

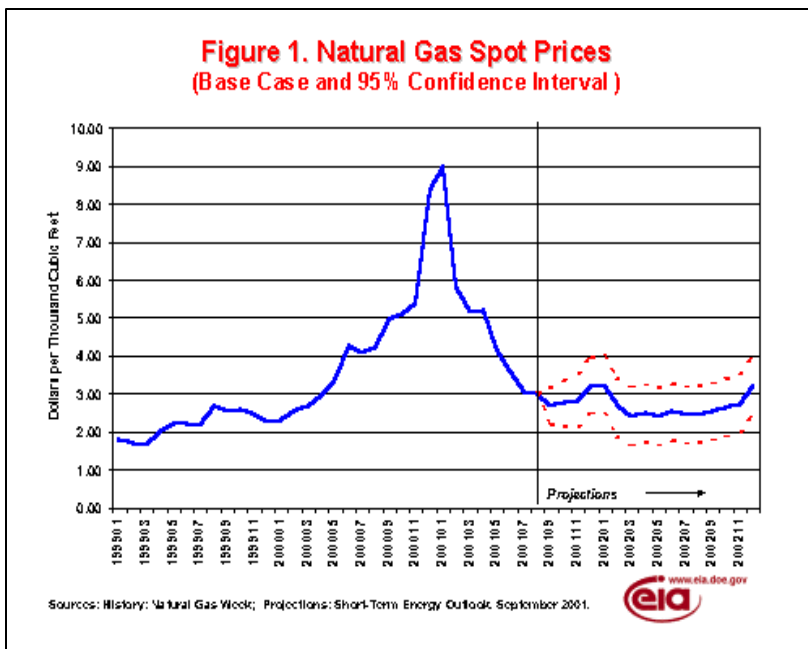
Short-Term Energy Outlook

September 2001

Overview

Natural Gas Markets

The U.S. economic slowdown and the lack of any sustained and broad-based boost in fuel use from summer electricity demand have left U.S. natural gas supplies underwhelmed on the demand side since the end of the last heating season. At the end of August, working gas in storage amounted to approximately 2,603 billion cubic feet, 19 percent above the low year-ago levels and 7.6 percent above the previous 5-year average. The current gas situation is one that few (if any) foresaw when extraordinarily low end-of-season stocks arrived at the end of March. Spot natural gas prices at the Henry Hub fell

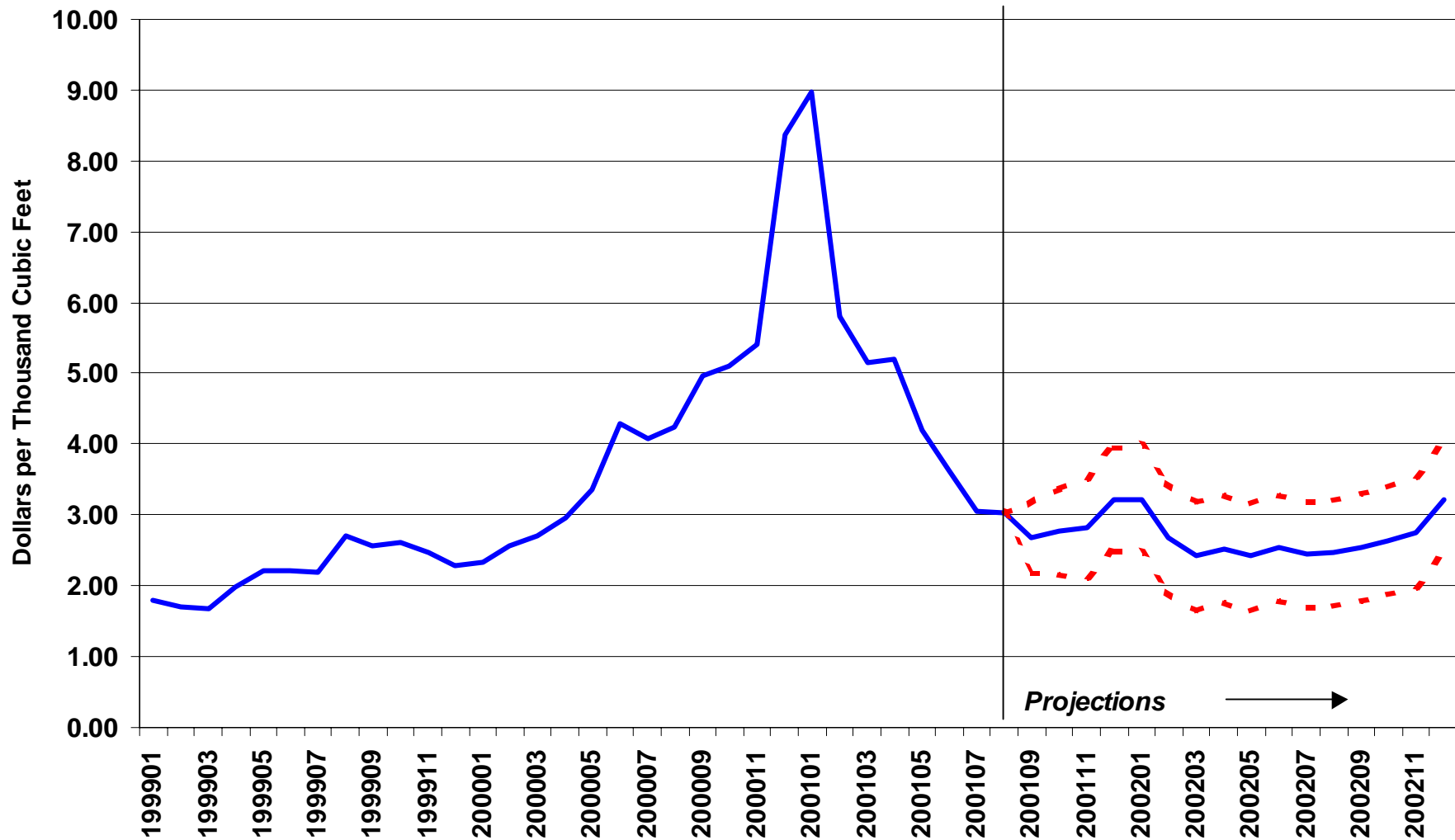


below \$2.50 per million Btu during the closing days of August, and the prospects for average prices well below \$3 in 2002 have improved greatly (Figure 1). Normal weather conditions and a modest recovery in industrial output during the forecast period are not expected to generate much in the way of new upward pressure on gas prices through 2002. We believe that production capability is more than sufficient to balance the U.S. natural gas market without any significant price spikes over at least the next 15 months.

Gasoline Prices

The return of price flare-ups in Midwest gasoline markets in August followed steady reductions in previously abundant gasoline inventories in July and August, generated in part by unexpectedly high gasoline demand and punctuated by the loss of a major refinery operation in Illinois in mid August. All regions saw an end to a downward trend in pump prices that extended from mid May to mid August. By far the sharpest price increases were seen in Midwest markets. Average Midwest pump prices rose 39 cents per gallon between August 6 and September 3, reaching \$1.73 per gallon in EIA's latest retail price survey. Over the same period the U.S. average rose 16 cents to \$1.55 per gallon at the beginning of September (Figure 2). Efforts to alleviate the supply crunch in the Midwest have already succeeded in dampening spot prices in Chicago, which had surged by 40-50 cents per gallon from August 1 to August 24 but have since fallen back by about 20 cents. These efforts, however, still leave gasoline inventories at the low end of normal for the country as a whole. In addition, the increased attention on gasoline production in recent weeks has contributed to some deterioration in the inventory position for distillate fuel, which already was lagging behind normal seasonal expectations during the first half of the summer. The potential for somewhat tighter heating oil and diesel markets for the coming winter has thus increased, and the probability that gasoline supplies for next spring will be below normal has gone up as well. Nevertheless, although Citgo's Lemont refinery is not expected to be back in operation much before the end of the next heating season, supply increases from other areas are expected to make the worst of the current upswing short-lived.

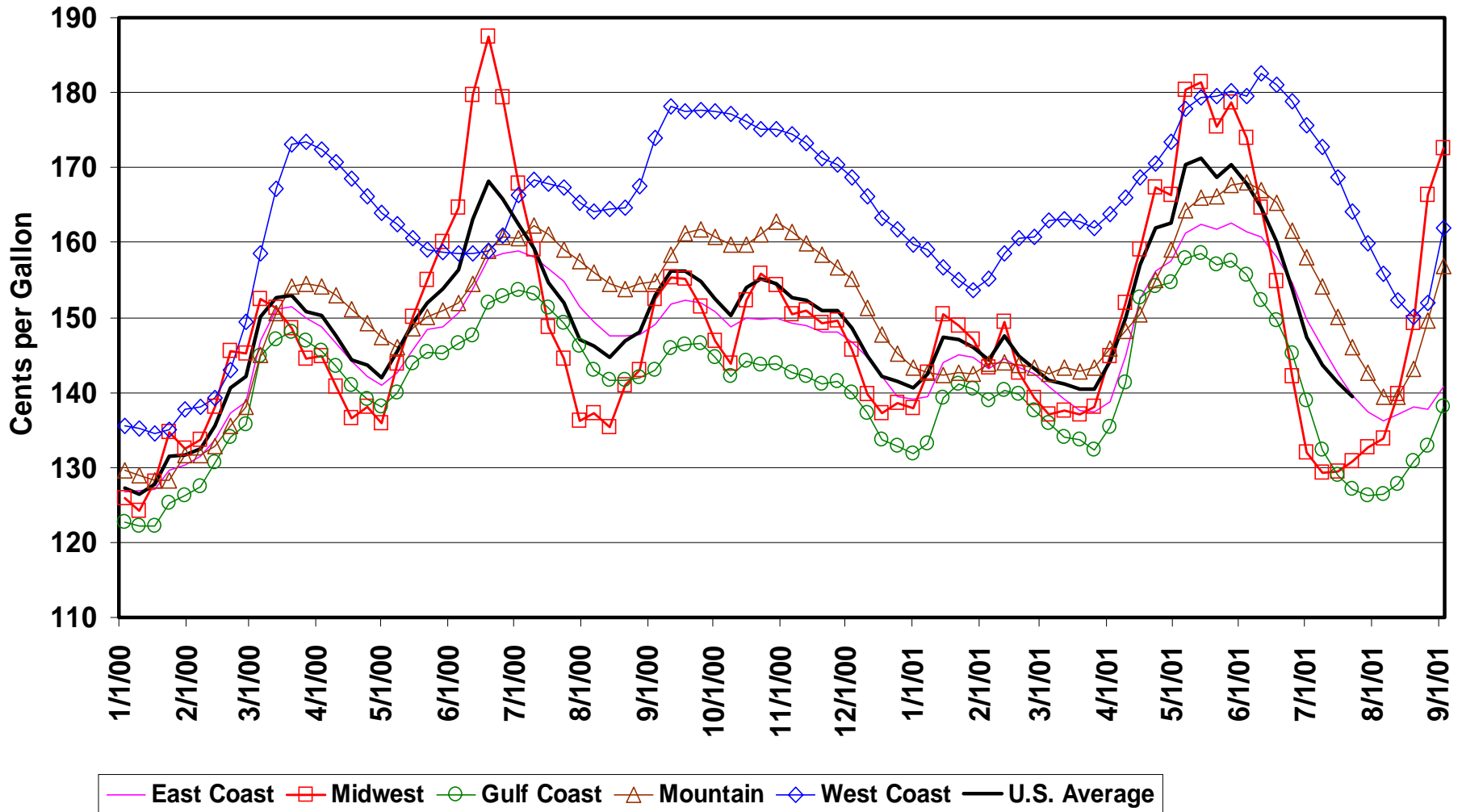
**Figure 1. Natural Gas Spot Prices
(Base Case and 95% Confidence Interval)**



Sources: History: Natural Gas Week; Projections: Short-Term Energy Outlook, September 2001.



Figure 2. Regional Retail Gasoline Prices (Weekly, Regular Grade, All Formulations)



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.

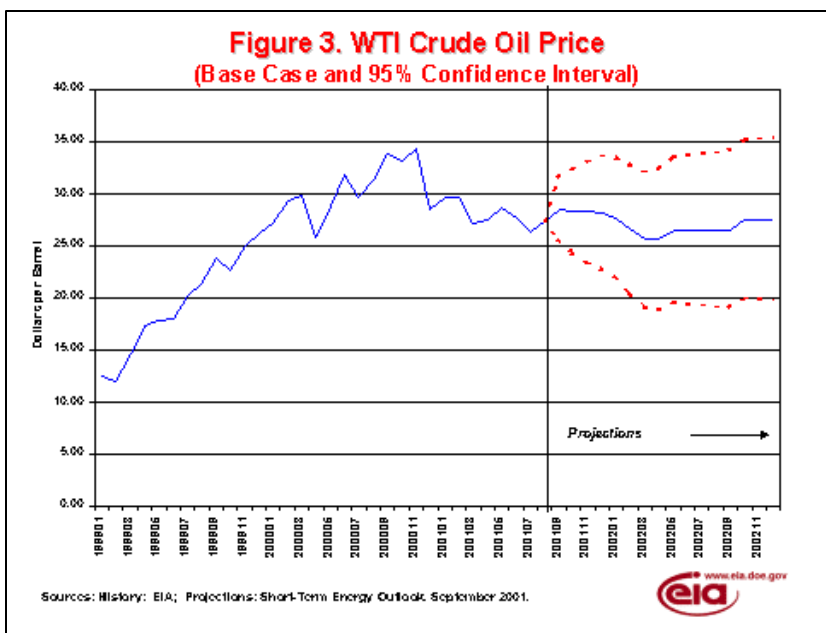


World Crude Oil Markets

Crude oil prices gained some ground last month, moving up about \$1 per barrel from the July average to an estimated level of \$24.50 per barrel in August for imported oil. Some reinforcement for our general view that crude markets are likely to tighten some before the end of the year arrived in the form of downward revisions in OECD oil stocks estimates. In the United States, total oil stocks now seem likely to show a decline in the third quarter of this year. We had previously projected a more normal-looking slight increase for the June to September period. With new OPEC cutbacks starting this month, there is good reason to expect average crude oil prices to rise further (by about \$1.50 per barrel) by the fourth quarter of this year. The loss of UN-sanctioned Iraqi exports in June and further OPEC production quota cuts effective September 1 are expected to further reduce OECD commercial oil inventories over the next few months. The West Texas Intermediate oil price, which we now expect to average about \$28 per barrel in 2001, is expected to average slightly less than \$27 per barrel in 2002.

Macroeconomic Assumptions

In this issue of the Outlook, we have incorporated the historical revisions of GDP and related data released by the Bureau of Economic Analysis in late July and have revised the macroeconomic forecast accordingly. Real GDP grew at a revised pace of 4.1 percent in 2000. Growth in 2001 and 2002 is pegged at 1.7 percent and 2.9 percent, respectively. Manufacturing production, which is now expected to post a 2.9-percent decline in 2001, may be poised for a better recovery next year than previously thought. We currently project a 3.5-percent growth rate for manufacturing output in 2002, compared to the slightly weaker 2.1 percent assumed in the August Outlook. Lower expected energy costs and more favorable costs of other inputs are expected to help durable goods manufacturing expand at a faster pace than previously expected. While the environment for industry remains weak, some hopeful signs may be emerging. The National Association of Purchasing Managers' Report, released on Sept 4, indicated that the worst declines for production may be over. The manufacturing sector began to stabilize in August. Although the overall activity index remained below 50 (the dividing line between contraction and expansion), several components crept back over 50: production, new orders and new export orders.

