and the driving season winds down following the Labor Day weekend. However, because prices rose so rapidly in August, EIA's projected average retail price for regular gasoline in September (\$1.67) remains above the corresponding average price for August (\$1.62). Looking ahead, we expect retail regular gasoline to average about \$1.55 in October, then fall below \$1.50 in November. In 2004, the average annual pump price is projected to be \$1.46 per gallon (down about 10 cents per gallon from the projected 2003 average), as crude oil prices and average annual refiner margins decline. Refiner margins this year had spiked during the beginning and end of the driving season. Next year, the appearance of more normal stock levels for gasoline should reduce the average refiner margin. By the end of August, gasoline inventories remained just below the 5-year min/max range.

The current price of regular motor gasoline in California of \$2.10 per gallon is 35 cents per gallon higher than the average price for the nation of \$1.75 per gallon.

Distillate Fuel Oil (Diesel Fuel and Heating Oil): Diesel fuel oil price increases have been more modest than motor gasoline price increases over the past month. While motor gasoline prices gained 20 cents per gallon from the first to the last week of August, diesel prices grew by only a nickel. Diesel prices will likely continue to increase as the heating season approaches, but by a modest amount, assuming our base case crude oil path holds. Heating oil prices during the October-March winter season are expected to average approximately the same amount (a little over \$1.30 per gallon) as they did last winter ([Figure 7](#)). We have not seen the rapid price increases for distillate fuels (diesel and heating oil) that have occurred for motor gasoline, since distillate fuel inventories remain somewhat less tight than gasoline inventories. Several caveats should be noted, however: if East Coast weather is colder-than-normal this fall and winter; if world oil prices remain high or rise further; or if distillate inventory levels, which currently lie in the low end of the "normal" range, are not built quickly by the beginning of the heating season, then heating oil

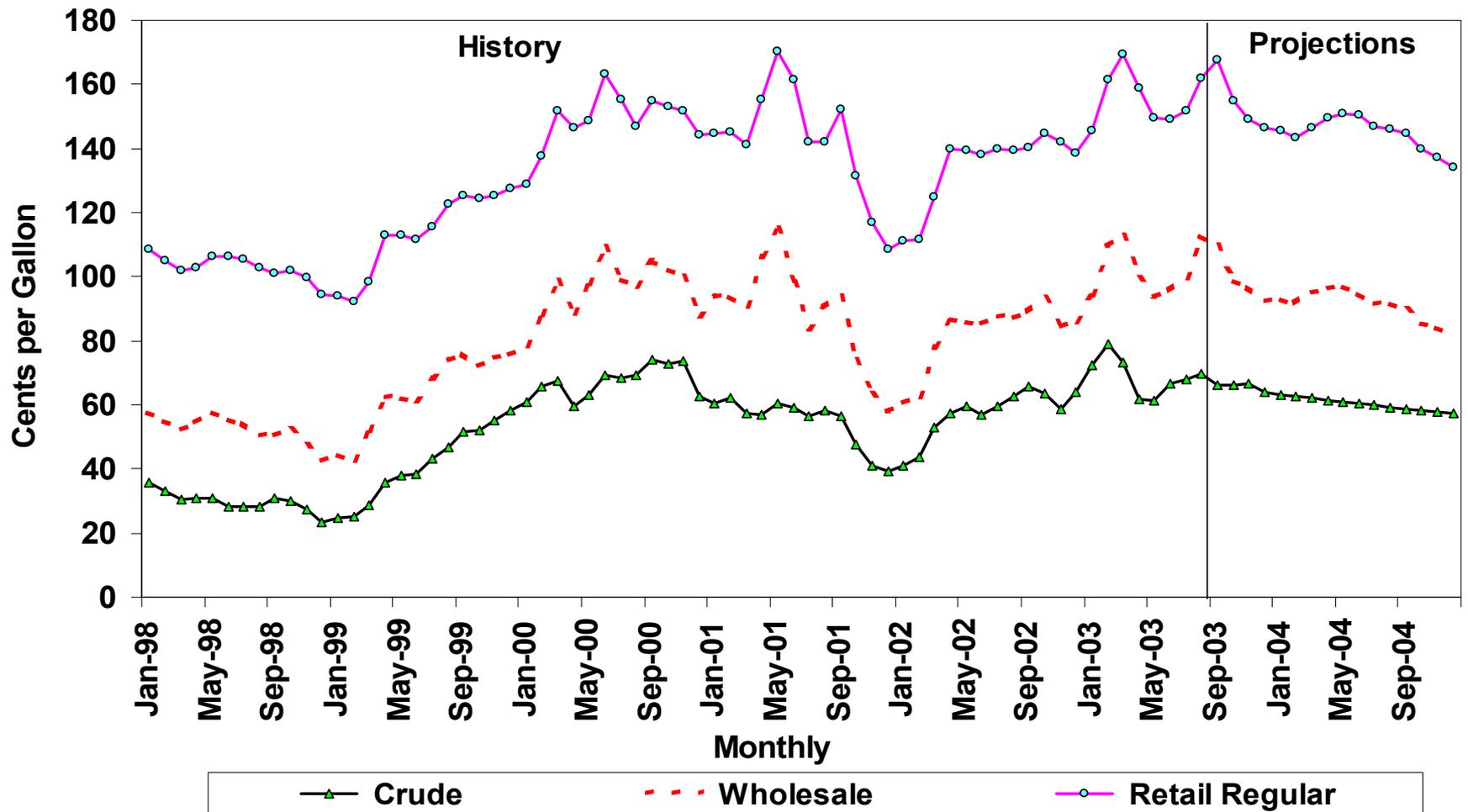
Figure 5. U.S. Gasoline Inventories



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



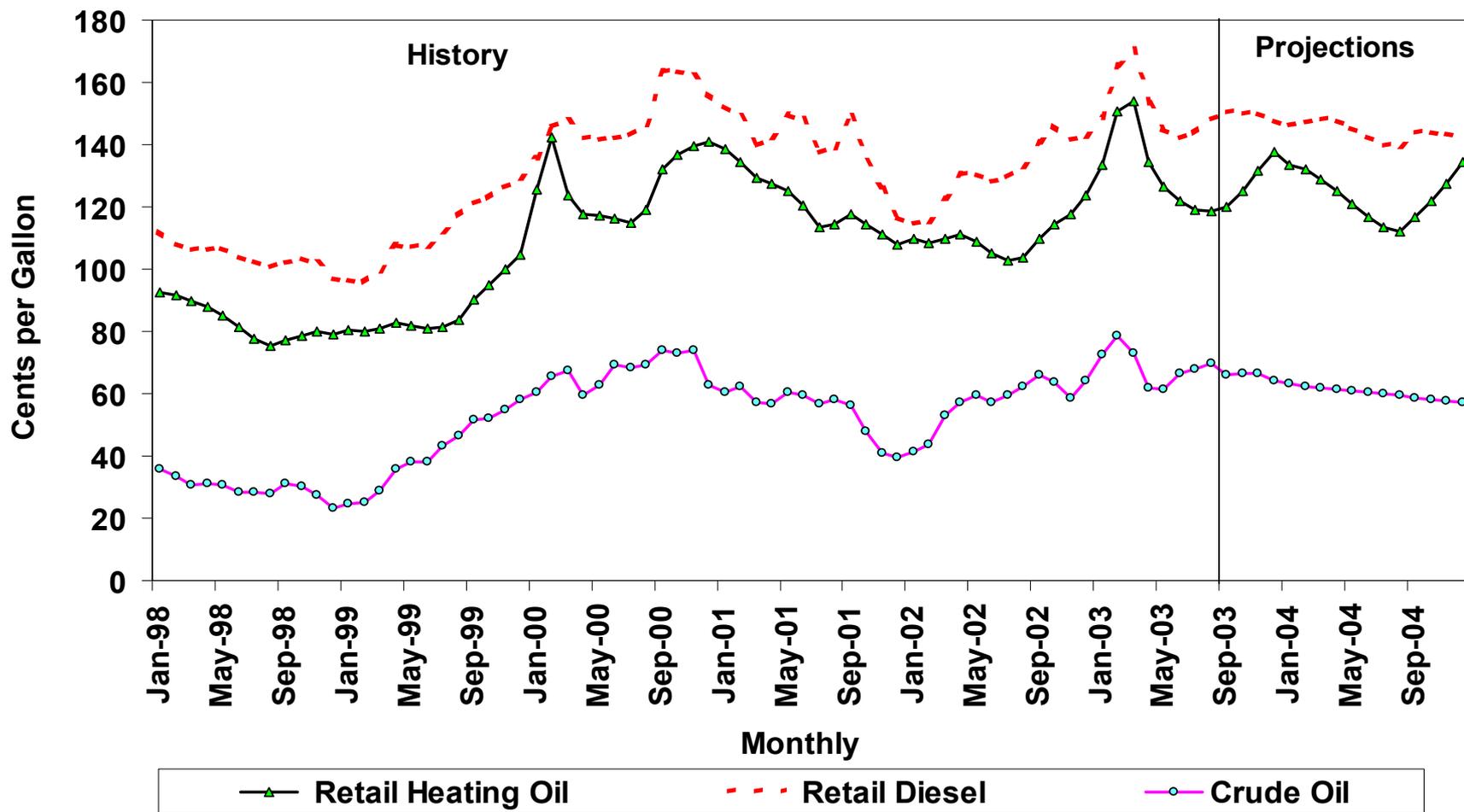
Figure 6. Gasoline Prices and Crude Oil Costs



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



Figure 7. Distillate Fuel Prices



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



prices could rise considerably more than is suggested by our base case projections. Based on the recent past, heating oil prices averaging between \$1.40 and \$1.55 per gallon (perhaps more at the local level) are possible given those scenarios. At the end of August, distillate fuel oil inventories reached 125 million barrels, a level slightly above the lower band (120.9 million barrels) of the 5-year min/max range ([Figure 8](#)).

Natural Gas: Mild summer weather throughout much of the country in June and July stabilized natural gas spot prices. Cooling demand diminished, thus reducing electricity generation from natural gas. As a result, historically high levels of natural gas were injected into underground storage during the period. Cash prices at the Henry Hub, which had hovered considerably above \$5 per million btu on a monthly basis since the beginning of the year, fell below \$4.70 per million btu during the last week in July. In August, a return to hotter weather sent prices over the \$5.00 mark. However, by the end of the month and the first week of September, spot prices again dipped below \$4.70 per million btu as the weather again turned mild. A continuation of above-average build rates for natural gas storage this season would make 3 trillion cubic feet of working gas in storage by November 1 an attainable target. Assuming normal weather, spot prices in the \$4.80-\$5.50 per million btu range are expected for the rest of 2003 ([Figure 9](#)).

Working gas in storage at the end of August stood about 13 percent below end-of-August 2002 levels and about 6 percent below the previous 5-year average. In 2003, natural gas wellhead prices are projected to reach \$4.97 per thousand cubic feet, an increase of about \$2.00 per thousand cubic feet over the 2002 annual average, the largest U.S. annual wellhead price increase on record. For 2004, average annual wellhead prices are projected to ease by about \$1.00 per thousand cubic feet, almost 20 percent, as supplies are projected to rise. Moreover, assuming that petroleum prices ease in 2004, the ceiling for the price of natural gas in the competitive sectors (electric utilities and industrial) would also be lowered. Residential natural gas prices for this heating season are expected to be about 10-15 percent higher than the average prices during last winter's heating season. Much of the price difference is expected to occur in the fourth quarter, when wellhead prices are projected to be about \$1.00 per thousand cubic (32 percent) higher than one year earlier.

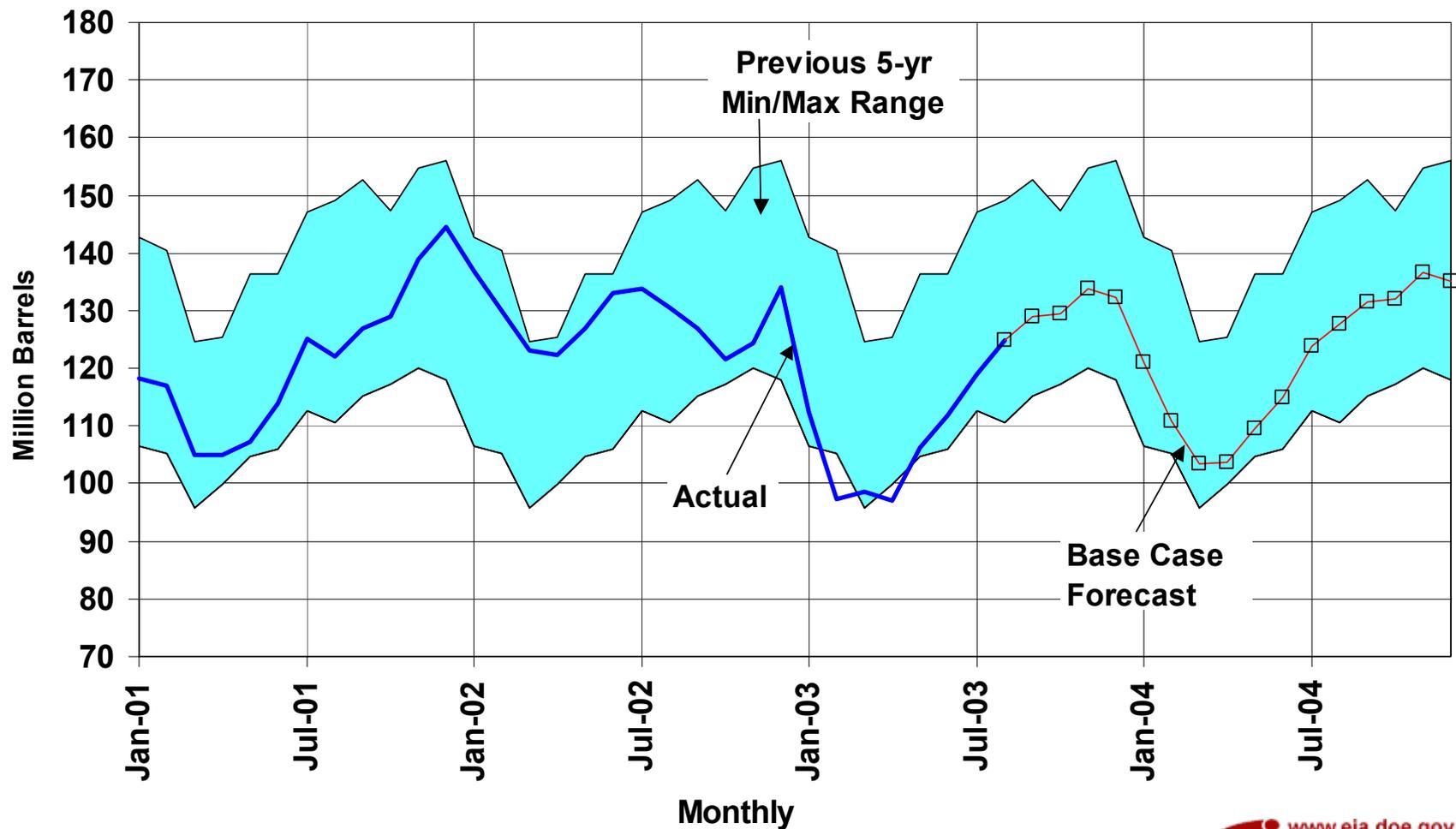
U. S. Oil Demand

This year, total petroleum demand is projected to increase by 200,000 barrels per day from last year's average, or 1.0 percent, to 19.96 million barrels per day ([Figure 10](#)). Demand for motor gasoline, the largest oil-based product, is projected to increase 1.1 percent for the year as a whole. Published highway travel data, which show year-to-year declines in February, March and May, are consistent with this motor gasoline demand pattern. The second half of the year, however, calls for a 2-percent increase in motor gasoline demand due largely to the economic recovery.

Jet fuel markets, having been adversely affected by both the SARS epidemic and the Iraqi campaign earlier in the year, are expected to remain sluggish for the rest of the year as well. For the first half of 2003, revenue ton-miles showed virtually no growth, but capacity continued to expand. Recent announcements indicate a nascent recovery in revenue ton-miles. Airlines, however, seeking to increase load factors, are planning to trim capacity for the rest of this year. As a result, commercial jet fuel demand is projected to contract by 1 percent this year. Moreover, domestic military demand will likely decline as a result of an increase in overseas activity, contributing to the projected year-over-year decline of 2.2 percent in total jet fuel demand.