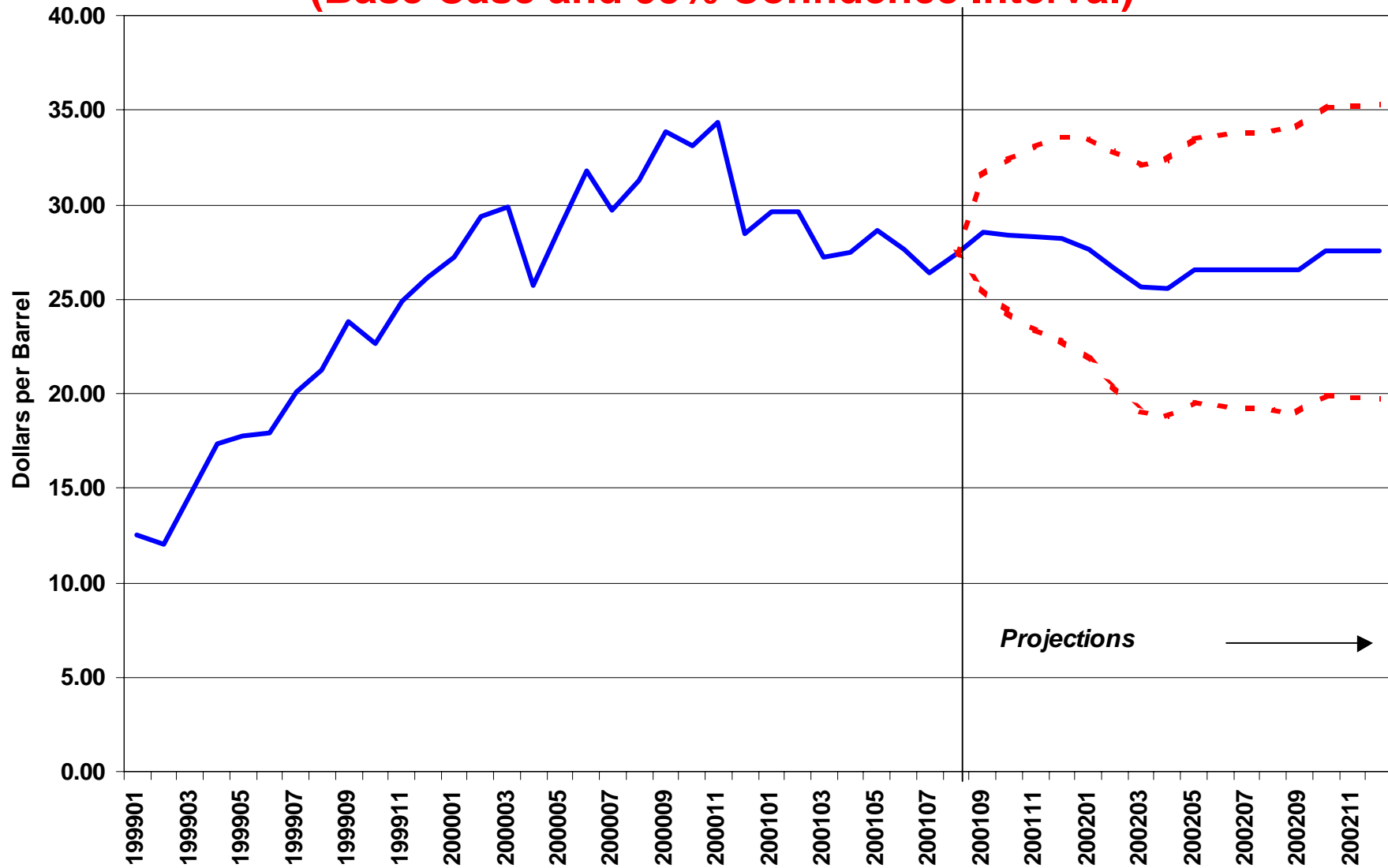


International Oil Markets

Crude Oil Prices. World oil prices strengthened in August as commercial oil inventories in the OECD countries tightened to the lower end of the normal range by end-month. The U.S. average imported crude oil price in August was about \$24.40 per barrel, up about \$1 per barrel from July levels, while the U.S. benchmark West Texas Intermediate crude oil price averaged almost \$27.50 per barrel in August ([Figure 3](#)). The OPEC basket price, which generally tracks closely with the average imported crude oil price, averaged about \$24.50 per barrel.

World oil prices are expected to rise further (by about \$1.50 per barrel) by the fourth quarter as the loss of UN-sanctioned Iraqi exports in June and further OPEC production quota cuts effective September 1 are expected to further reduce OECD

Figure 3. WTI Crude Oil Price (Base Case and 95% Confidence Interval)



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



commercial oil inventories over the next few months. The West Texas Intermediate oil price is expected to average about \$27 per barrel in 2002.

World Oil Inventories. Although OECD commercial stocks were initially estimated to be at the upper end of their normal range in spring 2001, the International Energy Agency has revised each of their monthly stock estimates for 2001 downward. EIA estimates indicate that they were continuing to move towards the lower end of their normal range during mid-summer as the loss of UN-sanctioned Iraqi exports in June resulted in decreased imports of Iraqi oil by end-July. OECD commercial stocks are currently projected to remain at the lower end of their normal range during the latter half of the year and much of 2002 ([Figure 4](#)). EIA does not attempt to estimate oil inventory levels on a global basis. However, the direction in which OECD commercial oil inventories are headed is discerned from EIA's world oil supply and demand estimates.

International Oil Demand. EIA has not changed its projection for world oil demand growth, and it remains at 1 million barrels per day for 2001 ([Figure 5](#)). Although EIA has lowered its demand projection in previous Outlooks because of lowered expectations for world economic growth, no further significant revisions are expected. World oil demand during the past decade has generally grown by 1 - 2 million barrels per day, except during conditions which do not hold in 2001, such as periods of serious international crises or periods of rapidly increasing world oil prices. This pattern of demand growth is expected to continue because although there has been an economic slowdown, world oil markets have not faced any periods of crises or worldwide recession, and oil prices have generally been declining.

International Oil Supply

In June and July, the OPEC 10 increased production to partially offset lost UN-sanctioned Iraqi oil exports, producing roughly 500,000 barrels per day above their May levels in July. With the return of Iraqi exports, OPEC 10 production in August fell back toward May levels.

Effective September 1, OPEC cut their production quotas for the third time this year, with the decrease totaling another 1 million barrels per day. With OECD and world commercial inventories tightening, the OPEC 10 are not expected to adhere closely to this quota, and OPEC overproduction is expected to be almost 900,000 barrels per day in the fourth quarter. OPEC production should increase again in 2002, as world oil demand growth will continue to increase by more than non-OPEC production.

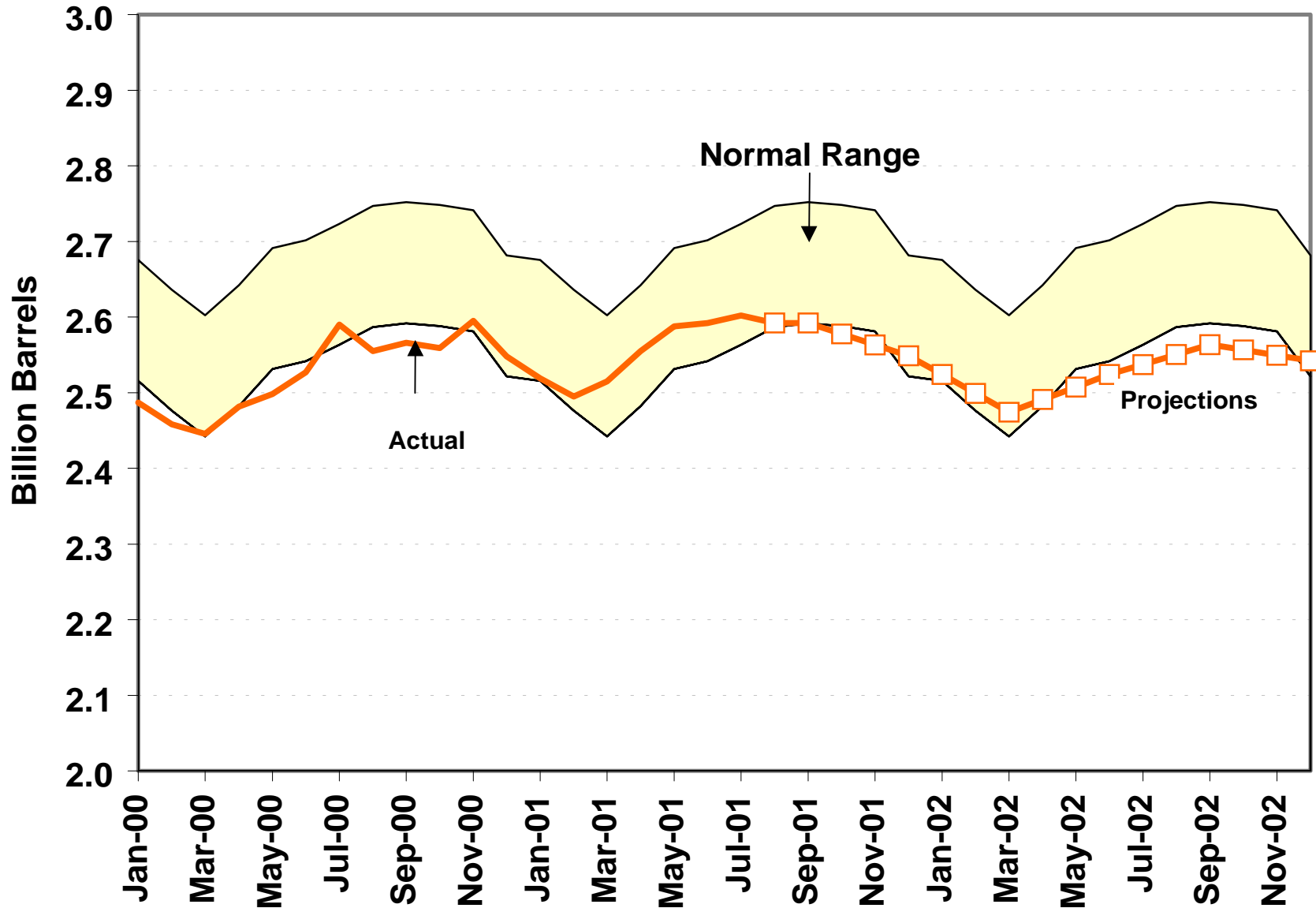
Iraq is not bound by the OPEC 10 quotas. Iraqi average production continued to increase, rising by 300,000 barrels per day in August from their July level, with similar increases expected for September. Although temporary decreases in production have come to be expected at rollover times for the oil-for-food program, no ongoing restriction on Iraqi exports is assumed in this Outlook ([Figure 6](#)).

Non-OPEC production is expected to increase by 0.8 million barrels per day in 2001. Announced delays in opening the Caspian Pipeline Consortium pipeline to transport oil from Kazakhstan to world markets will not affect the Outlook for 2001, as this pipeline was not expected to support greater Caspian production levels until 2002.

U. S. Energy Prices

Gasoline Prices. After declining for 10 weeks in a row, national average retail motor gasoline prices rebounded with a surprisingly strong late summer price surge. However, most of this price jump was concentrated in the Midwest and, to a lesser degree, the Rocky Mountain and West Coast regions of the country. Prices on the East Coast on the other hand, have remained fairly steady or continued to decline until early September. A major refinery shutdown that occurred on August 14 in Lemont, Illinois,

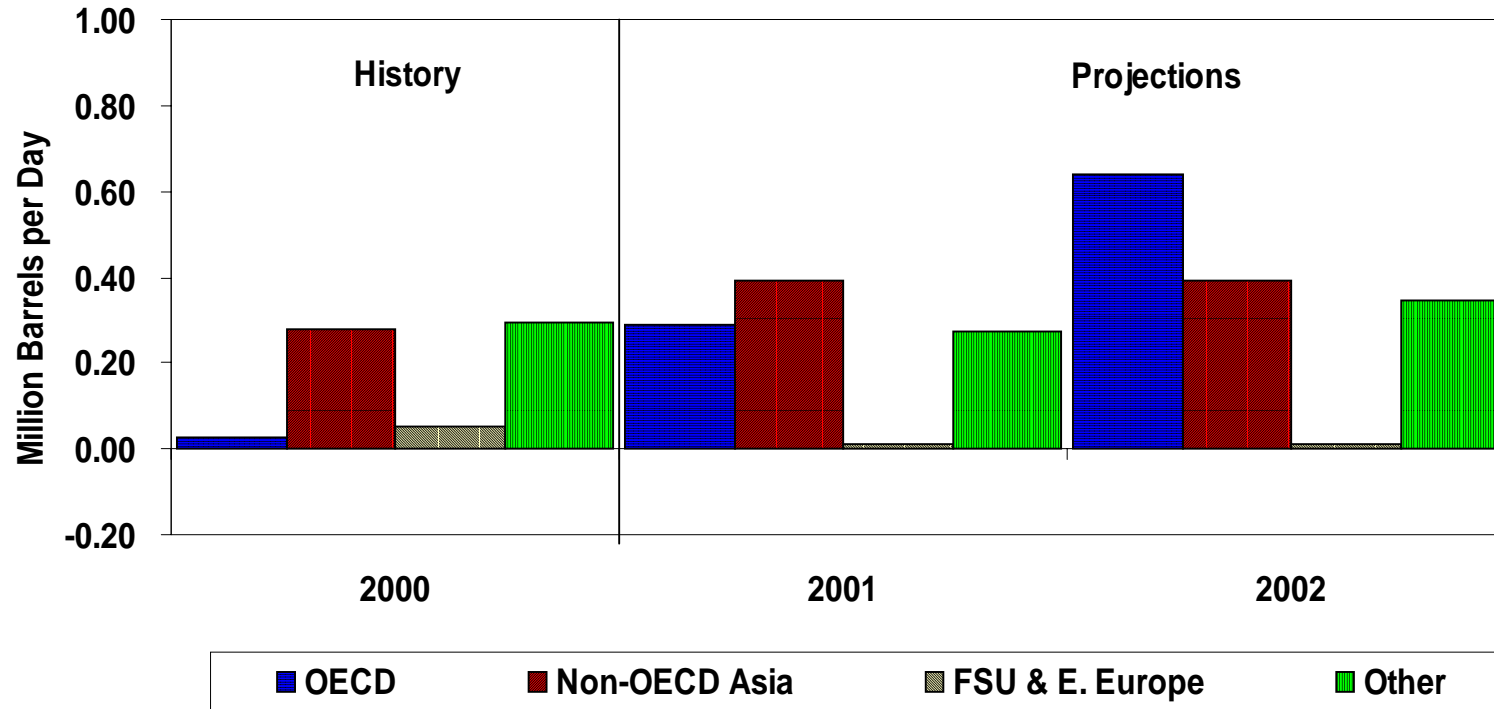
Figure 4. OECD Commercial Stocks



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



Figure 5. World Oil Demand Growth (Change from Year Ago)

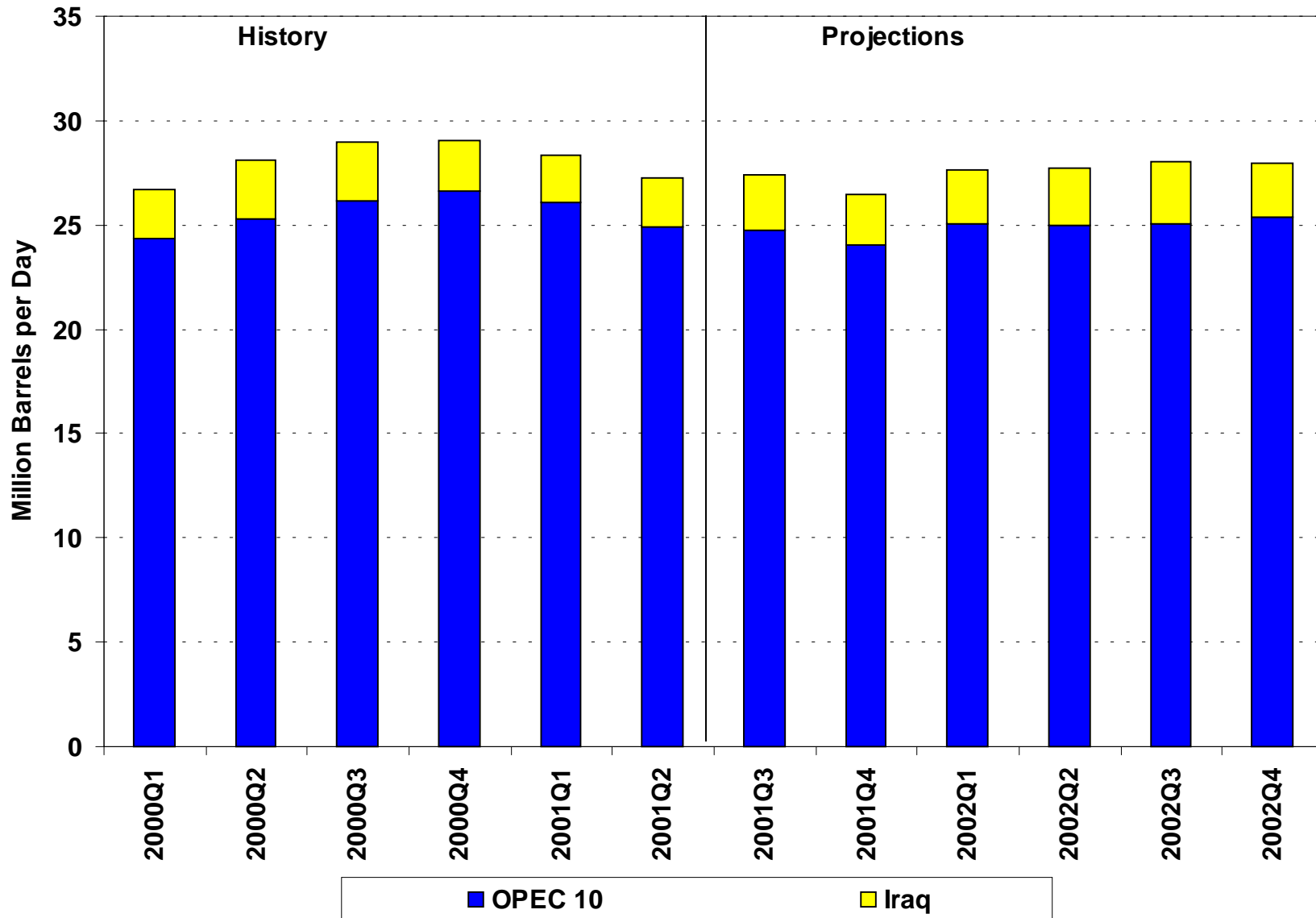


* FSU = Former Soviet Union

Sources: History: EIA; Projections: Short-Term Energy Outlook September 2001.



Figure 6. OPEC Crude Oil Production 2000-2002



Sources: History: EIA; Projections: Short-Term Energy Outlook September 2001.



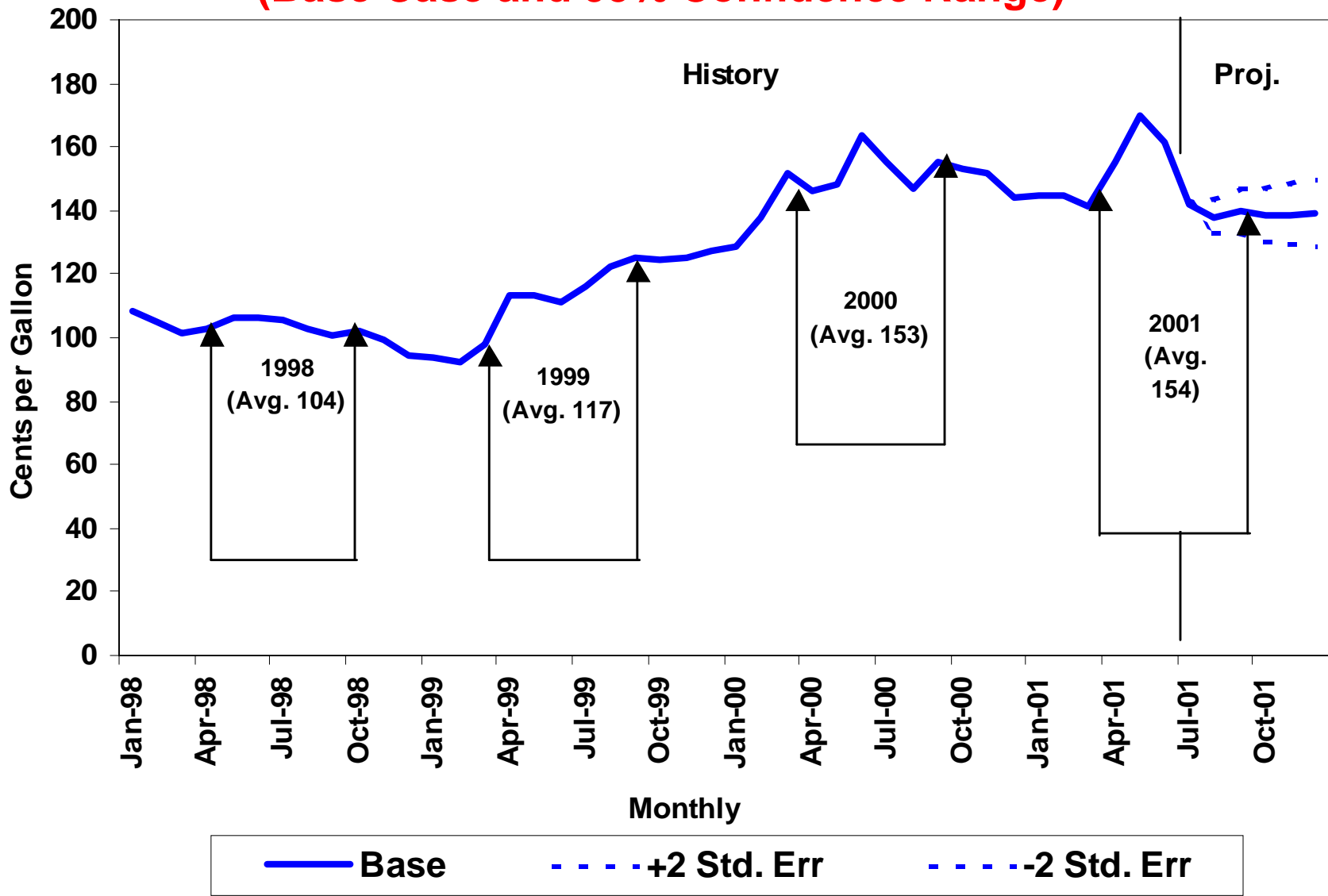
exacerbated an already tight supply situation in that area of the country. As a result, regional spot prices for gasoline soared. Within the last two weeks of August, pump prices in Minnesota, for example, shot up 40 cents per gallon. Meanwhile, pump prices in New York fell by about a penny. During the week of September 3, upward price movement was evident in all regions, and the U.S. average pump price for regular gasoline touched \$1.55 per gallon.

Last June, the Midwest (and to a lesser extent, the nation as a whole) experienced a similar spike in motor gasoline prices. Prices plunged soon afterward in response to increased supplies pouring in from other regions. Although EIA does not yet have final weekly import data for the end of August, the trade publications indicate that product imports have been moving quickly. For example, (from the Reuters Wire of August 27), "The soaring prices have attracted fuel tankers and barges, which are now heading to the region. An official at Venezuela's state oil giant PDVSA, Citgo's parent, said the company will guarantee fuel supply to clients of its U.S. subsidiary. Last spring, the national average retail gasoline price hit an all time high (in nominal terms) as refinery troubles and significantly reduced inventories of gasoline plagued the nation (Figure 7). However, by mid-summer the supply situation reversed and prices at the pump quickly retreated. Stocks remained at or above "normal" levels for June through August (Figure 8). We had anticipated that prices would continue to drift downward through the remainder of the year. However, the unexpected happened: a fire on August 14th caused Citgo Petroleum's refinery in Lemont, Illinois to shut down until early next year. The result was a sudden reduction in gasoline supplies during the peak summer driving period, leading to Chicago spot price increases of 20 cents per gallon in a period of 2 days. Corresponding price spikes at the pump soon followed throughout the Midwest. Less than 2 weeks after the Citgo fire, some refineries on the West Coast had experienced outages, causing spot prices in that region of the country to rise rapidly. However, these reported shutdowns are only expected to last 1-2 weeks compared to an estimated 6-month downtime for the Lemont refinery in Illinois. Thus, any price increases at the pump, which would soon follow, may be short-lived. Interestingly, spot prices in the East Coast and Gulf regions of the nation have not risen as much as the prices in those other regions, though demand pressure from the "troubled" regions is stirring the markets throughout the nation.

Currently, we expect national average monthly prices for regular gasoline to average about \$1.52 per gallon in September, 10 cents per gallon higher than August. Gasoline demand normally falls off after the summer, and the high spot market prices have been attracting fuel tankers and barges of gasoline from abroad. Assuming our base case crude oil price path, we expect prices to start easing by the 4th quarter.

Distillate Fuel Oil (Diesel and Heating Oil). The price of diesel fuel, like the price of gasoline, is also expected to rise this September to \$1.45 per gallon, or by about 6 cents per gallon above the August price (Figure 9). But unlike the price of gasoline, which we project to fall in the winter, diesel prices are expected to remain firm through the end of the year, as the overall demand for distillate fuels increases during the heating season. Nevertheless, diesel prices in the fourth quarter of this year are expected to be nearly 15 cents per gallon less than they were in the 4th quarter of year 2000 because, compared to Q4 2000, world crude oil prices are expected to be about \$2.60 per barrel (6 cents per gallon) less, distillate demand is projected to be slightly lower, and given the current stock situation, distillate stocks are likely to be over 7 percent higher going into the fourth quarter than they were this time last year. Similarly, residential heating oil prices are projected to be lower this upcoming winter, compared to last winter, as we are likely to enter the heating season with a more plentiful distillate stock situation compared to last year. Inventories of distillate fuel oil currently stand at 10 percent above last year's level for the end of August (Figure 10). By the end of November, when distillate stocks are normally at their peak, we expect U.S. inventories to stand at 126 million barrels--at the low end of the "normal" range--and about 5 percent above last year's level. However, there is some risk that this situation could deteriorate over the next month or so, depending on how tight world oil markets are and on how willing U.S. refiners are to maintain high levels of output. One factor that promises to relieve distillate markets of some of the pressure that they were subject to during the last heating season is the dramatic shift in the net supply situation for natural gas. Plentiful gas this winter

Figure 7. U.S. Average Retail Motor Gasoline Price Cases* (Base Case and 95% Confidence Range)

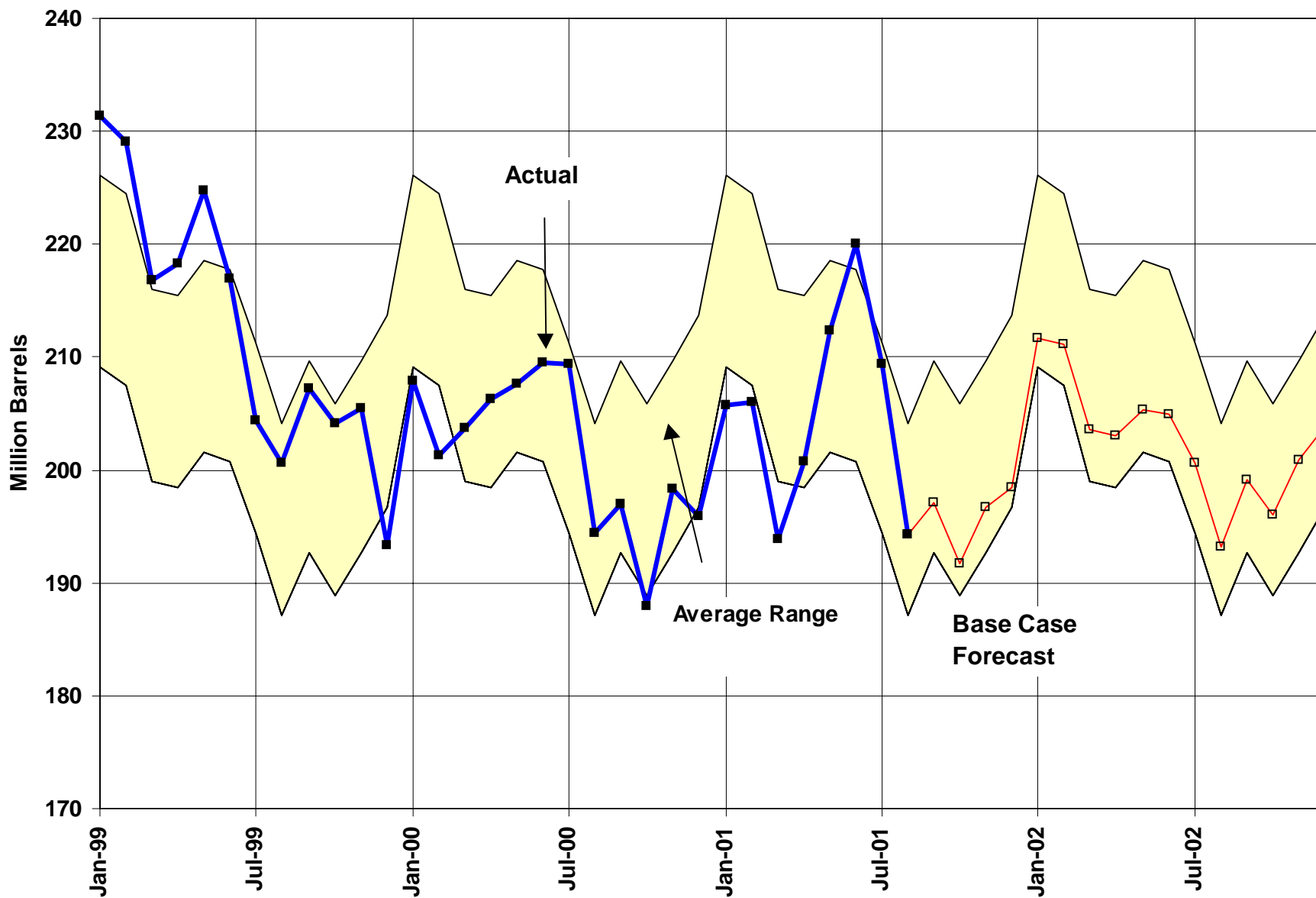


* Regular gasoline, self-serve cash.

Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



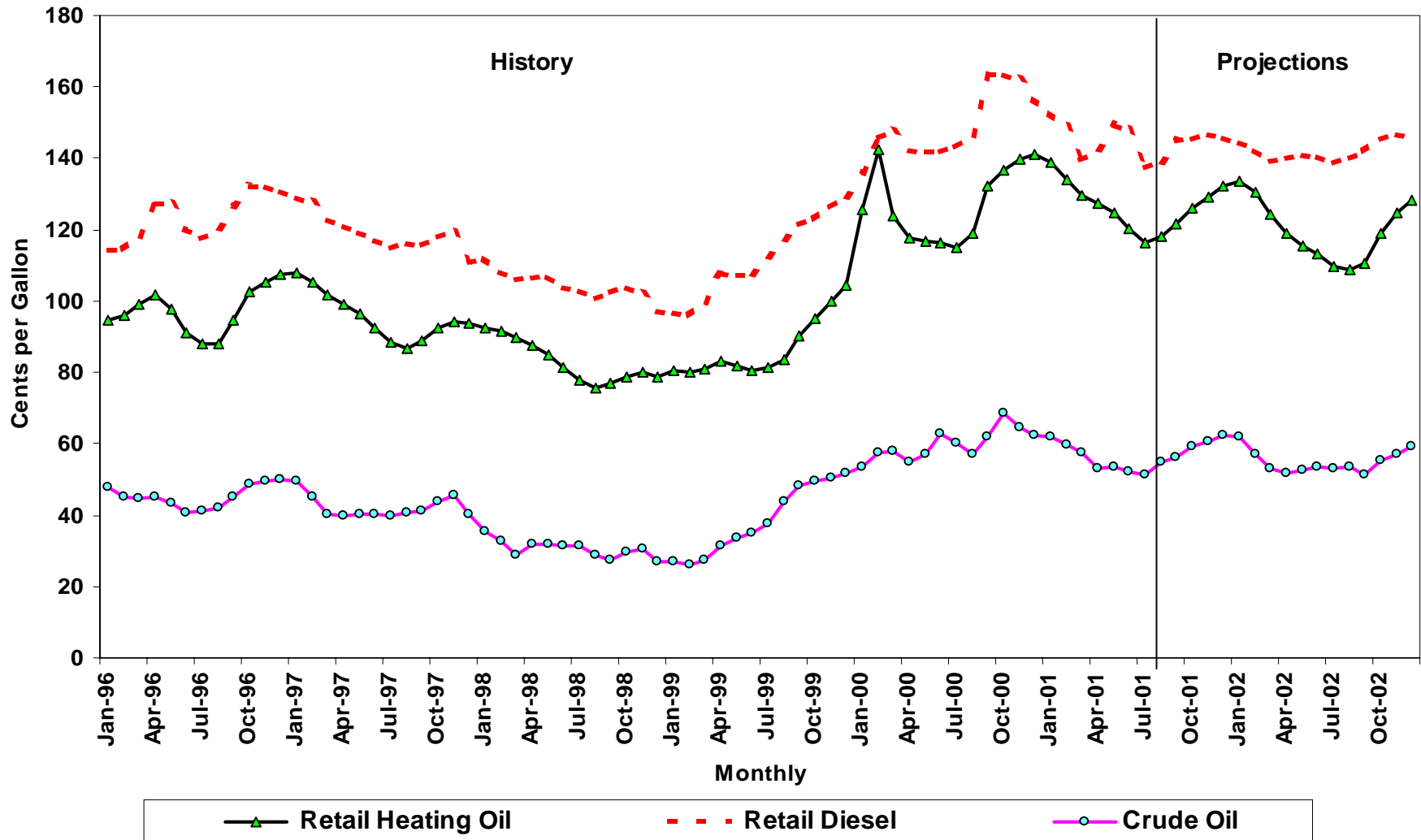
Figure 8. U.S. Gasoline Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.

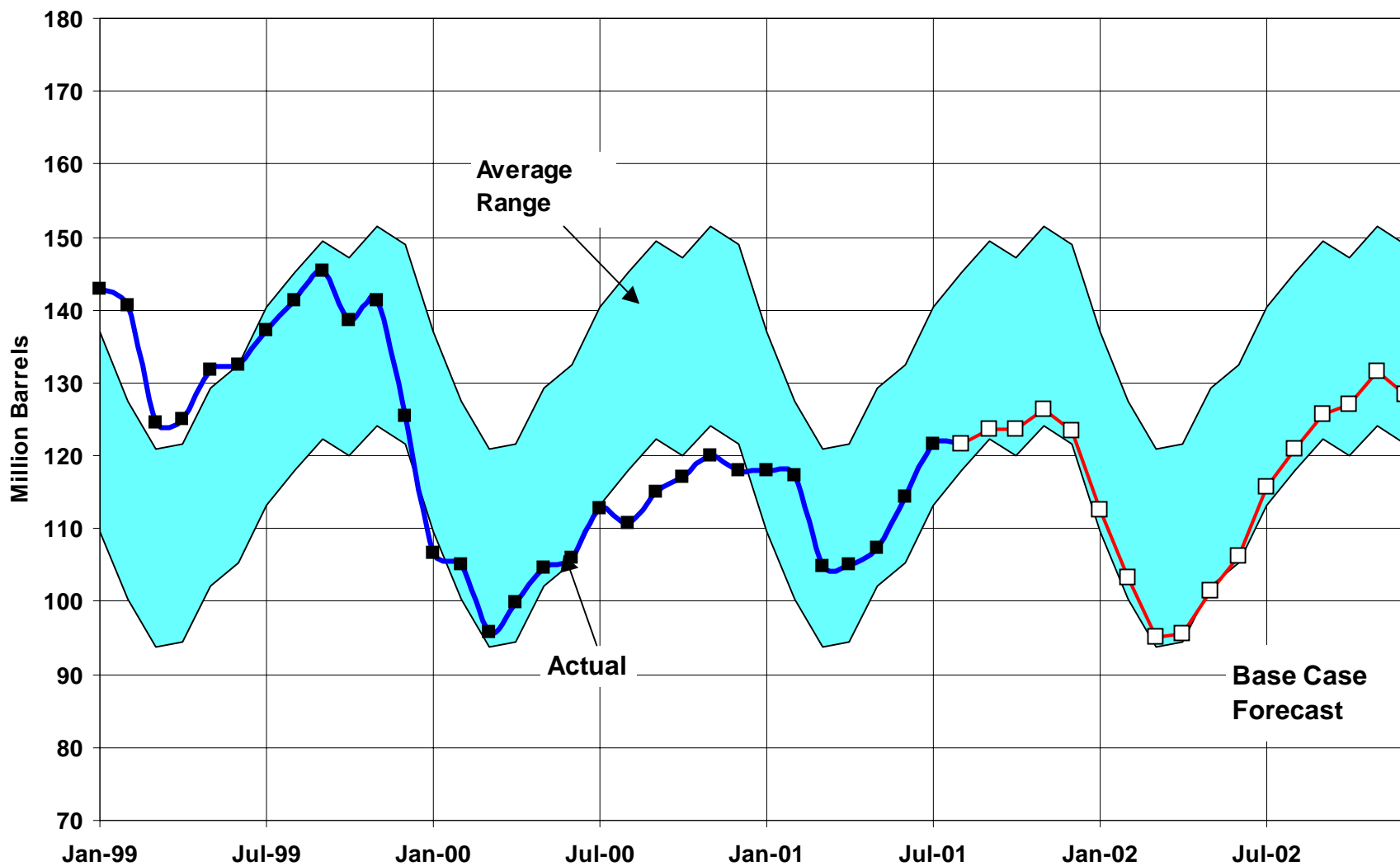


Figure 9. Distillate Fuel Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.

Figure 10. Distillate Fuel Inventories



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



is likely to forestall the level of switching toward distillate fuels observed in the period of last December through the first quarter of 2001.

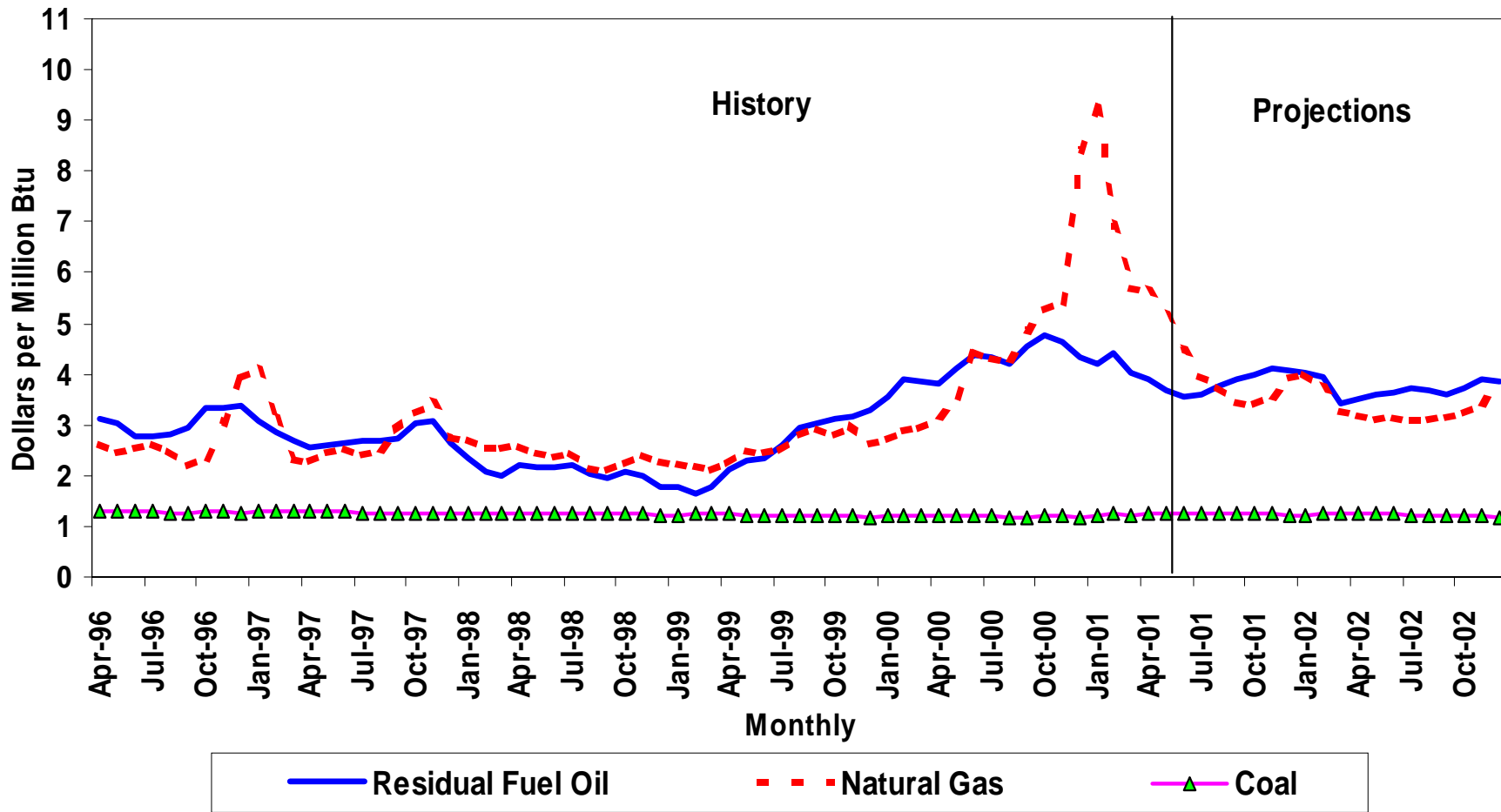
Natural Gas. In the last Outlook, we had speculated "whether or not natural gas spot prices are likely to remain at or above \$3.00 per thousand cubic feet for any sustained period of time for the rest of 2001." The answer now seems quite apparent. In fact, prices at the Henry Hub have recently hovered near \$2.00 per thousand cubic feet. Moderate summer weather for much of the nation, increased production, and weak demand yielded rapidly falling prices and robust levels of injections of gas into storage from April through the present. Assuming normal weather, and barring any major production catastrophes-- such as a hurricane in the Gulf-- by the start of the heating season, working gas in underground storage is projected to be 14 percent above last year's level and 5 percent above the previous 5-year average. Unless the weather is unusually harsh in the gas consuming regions of the country, we project the spot price to average under \$3.00 per thousand cubic this winter, and well under that amount for all of year 2002. [\(Figure 1\)](#) The average for 2001 is now projected to be about \$4.20 per thousand cubic feet. Next year, we expect the inventory and production conditions to continue to remain robust. Therefore, we expect a significant drop in the average annual wellhead price to about \$2.65 per thousand cubic feet. Prices at the wellhead during the spring and summer months of 2002 are projected to average less than \$2.50 per thousand cubic. It is now quite possible that prices may collapse even further if the fall and winter weather patterns turn out to be mild, crude oil prices stay stable, and the economy fails to muster at least a modest resurgence over the next few quarters. Then, gas prices could easily drop to \$2.00 per thousand cubic feet and remain there for months as underground storage levels bulge. On the other hand, a prolonged cold autumn and a harsh winter would diminish storage, allowing the price to rise, but probably not beyond the \$3.00-3.50 per-thousand-cubic-foot range.

Electric Utility Fuels. In June 2000, the price of delivered gas to electric utilities bounced above heavy fuel oil prices, giving oil the competitive edge [\(Figure 11\)](#). This divergence continued until last January, when the price of gas surged to double that of oil. In February, as gas prices began falling, the two competitive fuel prices started to converge. Last month, we estimate that they reached parity on an average Btu basis. As gas prices are expected to continue to decline (while oil prices stay more or less stable), natural gas should slip below average delivered heavy oil prices as early as this month. As recently as last month, we expected that this situation would not occur until the middle of next year. The spot price of coal to electric utilities has also risen this year, partly because of pressures for coal substitution for relatively scarce gas and also because of the very tight storage position of coal at power generating stations. For example, stocks of coal at electric utilities had dropped considerably in the first half of the year compared to the same period last year and are still somewhat weak. However stocks have been building, and are expected to rebound by the end of the year, as production increases and as gas is more heavily used for power generation, easing pressure on spot coal prices. Nevertheless, on an annual basis, coal prices are expected to increase slightly this year, after years of annual price decreases. Next year, coal prices should recede as coal stocks gain and natural gas prices continue to drop.

U.S. Oil Demand

Total petroleum demand in the current year is projected to average 19.86 million barrels per day, up only 170,000 barrels per day, or 0.8 percent, from the average for 2000, with the first quarter accounting for much of that increase [\(Figure 12\)](#). That is even less than the 176,000 barrels-per-day growth recorded last year and the smallest such increase since 1995, a year of almost no demand growth. Moreover, this year's projected change would also have been close to zero but for the substantial price-induced fuel switching away from natural gas during the first quarter. In 2002, however, total demand is projected to average 20.29 million barrels per day, up 423,000 barrels per day, or 2.1 percent from the current year.