Distillate fuel oil is projected to increase 3.9 percent this year, buoyed by the harsh weather during the first quarter and relatively high sales to the power generation sector during the spring and summer. Transportation demand, the largest distillate component, is projected to increase 3.0 percent this year, reflecting an acceleration of economic activity during the second half of the year. Residual fuel oil demand, bolstered by high space-heating demand during the first quarter and firm natural gas prices throughout the

Figure 8. Distillate Fuel Inventories

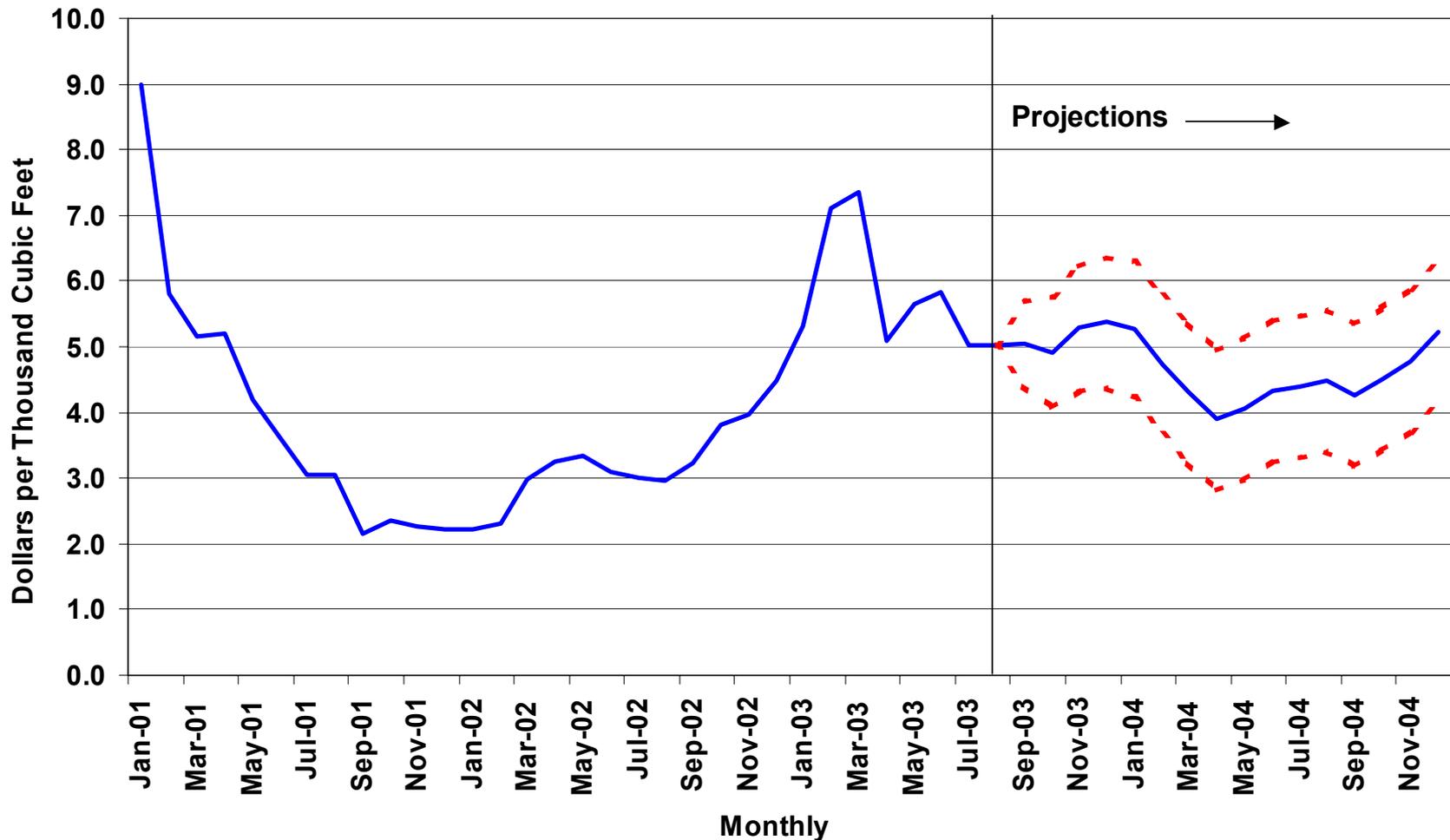


Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2003.



Figure 9. Natural Gas Spot Prices

(Base Case and 95% Confidence Interval*)

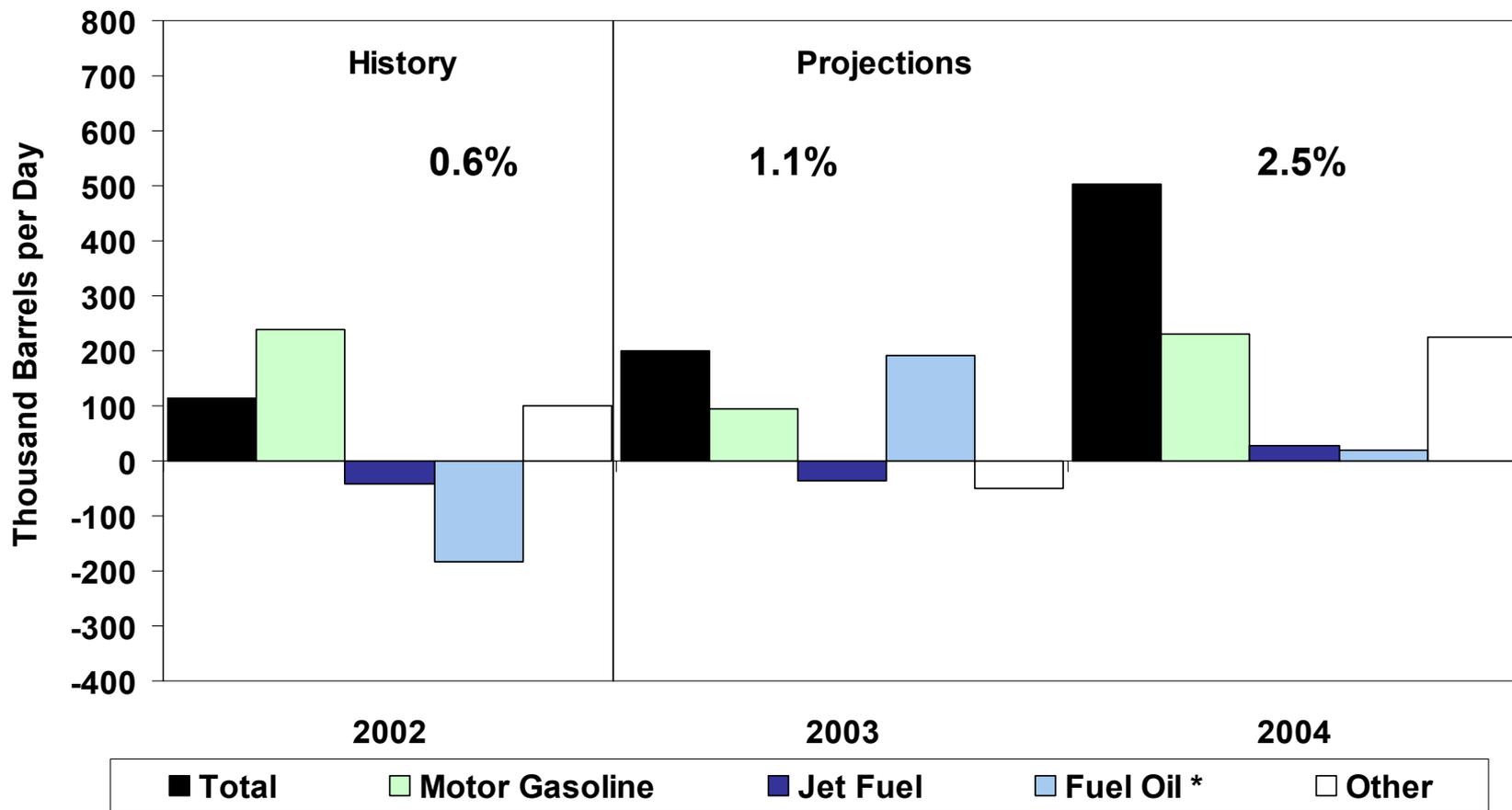


*The confidence intervals show +/- 2 standard errors based on the properties of the model. The ranges do not include the effects of major supply disruptions.

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



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



* Sum of distillate and residual fuel.

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



year, is projected to register an increase of 6.1 percent. Despite the colder-than-average winter, liquefied petroleum gas demand is projected to decline almost 5 percent for the year as a whole, largely as a result of weakness in petrochemical activity as well as high natural gas prices.

Total 2004 petroleum demand is projected to grow by 500,000 barrels per day, or 2.5 percent, to an average 20.47 million barrels per day. All the major products (except residual fuel oil) are expected to contribute to this growth. Motor gasoline demand, reflecting an acceleration of economic activity and a substantial decline in retail pump prices, is projected to increase 2.6 percent. Jet fuel demand, having declined for two consecutive years, is projected to post a growth rate of 1.8 percent to average 1.61 million barrels per day, still below the 2001 average. Distillate demand growth is projected to moderate to 2.3 percent, as demand reductions resulting from a forward projection of "normal" weather partly counteracts the projected 3.7 percent growth in distillate demand in the transportation sector. Residual fuel oil deliveries, having experienced growth in 2003, are projected to retrench by nearly 10 percent in 2004. That reversal reflects the assumptions of normal weather and somewhat greater competition from natural gas, for which prices are projected to decline throughout the forecast interval. Demand for liquefied petroleum gas is expected to recover smartly from the weaknesses of the previous year, exhibiting growth of 9 percent. Growth in both petrochemical activity and declines in natural gas feedstock prices are both expected to offset the year-to-year decline in weather-related space-heating demand under assumptions of normal weather during the upcoming winter season.

Oil Supply

Average domestic oil production is expected to increase by 32 thousand barrels per day, or 0.6 percent, in 2003, to a level of 5.78 million barrels of oil per day. For 2004, a 1.2 percent decrease is expected, resulting in an average production rate of 5.71 million barrels for the year ([Figure 11](#)).

Lower-48 States oil production is expected to increase by 42 thousand barrels per day to a rate of 4.80 million barrels per day in 2003, followed by a decrease of 39 thousand barrels per day in 2004. Oil production from the Mars, Mad Dog, Na Kika, Ursa and Dianna-Hoover Federal Offshore fields is expected to account for about 7.9 percent of the lower-48 oil production by the fourth quarter of 2004.

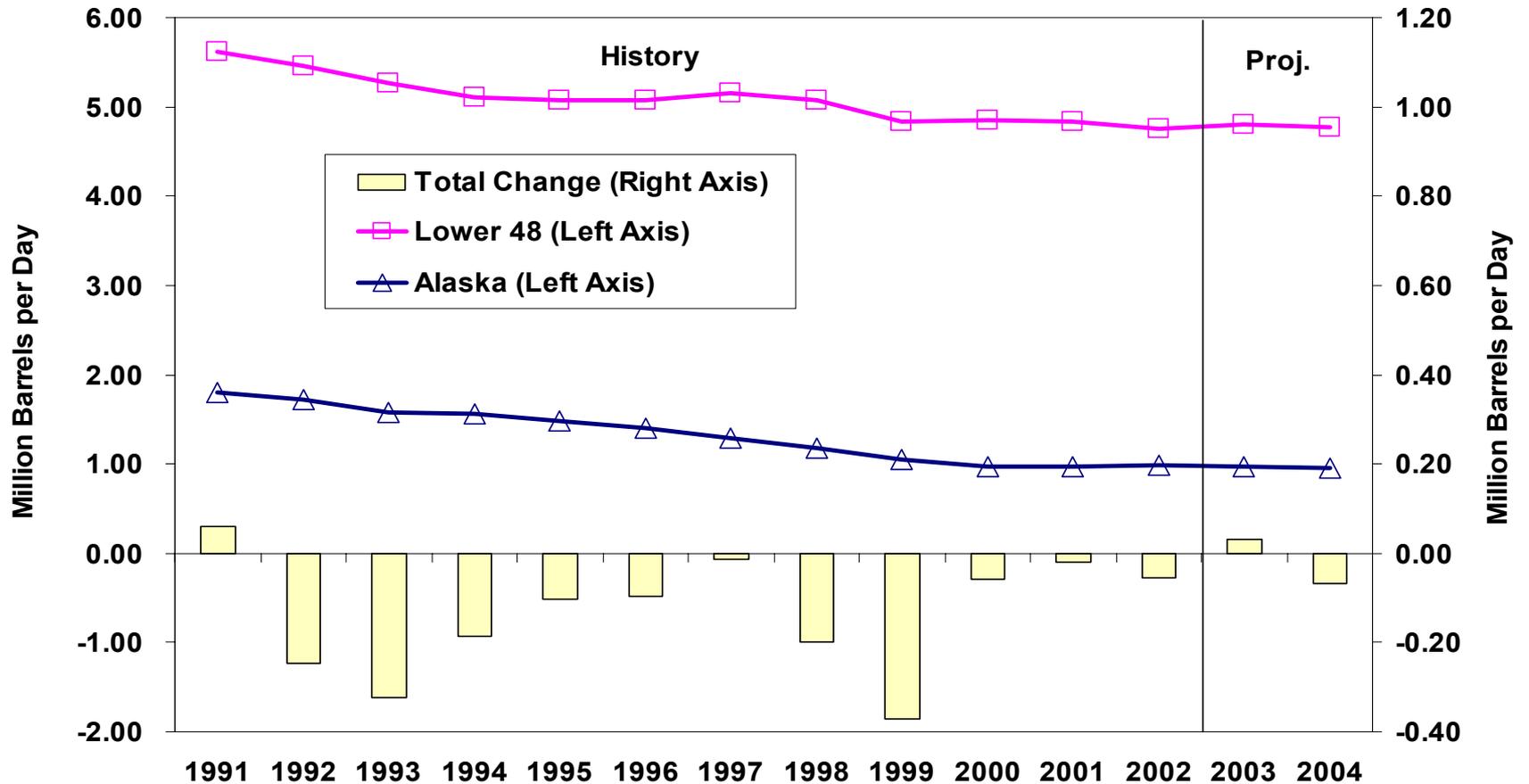
Alaska is expected to account for 16.6 percent of the total U.S. oil production in 2004. Alaskan oil production is expected to decrease by 1.0 percent in 2003 and decrease by 2.8 percent in 2004. The combined production rate from the two significant satellite fields, Alpine and North Star, averaged nearly 173 thousand barrels per day during June 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 210 thousand barrels per day over the forecast.

Other liquids production in the United States (specifically natural gas plant liquids) fell sharply (about 12 percent) in the first half of 2003 compared to the year-ago average. Much of this was due to lower extraction rates from the natural gas stream due to the high value of energy in the natural gas market. Natural gas liquids production for all of 2003 is expected to be at its lowest level in 11 years. More normal extraction rates are expected to generate a sharp rebound in 2004.

Natural Gas Supply and Demand

Natural gas demand growth is expected to be flat in 2003 due to demand weakness in the industrial sector and the sharply lower weather-related (electric power sector) demand during the summer months ([Figure 12](#)). In 2004, demand is projected to remain flat as increases in industrial and commercial sector demand are canceled out by lower electric power sector demand.

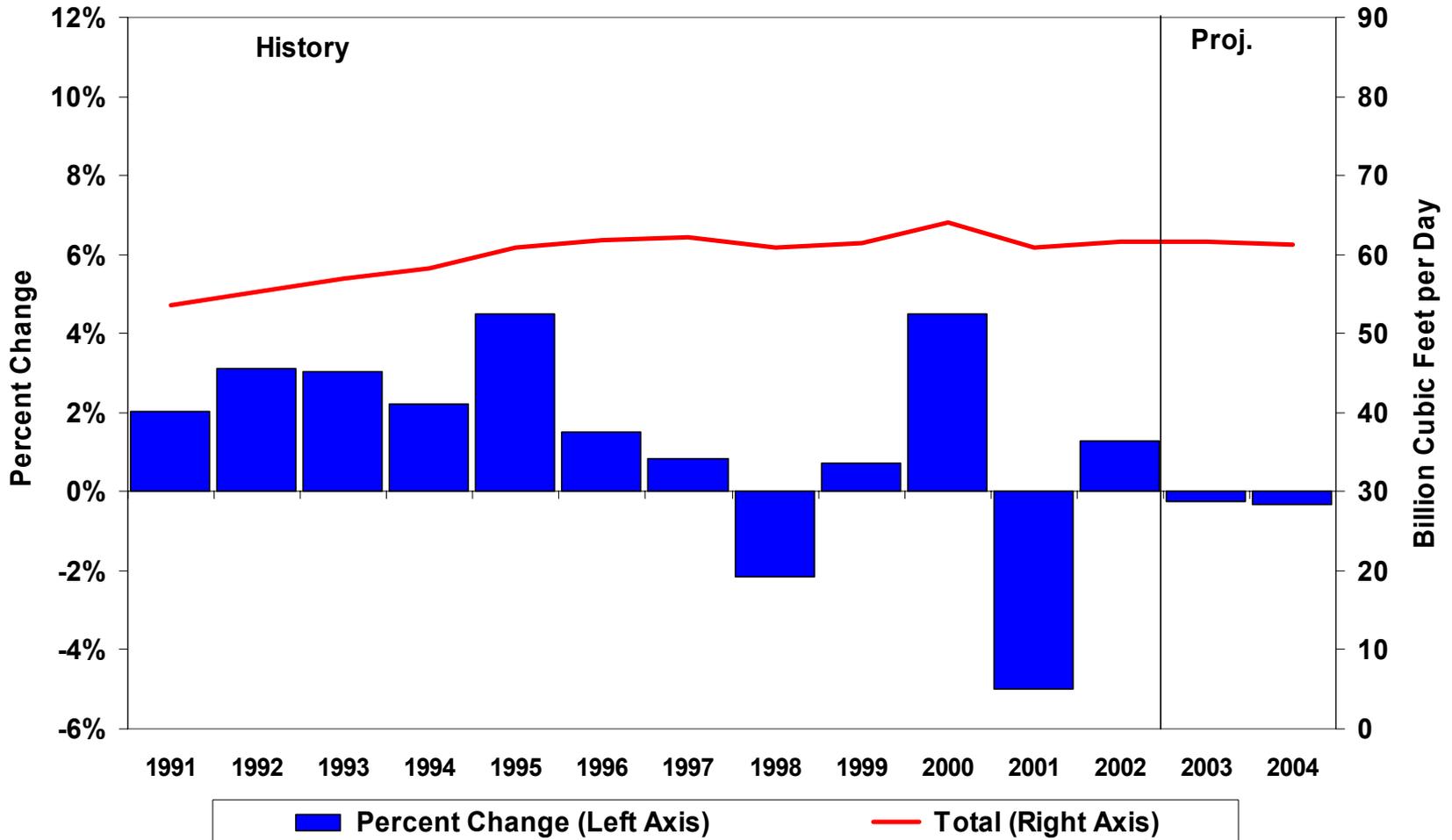
Figure 11. U.S. Crude Oil Production Trends



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



Figure 12. Total Natural Gas Demand Growth Patterns



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

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



Summer demand for natural gas is currently estimated to have been 2.6 percent below last summer's level, due largely to the 11 percent fewer cooling degree-days compared with last summer and the effect of high natural gas prices on consumption in the industrial and electricity-generating sectors. Summer natural gas wellhead prices are estimated to have been 60-70 percent higher than last year. These factors dampened demand and enabled the record high levels of natural gas storage injections seen in the past few months, during which weekly net storage additions exceeded the 5-year average in 18 of the past 20 weeks.

Working natural gas in storage stood at about 2.4 trillion cubic feet (tcf) at the end of August, or 13 percent below the year-ago level ([Figure 13](#)). Barring any disruptions, aggregate working gas in storage is expected to reach 3.0 trillion cubic feet by the end of October.

Natural gas production is expected to increase by about 2.4 percent this year. Following the downturn in natural gas-directed drilling activity in 2002, higher natural gas prices and sharply higher oil and natural gas field revenues continue to drive the resurgence in drilling this year ([Figure 14](#)). Despite the drilling increases, it seems now (in contrast to previous *Outlooks*) that a monthly average of 1000 active rigs drilling for new gas wells this summer may not quite happen. Monthly oil and natural gas field revenues are expected to continue to average over \$400 million this year ([Figure 15](#)). The prospects for significant reductions in natural gas wellhead prices over the forecast period from the current high levels could hinge on the productivity of the expected upsurge in drilling. An average natural gas wellhead price of about \$3.99 is projected for 2004 compared with \$4.97 in 2003, partly based on our belief that natural gas production will rise modestly in 2003 and remain close to improved levels in 2004.

Electricity Demand and Supply

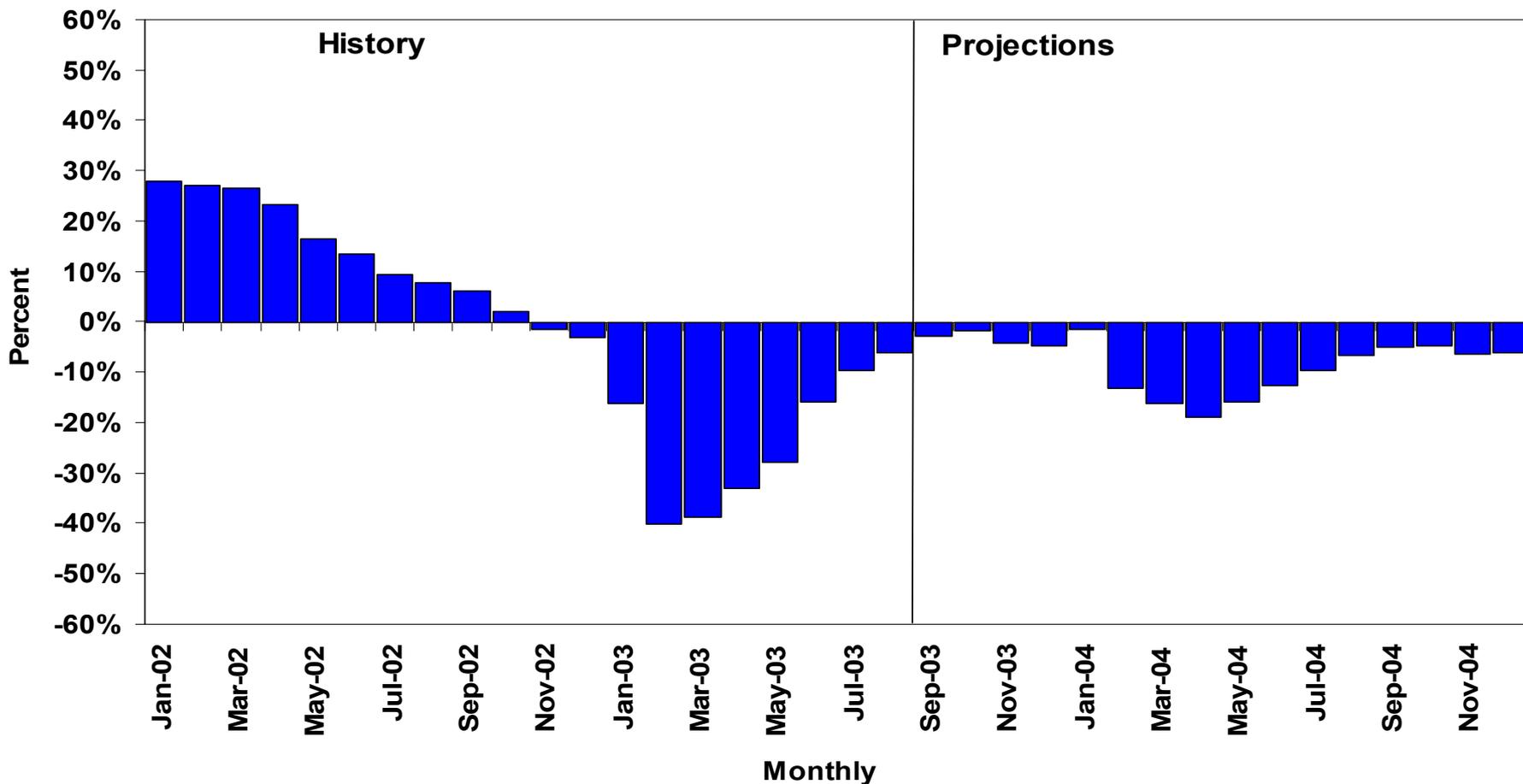
Electricity demand growth is projected to be flat this year in response to the drop in summer cooling demand ([Figure 16](#)). This situation contrasts sharply with the hot weather conditions that prevailed in 2002. In 2004, annual electricity demand is projected to grow by about 1.2 percent as economic growth increases.

Natural gas-generated electricity production will likely decline slightly in 2003. This is due to the fuel substitution that has occurred, related to high natural gas prices, which has increased oil-fired plant utilization (where possible) beyond what otherwise might have been projected. In addition, industrial demand was lower in the second and third quarters than it was during those quarters in 2002. For all of 2003, petroleum-generated electricity production is expected to increase by about 8.5 percent. In 2004, petroleum-generated electricity production is projected to fall back to close to 2002 levels. Hydroelectric generation in 2003, while flat in the Pacific Region, is up in other parts of the country due to high water levels and is expected to increase by over 5 percent this year. Nuclear generation will likely be somewhat lower than last year, as first-half statistics from EIA and the Nuclear Regulatory Commission indicate a decline from the first half of 2002. The extended shutdown of two nuclear plants has contributed to this decline. One plant in South Texas has been shut down for several months (NRC has recently allowed it to resume operations) and the Davis-Besse plant has been shut down for many months. With the nuclear industry electrical generating capacity factors now exceeding 90%, these extended shutdowns (which are longer than, and in addition to, normal refueling shutdowns) have a direct impact on generation.

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).

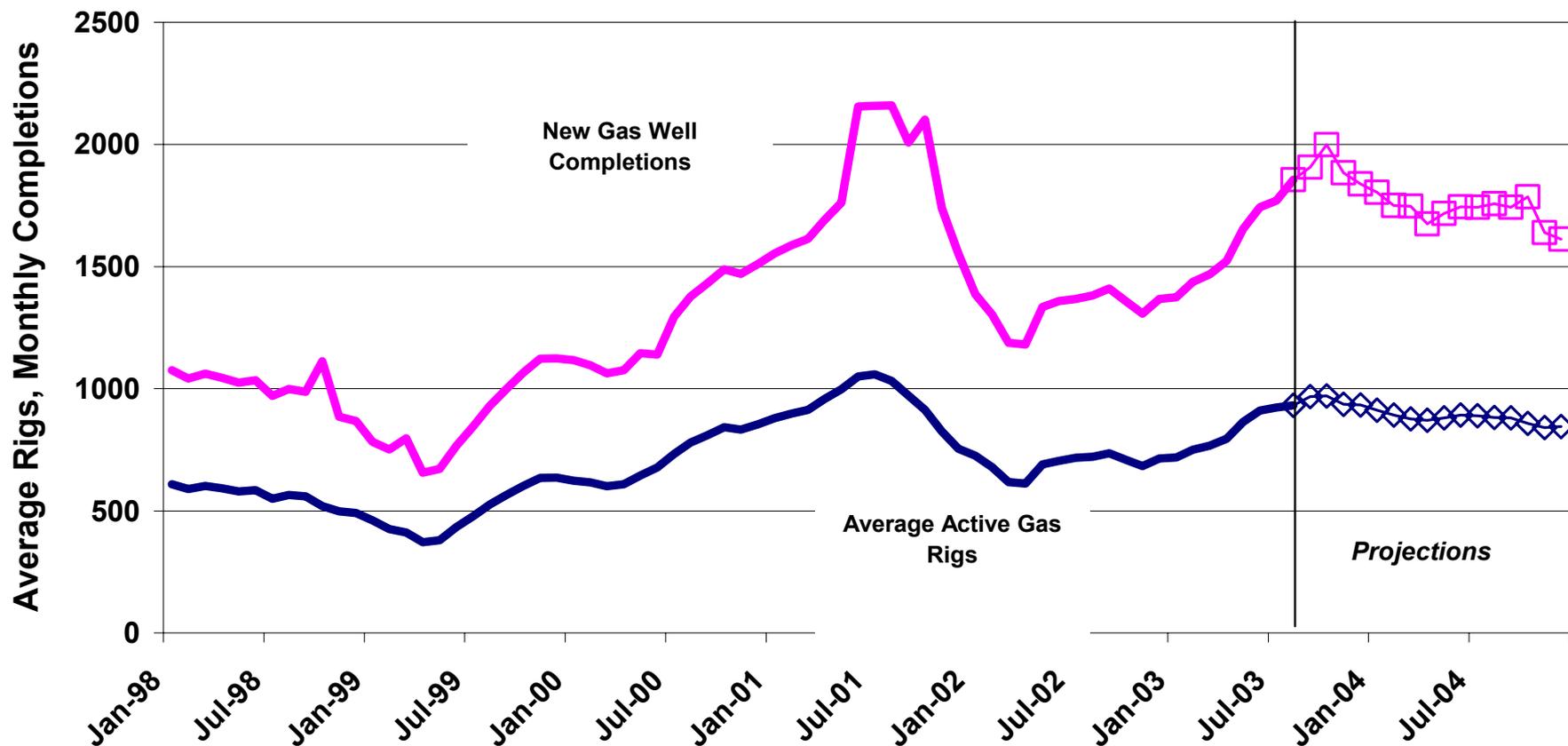
Figure 13. Working Gas in Storage (Difference from Previous 5-Year Average)



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



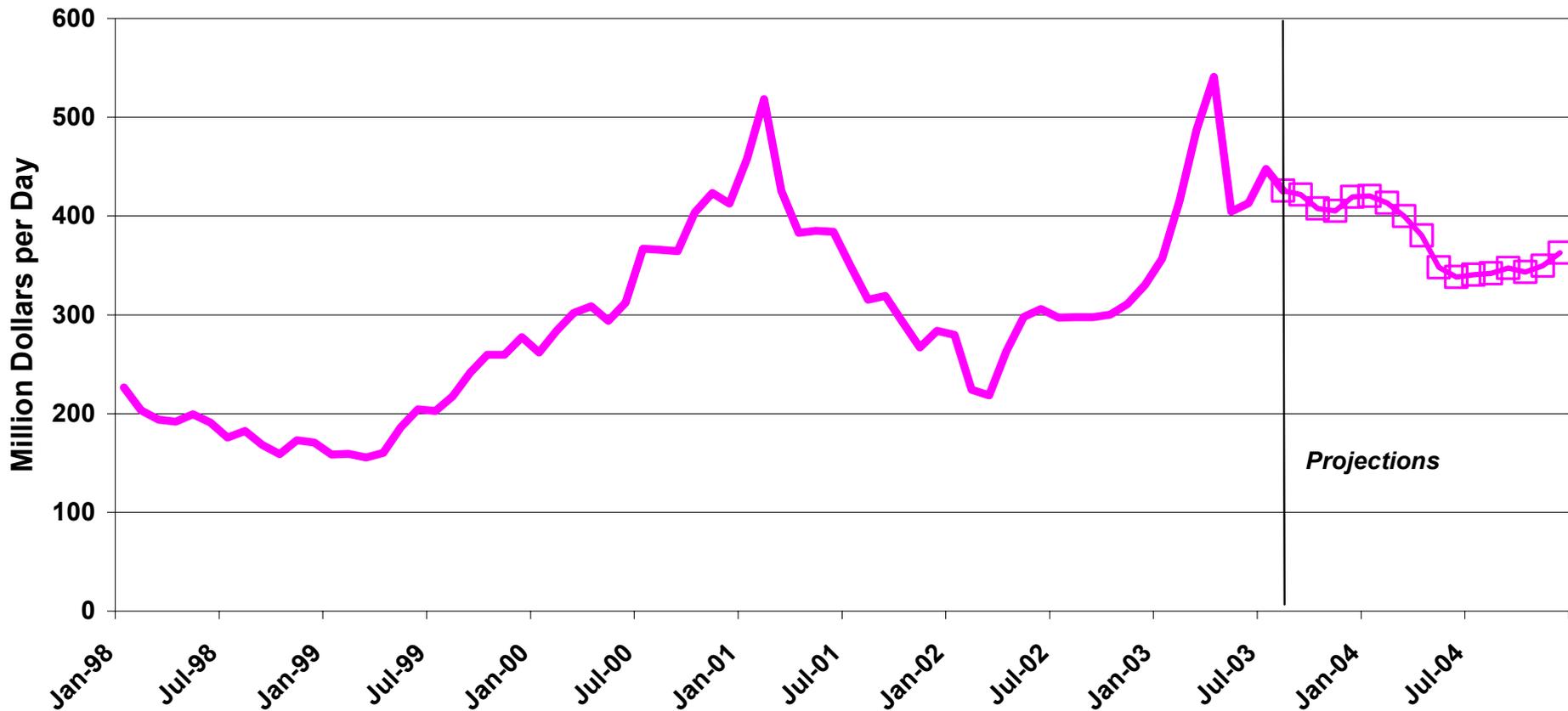
Figure 14. U.S. Natural Gas-Directed Drilling Activity