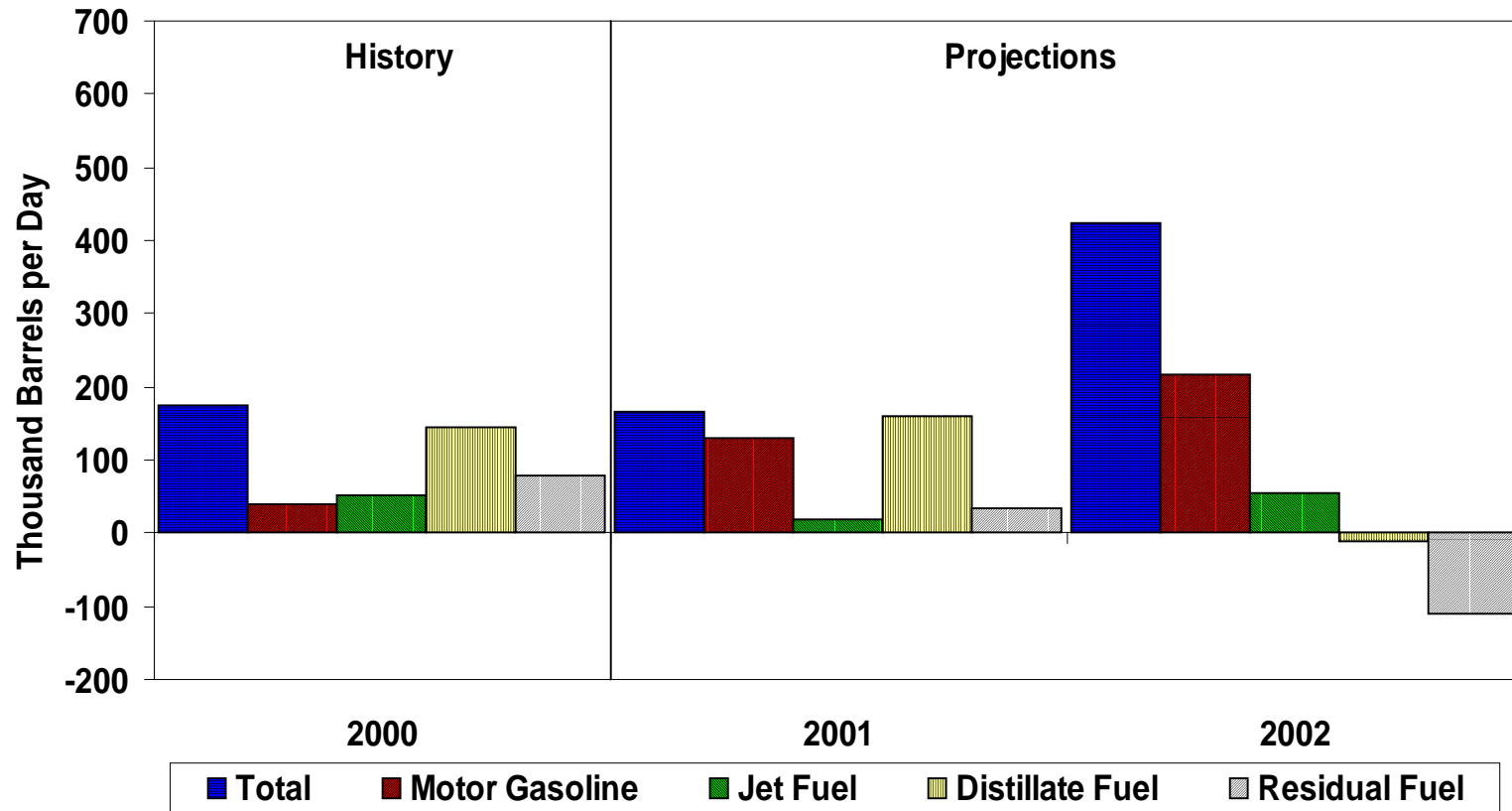
Figure 11. Fossil Fuel Prices to Electric Utilities



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



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



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



Revised data now show that that demand for petroleum products in the first quarter of this year jumped 563,000 barrels per day (2.9 percent) from the same period in 2000. Several factors account for that growth, among which are: the spike in natural gas prices to record levels, which stimulated oil demand in the price-sensitive industrial and power generation sectors; a more than 14-percent increase in heating degree-days from the previous year's mild first quarter to a more normal first quarter; and, of somewhat less importance, the unusually weak first-quarter 2000 shipments data stemming from Y2K-related behavior of suppliers at the end of 1999. The second quarter 2001, in contrast, registered an estimated year-to-year overall increase of only 69,000 barrels per day. The latter half of the year is expected to display further deterioration in demand growth, averaging 19,000 barrels per day. Normal weather assumptions and the prospects for plentiful gas supplies favor noticeably weaker distillate demand during the fourth quarter of 2001 compared to the same period in 2000.

For the current year, motor gasoline demand is expected to grow 1.5 percent, up from the 0.5 percent rate of increase of the previous year. The second quarter, however, was a weak period, with gasoline demand increasing only 0.5 percent. During that period, retail pump prices spiked to record levels; and underlying growth in disposable income slowed markedly. The second half is projected to witness an acceleration of demand growth to about 1.6 percent, resulting from recently enacted tax concessions, the beginnings of a broad economic recovery, and the lagged effects of retail price declines since the Spring peaks. In 2002, motor gasoline demand is projected to climb a robust 2.5 percent, the highest rate of growth in four years. That results not only from recovery in economic growth but also to lagged effects of the prior year's price declines. It should be noted that even that rate of growth in 2002 would leave gasoline demand at a level below most trend expectations of two years ago.

Jet fuel demand, which has also been weak for much of this year, is expected to register a 1.1 percent growth for all of 2001. Following two years of substantial growth, revenue ton-mile growth is projected to advance by only 0.7 percent in the current year, the smallest increase since the Gulf War. Although growth in capacity is projected to be more than 3 percent, the decline in load factors is expected to boost fuel efficiency, constraining demand growth for jet fuel. In the following year, during which economic growth is projected to accelerate, jet fuel demand is projected to increase by almost 3 percent, buoyed by an increase in revenue ton-miles of more than 5 percent and a 3-percent growth rate in industry-wide capacity.

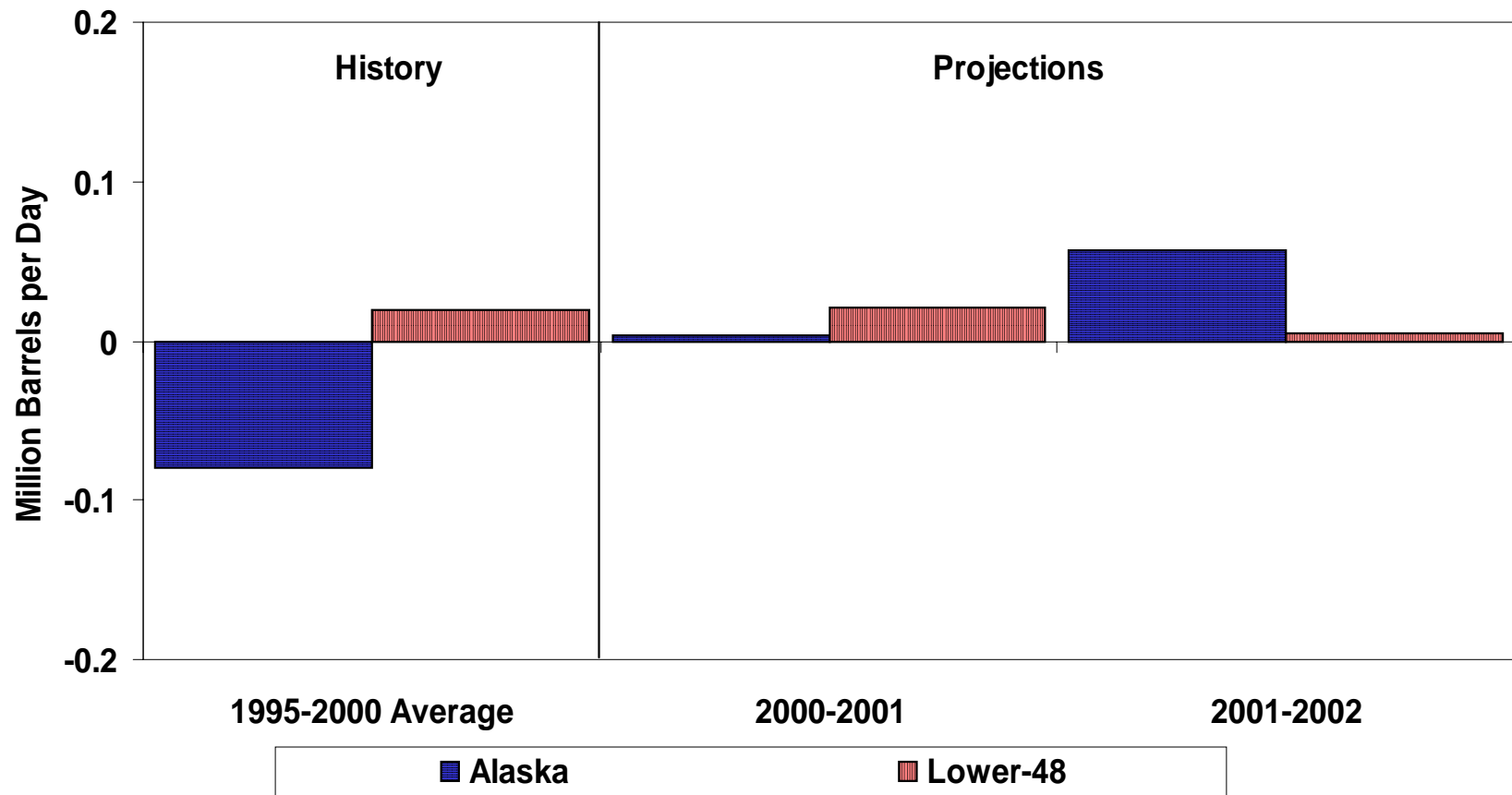
Distillate fuel oil demand, having increased by 4.0 percent in 2000, is projected to increase a further 4.3 percent in the current year despite the slowdown in economic growth. In the first quarter, high natural gas prices and the return to normal winter weather resulted in shipments of distillate oil being up an estimated 438,000 barrels per day compared to the previous year. In 2002, total distillate demand is projected to decline slightly. That projection, however, assumes that the pattern of record volumes of purchases of fuel oil by power generators is not going to be repeated. Meanwhile, space-heating demand is projected to decline slightly. Diesel fuel shipments, however, are projected to increase, but at a more moderate 2.3 percent rate.

Residual fuel oil demand is projected to increase by 3.9 percent in the current year. But that growth during the first half of the year--due primarily to the fuel switching in power-generation and industrial sectors--averaged almost 25 percent. The second half of 2001 is projected to see a decline of 7 percent as a result of the substantial decline of gas prices. In 2002, the assumption of normal weather and the continued low levels of natural gas prices are expected to result in further contraction of residual fuel oil demand of almost 13 percent.

U.S. Oil Supply

Average domestic oil production is expected to increase by 24,000 barrels per day or 0.4 percent in 2001, to a level of 5.85 million barrels per day ([Figure 13](#)). For 2002, a 1.1 percent increase is expected for a production

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



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



rate of 5.91 million barrels per day average for the year.

Lower-48 States oil production is expected to increase by 21,000 barrels per day to a rate of 4.87 million barrels per day in 2001, followed by an increase of 5,000 barrels per day in 2002. Shell started production from their Ursa field in 1999, and will peak in production late in the year 2001. Shell's Brutus platform is expected to start production in the third quarter of 2001 with peak oil production of 100,000 barrels per day in 2002. Oil production from the Mars, Troika, Ursa, Dianna-Hoover and Brutus Federal Offshore fields is expected to account for about 10.2 percent of the lower-48 oil production by the 4th quarter of 2002.

Alaska is expected to account for 17.45 percent of the total U.S. oil production in 2002. Its oil production is expected to increase by 0.4 percent in 2001 and again increase by 5.9 percent in 2002. The increase in 2001 is the result of adding two new satellite fields, Colville River (Alpine) and Prudhoe Bay (Aurora), which contributed to the Alaska North Slope production. Alpine averaged 78,000 barrels per day during June and it is expected to peak at 85,000 barrels per day later this year. Aurora peak production should also occur late this year. Another satellite field, North Star, is expected to come on in early to mid 2002 and will peak at a rate of 65,000 barrels per day later that year. A substantial portion of the oil production from Alaska comes from the giant Prudhoe Bay Field. Production from the Kuparuk River field plus like production from "West Sak, Tabasco and Tarn fields is expected to stay at an average of 225,000 barrels per day in the 2001 and 2002 forecast period. Meltwater, another satellite field, is being developed by drilling and completing wells in 2001.

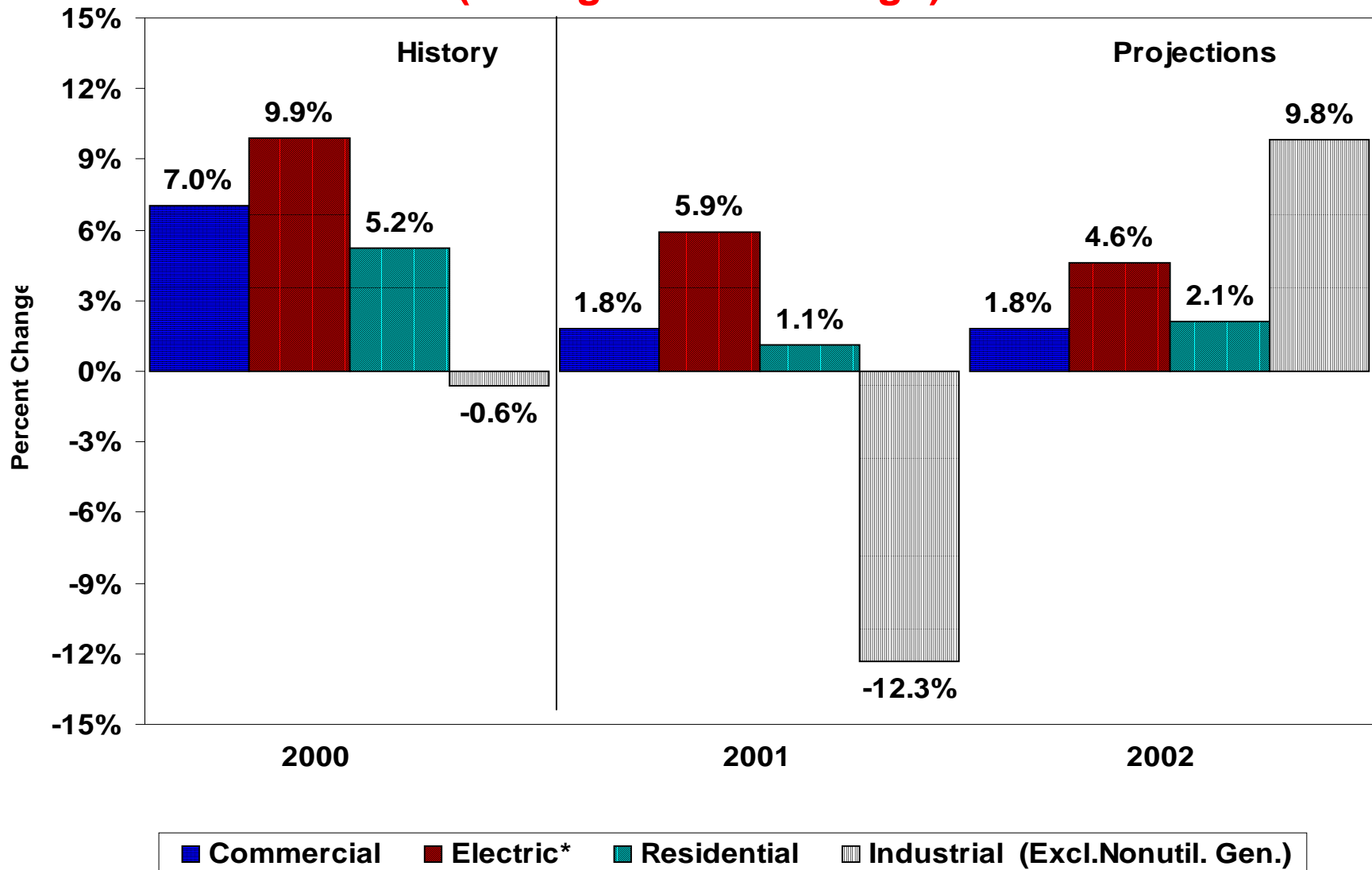
Natural Gas Demand and Supply

Based on 5 month's worth of monthly survey data on gas consumption, it is now apparent that a decline in total natural gas consumption for the year 2001 is likely. In the current base case we project a decline of 1.3 percent from the 2000 total level of 22.74 trillion cubic feet ([Figure 14](#)). Sharp reductions in industrial gas demand, particularly related to processes other than the production of electricity, is the reason for the falloff in overall usage.

Based on EIA data through May, we estimate that total industrial gas use (including consumption by nonutility power generators) fell by about 280 billion cubic feet (6.5 percent) during the first half of 2001 compared to the first half of 2000. A firmer estimate of the amount of demand lost during the first six months of this year should be available for next month's report. Natural gas use related to electricity output by independent power producers as well as industrial and commercial cogenerators rose sharply – by 23 percent in the first quarter and is estimated to grow by a similar amount in the second quarter, compared to 2000 levels. It is not possible to say definitively how much of the growth from nonutility generators was from cogenerators, but, inasmuch as this category is strongly (but not exclusively) related to the level of industrial activity, we suspect that the contribution was small and possibly negative. If one excludes all nonutility generator-related demand from the industrial category, we would estimate at this time that such a subtotal of the industrial category fell by over 600 billion cubic feet during the first half of 2001, a 22.5 percent decline from the first-half 2000 total.