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



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

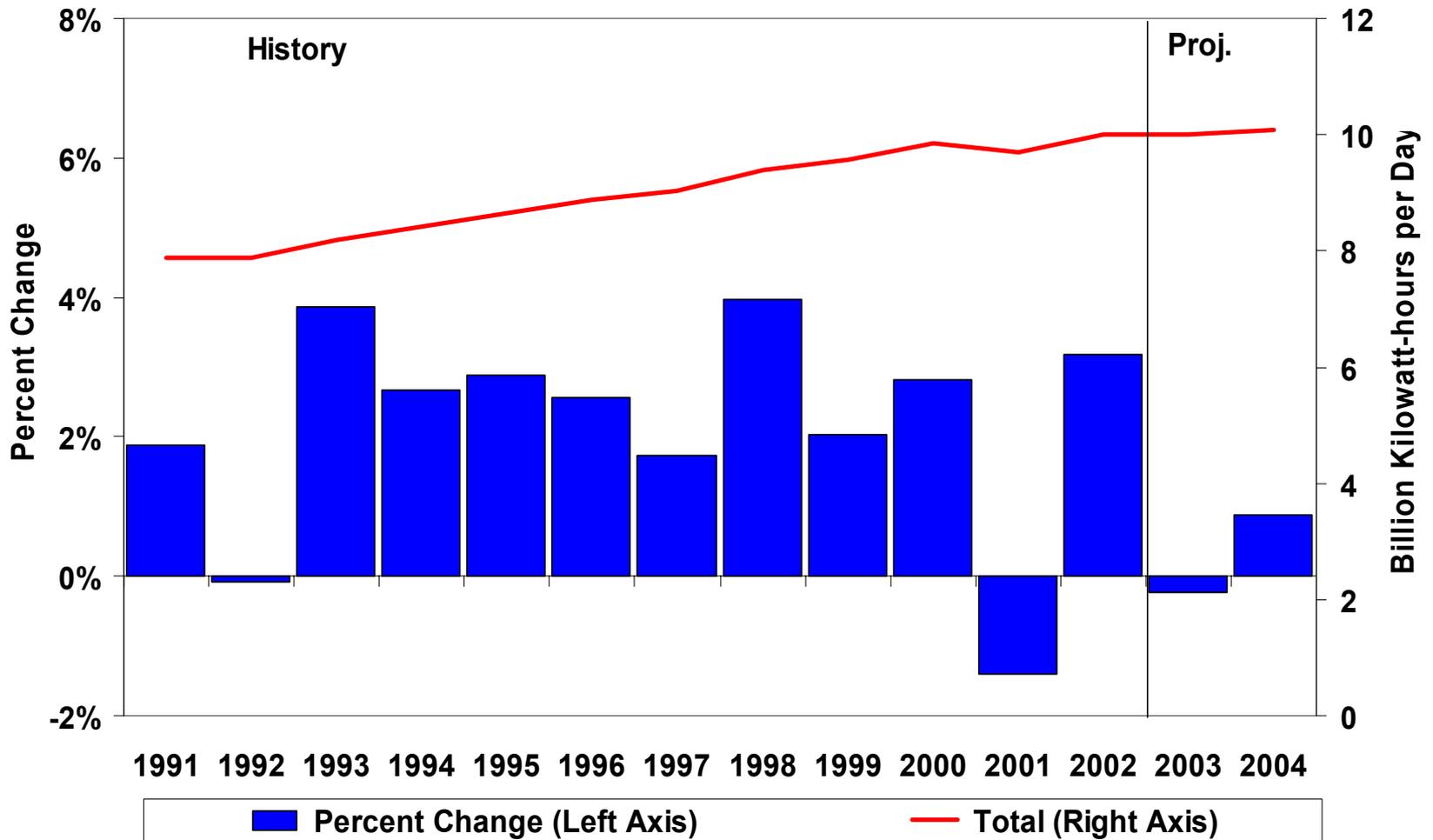


Projections

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



Figure 16. Total Electricity Demand Growth Patterns



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



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

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

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

	Year				Annual Percentage Change		
	2001	2002	2003	2004	2001-2002	2002-2003	2003-2004
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	9215	9440	9657	10024	2.4	2.3	3.8
Imported Crude Oil Price ^a (nominal dollars per barrel)	22.00	23.69	27.74	24.74	7.7	17.1	-10.8
Petroleum Supply (million barrels per day)							
Crude Oil Production ^b	5.80	5.75	5.78	5.71	-1.0	0.6	-1.2
Total Petroleum Net Imports (including SPR).....	10.90	10.54	11.11	11.49	-3.3	5.4	3.4
Energy Demand							
World Petroleum (million barrels per day).....	77.1	77.6	78.7	79.8	0.6	1.5	1.4
Petroleum (million barrels per day).....	19.65	19.76	19.96	20.46	0.6	1.0	2.5
Natural Gas (trillion cubic feet)	22.23	22.52	22.46	22.44	1.3	-0.3	-0.1
Coal ^c (million short tons)	1060	1065	1070	1074	0.5	0.4	0.4
Electricity (billion kilowatthours)							
Retail Sales ^d	3370	3475	3478	3509	3.1	0.1	0.9
Other Use/Sales ^e	173	180	169	180	4.2	-6.2	6.3
Total	3543	3655	3647	3689	3.2	-0.2	1.2
Total Energy Demand ^f (quadrillion Btu)	96.3	97.6	97.9	99.8	1.3	0.4	1.9
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar)	10.45	10.34	10.14	9.96	-1.1	-1.9	-1.8
Renewable Energy as Percent of Total ^g	5.6%	6.2%	6.3%	6.6%			

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

^bIncludes lease condensate.

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

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

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

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

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

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; and Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-0520; Weekly Petroleum Status Report, DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL0803.

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

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Macroeconomic ^a															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR)...	9363	9392	9486	9518	<i>9552</i>	<i>9608</i>	<i>9689</i>	<i>9777</i>	<i>9872</i>	<i>9964</i>	<i>10079</i>	<i>10183</i>	9440	<i>9657</i>	<i>10024</i>
Percentage Change from Prior Year	1.4	2.2	3.3	2.9	<i>2.0</i>	<i>2.3</i>	<i>2.1</i>	<i>2.7</i>	<i>3.3</i>	<i>3.7</i>	<i>4.0</i>	<i>4.1</i>	2.4	<i>2.3</i>	<i>3.8</i>
Annualized Percent Change from Prior Quarter	5.0	1.2	4.0	1.4	<i>1.4</i>	<i>2.3</i>	<i>3.4</i>	<i>3.6</i>	<i>3.9</i>	<i>3.7</i>	<i>4.6</i>	<i>4.1</i>			
GDP Implicit Price Deflator (Index, 1996=1.000)	1.101	1.105	1.108	1.112	<i>1.119</i>	<i>1.122</i>	<i>1.125</i>	<i>1.128</i>	<i>1.133</i>	<i>1.136</i>	<i>1.142</i>	<i>1.148</i>	1.107	<i>1.123</i>	<i>1.140</i>
Percentage Change from Prior Year	1.4	1.1	0.8	1.3	<i>1.6</i>	<i>1.5</i>	<i>1.6</i>	<i>1.4</i>	<i>1.2</i>	<i>1.3</i>	<i>1.5</i>	<i>1.7</i>	1.1	<i>1.5</i>	<i>1.4</i>
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR) ..	6961	7027	7058	7082	<i>7119</i>	<i>7162</i>	<i>7335</i>	<i>7359</i>	<i>7493</i>	<i>7538</i>	<i>7583</i>	<i>7643</i>	7032	<i>7244</i>	<i>7564</i>
Percentage Change from Prior Year	3.8	5.0	2.8	5.2	<i>2.3</i>	<i>1.9</i>	<i>3.9</i>	<i>3.9</i>	<i>5.3</i>	<i>5.2</i>	<i>3.4</i>	<i>3.9</i>	4.2	<i>3.0</i>	<i>4.4</i>
Manufacturing Production (Index, 1997=100.0)	110.8	111.8	112.6	111.5	<i>111.3</i>	<i>110.5</i>	<i>111.6</i>	<i>113.0</i>	<i>114.9</i>	<i>117.3</i>	<i>119.9</i>	<i>122.2</i>	111.7	<i>111.6</i>	<i>118.6</i>
Percentage Change from Prior Year	-4.0	-1.5	0.5	1.2	<i>0.4</i>	<i>-1.2</i>	<i>-0.9</i>	<i>1.3</i>	<i>3.2</i>	<i>6.1</i>	<i>7.4</i>	<i>8.2</i>	-1.0	<i>-0.1</i>	<i>6.3</i>
OECD Economic Growth (percent) ^b ...													1.8	<i>2.2</i>	<i>2.8</i>
Weather ^c															
Heating Degree-Days															
U.S.	2072	490	49	1673	<i>2297</i>	<i>607</i>	<i>72</i>	<i>1622</i>	<i>2254</i>	<i>517</i>	<i>85</i>	<i>1621</i>	4284	<i>4598</i>	<i>4477</i>
New England	2791	865	71	2372	<i>3504</i>	<i>1144</i>	<i>155</i>	<i>2236</i>	<i>3205</i>	<i>880</i>	<i>167</i>	<i>2235</i>	6099	<i>7039</i>	<i>6488</i>
Middle Atlantic	2505	664	45	2158	<i>3207</i>	<i>896</i>	<i>89</i>	<i>2001</i>	<i>2919</i>	<i>697</i>	<i>106</i>	<i>2001</i>	5372	<i>6194</i>	<i>5723</i>
U.S. Gas-Weighted	2181	558	48	1773	<i>2464</i>	<i>598</i>	<i>77</i>	<i>1713</i>	<i>2373</i>	<i>554</i>	<i>90</i>	<i>1713</i>	4560	<i>4853</i>	<i>4730</i>
Cooling Degree-Days (U.S.)	31	387	902	73	<i>28</i>	<i>335</i>	<i>825</i>	<i>76</i>	<i>33</i>	<i>348</i>	<i>784</i>	<i>76</i>	1393	<i>1263</i>	<i>1240</i>

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

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

^cPopulation-weighted degree days. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 2000 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 CONTROL0803.

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

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Macroeconomic^a															
Real Fixed Investment (billion chained 1996 dollars-SAAR) ...	1576	1573	1572	1588	<i>1588</i>	<i>1613</i>	<i>1621</i>	<i>1638</i>	<i>1652</i>	<i>1668</i>	<i>1695</i>	<i>1728</i>	1577	<i>1615</i>	<i>1685</i>
Real Exchange Rate (index)	1.193	1.152	1.105	1.102	<i>1.049</i>	<i>1.000</i>	<i>1.013</i>	<i>1.013</i>	<i>1.011</i>	<i>1.004</i>	<i>0.997</i>	<i>0.990</i>	1.138	<i>1.019</i>	<i>1.001</i>
Business Inventory Change (billion chained 1996 dollars-SAAR) ...	-31.9	-14.1	-2.6	2.8	<i>-6.1</i>	<i>-10.8</i>	<i>0.1</i>	<i>5.0</i>	<i>1.8</i>	<i>9.1</i>	<i>16.9</i>	<i>21.7</i>	-11.5	<i>-2.9</i>	<i>12.4</i>
Producer Price Index (index, 1982=1.000)	1.291	1.306	1.313	1.335	<i>1.383</i>	<i>1.369</i>	<i>1.367</i>	<i>1.364</i>	<i>1.354</i>	<i>1.351</i>	<i>1.363</i>	<i>1.363</i>	1.311	<i>1.371</i>	<i>1.358</i>
Consumer Price Index (index, 1982-1984=1.000)	1.780	1.795	1.805	1.814	<i>1.831</i>	<i>1.834</i>	<i>1.842</i>	<i>1.848</i>	<i>1.852</i>	<i>1.856</i>	<i>1.864</i>	<i>1.873</i>	1.799	<i>1.839</i>	<i>1.861</i>
Petroleum Product Price Index (index, 1982=1.000)	0.656	0.810	0.839	0.875	<i>1.074</i>	<i>0.918</i>	<i>0.926</i>	<i>0.921</i>	<i>0.909</i>	<i>0.909</i>	<i>0.870</i>	<i>0.844</i>	0.795	<i>0.960</i>	<i>0.883</i>
Non-Farm Employment (millions)	130.5	130.4	130.2	130.3	<i>130.2</i>	<i>130.0</i>	<i>129.9</i>	<i>130.1</i>	<i>130.8</i>	<i>131.4</i>	<i>132.0</i>	<i>132.6</i>	130.4	<i>130.0</i>	<i>131.7</i>
Commercial Employment (millions)	91.3	91.3	91.3	91.5	<i>91.5</i>	<i>91.6</i>	<i>91.7</i>	<i>92.0</i>	<i>92.9</i>	<i>93.4</i>	<i>94.0</i>	<i>94.6</i>	91.4	<i>91.7</i>	<i>93.7</i>
Total Industrial Production (index, 1997=100.0)	109.3	110.5	111.4	110.4	<i>110.5</i>	<i>109.6</i>	<i>110.6</i>	<i>111.7</i>	<i>113.4</i>	<i>115.5</i>	<i>117.7</i>	<i>119.7</i>	110.4	<i>110.6</i>	<i>116.6</i>
Housing Stock (millions)	115.3	115.6	115.8	116.2	<i>116.7</i>	<i>117.0</i>	<i>117.3</i>	<i>117.6</i>	<i>117.9</i>	<i>118.2</i>	<i>118.5</i>	<i>118.8</i>	115.7	<i>117.2</i>	<i>118.3</i>
Miscellaneous															
Gas Weighted Industrial Production (index, 1997=100.0)	100.4	101.0	101.6	100.8	<i>100.6</i>	<i>99.9</i>	<i>100.2</i>	<i>100.9</i>	<i>101.8</i>	<i>103.2</i>	<i>104.6</i>	<i>106.0</i>	100.9	<i>100.4</i>	<i>103.9</i>
Vehicle Miles Traveled ^b (million miles/day)	7268	8033	8060	7641	<i>7220</i>	<i>8071</i>	<i>8182</i>	<i>7746</i>	<i>7430</i>	<i>8220</i>	<i>8348</i>	<i>7979</i>	7752	<i>7807</i>	<i>7995</i>
Vehicle Fuel Efficiency (index, 1999=1.000)	0.997	1.040	1.037	1.006	<i>0.989</i>	<i>1.043</i>	<i>1.037</i>	<i>0.996</i>	<i>0.985</i>	<i>1.036</i>	<i>1.038</i>	<i>0.999</i>	1.020	<i>1.017</i>	<i>1.015</i>
Real Vehicle Fuel Cost (cents per mile)	3.31	3.75	3.76	3.91	<i>4.40</i>	<i>4.01</i>	<i>4.06</i>	<i>4.12</i>	<i>4.03</i>	<i>3.94</i>	<i>3.81</i>	<i>3.69</i>	3.69	<i>4.14</i>	<i>3.86</i>
Air Travel Capacity (mill. available ton-miles/day)	435.8	467.6	488.2	491.4	<i>454.8</i>	<i>474.7</i>	<i>472.0</i>	<i>465.9</i>	<i>446.8</i>	<i>471.0</i>	<i>491.4</i>	<i>494.0</i>	470.9	<i>466.9</i>	<i>475.9</i>
Aircraft Utilization (mill. revenue ton-miles/day)	238.2	265.3	274.3	272.0	<i>244.1</i>	<i>263.7</i>	<i>271.2</i>	<i>258.0</i>	<i>243.1</i>	<i>267.1</i>	<i>283.6</i>	<i>274.5</i>	262.6	<i>259.3</i>	<i>267.1</i>
Airline Ticket Price Index (index, 1982-1984=1.000)	2.317	2.377	2.334	2.235	<i>2.252</i>	<i>2.341</i>	<i>2.429</i>	<i>2.415</i>	<i>2.338</i>	<i>2.273</i>	<i>2.251</i>	<i>2.244</i>	2.316	<i>2.359</i>	<i>2.277</i>
Raw Steel Production (million tons)	23.92	25.03	26.34	25.68	<i>25.61</i>	<i>25.52</i>	<i>25.45</i>	<i>23.61</i>	<i>25.18</i>	<i>26.61</i>	<i>26.17</i>	<i>24.30</i>	100.98	<i>100.18</i>	<i>102.26</i>