A combination of very high gas prices and falling industrial production in gas-intensive industries has shaken a great deal of natural gas demand out of the industrial sector so far this year. While price conditions have now swung back in favor of using natural gas, the depressed output situation is not expected to improve appreciatively until early 2002. From the severely depressed conditions of 2001 we expect a sharp increase in overall industrial demand in 2002 (approximately 1 trillion cubic feet or 11.3 percent in the base case). While about half of that increase is likely to stem from higher reported use by nonutility generators, a significant portion should come from non power-related uses due to much more competitive natural gas prices and a respectable (2.8-percent) increase in gas-intensive industrial output.

Figure 14. Natural Gas Demand Growth by Sector (Change from Year Ago)



* Includes gas to electric utilities and nonutility generators.

Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.

Natural gas demand growth in 2002 is expected to rise by 4.6 percent as the economy picks up again from its dip in 2001 and as industrial sector demand for gas recovers. The differential between natural gas and fuel oil prices is expected to turn around in favor of gas in the fourth quarter 2001 and continues to favor gas through the forecast period.

Increases in natural gas production, the mild summer weather and the loss of some demand for gas in the industrial and utility sectors, were responsible for collapsing spot prices and the high levels of storage injections seen this summer. Based on EIA survey data and recent information from the American Gas Association on early-season storage additions, we estimate that, on an EIA survey basis, working gas in storage at the end of August was 2,603 billion cubic feet. Storage is well above last year's level and also above the previous five-year average ([Figure 15](#)). In August, spot natural gas prices fell to below \$3.00 per thousand cubic feet (mcf) from recent average monthly levels of well over \$5.00 per mcf. Gas storage levels at the beginning of the heating season (Nov. 1) are expected to be significantly higher (perhaps by as much as 15 percent higher) than they were at that time last year.

Domestic gas production is estimated to have risen by 2.4 percent in 2000. There remain some important uncertainties about just how much natural gas was lifted and sent to market during the first half of this year. Our current preliminary estimates of 1.7 percent growth in dry gas production for the first six months of 2001 compared to the same period in 2000 may be too low because of unusually high retention of liquids in the gas stream and because of other short-run behavioral shifts in gas marketing, implemented to take advantage of very high prices but effected in a way that precludes detection by the usual estimating techniques. This issue should be resolved with more complete data later this year. Meanwhile, we have lowered projected production gains for the rest of this year and for 2002 in light of the growing supply situation and the drastic reductions in gas prices. Year 2002 production growth is currently pegged at 2.1 percent.

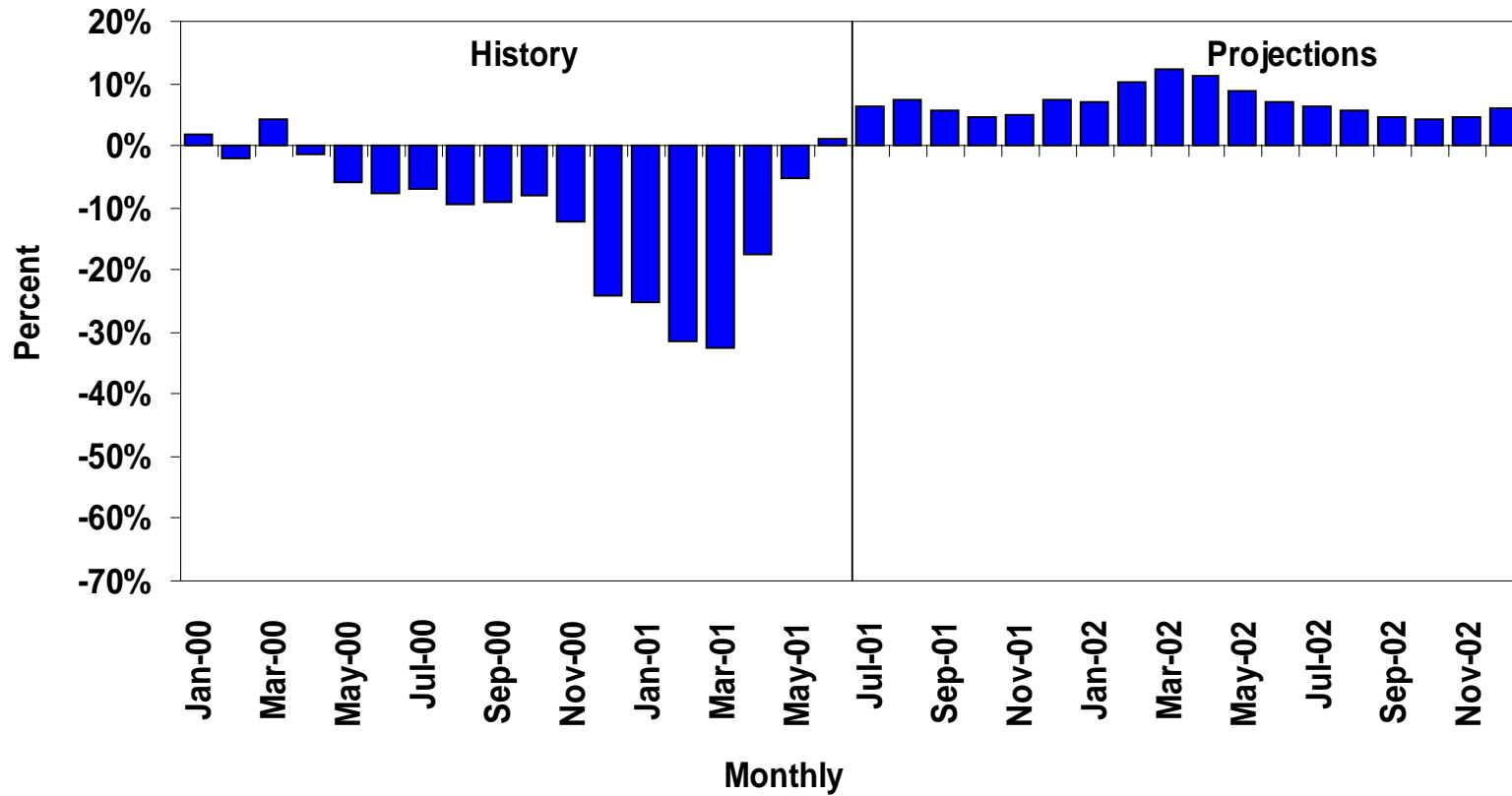
Net imports of natural gas are projected to rise by about 4.5 percent in 2001 and by 9.1 percent in 2002. Strong increases in gross imports have been partially offset this year by increased exports of gas to Mexico (total gross exports were up by an average of 54 percent for the first 5 months of 2001). We assume that export requirements will not expand comparably in 2002. Average import capacity is expected to post gains of 6 percent and 7 percent in 2001 and 2002, respectively.

Electricity Demand and Supply

Total annual electricity demand growth (retail sales plus industrial generation for own use and other direct sales) is projected at about 1.2 percent in 2001 and 2.5 percent in 2002. This is compared with estimated demand growth in 2000 of 3.0 percent over the previous year's level. Electricity demand growth is expected to be somewhat slower in the forecast years than it was in 2000 ([Figure 16](#)) partly because the economy is growing more slowly than it was in 2000. Industrial demand for electricity is expected to be negative in 2001 compared to its 2000 level but revive in 2002 along with the economy. In 2001, growth in residential and commercial demand for electricity is expected to be 4.0 percent and 3.2 percent, respectively, due to continued expansion of the customer base as well as weather.

This summer's overall cooling degree-days (CDD) are expected to be about 4.8 percent above normal (assuming normal temperatures in September) based on April through September temperatures, and about 5.5 percent above last summer's CDD total. This winter's electricity demand growth is expected to be just under 1.0 percent compared with last winter's 4.7 percent due to the assumption of normal weather ([Table 10](#)).

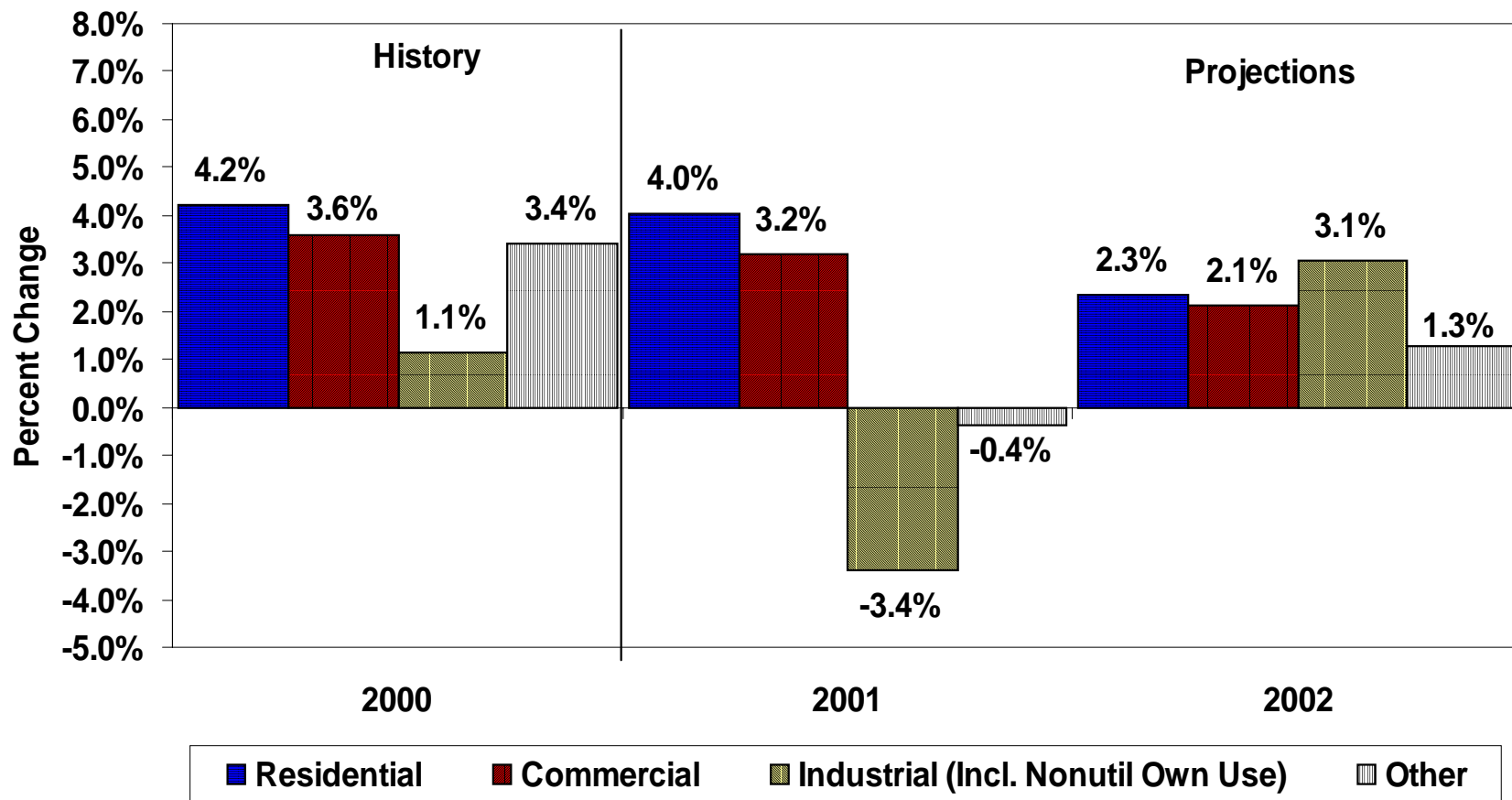
**Figure 15. Working Gas in Storage
(Difference from Previous 5-Year Average)**



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



Figure 16. U.S. Electricity Demand Growth by Sector (Change from Year Ago)



Sources: History: EIA; Projections: Short-Term Energy Outlook, September 2001.



Table HL1. U. S. Energy Supply and Demand

	Year				Annual Percentage Change		
	1999	2000	2001	2002	1999-2000	2000-2001	2001-2002
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	8857	<i>9224</i>	<i>9381</i>	<i>9657</i>	<i>4.1</i>	<i>1.7</i>	<i>2.9</i>
Imported Crude Oil Price ^a (nominal dollars per barrel).....	17.22	<i>27.72</i>	<i>24.65</i>	<i>24.66</i>	<i>61.0</i>	<i>-11.1</i>	<i>0.0</i>
Petroleum Supply (million barrels per day)							
Crude Oil Production ^b	5.88	<i>5.82</i>	<i>5.85</i>	<i>5.91</i>	<i>-1.0</i>	<i>0.5</i>	<i>1.0</i>
Total Petroleum Net Imports (including SPR)	9.91	<i>10.42</i>	<i>10.71</i>	<i>11.11</i>	<i>5.1</i>	<i>2.8</i>	<i>3.7</i>
Energy Demand							
World Petroleum (million barrels per day).....	74.9	<i>75.6</i>	<i>76.5</i>	<i>77.9</i>	<i>0.9</i>	<i>1.2</i>	<i>1.8</i>
Petroleum (million barrels per day).....	19.52	<i>19.70</i>	<i>19.86</i>	<i>20.29</i>	<i>0.9</i>	<i>0.8</i>	<i>2.2</i>
Natural Gas (trillion cubic feet)	21.70	<i>22.74</i>	<i>22.44</i>	<i>23.47</i>	<i>4.8</i>	<i>-1.3</i>	<i>4.6</i>
Coal ^c (million short tons)	1045	<i>1082</i>	<i>1093</i>	<i>1105</i>	<i>3.5</i>	<i>1.0</i>	<i>1.1</i>
Electricity (billion kilowatthours)							
Retail Sales ^d	3312	<i>3413</i>	<i>3452</i>	<i>3538</i>	<i>3.0</i>	<i>1.1</i>	<i>2.5</i>
Nonutility Use/Sales ^e	189	<i>193</i>	<i>197</i>	<i>202</i>	<i>2.1</i>	<i>2.1</i>	<i>2.5</i>
Total	3501	<i>3606</i>	<i>3648</i>	<i>3740</i>	<i>3.0</i>	<i>1.2</i>	<i>2.5</i>
Total Energy Demand ^f (quadrillion Btu).....	97.2	<i>99.5</i>	<i>99.4</i>	<i>101.9</i>	<i>2.4</i>	<i>-0.1</i>	<i>2.6</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar)	10.97	<i>10.78</i>	<i>10.59</i>	<i>10.55</i>	<i>-1.7</i>	<i>-1.8</i>	<i>-0.4</i>
Renewable Energy as Percent of Total ^g ...	7.2	<i>6.9</i>	<i>6.5</i>	<i>6.9</i>			

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

^b Includes lease condensate.

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

^d Total of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA's *Electric Power Monthly* and *Electric Power Annual*. Power marketers' sales for historical periods are reported in EIA's *Electric Sales and Revenue*, Appendix C. Data for 2000 are estimates.

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

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

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

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0801.