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

^bIncludes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

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

Table 3. International Petroleum Supply and Demand: Base Case
(Million Barrels per Day, Except OECD Commercial Stocks)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Demand^a															
OECD															
U.S. (50 States)	19.5	19.7	19.9	19.9	<i>20.0</i>	<i>19.6</i>	<i>20.1</i>	<i>20.1</i>	<i>20.3</i>	<i>20.2</i>	<i>20.6</i>	<i>20.8</i>	19.8	<i>20.0</i>	<i>20.5</i>
U.S. Territories.....	0.3	0.3	0.3	0.3	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>0.4</i>	<i>0.3</i>	<i>0.3</i>	<i>0.4</i>	0.3	<i>0.3</i>	<i>0.3</i>
Canada	2.1	2.0	2.1	2.2	<i>2.2</i>	<i>2.1</i>	<i>2.2</i>	<i>2.2</i>	<i>2.1</i>	<i>2.1</i>	<i>2.2</i>	<i>2.2</i>	2.1	<i>2.2</i>	<i>2.2</i>
Europe	15.1	14.6	15.2	15.3	<i>15.2</i>	<i>14.7</i>	<i>14.9</i>	<i>15.6</i>	<i>15.5</i>	<i>14.5</i>	<i>15.1</i>	<i>15.7</i>	15.1	<i>15.1</i>	<i>15.2</i>
Japan	5.7	4.6	5.0	5.9	<i>6.2</i>	<i>5.0</i>	<i>5.2</i>	<i>5.7</i>	<i>5.9</i>	<i>4.8</i>	<i>5.0</i>	<i>5.5</i>	5.3	<i>5.5</i>	<i>5.3</i>
Other OECD.....	5.4	5.0	5.0	5.4	<i>5.4</i>	<i>5.1</i>	<i>5.3</i>	<i>5.4</i>	<i>5.2</i>	<i>5.2</i>	<i>5.4</i>	<i>5.4</i>	5.2	<i>5.3</i>	<i>5.3</i>
Total OECD.....	48.1	46.3	47.5	49.0	<i>49.3</i>	<i>46.7</i>	<i>48.1</i>	<i>49.3</i>	<i>49.3</i>	<i>47.1</i>	<i>48.8</i>	<i>50.1</i>	47.7	<i>48.4</i>	<i>48.8</i>
Non-OECD															
Former Soviet Union.....	4.1	3.9	3.9	3.9	<i>4.1</i>	<i>3.9</i>	<i>3.9</i>	<i>4.0</i>	<i>4.2</i>	<i>4.0</i>	<i>4.0</i>	<i>4.0</i>	3.9	<i>4.0</i>	<i>4.1</i>
Europe	0.7	0.7	0.7	0.7	<i>0.8</i>	0.7	<i>0.8</i>	<i>0.8</i>							
China.....	5.3	5.3	5.2	5.3	<i>5.5</i>	<i>5.4</i>	<i>5.4</i>	<i>5.4</i>	<i>5.7</i>	<i>5.6</i>	<i>5.5</i>	<i>5.6</i>	5.3	<i>5.4</i>	<i>5.6</i>
Other Asia.....	7.7	7.7	7.5	7.8	<i>7.8</i>	<i>7.8</i>	<i>7.6</i>	<i>8.0</i>	<i>8.0</i>	<i>8.0</i>	<i>7.7</i>	<i>8.1</i>	7.7	<i>7.8</i>	<i>7.9</i>
Other Non-OECD.....	12.1	12.3	12.4	12.3	<i>12.2</i>	<i>12.4</i>	<i>12.5</i>	<i>12.5</i>	<i>12.4</i>	<i>12.7</i>	<i>12.8</i>	<i>12.6</i>	12.3	<i>12.4</i>	<i>12.6</i>
Total Non-OECD.....	29.9	29.9	29.7	30.0	<i>30.4</i>	<i>30.3</i>	<i>30.2</i>	<i>30.6</i>	<i>31.0</i>	<i>31.0</i>	<i>30.8</i>	<i>31.1</i>	29.9	<i>30.4</i>	<i>31.0</i>
Total World Demand.....	78.0	76.2	77.2	79.0	<i>79.7</i>	<i>77.1</i>	<i>78.3</i>	<i>79.9</i>	<i>80.3</i>	<i>78.1</i>	<i>79.6</i>	<i>81.1</i>	77.6	<i>78.7</i>	<i>79.8</i>
Supply^b															
OECD															
U.S. (50 States)	9.1	9.2	8.9	8.8	<i>9.0</i>	<i>8.8</i>	<i>8.8</i>	<i>9.0</i>	<i>9.1</i>	<i>9.0</i>	<i>9.0</i>	<i>9.1</i>	9.0	<i>8.9</i>	<i>9.1</i>
Canada	2.9	2.9	2.9	3.0	<i>3.0</i>	<i>3.0</i>	<i>3.1</i>	<i>3.2</i>	<i>3.1</i>	<i>3.1</i>	<i>3.2</i>	<i>3.3</i>	2.9	<i>3.1</i>	<i>3.2</i>
Mexico.....	3.6	3.6	3.6	3.6	<i>3.8</i>	<i>3.8</i>	<i>3.8</i>	<i>3.7</i>	<i>3.9</i>	<i>3.9</i>	<i>4.0</i>	<i>3.9</i>	3.6	<i>3.8</i>	<i>3.9</i>
North Sea ^c	6.3	6.3	5.8	6.4	<i>6.3</i>	<i>5.8</i>	<i>6.1</i>	<i>6.4</i>	<i>6.3</i>	<i>6.0</i>	<i>6.1</i>	<i>6.4</i>	6.2	<i>6.2</i>	<i>6.2</i>
Other OECD.....	1.7	1.6	1.7	1.6	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	<i>1.5</i>	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	1.7	<i>1.6</i>	<i>1.6</i>
Total OECD.....	23.6	23.7	23.0	23.4	<i>23.7</i>	<i>22.9</i>	<i>23.5</i>	<i>24.0</i>	<i>24.0</i>	<i>23.6</i>	<i>23.9</i>	<i>24.3</i>	23.4	<i>23.5</i>	<i>23.9</i>
Non-OECD															
OPEC.....	28.5	27.9	28.8	29.5	<i>30.1</i>	<i>30.0</i>	<i>30.0</i>	<i>30.5</i>	<i>30.1</i>	<i>30.0</i>	<i>29.4</i>	<i>29.6</i>	28.7	<i>30.1</i>	<i>29.8</i>
Crude Oil Portion	25.2	24.6	25.5	26.3	<i>26.9</i>	<i>26.7</i>	<i>26.7</i>	<i>27.1</i>	<i>26.7</i>	<i>26.7</i>	<i>26.0</i>	<i>26.2</i>	25.4	<i>26.8</i>	<i>26.4</i>
Former Soviet Union.....	9.0	9.2	9.6	9.8	<i>9.9</i>	<i>10.1</i>	<i>10.3</i>	<i>10.3</i>	<i>10.4</i>	<i>10.5</i>	<i>10.7</i>	<i>10.8</i>	9.4	<i>10.2</i>	<i>10.6</i>
China.....	3.3	3.4	3.4	3.4	<i>3.4</i>	<i>3.4</i>	<i>3.4</i>	<i>3.4</i>	<i>3.3</i>	<i>3.4</i>	<i>3.4</i>	<i>3.4</i>	3.4	<i>3.4</i>	<i>3.4</i>
Other Non-OECD.....	11.5	11.5	11.4	11.4	<i>11.4</i>	<i>11.4</i>	<i>11.5</i>	<i>11.7</i>	<i>11.8</i>	<i>11.9</i>	<i>12.1</i>	<i>12.3</i>	11.4	<i>11.5</i>	<i>12.0</i>
Total Non-OECD.....	52.3	52.0	53.3	54.1	<i>54.7</i>	<i>55.0</i>	<i>55.3</i>	<i>55.9</i>	<i>55.6</i>	<i>55.8</i>	<i>55.6</i>	<i>56.0</i>	52.9	<i>55.2</i>	<i>55.8</i>
Total World Supply.....	75.9	75.6	76.2	77.5	<i>78.4</i>	<i>77.9</i>	<i>78.7</i>	<i>79.9</i>	<i>79.6</i>	<i>79.5</i>	<i>79.5</i>	<i>80.3</i>	76.3	<i>78.7</i>	<i>79.7</i>
Additional unaccounted for supply.....	0.3	0.3	0.3	0.3	<i>0.3</i>	0.3	<i>0.3</i>	<i>0.3</i>							
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	0.2	-0.5	0.5	0.3	<i>0.7</i>	<i>-0.9</i>	<i>-0.3</i>	<i>0.1</i>	<i>0.0</i>	<i>-0.8</i>	<i>-0.2</i>	<i>0.3</i>	0.1	<i>-0.1</i>	<i>-0.2</i>
Other	1.6	0.7	0.2	0.8	<i>0.3</i>	<i>-0.2</i>	<i>-0.4</i>	<i>-0.4</i>	<i>0.5</i>	<i>-0.9</i>	<i>0.0</i>	<i>0.2</i>	0.9	<i>-0.2</i>	<i>0.0</i>
Total Stock Withdrawals	1.8	0.3	0.7	1.1	<i>1.0</i>	<i>-1.2</i>	<i>-0.7</i>	<i>-0.3</i>	<i>0.5</i>	<i>-1.7</i>	<i>-0.2</i>	<i>0.5</i>	1.0	<i>-0.3</i>	<i>-0.2</i>
OECD Comm. Stocks, End (bill. bbls.)	2.6	2.6	2.6	2.5	<i>2.4</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>	<i>2.6</i>	<i>2.6</i>	<i>2.6</i>	2.5	<i>2.5</i>	<i>2.6</i>
Non-OPEC Supply	47.4	47.7	47.4	48.0	<i>48.3</i>	<i>47.9</i>	<i>48.7</i>	<i>49.4</i>	<i>49.5</i>	<i>49.4</i>	<i>50.1</i>	<i>50.7</i>	47.6	<i>48.6</i>	<i>49.9</i>

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

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

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

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

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

SPR: Strategic Petroleum Reserve

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

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

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

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

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	19.34	23.84	25.88	25.39	30.59	25.58	28.06	27.07	25.77	25.09	24.41	23.73	23.69	27.74	24.74
WTI ^b Spot Average	21.66	26.25	28.34	28.22	34.10	28.98	30.77	29.67	28.27	27.59	26.91	26.23	26.12	30.88	27.25
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	2.34	2.99	2.88	3.60	5.54	5.01	4.75	4.59	4.30	3.66	3.87	4.14	2.96	4.97	3.99
Petroleum Products															
Gasoline Retail ^c (dollars per gallon)															
All Grades	1.20	1.43	1.44	1.46	1.63	1.57	1.64	1.55	1.50	1.55	1.51	1.41	1.39	1.60	1.49
Regular Unleaded	1.16	1.39	1.40	1.42	1.59	1.52	1.60	1.50	1.45	1.50	1.46	1.37	1.34	1.55	1.45
No. 2 Diesel Oil, Retail															
(dollars per gallon)	1.18	1.30	1.35	1.44	1.62	1.47	1.48	1.49	1.47	1.45	1.41	1.43	1.32	1.51	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.60	0.68	0.73	0.79	1.00	0.79	0.77	0.83	0.82	0.77	0.76	0.80	0.69	0.87	0.79
No. 2 Heating Oil, Retail															
(dollars per gallon)	1.09	1.09	1.06	1.19	1.45	1.31	1.19	1.33	1.32	1.22	1.15	1.30	1.11	1.37	1.28
No. 6 Residual Fuel Oil, Retail ^d															
(dollars per barrel).....	19.34	24.11	25.73	26.22	33.71	26.66	26.91	27.22	26.56	24.17	23.54	23.91	23.81	28.86	24.63
Electric Utility Fuels															
Coal															
(dollars per million Btu)	1.27	1.26	1.26	1.23	1.27	1.27	1.24	1.23	1.25	1.25	1.23	1.22	1.25	1.25	1.24
Heavy Fuel Oil ^e															
(dollars per million Btu)	2.91	3.61	3.81	4.24	4.94	4.29	4.57	4.48	4.03	3.87	4.04	3.96	3.68	4.60	3.99
Natural Gas															
(dollars per million Btu)	2.99	3.58	3.41	4.26	6.20	5.61	5.04	5.18	4.91	4.25	4.45	4.86	3.54	5.43	4.57
Other Residential															
Natural Gas															
(dollars per thousand cubic feet).....	7.21	8.30	10.24	7.98	8.60	10.50	12.35	9.63	9.29	9.72	10.89	8.84	7.86	9.44	9.35
Electricity															
(cents per kilowatthour).....	8.14	8.58	8.74	8.30	8.08	8.98	9.09	8.59	8.23	8.75	8.92	8.45	8.45	8.69	8.60

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

^bWest Texas Intermediate.

^cAverage self-service cash prices.

^dAverage for all sulfur contents.

^eIncludes independent power producers after January 2002.

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

Notes: Data are estimated for the first quarter of 2003. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

Table 5. U.S. Petroleum Supply and Demand: Base Case

(Million Barrels per Day, Except Closing Stocks)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Supply															
Crude Oil Supply															
Domestic Production ^a	5.87	5.90	5.67	5.55	<i>5.88</i>	<i>5.78</i>	<i>5.67</i>	<i>5.78</i>	<i>5.77</i>	<i>5.70</i>	<i>5.67</i>	<i>5.71</i>	5.75	<i>5.78</i>	<i>5.71</i>
Alaska	1.03	1.01	0.93	0.97	<i>1.01</i>	<i>0.98</i>	<i>0.91</i>	<i>1.00</i>	<i>1.00</i>	<i>0.95</i>	<i>0.91</i>	<i>0.93</i>	0.98	<i>0.98</i>	<i>0.95</i>
Lower 48	4.83	4.89	4.74	4.59	<i>4.87</i>	<i>4.80</i>	<i>4.76</i>	<i>4.78</i>	<i>4.77</i>	<i>4.75</i>	<i>4.75</i>	<i>4.78</i>	4.76	<i>4.80</i>	<i>4.76</i>
Net Commercial Imports ^b	8.72	9.30	9.16	9.28	<i>8.71</i>	<i>9.92</i>	<i>9.84</i>	<i>9.42</i>	<i>9.42</i>	<i>9.99</i>	<i>10.01</i>	<i>9.70</i>	9.12	<i>9.48</i>	<i>9.78</i>
Net SPR Withdrawals	-0.10	-0.15	-0.12	-0.11	<i>-0.13</i>	<i>-0.11</i>	<i>-0.16</i>	<i>-0.17</i>	<i>-0.11</i>	<i>-0.07</i>	<i>0.00</i>	<i>0.00</i>	-0.12	<i>-0.14</i>	<i>-0.05</i>
Net Commercial Withdrawals	-0.24	0.18	0.51	-0.08	<i>-0.04</i>	<i>-0.03</i>	<i>0.09</i>	<i>-0.08</i>	<i>-0.24</i>	<i>-0.05</i>	<i>0.14</i>	<i>-0.03</i>	0.09	<i>-0.01</i>	<i>-0.05</i>
Product Supplied and Losses	0.00	0.00	0.00	0.00	<i>0.00</i>	0.00	<i>0.00</i>	<i>0.00</i>							
Unaccounted-for Crude Oil	0.19	0.12	-0.01	0.13	<i>0.12</i>	<i>0.13</i>	<i>0.10</i>	<i>0.12</i>	<i>0.17</i>	<i>0.19</i>	<i>0.17</i>	<i>0.12</i>	0.11	<i>0.12</i>	<i>0.16</i>
Total Crude Oil Supply	14.44	15.34	15.21	14.78	<i>14.56</i>	<i>15.71</i>	<i>15.55</i>	<i>15.07</i>	<i>15.00</i>	<i>15.76</i>	<i>15.98</i>	<i>15.49</i>	14.95	<i>15.22</i>	<i>15.56</i>
Other Supply															
NGL Production	1.88	1.91	1.89	1.84	<i>1.76</i>	<i>1.60</i>	<i>1.71</i>	<i>1.83</i>	<i>1.96</i>	<i>1.94</i>	<i>1.88</i>	<i>1.97</i>	1.88	<i>1.72</i>	<i>1.94</i>
Other Hydrocarbon and Alcohol															
Inputs	0.37	0.44	0.43	0.43	<i>0.44</i>	<i>0.42</i>	<i>0.43</i>	<i>0.42</i>	<i>0.39</i>	<i>0.39</i>	<i>0.41</i>	<i>0.42</i>	0.42	<i>0.43</i>	<i>0.40</i>
Crude Oil Product Supplied	0.00	0.00	0.00	0.00	<i>0.00</i>	0.00	<i>0.00</i>	<i>0.00</i>							
Processing Gain	0.96	0.96	0.95	0.97	<i>0.89</i>	<i>0.94</i>	<i>0.94</i>	<i>0.95</i>	<i>0.94</i>	<i>0.94</i>	<i>0.94</i>	<i>0.96</i>	0.96	<i>0.93</i>	<i>0.94</i>
Net Product Imports ^c	1.37	1.56	1.37	1.36	<i>1.51</i>	<i>1.74</i>	<i>1.70</i>	<i>1.57</i>	<i>1.70</i>	<i>1.74</i>	<i>1.69</i>	<i>1.70</i>	1.42	<i>1.63</i>	<i>1.71</i>
Product Stock Withdrawn or Added (-)	0.51	-0.49	0.06	0.49	<i>0.87</i>	<i>-0.81</i>	<i>-0.27</i>	<i>0.33</i>	<i>0.33</i>	<i>-0.64</i>	<i>-0.34</i>	<i>0.33</i>	0.15	<i>0.03</i>	<i>-0.08</i>
Total Supply	19.53	19.72	19.92	19.87	<i>20.02</i>	<i>19.60</i>	<i>20.05</i>	<i>20.17</i>	<i>20.32</i>	<i>20.12</i>	<i>20.55</i>	<i>20.87</i>	19.76	<i>19.96</i>	<i>20.47</i>
Demand															
Motor Gasoline	8.49	9.00	9.05	8.85	<i>8.50</i>	<i>9.02</i>	<i>9.19</i>	<i>9.05</i>	<i>8.78</i>	<i>9.24</i>	<i>9.36</i>	<i>9.30</i>	8.85	<i>8.94</i>	<i>9.17</i>
Jet Fuel	1.57	1.61	1.63	1.65	<i>1.54</i>	<i>1.52</i>	<i>1.63</i>	<i>1.62</i>	<i>1.53</i>	<i>1.57</i>	<i>1.64</i>	<i>1.69</i>	1.61	<i>1.58</i>	<i>1.61</i>
Distillate Fuel Oil	3.80	3.70	3.71	3.89	<i>4.22</i>	<i>3.81</i>	<i>3.68</i>	<i>3.98</i>	<i>4.22</i>	<i>3.84</i>	<i>3.87</i>	<i>4.13</i>	3.78	<i>3.92</i>	<i>4.02</i>
Residual Fuel Oil	0.73	0.69	0.62	0.76	<i>0.86</i>	<i>0.73</i>	<i>0.73</i>	<i>0.65</i>	<i>0.76</i>	<i>0.58</i>	<i>0.63</i>	<i>0.71</i>	0.70	<i>0.74</i>	<i>0.67</i>
Other Oils ^d	4.93	4.72	4.91	4.73	<i>4.90</i>	<i>4.53</i>	<i>4.82</i>	<i>4.85</i>	<i>5.03</i>	<i>4.89</i>	<i>5.05</i>	<i>5.04</i>	4.82	<i>4.77</i>	<i>5.00</i>
Total Demand	19.53	19.72	19.92	19.87	<i>20.03</i>	<i>19.60</i>	<i>20.05</i>	<i>20.16</i>	<i>20.32</i>	<i>20.12</i>	<i>20.55</i>	<i>20.87</i>	19.76	<i>19.96</i>	<i>20.46</i>
Total Petroleum Net Imports	10.11	10.87	10.54	10.64	<i>10.22</i>	<i>11.66</i>	<i>11.54</i>	<i>10.99</i>	<i>11.12</i>	<i>11.73</i>	<i>11.69</i>	<i>11.40</i>	10.54	<i>11.11</i>	<i>11.49</i>
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	334	318	271	278	<i>281</i>	<i>283</i>	<i>275</i>	<i>282</i>	<i>304</i>	<i>308</i>	<i>295</i>	<i>299</i>	278	<i>282</i>	<i>299</i>
Total Motor Gasoline	213	217	206	209	<i>200</i>	<i>206</i>	<i>198</i>	<i>199</i>	<i>203</i>	<i>209</i>	<i>203</i>	<i>208</i>	209	<i>199</i>	<i>208</i>
Finished Motor Gasoline	160	168	157	162	<i>145</i>	<i>153</i>	<i>147</i>	<i>150</i>	<i>148</i>	<i>157</i>	<i>152</i>	<i>157</i>	162	<i>150</i>	<i>157</i>
Blending Components	54	49	49	47	<i>55</i>	<i>53</i>	<i>51</i>	<i>49</i>	<i>55</i>	<i>52</i>	<i>51</i>	<i>51</i>	47	<i>49</i>	<i>51</i>
Jet Fuel	42	39	41	39	<i>37</i>	<i>38</i>	<i>40</i>	<i>40</i>	<i>38</i>	<i>41</i>	<i>43</i>	<i>42</i>	39	<i>40</i>	<i>42</i>
Distillate Fuel Oil	123	133	127	134	<i>99</i>	<i>112</i>	<i>129</i>	<i>132</i>	<i>103</i>	<i>115</i>	<i>132</i>	<i>135</i>	134	<i>132</i>	<i>135</i>
Residual Fuel Oil	34	33	33	31	<i>32</i>	<i>36</i>	<i>33</i>	<i>35</i>	<i>32</i>	<i>34</i>	<i>36</i>	<i>37</i>	31	<i>35</i>	<i>37</i>
Other Oils ^e	265	301	309	258	<i>226</i>	<i>275</i>	<i>292</i>	<i>255</i>	<i>253</i>	<i>291</i>	<i>307</i>	<i>268</i>	258	<i>255</i>	<i>268</i>
Total Stocks (excluding SPR)	1011	1040	987	949	<i>874</i>	<i>950</i>	<i>966</i>	<i>943</i>	<i>934</i>	<i>997</i>	<i>1016</i>	<i>988</i>	949	<i>943</i>	<i>988</i>
Crude Oil in SPR	561	576	587	599	<i>599</i>	<i>609</i>	<i>623</i>	<i>639</i>	<i>649</i>	<i>656</i>	<i>656</i>	<i>656</i>	599	<i>639</i>	<i>656</i>
Heating Oil Reserve	2	2	2	2	<i>2</i>	2	<i>2</i>	<i>2</i>							
Total Stocks (incl SPR and HOR)	1575	1618	1576	1550	<i>1475</i>	<i>1560</i>	<i>1592</i>	<i>1584</i>	<i>1585</i>	<i>1655</i>	<i>1674</i>	<i>1646</i>	1550	<i>1584</i>	<i>1646</i>

^aIncludes lease condensate.^bNet imports equals gross imports plus SPR imports minus exports.^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.^dIncludes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil.^eIncludes stocks of all other oils, such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

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

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

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

^bShort-Term Integrated Forecasting System.

^cRefiner acquisitions cost of imported crude oil.

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

^eRefers to percent changes in degree-days.

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

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

	High Price Case	Low Price Case	Difference		
			Total	Uncertainty	Price Impact
United States.....	5.88	5.54	0.35	0.07	0.28
Lower 48 States.....	4.94	4.63	0.32	0.05	0.27
Alaska.....	0.95	0.92	0.03	0.02	0.01

Note: Components provided are for the fourth quarter 2004. Totals may not add to sum of components due to independent rounding.
Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

Table 8. U.S. Natural Gas Supply and Demand: Base Case
(Trillion Cubic Feet)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Supply															
Total Dry Gas Production.....	4.69	4.77	4.78	4.81	4.82	4.85	4.91	4.92	4.86	4.77	4.85	4.91	19.05	<i>19.51</i>	<i>19.39</i>
Gross Imports	0.98	0.95	1.03	1.04	0.95	0.95	1.13	1.11	1.10	1.10	1.15	1.15	4.01	<i>4.14</i>	<i>4.50</i>
Pipeline	0.95	0.88	0.97	0.97	0.88	0.82	0.97	0.98	0.98	0.93	0.99	1.01	3.78	<i>3.66</i>	<i>3.91</i>
LNG.....	0.03	0.07	0.06	0.07	0.08	0.13	0.15	0.14	0.12	0.16	0.16	0.14	0.23	<i>0.49</i>	<i>0.59</i>
Gross Exports	0.10	0.12	0.14	0.15	0.16	0.16	0.17	0.18	0.18	0.19	0.21	0.22	0.52	<i>0.68</i>	<i>0.80</i>
Net Imports	0.88	0.83	0.90	0.89	0.79	0.79	0.95	0.93	0.91	0.91	0.95	0.93	3.49	<i>3.47</i>	<i>3.70</i>
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	<i>0.08</i>	<i>0.08</i>
Total New Supply.....	5.59	5.62	5.69	5.72	5.63	5.65	5.89	5.88	5.80	5.70	5.81	5.86	22.62	<i>23.05</i>	<i>23.17</i>
Working Gas in Storage															
Opening	2.90	1.52	2.31	3.04	2.38	<i>0.73</i>	<i>1.71</i>	<i>2.78</i>	<i>2.33</i>	<i>1.01</i>	<i>1.78</i>	<i>2.72</i>	2.90	<i>2.38</i>	<i>2.33</i>
Closing	1.52	2.31	3.04	2.38	<i>0.73</i>	<i>1.71</i>	<i>2.78</i>	<i>2.33</i>	<i>1.01</i>	<i>1.78</i>	<i>2.72</i>	<i>2.30</i>	2.38	<i>2.33</i>	<i>2.30</i>
Net Withdrawals.....	1.39	-0.79	-0.73	0.67	<i>1.64</i>	<i>-0.97</i>	<i>-1.07</i>	<i>0.45</i>	<i>1.33</i>	<i>-0.77</i>	<i>-0.95</i>	<i>0.42</i>	0.53	<i>0.04</i>	<i>0.03</i>
Total Supply	6.98	4.83	4.96	6.38	7.27	4.68	4.81	6.33	7.13	4.93	4.86	6.28	23.15	<i>23.09</i>	<i>23.20</i>
Balancing Item ^a	-0.12	0.16	-0.06	-0.61	<i>-0.06</i>	<i>0.11</i>	<i>0.05</i>	<i>-0.73</i>	<i>-0.03</i>	<i>-0.05</i>	<i>-0.05</i>	<i>-0.63</i>	-0.63	<i>-0.64</i>	<i>-0.76</i>
Total Primary Supply.....	6.86	4.98	4.90	5.78	7.21	4.79	4.86	5.60	7.10	4.88	4.81	5.65	22.52	<i>22.46</i>	<i>22.44</i>
Demand															
Residential	2.20	0.84	0.37	1.51	<i>2.51</i>	<i>0.85</i>	<i>0.34</i>	<i>1.37</i>	<i>2.44</i>	<i>0.83</i>	<i>0.36</i>	<i>1.41</i>	4.92	<i>5.07</i>	<i>5.05</i>
Commercial.....	1.19	0.61	0.42	0.90	<i>1.34</i>	<i>0.58</i>	<i>0.39</i>	<i>0.85</i>	<i>1.31</i>	<i>0.61</i>	<i>0.44</i>	<i>0.90</i>	3.12	<i>3.16</i>	<i>3.25</i>
Industrial	2.16	2.04	2.00	2.09	<i>2.11</i>	<i>1.97</i>	<i>2.01</i>	<i>2.13</i>	<i>2.17</i>	<i>1.99</i>	<i>2.01</i>	<i>2.16</i>	8.29	<i>8.22</i>	<i>8.33</i>
Lease and Plant Fuel.....	0.26	0.26	0.26	0.27	<i>0.27</i>	<i>0.25</i>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	<i>0.24</i>	<i>0.25</i>	<i>0.25</i>	1.05	<i>1.00</i>	<i>0.99</i>
Other Industrial	1.90	1.78	1.73	1.83	<i>1.85</i>	<i>1.72</i>	<i>1.77</i>	<i>1.89</i>	<i>1.93</i>	<i>1.75</i>	<i>1.76</i>	<i>1.91</i>	7.24	<i>7.22</i>	<i>7.34</i>
CHP ^b	0.32	0.31	0.35	0.29	<i>0.30</i>	<i>0.26</i>	<i>0.31</i>	<i>0.27</i>	<i>0.30</i>	<i>0.30</i>	<i>0.32</i>	<i>0.29</i>	1.28	<i>1.15</i>	<i>1.21</i>
Non-CHP	1.58	1.46	1.38	1.54	<i>1.55</i>	<i>1.45</i>	<i>1.46</i>	<i>1.62</i>	<i>1.63</i>	<i>1.45</i>	<i>1.44</i>	<i>1.62</i>	5.96	<i>6.07</i>	<i>6.14</i>
Transportation ^c	0.20	0.14	0.14	0.17	0.21	0.14	0.16	0.17	0.21	0.15	0.13	0.17	0.65	<i>0.67</i>	<i>0.66</i>
Electric Power ^d	1.12	1.35	1.97	1.11	<i>1.05</i>	<i>1.23</i>	<i>1.97</i>	<i>1.07</i>	<i>0.97</i>	<i>1.29</i>	<i>1.87</i>	<i>1.02</i>	5.55	<i>5.31</i>	<i>5.15</i>
Total Demand	6.86	4.98	4.90	5.78	7.21	4.79	4.86	5.60	7.10	4.88	4.81	5.65	22.52	<i>22.46</i>	<i>22.44</i>

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

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

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

^dNatural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers. Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

Table 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	<i>264.1</i>	<i>265.0</i>	<i>277.8</i>	<i>279.8</i>	<i>270.6</i>	<i>258.2</i>	<i>275.5</i>	<i>278.0</i>	1093.8	<i>1086.7</i>	<i>1082.3</i>
Appalachia.....	108.3	99.1	95.2	94.2	<i>95.4</i>	<i>96.2</i>	<i>101.9</i>	<i>99.9</i>	<i>99.4</i>	<i>91.2</i>	<i>96.2</i>	<i>97.0</i>	396.8	<i>393.4</i>	<i>383.9</i>
Interior.....	36.8	37.3	36.6	35.6	<i>36.1</i>	<i>34.9</i>	<i>35.5</i>	<i>31.1</i>	<i>31.9</i>	<i>32.9</i>	<i>32.0</i>	<i>29.1</i>	146.2	<i>137.6</i>	<i>125.8</i>
Western.....	137.6	131.2	138.9	143.1	<i>132.5</i>	<i>133.9</i>	<i>141.0</i>	<i>148.9</i>	<i>139.3</i>	<i>134.0</i>	<i>147.3</i>	<i>151.9</i>	550.8	<i>556.3</i>	<i>572.6</i>
Primary Stock Levels ^a															
Opening.....	35.9	40.3	41.3	35.7	<i>43.3</i>	<i>39.0</i>	<i>37.7</i>	<i>35.0</i>	<i>36.8</i>	<i>35.3</i>	<i>35.5</i>	<i>32.9</i>	35.9	<i>43.3</i>	<i>36.8</i>
Closing.....	40.3	41.3	35.7	43.3	<i>39.0</i>	<i>37.7</i>	<i>35.0</i>	<i>36.8</i>	<i>35.3</i>	<i>35.5</i>	<i>32.9</i>	<i>36.1</i>	43.3	<i>36.8</i>	<i>36.1</i>
Net Withdrawals.....	-4.4	-1.0	5.6	-7.6	<i>4.3</i>	<i>1.3</i>	<i>2.7</i>	<i>-1.8</i>	<i>1.5</i>	<i>-0.3</i>	<i>2.6</i>	<i>-3.1</i>	-7.4	<i>6.5</i>	<i>0.7</i>
Imports.....	4.0	3.9	4.7	4.4	<i>5.0</i>	<i>6.4</i>	<i>5.1</i>	<i>4.7</i>	<i>5.5</i>	<i>5.9</i>	<i>5.4</i>	<i>5.0</i>	16.9	<i>21.1</i>	<i>21.8</i>
Exports.....	9.3	11.0	9.3	10.0	<i>8.5</i>	<i>11.4</i>	<i>11.1</i>	<i>10.8</i>	<i>10.0</i>	<i>10.7</i>	<i>10.5</i>	<i>10.2</i>	39.6	<i>41.9</i>	<i>41.4</i>
Total Net Domestic Supply.....	273.0	259.4	271.8	259.5	<i>264.8</i>	<i>261.2</i>	<i>274.5</i>	<i>271.9</i>	<i>267.6</i>	<i>253.2</i>	<i>273.0</i>	<i>269.6</i>	1063.7	<i>1072.4</i>	<i>1063.4</i>
Secondary Stock Levels ^b															
Opening.....	146.0	152.9	158.0	142.7	<i>148.9</i>	<i>146.2</i>	<i>158.4</i>	<i>149.4</i>	<i>163.9</i>	<i>166.5</i>	<i>176.3</i>	<i>162.1</i>	146.0	<i>148.9</i>	<i>163.9</i>
Closing.....	152.9	158.0	142.7	148.9	<i>146.2</i>	<i>158.4</i>	<i>149.4</i>	<i>163.9</i>	<i>166.5</i>	<i>176.3</i>	<i>162.1</i>	<i>168.2</i>	148.9	<i>163.9</i>	<i>168.2</i>
Net Withdrawals.....	-6.9	-5.1	15.3	-6.2	<i>2.8</i>	<i>-12.3</i>	<i>9.1</i>	<i>-14.6</i>	<i>-2.5</i>	<i>-9.9</i>	<i>14.3</i>	<i>-6.1</i>	-2.9	<i>-15.0</i>	<i>-4.2</i>
Waste Coal Supplied to IPPs ^c	2.8	2.8	2.8	2.8	<i>2.9</i>	<i>2.9</i>	<i>2.9</i>	<i>2.9</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	11.1	<i>11.6</i>	<i>14.8</i>
Total Supply.....	268.8	257.1	289.9	256.1	<i>270.4</i>	<i>251.9</i>	<i>286.5</i>	<i>260.2</i>	<i>268.8</i>	<i>247.0</i>	<i>290.9</i>	<i>267.2</i>	1071.9	<i>1069.0</i>	<i>1074.0</i>
Demand															
Coke Plants.....	5.4	5.6	5.6	5.9	<i>6.0</i>	<i>6.7</i>	<i>6.3</i>	<i>5.8</i>	<i>6.1</i>	<i>6.1</i>	<i>6.1</i>	<i>5.4</i>	22.5	<i>24.9</i>	<i>23.7</i>
Electric Power Sector ^d	231.6	231.1	267.0	245.6	<i>251.0</i>	<i>228.2</i>	<i>263.7</i>	<i>237.1</i>	<i>244.9</i>	<i>225.4</i>	<i>269.4</i>	<i>244.7</i>	975.4	<i>980.0</i>	<i>984.3</i>
Retail and General Industry.....	17.6	16.0	16.1	17.7	<i>17.4</i>	<i>15.0</i>	<i>15.1</i>	<i>17.2</i>	<i>17.8</i>	<i>15.5</i>	<i>15.5</i>	<i>17.2</i>	67.4	<i>64.8</i>	<i>66.0</i>
Total Demand ^e	254.6	252.8	288.7	269.2	<i>274.5</i>	<i>249.9</i>	<i>285.2</i>	<i>260.2</i>	<i>268.8</i>	<i>247.0</i>	<i>290.9</i>	<i>267.2</i>	1065.4	<i>1069.7</i>	<i>1074.0</i>
Discrepancy ^f	14.2	4.2	1.1	-13.1	<i>-4.0</i>	<i>2.0</i>	<i>1.3</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	6.5	<i>-0.7</i>	<i>0.0</i>

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

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

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

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

^eTotal Demand includes estimated IPP consumption.