Table 1. U.S. Macroeconomic and Weather Assumptions

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Macroeconomic ^a															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR).....	9103	9229	9260	<i>9304</i>	<i>9335</i>	<i>9352</i>	<i>9388</i>	<i>9449</i>	<i>9529</i>	<i>9606</i>	<i>9700</i>	<i>9794</i>	<i>9224</i>	<i>9381</i>	<i>9657</i>
Percentage Change from Prior Year	4.2	5.2	4.4	<i>2.8</i>	<i>2.5</i>	<i>1.3</i>	<i>1.4</i>	<i>1.6</i>	<i>2.1</i>	<i>2.7</i>	<i>3.3</i>	<i>3.7</i>	<i>4.1</i>	<i>1.7</i>	<i>2.9</i>
Annualized Percent Change from Prior Quarter.....	2.3	5.6	1.3	<i>1.9</i>	<i>1.3</i>	<i>0.7</i>	<i>1.6</i>	<i>2.6</i>	<i>3.4</i>	<i>3.2</i>	<i>4.0</i>	<i>3.9</i>			
GDP Implicit Price Deflator (Index, 1996=1.000)	1.063	1.068	1.073	<i>1.078</i>	<i>1.087</i>	<i>1.093</i>	<i>1.095</i>	<i>1.101</i>	<i>1.108</i>	<i>1.113</i>	<i>1.119</i>	<i>1.126</i>	<i>1.070</i>	<i>1.094</i>	<i>1.117</i>
Percentage Change from Prior Year	2.1	2.3	2.4	<i>2.4</i>	<i>2.3</i>	<i>2.3</i>	<i>2.1</i>	<i>2.1</i>	<i>2.0</i>	<i>1.9</i>	<i>2.2</i>	<i>2.3</i>	<i>2.3</i>	<i>2.2</i>	<i>2.1</i>
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	6432	6524	6566	<i>6635</i>	<i>6679</i>	<i>6720</i>	<i>6918</i>	<i>6829</i>	<i>6899</i>	<i>6977</i>	<i>7044</i>	<i>7120</i>	<i>6539</i>	<i>6786</i>	<i>7010</i>
Percentage Change from Prior Year	2.6	3.6	3.7	<i>4.0</i>	<i>3.8</i>	<i>3.0</i>	<i>5.4</i>	<i>2.9</i>	<i>3.3</i>	<i>3.8</i>	<i>1.8</i>	<i>4.3</i>	<i>3.5</i>	<i>3.8</i>	<i>3.3</i>
Manufacturing Production (Index, 1996=1.000)	1.237	1.261	1.272	<i>1.267</i>	<i>1.241</i>	<i>1.222</i>	<i>1.210</i>	<i>1.217</i>	<i>1.235</i>	<i>1.254</i>	<i>1.276</i>	<i>1.298</i>	<i>1.259</i>	<i>1.223</i>	<i>1.266</i>
Percentage Change from Prior Year	6.3	7.0	6.4	<i>4.2</i>	<i>0.4</i>	<i>-3.0</i>	<i>-4.9</i>	<i>-3.9</i>	<i>-0.5</i>	<i>2.6</i>	<i>5.5</i>	<i>6.6</i>	<i>6.0</i>	<i>-2.9</i>	<i>3.5</i>
OECD Economic Growth (percent) ^b													<i>3.3</i>	<i>1.9</i>	<i>2.6</i>
Weather ^c															
Heating Degree-Days															
U.S.....	2023	485	93	<i>1853</i>	<i>2279</i>	<i>452</i>	<i>86</i>	<i>1622</i>	<i>2234</i>	<i>518</i>	<i>86</i>	<i>1622</i>	<i>4454</i>	<i>4439</i>	<i>4459</i>
New England	3007	909	196	<i>2385</i>	<i>3273</i>	<i>847</i>	<i>172</i>	<i>2238</i>	<i>3174</i>	<i>883</i>	<i>167</i>	<i>2237</i>	<i>6497</i>	<i>6530</i>	<i>6462</i>
Middle Atlantic.....	2713	692	129	<i>2234</i>	<i>2919</i>	<i>624</i>	<i>106</i>	<i>2003</i>	<i>2891</i>	<i>700</i>	<i>105</i>	<i>2002</i>	<i>5768</i>	<i>5652</i>	<i>5698</i>
U.S. Gas-Weighted.....	2115	512	100	<i>1957</i>	<i>2417</i>	<i>473</i>	<i>91</i>	<i>1714</i>	<i>2351</i>	<i>555</i>	<i>90</i>	<i>1714</i>	<i>4684</i>	<i>4695</i>	<i>4710</i>
Cooling Degree-Days (U.S.)	45	380	742	<i>62</i>	<i>23</i>	<i>388</i>	<i>796</i>	<i>76</i>	<i>33</i>	<i>347</i>	<i>782</i>	<i>76</i>	<i>1229</i>	<i>1283</i>	<i>1237</i>

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

^bOECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

^cPopulation-weighted degree days. A degree day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 1990 population.

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0801.

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

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Macroeconomic ^a															
Real Fixed Investment															
(billion chained 1996 dollars-SAAR)	1683	1719	1730	1732	1740	1701	1674	1651	1659	1667	1692	1718	1716	1692	1684
Real Exchange Rate															
(index)	1.046	1.070	1.085	1.113	1.106	1.142	1.142	1.136	1.118	1.111	1.103	1.092	1.078	1.131	1.106
Business Inventory Change															
(billion chained 1996 dollars-SAAR)	5.3	22.0	12.0	12.9	-15.0	-23.6	-16.9	-3.6	1.3	3.2	6.8	9.7	13.1	-14.8	5.3
Producer Price Index															
(index, 1982=1.000)	1.303	1.321	1.333	1.353	1.385	1.363	1.351	1.350	1.352	1.349	1.352	1.359	1.328	1.362	1.353
Consumer Price Index															
(index, 1982-1984=1.000).....	1.703	1.715	1.730	1.743	1.761	1.774	1.777	1.786	1.797	1.805	1.817	1.830	1.723	1.775	1.812
Petroleum Product Price Index															
(index, 1982=1.000)	0.830	0.899	0.954	0.969	0.892	0.962	0.872	0.893	0.886	0.849	0.820	0.860	0.913	0.905	0.854
Non-Farm Employment															
(millions)	131.0	131.9	131.9	132.3	132.6	132.5	132.4	132.9	133.5	134.1	134.7	135.2	131.8	132.6	134.4
Commercial Employment															
(millions)	91.4	91.9	92.3	92.7	93.1	93.3	93.4	94.2	94.9	95.4	95.9	96.3	92.1	93.5	95.6
Total Industrial Production															
(index, 1996=1.000)	1.208	1.231	1.241	1.238	1.217	1.199	1.188	1.195	1.210	1.227	1.246	1.267	1.230	1.200	1.238
Housing Stock															
(millions)	115.7	115.9	116.4	116.9	117.5	117.8	118.3	118.8	119.1	119.5	119.9	120.2	116.2	118.1	119.7
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1996=1.000)	1.124	1.133	1.124	1.111	1.088	1.077	1.071	1.081	1.094	1.105	1.116	1.127	1.123	1.079	1.110
Vehicle Miles Traveled ^b															
(million miles/day).....	6838	7682	7689	7221	6937	7733	7851	7326	7097	7838	8028	7578	7358	7464	7637
Vehicle Fuel Efficiency															
(index, 1999=1.000)	0.995	1.010	0.984	0.984	0.987	1.012	0.988	0.983	0.989	0.994	0.991	0.987	0.993	0.992	0.990
Real Vehicle Fuel Cost															
(cents per mile).....	4.18	4.30	4.29	4.36	4.20	4.41	3.98	4.12	3.99	3.92	3.85	3.93	4.28	4.18	3.92
Air Travel Capacity															
(mill. available ton-miles/day).....	455.5	475.9	489.1	470.6	475.5	491.2	501.1	485.7	481.6	501.3	519.3	510.4	472.8	488.4	503.2
Aircraft Utilization															
(mill. revenue ton-miles/day).....	256.6	287.6	292.5	269.4	263.5	280.1	292.3	278.0	274.2	294.6	309.7	296.4	276.5	278.6	293.8
Airline Ticket Price Index															
(index, 1982-1984=1.000).....	2.309	2.419	2.474	2.375	2.399	2.408	2.474	2.482	2.513	2.518	2.522	2.539	2.394	2.441	2.523
Raw Steel Production															
(millions tons)	29.02	29.53	27.45	25.01	25.53	25.82	25.15	25.17	25.84	26.13	25.71	25.85	111.02	101.67	103.53

^aMacroeconomic projections from DRI/McGraw-Hill model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid 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: Mid World Oil Price Case

(Million Barrels per Day, Except OECD Commercial Stocks)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Demand ^a															
OECD															
U.S. (50 States)	19.3	19.5	20.0	<i>20.0</i>	<i>19.8</i>	<i>19.6</i>	<i>20.1</i>	<i>20.0</i>	<i>20.2</i>	<i>20.0</i>	<i>20.5</i>	<i>20.6</i>	<i>19.7</i>	<i>19.9</i>	<i>20.3</i>
U.S. Territories	0.4	0.3	0.3	<i>0.4</i>	<i>0.4</i>	<i>0.3</i>	<i>0.3</i>	<i>0.4</i>	<i>0.4</i>	<i>0.4</i>	<i>0.4</i>	<i>0.4</i>	<i>0.3</i>	<i>0.4</i>	<i>0.4</i>
Canada.....	1.9	1.9	2.0	<i>2.1</i>	<i>1.9</i>	<i>2.0</i>	<i>2.0</i>	<i>2.1</i>	<i>2.0</i>	<i>2.0</i>	<i>2.1</i>	<i>2.1</i>	<i>2.0</i>	<i>2.0</i>	<i>2.1</i>
Europe.....	14.5	13.9	14.4	<i>14.6</i>	<i>14.3</i>	<i>14.0</i>	<i>14.5</i>	<i>14.7</i>	<i>14.7</i>	<i>13.8</i>	<i>14.3</i>	<i>15.0</i>	<i>14.4</i>	<i>14.4</i>	<i>14.5</i>
Japan	6.0	5.0	5.4	<i>5.6</i>	<i>6.1</i>	<i>5.0</i>	<i>5.4</i>	<i>5.6</i>	<i>6.1</i>	<i>5.0</i>	<i>5.3</i>	<i>5.7</i>	<i>5.5</i>	<i>5.5</i>	<i>5.5</i>
Australia and New Zealand.....	1.0	1.0	1.0	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>
Total OECD.....	43.1	41.6	43.1	<i>43.6</i>	<i>43.6</i>	<i>41.9</i>	<i>43.3</i>	<i>43.8</i>	<i>44.5</i>	<i>42.3</i>	<i>43.6</i>	<i>44.8</i>	<i>42.9</i>	<i>43.2</i>	<i>43.8</i>
Non-OECD															
Former Soviet Union.....	3.9	3.7	3.7	<i>3.7</i>	<i>3.8</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.9</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.8</i>
Europe.....	1.5	1.5	1.5	<i>1.5</i>	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	<i>1.6</i>	<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>
China.....	4.6	4.6	4.6	<i>4.6</i>	<i>4.8</i>	<i>4.8</i>	<i>4.7</i>	<i>4.8</i>	<i>5.0</i>	<i>5.0</i>	<i>4.9</i>	<i>5.0</i>	<i>4.6</i>	<i>4.8</i>	<i>5.0</i>
Other Asia.....	8.9	9.0	8.8	<i>9.1</i>	<i>9.2</i>	<i>9.2</i>	<i>8.9</i>	<i>9.4</i>	<i>9.5</i>	<i>9.5</i>	<i>9.1</i>	<i>9.6</i>	<i>9.0</i>	<i>9.2</i>	<i>9.4</i>
Other Non-OECD.....	13.6	13.9	14.0	<i>13.9</i>	<i>13.9</i>	<i>14.2</i>	<i>14.3</i>	<i>14.2</i>	<i>14.2</i>	<i>14.4</i>	<i>14.5</i>	<i>14.4</i>	<i>13.9</i>	<i>14.1</i>	<i>14.4</i>
Total Non-OECD	32.6	32.7	32.5	<i>32.9</i>	<i>33.4</i>	<i>33.4</i>	<i>33.1</i>	<i>33.6</i>	<i>34.1</i>	<i>34.2</i>	<i>33.9</i>	<i>34.3</i>	<i>32.7</i>	<i>33.4</i>	<i>34.1</i>
Total World Demand.....	75.7	74.4	75.7	<i>76.5</i>	<i>77.0</i>	<i>75.3</i>	<i>76.4</i>	<i>77.3</i>	<i>78.6</i>	<i>76.4</i>	<i>77.5</i>	<i>79.1</i>	<i>75.6</i>	<i>76.5</i>	<i>77.9</i>
Supply ^b															
OECD															
U.S. (50 States)	9.1	9.1	9.0	<i>9.0</i>	<i>8.8</i>	<i>9.0</i>	<i>9.0</i>	<i>9.1</i>	<i>9.1</i>	<i>9.1</i>	<i>9.1</i>	<i>9.1</i>	<i>9.1</i>	<i>9.0</i>	<i>9.1</i>
Canada.....	2.7	2.7	2.7	<i>2.8</i>	<i>2.8</i>	<i>2.8</i>	<i>2.9</i>	<i>3.0</i>	<i>2.8</i>	<i>2.8</i>	<i>2.9</i>	<i>3.0</i>	<i>2.7</i>	<i>2.9</i>	<i>2.9</i>
North Sea ^c	6.3	5.9	5.9	<i>6.1</i>	<i>5.9</i>	<i>5.7</i>	<i>5.9</i>	<i>6.4</i>	<i>6.0</i>	<i>5.8</i>	<i>5.9</i>	<i>6.3</i>	<i>6.0</i>	<i>6.0</i>	<i>6.0</i>
Other OECD.....	2.0	2.0	1.9	<i>1.9</i>	<i>2.0</i>	<i>1.9</i>	<i>2.0</i>	<i>1.9</i>	<i>1.9</i>	<i>1.9</i>	<i>2.0</i>	<i>1.9</i>	<i>2.0</i>	<i>2.0</i>	<i>1.9</i>
Total OECD.....	20.1	19.7	19.6	<i>19.8</i>	<i>19.6</i>	<i>19.5</i>	<i>19.8</i>	<i>20.3</i>	<i>19.8</i>	<i>19.7</i>	<i>19.8</i>	<i>20.3</i>	<i>19.8</i>	<i>19.8</i>	<i>19.9</i>
Non-OECD															
OPEC.....	29.3	30.8	31.6	<i>31.7</i>	<i>31.1</i>	<i>30.0</i>	<i>30.1</i>	<i>29.2</i>	<i>30.4</i>	<i>30.5</i>	<i>30.8</i>	<i>30.7</i>	<i>30.9</i>	<i>30.1</i>	<i>30.6</i>
Former Soviet Union.....	7.9	8.0	8.2	<i>8.5</i>	<i>8.6</i>	<i>8.7</i>	<i>8.8</i>	<i>8.8</i>	<i>8.7</i>	<i>8.8</i>	<i>9.0</i>	<i>9.0</i>	<i>8.1</i>	<i>8.7</i>	<i>8.9</i>
China.....	3.3	3.3	3.2	<i>3.2</i>	<i>3.3</i>	<i>3.3</i>	<i>3.2</i>	<i>3.3</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>3.2</i>	<i>3.2</i>	<i>3.1</i>
Mexico.....	3.5	3.5	3.5	<i>3.4</i>	<i>3.6</i>	<i>3.5</i>	<i>3.4</i>	<i>3.4</i>	<i>3.7</i>	<i>3.7</i>	<i>3.7</i>	<i>3.6</i>	<i>3.5</i>	<i>3.5</i>	<i>3.7</i>
Other Non-OECD.....	11.2	11.2	11.4	<i>11.6</i>	<i>11.4</i>	<i>11.3</i>	<i>11.6</i>	<i>11.7</i>	<i>11.7</i>	<i>11.9</i>	<i>12.0</i>	<i>12.2</i>	<i>11.3</i>	<i>11.5</i>	<i>12.0</i>
Total Non-OECD	55.1	56.7	58.0	<i>58.4</i>	<i>58.1</i>	<i>56.8</i>	<i>57.1</i>	<i>56.4</i>	<i>57.6</i>	<i>58.0</i>	<i>58.7</i>	<i>58.6</i>	<i>57.0</i>	<i>57.1</i>	<i>58.2</i>
Total World Supply	75.2	76.4	77.6	<i>78.2</i>	<i>77.6</i>	<i>76.2</i>	<i>76.9</i>	<i>76.7</i>	<i>77.3</i>	<i>77.6</i>	<i>78.5</i>	<i>78.9</i>	<i>76.8</i>	<i>76.9</i>	<i>78.1</i>
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	0.2	-0.5	0.0	<i>0.6</i>	<i>-0.1</i>	<i>-0.9</i>	<i>0.2</i>	<i>0.4</i>	<i>0.2</i>	<i>-0.7</i>	<i>-0.3</i>	<i>0.3</i>	<i>0.1</i>	<i>-0.1</i>	<i>-0.1</i>
Other.....	0.3	-1.4	-1.9	<i>-2.3</i>	<i>-0.5</i>	<i>0.0</i>	<i>-0.6</i>	<i>0.3</i>	<i>1.1</i>	<i>-0.5</i>	<i>-0.7</i>	<i>-0.1</i>	<i>-1.4</i>	<i>-0.2</i>	<i>-0.1</i>
Total Stock Withdrawals	0.5	-2.0	-1.9	<i>-1.7</i>	<i>-0.7</i>	<i>-0.9</i>	<i>-0.5</i>	<i>0.7</i>	<i>1.3</i>	<i>-1.2</i>	<i>-1.0</i>	<i>0.2</i>	<i>-1.3</i>	<i>-0.3</i>	<i>-0.2</i>
OECD Comm. Stocks, End (bill. bbls.).....	2.4	2.5	2.6	<i>2.5</i>	<i>2.5</i>	<i>2.6</i>	<i>2.6</i>	<i>2.5</i>	<i>2.4</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>	<i>2.5</i>
Non-OPEC Supply	45.9	45.6	45.9	<i>46.4</i>	<i>46.5</i>	<i>46.2</i>	<i>46.9</i>	<i>47.5</i>	<i>46.9</i>	<i>47.1</i>	<i>47.7</i>	<i>48.2</i>	<i>46.0</i>	<i>46.8</i>	<i>47.5</i>
Net Exports from Former Soviet Union...	4.0	4.3	4.5	<i>4.8</i>	<i>4.8</i>	<i>5.0</i>	<i>5.1</i>	<i>5.1</i>	<i>4.8</i>	<i>5.1</i>	<i>5.3</i>	<i>5.3</i>	<i>4.4</i>	<i>5.0</i>	<i>5.1</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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