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

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

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

Table 10a. U.S. Electricity Supply and Demand

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Net Electricity Generation															
Electric Power Sector ^a															
Coal.....	454.2	452.0	519.5	479.0	<i>485.6</i>	<i>448.5</i>	<i>512.3</i>	<i>460.4</i>	<i>474.6</i>	<i>436.9</i>	<i>521.0</i>	<i>472.5</i>	1904.7	<i>1906.9</i>	<i>1905.0</i>
Petroleum.....	18.0	21.6	24.9	20.2	<i>31.5</i>	<i>23.2</i>	<i>20.0</i>	<i>17.1</i>	<i>24.5</i>	<i>14.7</i>	<i>24.0</i>	<i>21.0</i>	84.6	<i>91.8</i>	<i>84.2</i>
Natural Gas.....	121.9	143.8	211.3	123.5	<i>116.9</i>	<i>135.2</i>	<i>212.6</i>	<i>121.9</i>	<i>112.4</i>	<i>143.0</i>	<i>204.6</i>	<i>118.1</i>	600.5	<i>586.7</i>	<i>578.1</i>
Nuclear.....	195.6	187.8	205.7	190.9	<i>190.1</i>	<i>182.5</i>	<i>205.3</i>	<i>190.4</i>	<i>195.1</i>	<i>191.4</i>	<i>206.3</i>	<i>191.5</i>	780.1	<i>768.3</i>	<i>784.3</i>
Hydroelectric.....	59.9	76.8	59.4	54.7	<i>60.0</i>	<i>78.7</i>	<i>62.5</i>	<i>63.0</i>	<i>77.7</i>	<i>83.8</i>	<i>66.9</i>	<i>68.2</i>	250.8	<i>264.2</i>	<i>296.6</i>
Geothermal and Other ^b	13.3	14.1	14.2	13.1	<i>13.0</i>	<i>13.8</i>	<i>14.8</i>	<i>14.4</i>	<i>15.3</i>	<i>15.0</i>	<i>15.6</i>	<i>15.2</i>	54.7	<i>56.0</i>	<i>61.2</i>
Subtotal.....	863.0	896.1	1035.0	881.3	<i>897.1</i>	<i>882.0</i>	<i>1027.5</i>	<i>867.4</i>	<i>899.6</i>	<i>884.8</i>	<i>1038.4</i>	<i>886.5</i>	3675.4	<i>3673.9</i>	<i>3709.4</i>
Other Sectors ^c	40.5	39.8	44.1	38.6	<i>40.2</i>	<i>31.8</i>	<i>41.2</i>	<i>39.0</i>	<i>39.6</i>	<i>39.6</i>	<i>42.9</i>	<i>40.7</i>	163.1	<i>152.3</i>	<i>162.8</i>
Total Generation.....	903.5	935.9	1079.2	920.0	<i>937.3</i>	<i>913.8</i>	<i>1068.7</i>	<i>906.3</i>	<i>939.2</i>	<i>924.4</i>	<i>1081.3</i>	<i>927.2</i>	3838.6	<i>3826.2</i>	<i>3872.1</i>
Net Imports ^d	6.3	4.7	8.6	3.2	<i>2.4</i>	<i>5.8</i>	<i>9.8</i>	<i>3.2</i>	<i>2.2</i>	<i>2.3</i>	<i>5.1</i>	<i>2.2</i>	22.9	<i>21.2</i>	<i>11.9</i>
Total Supply.....	909.8	940.6	1087.8	923.2	<i>939.8</i>	<i>919.6</i>	<i>1078.5</i>	<i>909.5</i>	<i>941.4</i>	<i>926.7</i>	<i>1086.5</i>	<i>929.4</i>	3861.4	<i>3847.4</i>	<i>3884.0</i>
Losses and Unaccounted for ^e	38.6	67.6	50.8	49.2	<i>30.3</i>	<i>67.2</i>	<i>54.1</i>	<i>48.7</i>	<i>30.2</i>	<i>64.3</i>	<i>50.7</i>	<i>49.7</i>	206.1	<i>200.2</i>	<i>194.9</i>
Demand															
Retail Sales ^f															
Residential.....	311.3	281.7	382.7	292.5	<i>337.5</i>	<i>275.0</i>	<i>383.2</i>	<i>286.3</i>	<i>339.1</i>	<i>274.9</i>	<i>389.0</i>	<i>292.3</i>	1268.2	<i>1282.1</i>	<i>1295.2</i>
Commercial.....	255.1	273.0	313.4	266.7	<i>265.1</i>	<i>269.2</i>	<i>312.1</i>	<i>265.0</i>	<i>266.8</i>	<i>272.7</i>	<i>314.4</i>	<i>270.8</i>	1108.1	<i>1111.3</i>	<i>1124.7</i>
Industrial.....	236.3	249.0	262.3	246.2	<i>237.2</i>	<i>246.6</i>	<i>253.7</i>	<i>240.4</i>	<i>235.5</i>	<i>245.2</i>	<i>255.6</i>	<i>245.1</i>	993.8	<i>977.8</i>	<i>981.4</i>
Other.....	23.9	25.3	30.0	26.0	<i>25.3</i>	<i>25.7</i>	<i>29.8</i>	<i>26.1</i>	<i>26.2</i>	<i>25.9</i>	<i>29.5</i>	<i>26.5</i>	105.2	<i>107.0</i>	<i>108.1</i>
Subtotal.....	826.5	829.1	988.2	831.4	<i>865.1</i>	<i>816.5</i>	<i>978.9</i>	<i>817.8</i>	<i>867.6</i>	<i>818.7</i>	<i>988.4</i>	<i>834.7</i>	3475.2	<i>3478.2</i>	<i>3509.4</i>
Other Use/Sales ^g	44.7	44.0	48.7	42.7	<i>44.4</i>	<i>36.0</i>	<i>45.5</i>	<i>43.1</i>	<i>43.7</i>	<i>43.7</i>	<i>47.4</i>	<i>44.9</i>	180.1	<i>169.0</i>	<i>179.7</i>
Total Demand.....	871.3	873.0	1037.0	874.1	<i>909.5</i>	<i>852.4</i>	<i>1024.4</i>	<i>860.8</i>	<i>911.3</i>	<i>862.4</i>	<i>1035.8</i>	<i>879.6</i>	3655.3	<i>3647.1</i>	<i>3689.1</i>

^aElectric Utilities and independent power producers.

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

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

^dData for 2002 are estimates.

^eBalancing item, mainly transmission and distribution losses.

^fTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S Electric Power Monthly and Electric Power Annual. Power marketers' sales are reported annually in Appendix C of EIA's Electric Sales and Revenue. Quarterly data for power marketers (and thus retail sales totals) are imputed. Data for 2002 are estimated.

^gDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2002 are estimates.

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

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

Table 10b. U.S. Electricity Generation by Sector: Base Case
(Billion Kilowatt-hours)

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Electricity Generation by Sector															
Electric Power ^a															
Coal	454.2	452.0	519.5	479.0	485.6	448.5	512.3	460.4	474.6	436.9	521.0	472.5	1904.7	1906.9	1905.0
Petroleum	18.0	21.6	24.9	20.2	31.5	23.2	20.0	17.1	24.5	14.7	24.0	21.0	84.6	91.8	84.2
Natural Gas	121.9	143.8	211.3	123.5	116.9	135.2	212.6	121.9	112.4	143.0	204.6	118.1	600.5	586.7	578.1
Other ^b	268.8	278.7	279.3	258.7	263.1	275.0	282.5	267.9	288.0	290.3	288.9	274.9	1085.5	1088.6	1142.0
Subtotal	863.0	896.1	1035.0	881.3	897.1	882.0	1027.5	867.4	899.6	884.8	1038.4	886.5	3675.4	3673.9	3709.4
Commercial															
Coal	0.3	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	1.0	1.1	1.2
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	1.0	1.1	2.4	1.3	1.3	1.3	2.2	1.2	5.4	5.9	6.1
Other ^b	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.7	0.6	0.6	0.4	0.6	1.9	2.1	2.2
Subtotal	1.8	1.8	3.3	1.8	1.9	2.0	3.3	2.4	2.4	2.3	3.1	2.3	8.7	9.6	10.0
Industrial															
Coal	4.9	5.0	5.4	5.3	5.5	5.0	5.0	5.1	5.2	5.1	5.3	5.4	20.7	20.6	21.1
Petroleum	1.2	1.1	1.2	1.3	1.5	1.2	0.9	1.1	1.1	0.8	1.1	1.4	4.9	4.7	4.4
Natural Gas	21.0	19.5	21.4	17.9	19.9	16.9	20.0	17.7	19.5	19.1	20.8	18.4	79.9	74.5	77.7
Other ^b	11.6	12.3	12.8	12.3	11.3	12.2	12.1	12.7	11.4	12.4	12.6	13.2	49.0	48.3	49.5
Subtotal	38.7	38.0	40.9	36.8	38.3	35.3	38.0	36.6	37.2	37.3	39.8	38.4	154.4	148.1	152.8
Total	903.5	935.9	1079.2	920.0	937.3	913.8	1068.7	906.3	939.2	924.4	1081.3	927.2	3838.6	3826.2	3872.1

^aElectric Utilities and independent power producers.

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

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

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

	2002				2003				2004				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2002	2003	2004
Fuel Consumption for Electricity Generation by Sector (Quadrillion Btu)															
Electric Power ^a															
Coal	4.752	4.747	5.485	5.042	5.103	4.754	5.420	4.875	5.036	4.645	5.541	5.034	20.0	20.2	20.3
Petroleum	0.194	0.226	0.267	0.218	0.340	0.252	0.214	0.186	0.265	0.157	0.257	0.227	0.9	1.0	0.9
Natural Gas.....	1.087	1.326	1.957	1.084	1.008	1.195	1.924	1.040	0.939	1.262	1.819	0.992	5.5	5.2	5.0
Other ^b	2.783	2.934	3.086	2.843	2.857	2.868	3.008	2.854	3.068	3.081	3.074	2.926	11.6	11.6	12.1
Subtotal	8.816	9.233	10.795	9.187	9.308	9.070	10.566	8.954	9.309	9.146	10.691	9.179	38.0	37.9	38.3
Commercial															
Coal	0.003	0.003	0.004	0.003	0.003	0.003	0.004	0.004	0.004	0.003	0.003	0.004	0.013	0.014	0.014
Petroleum	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.002	0.003	0.001	0.001	0.002	0.005	0.007	0.007
Natural Gas.....	0.009	0.009	0.019	0.009	0.009	0.009	0.020	0.011	0.011	0.011	0.019	0.010	0.047	0.049	0.051
Other ^b	0.006	0.007	0.009	0.007	0.007	0.009	0.008	0.010	0.009	0.010	0.007	0.010	0.029	0.033	0.036
Subtotal	0.019	0.020	0.034	0.020	0.021	0.022	0.033	0.027	0.026	0.025	0.031	0.025	0.093	0.103	0.107
Industrial															
Coal	0.062	0.064	0.067	0.068	0.070	0.064	0.064	0.066	0.067	0.065	0.068	0.069	0.261	0.264	0.269
Petroleum	0.015	0.014	0.015	0.016	0.018	0.016	0.011	0.014	0.015	0.010	0.015	0.018	0.059	0.060	0.057
Natural Gas.....	0.183	0.179	0.197	0.157	0.176	0.153	0.179	0.157	0.174	0.171	0.186	0.165	0.717	0.665	0.695
Other ^b	0.143	0.146	0.154	0.164	0.138	0.159	0.156	0.161	0.146	0.161	0.163	0.167	0.607	0.615	0.637
Subtotal	0.403	0.402	0.433	0.404	0.403	0.392	0.410	0.399	0.402	0.407	0.431	0.419	1.643	1.604	1.658
Total	9.238	9.655	11.262	9.612	9.733	9.484	11.009	9.380	9.737	9.578	11.152	9.623	39.767	39.605	40.090
(Physical Units)															
Electric Power ^a															
Coal (Million Short Tons).....	231.0	230.8	266.7	245.1	248.1	231.2	263.5	237.1	244.9	225.9	269.4	244.8	973.7	979.9	985.0
Petroleum (Million Barrels per Day)	0.348	0.402	0.470	0.383	0.614	0.448	0.377	0.328	0.473	0.280	0.451	0.400	0.401	0.441	0.401
Natural Gas (Trillion Cubic Feet).....	1.060	1.294	1.909	1.058	0.983	1.166	1.877	1.014	0.916	1.232	1.775	0.968	5.321	5.041	4.890
Commercial															
Coal (Million Short Tons).....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.5	0.5	0.6
Petroleum (Million Barrels per Day)	0.002	0.002	0.003	0.002	0.006	0.002	0.002	0.003	0.005	0.001	0.002	0.003	0.002	0.003	0.003
Natural Gas (Trillion Cubic Feet).....	0.009	0.009	0.019	0.008	0.008	0.009	0.020	0.011	0.011	0.011	0.018	0.010	0.045	0.048	0.050
Industrial															
Coal (Million Short Tons).....	2.7	2.7	2.9	2.9	3.0	2.7	2.7	2.8	2.9	2.8	2.9	3.0	11.2	11.3	11.5
Petroleum (Million Barrels per Day)	0.027	0.025	0.026	0.028	0.034	0.030	0.021	0.025	0.027	0.018	0.026	0.032	0.026	0.027	0.026
Natural Gas (Trillion Cubic Feet).....	0.179	0.174	0.192	0.153	0.172	0.149	0.174	0.153	0.170	0.166	0.181	0.161	0.699	0.648	0.677

^aElectric Utilities and independent power producers.

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

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

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

	Year				Annual Percentage Change		
	2001	2002	2003	2004	2001-2002	2002-2003	2003-2004
Electricity Sector							
Hydroelectric Power ^a	2.165	2.623	<i>2.766</i>	<i>3.106</i>	21.2	5.5	12.3
Geothermal, Solar and Wind Energy ^b	0.363	0.392	<i>0.406</i>	<i>0.462</i>	8.0	3.6	13.8
Biofuels ^c	0.450	0.466	<i>0.488</i>	<i>0.504</i>	3.6	4.7	3.3
Total	2.978	3.481	<i>3.660</i>	<i>4.072</i>	16.9	5.1	11.3
Other Sectors ^d							
Residential and Commercial ^e	0.567	0.513	<i>0.536</i>	<i>0.559</i>	-9.5	4.5	4.3
Residential	0.475	0.418	<i>0.436</i>	<i>0.455</i>	-12.0	4.3	4.4
Commercial	0.091	0.095	<i>0.100</i>	<i>0.104</i>	4.4	5.3	4.0
Industrial ^f	1.641	1.734	<i>1.685</i>	<i>1.717</i>	5.7	-2.8	1.9
Transportation ^g	0.147	0.175	<i>0.206</i>	<i>0.205</i>	19.0	17.7	-0.5
Total	2.354	2.422	<i>2.427</i>	<i>2.481</i>	2.9	0.2	2.2
Total Renewable Energy Demand	5.331	5.903	<i>6.087</i>	<i>6.554</i>	10.7	3.1	7.7

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

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

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

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

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

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

^gEthanol blended into gasoline.

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

Table A1. Annual U.S. Energy Supply and Demand: Base Case

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	6708	6676	6880	7063	7348	7544	7813	8159	8509	8859	9191	9215	9440	<i>9657</i>	<i>10024</i>
Imported Crude Oil Price ^a (nominal dollars per barrel)	21.79	18.74	18.20	16.13	15.53	17.14	20.62	18.49	12.07	17.26	27.72	22.00	23.69	<i>27.74</i>	<i>24.74</i>
Petroleum Supply															
Crude Oil Production ^b (million barrels per day)	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.75	<i>5.78</i>	<i>5.71</i>
Total Petroleum Net Imports (including SPR) (million barrels per day)	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.54	<i>11.12</i>	<i>11.49</i>
Energy Demand															
U.S. Petroleum (million barrels per day)	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	<i>19.97</i>	<i>20.47</i>
Natural Gas (trillion cubic feet).....	19.17	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	<i>22.33</i>	<i>22.41</i>
Coal (million short tons).....	904	899	908	944	951	962	1006	1030	1037	1039	1084	1060	1065	<i>1072</i>	<i>1076</i>
Electricity (billion kilowatthours) Retail Sales ^c	2713	2762	2763	2861	2935	3013	3101	3146	3264	3312	3421	3370	3475	<i>3478</i>	<i>3509</i>
Other Use/Sales ^d	115	118	122	128	134	144	146	148	161	183	181	173	180	<i>169</i>	<i>179</i>
Total	2827	2880	2886	2989	3069	3157	3247	3294	3425	3495	3603	3543	3655	<i>3647</i>	<i>3688</i>
Total Energy Demand ^e (quadrillion Btu)	84.6	84.5	85.9	87.6	89.2	91.2	94.2	94.7	95.1	96.8	99.0	96.3	97.6	<i>98.0</i>	<i>99.8</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar).....	12.62	12.66	12.48	12.40	12.15	12.09	12.06	11.63	11.18	10.92	10.78	10.45	10.34	<i>10.14</i>	<i>9.96</i>

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

^bIncludes lease condensate.

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

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

^e"Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, Annual Energy Review, 2001, DOE/EIA-0384(01) (AER), Table 1.1. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, Monthly Energy Review (MER). Consequently, the historical data may not precisely match those published in the MER or the AER.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-520, and Weekly Petroleum Status Report DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL0803.

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	<i>9657</i>	<i>10024</i>
GDP Implicit Price Deflator (Index, 1996=1.000).....	0.865	0.897	0.918	0.941	0.960	0.981	1.000	1.019	1.032	1.047	1.069	1.094	1.107	<i>1.123</i>	<i>1.140</i>
Real Disposable Personal Income (billion chained 1996 Dollars).....	5014	5033	5189	5261	5397	5539	5678	5854	6169	6328	6630	6748	7032	<i>7244</i>	<i>7564</i>
Manufacturing Production (Index, 1996=1.000).....	74.156	72.721	75.516	78.214	83.212	87.846	92.157	100.000	106.518	111.872	117.672	112.800	111.691	<i>111.592</i>	<i>118.569</i>
Real Fixed Investment (billion chained 1996 dollars).....	895	833	886	958	1046	1109	1213	1329	1480	1595	1692	1627	1577	<i>1615</i>	<i>1685</i>
Real Exchange Rate (Index, 1996=1.000).....	0.918	0.920	0.926	0.956	0.933	0.869	0.918	0.992	1.044	1.047	1.083	1.141	1.138	<i>1.019</i>	<i>1.001</i>
Business Inventory Change (billion chained 1996 dollars).....	8.7	-6.6	-4.7	3.6	11.9	13.8	9.9	14.8	27.1	14.4	17.5	-36.2	-11.5	<i>-2.9</i>	<i>12.4</i>
Producer Price Index (index, 1982=1.000).....	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.255	1.328	1.342	1.311	<i>1.371</i>	<i>1.358</i>
Consumer Price Index (index, 1982-1984=1.000).....	1.307	1.362	1.403	1.445	1.482	1.524	1.569	1.605	1.630	1.666	1.722	1.771	1.799	<i>1.839</i>	<i>1.861</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	0.913	0.853	0.795	<i>0.961</i>	<i>0.884</i>
Non-Farm Employment (millions).....	109.5	108.4	108.7	110.8	114.3	117.3	119.7	122.8	125.9	129.0	131.8	131.8	130.4	<i>130.0</i>	<i>131.7</i>
Commercial Employment (millions).....	71.0	70.5	70.9	72.9	75.7	78.4	80.7	83.4	86.1	89.1	91.4	92.0	91.4	<i>91.7</i>	<i>93.7</i>
Total Industrial Production (index, 1997=100.0).....	77.6	76.3	78.3	80.9	85.2	89.3	93.2	100.0	105.6	110.1	115.3	111.2	110.4	<i>110.6</i>	<i>116.6</i>
Housing Stock (millions).....	101.1	101.8	102.6	103.8	105.1	106.7	108.0	109.4	111.1	112.7	113.3	114.7	115.7	<i>117.2</i>	<i>118.3</i>
Weather ^a															
Heating Degree-Days															
U.S.	4016	4200	4441	4700	4483	4531	4713	4542	3951	4169	4460	4207	4284	<i>4598</i>	<i>4477</i>
New England	5848	5960	6844	6728	6672	6559	6679	6662	5680	5952	6489	6055	6099	<i>7039</i>	<i>6488</i>
Middle Atlantic	4998	5177	5964	5948	5934	5831	5986	5809	4812	5351	5774	5323	5372	<i>6194</i>	<i>5723</i>
U.S. Gas-Weighted.....	4139	4337	4458	4754	4659	4707	4980	4802	4183	4399	4680	4451	4560	<i>4853</i>	<i>4730</i>
Cooling Degree-Days (U.S.).....	1260	1331	1040	1218	1220	1293	1180	1156	1410	1297	1229	1256	1393	<i>1263</i>	<i>1240</i>

^aPopulation-weighted degree-days. A degree-day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 2000 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 CONTROL0803.

Table A3. U.S. Energy Supply and Demand: Base Case
(Quadrillion Btu except where noted)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Production															
Coal	22.46	21.59	21.63	20.25	22.11	22.03	22.68	23.21	23.94	23.19	22.62	23.05	22.55	22.41	22.32
Natural Gas.....	18.33	18.23	18.38	18.58	19.35	19.08	19.27	19.32	19.61	19.34	19.66	20.23	19.58	20.06	19.94
Crude Oil.....	15.57	15.70	15.22	14.49	14.10	13.89	13.72	13.66	13.24	12.45	12.36	12.28	12.16	12.23	12.12
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	2.35	2.65
Nuclear	6.10	6.42	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03	8.15	8.02	8.19
Hydroelectric.....	3.04	2.99	2.60	2.87	2.67	3.20	3.58	3.62	3.27	3.23	2.78	2.12	2.59	2.74	3.08
Other Renewables.....	3.08	3.14	3.29	3.27	3.38	3.46	3.55	3.43	3.26	3.33	3.35	3.12	3.22	3.25	3.37
Total.....	70.75	70.38	69.96	68.29	70.70	71.17	72.42	72.34	72.80	71.67	71.24	71.38	70.82	71.06	71.66
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	-0.56	-0.53
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	3.55	3.80
Crude Oil.....	12.50	12.22	13.00	14.43	15.07	15.36	16.20	17.88	18.96	19.06	19.94	20.58	20.17	20.95	21.68
Petroleum Products	2.79	2.00	1.96	1.97	2.19	1.53	2.02	1.76	1.98	2.12	2.44	2.72	2.49	2.77	2.88
Electricity	0.01	0.07	0.09	0.09	0.15	0.13	0.14	0.12	0.09	0.10	0.12	0.08	0.08	0.07	0.04
Coal Coke.....	0.00	0.01	0.03	0.03	0.06	0.06	0.02	0.05	0.07	0.06	0.07	0.03	0.06	0.05	0.05
Total.....	14.06	13.19	14.44	16.99	18.30	17.69	19.04	20.70	22.28	23.54	24.97	26.32	25.77	26.83	27.91
Adjustments ^a	-0.25	1.06	1.65	2.50	0.58	2.63	3.06	1.93	0.25	1.76	3.11	-1.62	0.77	-0.17	0.05
Consumption															
Coal	19.19	18.99	19.12	19.84	19.91	20.09	21.00	21.45	21.66	21.62	22.58	21.66	21.98	22.05	22.15
Natural Gas.....	19.72	20.15	20.83	21.35	21.84	22.78	23.20	23.33	22.93	23.01	24.04	22.84	23.14	23.07	23.05
Petroleum	33.55	32.85	33.53	33.84	34.67	34.55	35.76	36.27	36.93	37.96	38.40	38.33	38.30	38.64	39.76
Nuclear	6.10	6.42	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03	8.15	8.02	8.19
Other.....	6.00	6.23	6.09	6.34	6.46	7.00	7.48	7.33	6.75	6.77	6.43	5.22	5.80	5.94	6.46
Total.....	84.57	84.64	86.05	87.78	89.57	91.50	94.52	94.97	95.34	96.97	99.32	96.08	97.36	97.73	99.61

^aBalancing item. Includes stock changes, losses, gains, miscellaneous blending components, and unaccounted-for supply.

Table A4. Annual Average U.S. Energy Prices: Base Case
(Nominal Dollars)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	21.79	18.74	18.20	16.13	15.53	17.14	20.62	18.49	12.07	17.26	27.72	22.00	23.69	27.74	24.74
WTI ^b Spot Average	24.48	21.60	20.54	18.49	17.16	18.41	22.11	20.61	14.45	19.25	30.29	25.95	26.12	30.88	27.25
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.96	2.19	3.70	4.02	2.96	5.00	4.06
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	1.60	1.49
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	1.55	1.45
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	1.51	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.49	0.89	0.76	0.69	0.87	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	1.37	1.28
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel).....	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	16.02	25.34	22.24	23.81	29.21	25.02
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	1.25	1.25	1.24
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	3.68	4.67	4.06
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	3.54	5.44	4.60
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	7.86	9.45	9.46
Electricity															
(cents per kilowatthour).....	7.85	8.05	8.23	8.34	8.40	8.40	8.36	8.43	8.26	8.16	8.24	8.48	8.45	8.69	8.60

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

^bWest Texas Intermediate.

^cAverage self-service cash prices.

^dAverage for all sulfur contents.

^eIncludes independent power producers after January 2002.

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

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

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

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

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Crude Oil Supply															
Domestic Production ^a	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.75	5.78	5.71
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	0.98	0.95
Lower 48	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.85	4.84	4.76	4.80	4.76
Net Commercial Imports ^b	5.76	5.67	5.98	6.67	6.95	7.14	7.40	8.12	8.60	8.60	9.01	9.30	9.12	9.48	9.79
Net SPR Withdrawals.....	0.06	0.05	-0.01	-0.02	0.00	0.00	0.07	0.01	-0.02	0.02	0.08	-0.02	-0.12	-0.14	-0.05
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	-0.05
Product Supplied and Losses	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.15	0.12	0.11	0.12	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	14.95	15.23	15.57
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	1.72	1.94
Other Hydrocarbon and Alcohol Inputs.....	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.38	0.42	0.43	0.40
Crude Oil Product Supplied.....	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain.....	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.90	0.96	0.93	0.95
Net Product Imports ^c	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.40	1.59	1.42	1.63	1.70
Product Stock Withdrawn.....	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	0.00	-0.23	0.15	0.03	-0.08
Total Supply	17.04	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	19.97	20.48
Demand															
Motor Gasoline ^d	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.47	8.61	8.85	8.94	9.17
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	1.58	1.61
Distillate Fuel Oil	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.72	3.85	3.78	3.92	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	0.70	0.75	0.69
Other Oils ^e	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.73	4.82	4.77	4.99
Total Demand.....	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	19.97	20.47
Total Petroleum Net Imports	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.54	11.12	11.49
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	323	325	318	335	337	303	284	305	324	284	286	312	278	282	299
Total Motor Gasoline.....	220	219	216	226	215	202	195	210	216	193	196	210	209	199	207
Jet Fuel.....	52	49	43	40	47	40	40	44	45	41	45	42	39	40	42
Distillate Fuel Oil	132	144	141	141	145	130	127	138	156	125	118	145	134	132	135
Residual Fuel Oil.....	49	50	43	44	42	37	46	40	45	36	36	41	31	35	37
Other Oils ^f	227	251	292	237	274	348	280	204	212	396	246	178	345	261	223

^aIncludes lease condensate.

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

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

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

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

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

SPR: Strategic Petroleum Reserve. NGL: Natural Gas Liquids

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

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

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

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Total Dry Gas Production	17.81	17.70	17.84	18.10	18.82	18.60	18.78	18.83	19.02	18.83	19.18	19.68	19.05	<i>19.51</i>	<i>19.39</i>
Gross Imports	1.53	1.77	2.14	2.35	2.62	2.84	2.94	2.99	3.15	3.59	3.78	3.98	4.01	<i>4.14</i>	<i>4.50</i>
Gross Exports	0.09	0.13	0.22	0.14	0.16	0.15	0.15	0.16	0.16	0.16	0.24	0.37	0.52	<i>0.68</i>	<i>0.80</i>
Net Imports	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	3.54	3.60	3.49	<i>3.47</i>	<i>3.70</i>
Supplemental Gaseous Fuels.....	0.12	0.11	0.12	0.12	0.11	0.11	0.09	0.08	0.08	0.08	0.09	0.09	0.08	<i>0.08</i>	<i>0.08</i>
Total New Supply.....	19.38	19.45	19.88	20.42	21.39	21.40	21.66	21.74	22.10	22.34	22.81	23.37	22.62	<i>23.05</i>	<i>23.17</i>
Working Gas in Storage															
Opening	2.85	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	<i>2.38</i>	<i>2.33</i>
Closing.....	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	2.38	<i>2.33</i>	<i>2.30</i>
Net Withdrawals.....	-0.22	0.24	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.21	0.80	-1.18	0.53	<i>0.04</i>	<i>0.03</i>
Total Supply.....	19.16	19.70	20.11	20.70	21.11	21.85	21.64	21.74	21.54	22.54	23.61	22.18	23.15	<i>23.09</i>	<i>23.20</i>
Balancing Item ^a	0.01	-0.14	0.12	0.09	0.13	0.35	0.96	0.98	0.70	-0.15	-0.15	0.05	-0.63	<i>-0.64</i>	<i>-0.76</i>
Total Primary Supply	19.17	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	<i>22.46</i>	<i>22.44</i>
Demand															
Residential	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	4.99	4.78	4.92	<i>5.07</i>	<i>5.05</i>
Commercial.....	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	3.22	3.04	3.12	<i>3.16</i>	<i>3.25</i>
Industrial	8.25	8.36	8.70	8.87	8.91	9.38	9.68	9.71	9.49	9.16	9.40	8.45	8.29	<i>8.22</i>	<i>8.33</i>
Lease and Plant Fuel.....	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.17	1.08	1.15	1.09	1.05	<i>1.00</i>	<i>0.99</i>
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	7.24	<i>7.22</i>	<i>7.34</i>
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	<i>1.15</i>	<i>1.21</i>
Non-CHP	5.96	6.17	6.42	6.58	6.61	6.90	7.15	7.23	6.97	6.68	6.87	6.05	5.96	<i>6.07</i>	<i>6.14</i>
Transportation ^c	0.66	0.60	0.59	0.63	0.69	0.70	0.72	0.76	0.64	0.66	0.66	0.64	0.65	<i>0.67</i>	<i>0.66</i>
Electric Power ^d	3.24	3.32	3.45	3.47	3.90	4.24	3.81	4.06	4.59	4.82	5.21	5.34	5.55	<i>5.31</i>	<i>5.15</i>
Total Demand	19.17	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	<i>22.46</i>	<i>22.44</i>

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

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

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

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

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

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

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

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Supply															
Production.....	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.4	1073.6	1127.7	1093.8	1086.7	1082.3
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	393.4	383.9
Interior.....	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	143.5	147.0	146.2	137.6	125.8
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	556.3	572.6
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	43.3	36.8
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	43.3	36.8	36.1
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	-7.4	6.5	0.7
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	21.1	21.8
Exports.....	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	58.5	48.7	39.6	41.9	41.4
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	1063.7	1072.4	1063.4
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	163.9
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	163.9	168.2
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	-15.0	-4.2
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	1071.9	1069.0	1074.0
Demand															
Coke Plants.....	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	28.9	26.1	22.5	24.9	23.7
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	980.0	984.3
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	64.8	66.0
Residential and Commercial.....	6.7	6.1	6.2	6.2	6.0	5.8	6.0	6.5	4.9	4.9	4.1	4.4	4.4	4.7	4.5
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	60.1	61.5
CHP ^e	27.8	27.0	28.2	28.9	29.7	29.4	29.4	29.9	28.6	27.8	28.0	26.4	26.5	24.6	25.2
Non-CHP.....	48.5	48.4	45.8	46.0	45.5	43.7	42.3	41.7	38.9	37.0	37.2	38.8	36.6	35.5	36.3
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	1069.7	1074.0
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	6.5	-0.7	0.0

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

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

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

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

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

^fTotal Demand includes estimated IPP consumption.

^gThe discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period. Prior to 1994, discrepancy may include some waste coal supplied to IPPs that has not been specifically identified.

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

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

Table A8. Annual U.S. Electricity Supply and Demand: Base Case
(Billion Kilowatt-hours)

	Year														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Net Electricity Generation															
Electric Power Sector ^a															
Coal	1572.1	1568.8	1597.7	1665.5	1666.3	1686.1	1772.0	1820.8	1850.2	1858.6	1943.1	1882.8	1904.7	<i>1910.2</i>	<i>1905.9</i>
Petroleum	118.9	112.8	92.2	105.4	98.7	68.1	74.8	86.5	122.2	111.5	105.2	119.1	84.6	<i>103.0</i>	<i>87.6</i>
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	<i>572.3</i>	<i>573.3</i>
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	<i>768.3</i>	<i>784.3</i>
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	<i>264.2</i>	<i>296.6</i>
Geothermal and Other ^b	36.5	40.8	44.3	45.9	45.8	43.7	44.7	46.0	47.3	48.7	50.2	49.4	54.7	<i>56.0</i>	<i>61.2</i>
Subtotal	2900.1	2934.2	2933.1	3042.8	3087.5	3193.2	3283.0	3328.1	3456.1	3528.7	3636.2	3580.1	3675.4	<i>3674.2</i>	<i>3708.8</i>
Other Sectors ^c	136.7	138.2	149.5	153.3	158.8	159.3	160.0	162.8	162.9	164.8	164.6	156.6	163.1	<i>152.3</i>	<i>162.5</i>
Total	3036.7	3072.5	3082.6	3196.1	3246.3	3352.5	3443.0	3490.9	3619.0	3693.5	3800.8	3736.6	3838.6	<i>3826.4</i>	<i>3871.3</i>
Net Imports ^d	2.3	19.6	25.4	27.8	44.8	39.2	40.2	34.1	25.8	29.0	34.0	22.0	22.9	<i>21.2</i>	<i>11.9</i>
Total Supply	3039.0	3092.1	3108.0	3223.9	3291.1	3391.7	3483.2	3525.0	3644.8	3722.5	3834.8	3758.7	3861.4	<i>3847.6</i>	<i>3883.2</i>
Losses and Unaccounted for ^e	211.9	212.0	222.4	234.9	222.4	234.4	236.2	230.9	219.7	227.9	231.9	216.1	206.1	<i>200.3</i>	<i>194.9</i>
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	<i>1282.2</i>	<i>1295.0</i>
Commercial	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1055.2	1089.2	1108.1	<i>1111.3</i>	<i>1124.7</i>
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	<i>977.9</i>	<i>981.2</i>
Other	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	109.5	113.8	105.2	<i>107.0</i>	<i>108.1</i>
Subtotal	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3421.4	3369.8	3475.2	<i>3478.4</i>	<i>3509.0</i>
Other Use/Sales ^g	114.6	118.1	122.3	127.5	134.1	144.1	145.9	148.4	160.9	182.5	181.5	172.8	180.1	<i>169.0</i>	<i>179.4</i>
Total Demand	2827.1	2880.1	2885.6	2989.0	3068.7	3157.3	3247.0	3294.0	3425.1	3494.6	3602.9	3542.6	3655.3	<i>3647.4</i>	<i>3688.3</i>

^aElectric Utilities and independent power producers.

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

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

^dData for 2002 are estimates.

^eBalancing item, mainly transmission and distribution losses.

^fTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S Electric Power Monthly and Electric Power Annual. Power marketers' sales are reported annually in Appendix C of EIA's Electric Sales and Revenue. Quarterly data for power marketers (and thus retail sales totals) are imputed. Data for 2002 are estimated.

^gDefined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2002 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.