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

Table 4. U. S. Energy Prices

(Nominal Dollars)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	26.84	26.55	29.12	28.25	24.12	23.85	24.66	26.00	24.50	24.17	24.50	25.50	27.72	24.65	24.66
WTI ^b Spot Average	28.82	28.78	31.61	31.96	28.82	27.92	27.45	28.29	26.63	26.24	26.56	27.55	30.29	28.12	26.75
Natural Gas Wellhead (dollars per thousand cubic feet).....															
	2.26	3.06	3.87	5.20	6.37	4.55	3.15	2.92	2.88	2.48	2.48	2.76	3.61	4.23	2.65
Petroleum Products															
Gasoline Retail ^c (dollars per gallon)															
All Grades	1.44	1.57	1.56	1.54	1.47	1.66	1.49	1.49	1.43	1.48	1.48	1.46	1.53	1.53	1.46
Regular Unleaded.....	1.40	1.53	1.52	1.50	1.43	1.62	1.45	1.45	1.39	1.45	1.45	1.43	1.49	1.49	1.43
No. 2 Diesel Oil, Retail (dollars per gallon)															
	1.43	1.42	1.51	1.61	1.47	1.47	1.41	1.46	1.42	1.41	1.40	1.46	1.49	1.45	1.42
No. 2 Heating Oil, Wholesale (dollars per gallon)															
	0.85	0.78	0.91	0.97	0.83	0.80	0.80	0.86	0.82	0.74	0.74	0.83	0.89	0.83	0.79
No. 2 Heating Oil, Retail (dollars per gallon)															
	1.31	1.17	1.23	1.40	1.35	1.25	1.19	1.30	1.30	1.17	1.10	1.26	1.31	1.31	1.25
No. 6 Residual Fuel Oil, Retail ^d (dollars per barrel)															
	23.62	24.57	25.10	27.41	25.13	22.26	22.61	25.54	24.22	22.07	22.12	24.10	25.34	23.85	23.15
Electric Utility Fuels															
Coal (dollars per million Btu).....															
	1.21	1.21	1.18	1.20	1.23	1.25	1.24	1.24	1.24	1.25	1.22	1.21	1.20	1.24	1.23
Heavy Fuel Oil ^e (dollars per million Btu).....															
	3.74	4.16	4.34	4.52	4.22	3.69	3.73	4.05	3.83	3.59	3.68	3.82	4.26	3.90	3.73
Natural Gas (dollars per million Btu).....															
	2.85	3.78	4.46	6.33	7.26	5.01	3.76	3.62	3.66	3.15	3.12	3.48	4.33	4.69	3.29
Other Residential															
Natural Gas (dollars per thousand cubic feet).....															
	6.53	7.78	10.07	8.70	9.89	10.43	10.33	7.37	7.03	7.84	9.17	7.25	7.71	9.30	7.38
Electricity (cents per kilowatthour).....															
	7.77	8.37	8.59	8.12	7.96	8.68	9.12	8.50	8.12	8.69	8.90	8.42	8.23	8.58	8.54

^aRefiner acquisition cost (RAC) of imported crude oil.^bWest Texas Intermediate.^cAverage self-service cash prices.^dAverage for all sulfur contents.^eIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

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

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

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

(Million Barrels per Day, Except Closing Stocks)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Crude Oil Supply															
Domestic Production ^a	5.85	5.84	5.76	5.83	5.85	5.84	5.81	5.89	5.91	5.93	5.91	5.88	5.82	5.85	5.91
Alaska.....	1.02	0.97	0.91	0.99	0.99	0.96	0.92	1.02	1.04	1.03	1.02	1.03	0.97	0.97	1.03
Lower 48.....	4.83	4.87	4.86	4.85	4.86	4.88	4.88	4.86	4.88	4.90	4.88	4.85	4.85	4.87	4.88
Net Imports (including SPR) ^b	8.19	9.26	9.59	9.03	8.94	9.40	9.07	8.88	9.05	9.80	9.76	9.44	9.02	9.07	9.52
Other SPR Supply	0.02	0.00	0.02	0.00	0.02	0.01	0.05	0.09	0.00	0.10	0.10	0.13	0.01	0.04	0.08
SPR Stock Withdrawn or Added (-)	-0.02	0.01	-0.02	0.32	-0.02	-0.01	-0.04	-0.09	0.00	-0.10	-0.10	-0.13	0.07	-0.04	-0.08
Other Stock Withdrawn or Added (-) ..	-0.14	0.07	0.14	-0.08	-0.22	-0.01	0.12	0.06	-0.19	-0.02	0.18	0.03	0.00	-0.01	0.00
Product Supplied and Losses.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil.....	0.26	0.22	0.15	-0.01	0.10	0.43	0.36	0.21	0.21	0.22	0.22	0.22	0.15	0.27	0.22
Total Crude Oil Supply	14.14	15.40	15.62	15.10	14.75	15.65	15.31	14.95	14.99	15.83	15.97	15.44	15.07	15.17	15.56
Other Supply															
NGL Production.....	1.98	1.94	1.93	1.79	1.64	1.89	1.85	1.84	1.86	1.87	1.85	1.89	1.91	1.81	1.87
Other Inputs	0.36	0.39	0.38	0.37	0.36	0.38	0.37	0.39	0.37	0.37	0.37	0.38	0.38	0.38	0.37
Crude Oil Product Supplied.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.94	0.95	0.94	0.96	0.94	0.94	0.96	0.93	0.93	0.95	0.95	0.93	0.95	0.94	0.94
Net Product Imports ^c	1.52	1.43	1.29	1.36	2.05	1.58	1.47	1.46	1.64	1.53	1.67	1.52	1.40	1.64	1.59
Product Stock Withdrawn or Added (-).....	0.35	-0.62	-0.13	0.41	0.11	-0.86	0.09	0.41	0.36	-0.55	-0.35	0.39	0.00	-0.06	-0.04
Total Supply	19.29	19.49	20.03	19.99	19.86	19.57	20.06	19.98	20.14	20.00	20.45	20.54	19.70	19.87	20.29
Demand															
Motor Gasoline.....	8.08	8.62	8.70	8.49	8.27	8.66	8.84	8.62	8.44	8.93	9.01	8.88	8.47	8.60	8.82
Jet Fuel	1.65	1.69	1.79	1.77	1.73	1.71	1.75	1.78	1.79	1.76	1.82	1.84	1.73	1.74	1.80
Distillate Fuel Oil.....	3.77	3.56	3.63	3.91	4.21	3.72	3.73	3.86	4.12	3.71	3.68	3.95	3.72	3.88	3.87
Residual Fuel Oil	0.79	0.82	0.98	1.05	1.02	0.99	0.92	0.85	0.92	0.77	0.86	0.78	0.91	0.94	0.83
Other Oils ^d	5.00	4.81	4.94	4.75	4.63	4.48	4.81	4.86	4.87	4.83	5.08	5.08	4.87	4.70	4.97
Total Demand.....	19.29	19.49	20.03	19.97	19.85	19.56	20.06	19.98	20.14	20.00	20.45	20.54	19.70	19.86	20.29
Total Petroleum Net Imports	9.71	10.70	10.88	10.39	10.98	10.98	10.54	10.34	10.70	11.33	11.43	10.96	10.42	10.71	11.11
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	297	291	278	286	305	306	294	289	306	308	292	289	286	289	289
Total Motor Gasoline.....	204	210	197	196	194	220	197	199	204	205	199	204	196	199	204
Finished Motor Gasoline	157	165	154	153	146	169	155	158	157	163	157	161	153	158	161
Blending Components	47	45	43	43	48	51	42	41	47	42	43	43	43	41	43
Jet Fuel	40	44	42	45	40	43	42	44	41	42	44	45	45	44	45
Distillate Fuel Oil.....	96	106	115	118	105	114	124	123	95	106	126	128	118	123	128
Residual Fuel Oil	36	37	38	36	39	43	39	41	39	39	41	42	36	41	42
Other Oils ^e	233	270	287	247	253	289	299	257	253	289	303	259	247	257	259
Total Stocks (excluding SPR)	907	957	957	927	936	1015	996	953	938	990	1005	966	927	953	966
Crude Oil in SPR.....	569	569	570	541	542	543	547	556	556	565	574	587	541	556	587
Heating Oil Reserve.....	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2
Total Stocks (including SPR).....	1476	1526	1527	1468	1478	1558	1543	1509	1493	1554	1580	1553	1468	1509	1553

^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.

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

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

^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	6.20	5.56	0.64	0.08	0.56
Lower 48 States.....	5.15	4.55	0.60	0.07	0.53
Alaska.....	1.05	1.01	0.04	0.02	0.02

Note: Components provided are for the fourth quarter 2002. Totals may not add to sum of components due to independent rounding.

Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

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

(Trillion Cubic Feet)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Total Dry Gas Production	4.71	4.73	4.80	4.83	4.75	4.86	4.82	4.95	4.90	4.89	4.93	5.06	19.08	19.38	19.79
Net Imports	0.87	0.82	0.88	0.95	0.97	0.82	0.92	0.98	1.01	0.95	1.03	1.03	3.53	3.69	4.03
Supplemental Gaseous Fuels.....	0.03	0.02	0.02	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.10	0.10	0.12
Total New Supply	5.61	5.57	5.71	5.81	5.74	5.70	5.77	5.96	5.95	5.87	5.99	6.13	22.71	23.17	23.94
Working Gas in Storage															
Opening.....	2.51	1.15	1.71	2.47	1.72	0.74	1.87	2.88	2.43	1.24	1.98	2.85	2.51	1.72	2.43
Closing.....	1.15	1.71	2.47	1.72	0.74	1.87	2.88	2.43	1.24	1.98	2.85	2.40	1.72	2.43	2.40
Net Withdrawals.....	1.36	-0.56	-0.77	0.75	0.98	-1.13	-1.00	0.44	1.20	-0.75	-0.87	0.45	0.79	-0.71	0.03
Total Supply.....	6.97	5.02	4.94	6.56	6.72	4.57	4.77	6.40	7.14	5.13	5.12	6.58	23.50	22.46	23.97
Balancing Item ^a	-0.02	-0.05	-0.23	-0.47	0.44	0.17	-0.06	-0.56	0.25	0.02	-0.21	-0.55	-0.76	-0.01	-0.50
Total Primary Supply.....	6.96	4.97	4.71	6.10	7.16	4.74	4.71	5.84	7.39	5.15	4.91	6.02	22.74	22.44	23.47
Demand															
Lease and Plant Fuel.....	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.29	0.28	0.28	0.28	0.30	1.10	1.13	1.14
Pipeline Use.....	0.24	0.17	0.16	0.21	0.24	0.16	0.17	0.20	0.24	0.17	0.16	0.20	0.77	0.77	0.76
Residential.....	2.19	0.78	0.39	1.62	2.47	0.78	0.37	1.41	2.44	0.85	0.37	1.47	4.97	5.03	5.13
Commercial.....	1.25	0.60	0.45	0.95	1.38	0.62	0.45	0.87	1.38	0.64	0.46	0.89	3.26	3.32	3.38
Industrial (Incl. Nonutility Use).....	2.44	2.31	2.37	2.46	2.32	2.15	2.47	2.56	2.59	2.50	2.74	2.74	9.58	9.50	10.58
Electric Utilities.....	0.57	0.83	1.07	0.58	0.47	0.75	0.97	0.51	0.45	0.70	0.89	0.44	3.05	2.70	2.48
Total Demand.....	6.96	4.97	4.71	6.10	7.16	4.74	4.71	5.84	7.39	5.15	4.91	6.02	22.74	22.44	23.47

^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.

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

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

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

(Million Short Tons)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Production	274.0	262.2	271.0	268.3	283.6	289.9	279.8	286.9	285.2	279.3	281.3	289.5	1075.5	1140.1	1135.2
Appalachia	109.5	107.0	101.8	102.6	110.8	114.5	101.7	107.3	110.1	109.7	100.6	105.9	420.9	434.2	426.3
Interior	36.1	35.2	37.6	35.8	37.5	39.0	37.6	36.5	34.0	34.2	35.6	34.9	144.7	150.6	138.6
Western.....	128.5	120.0	131.5	129.9	135.3	136.4	140.5	143.2	141.1	135.4	145.1	148.7	509.9	555.4	570.3
Primary Stock Levels ^a															
Opening.....	39.5	44.4	40.4	37.1	34.2	38.5	41.9	35.5	34.6	33.0	36.9	32.3	39.5	34.2	34.6
Closing.....	44.4	40.4	37.1	34.2	38.5	41.9	35.5	34.6	33.0	36.9	32.3	34.6	34.2	34.6	34.6
Net Withdrawals.....	-4.9	4.0	3.3	2.9	-4.3	-3.4	6.4	0.9	1.6	-3.8	4.6	-2.4	5.3	-0.4	(S)
Imports.....	2.8	2.7	3.6	3.4	3.9	4.1	4.5	4.3	4.5	4.5	4.5	4.6	12.5	16.8	18.1
Exports	13.6	14.4	15.8	14.7	11.8	13.1	15.2	15.1	14.0	14.2	14.4	14.4	58.5	55.3	57.0
Total Net Domestic Supply.....	258.3	254.5	262.0	259.9	271.4	277.5	275.4	276.9	277.3	265.8	275.9	277.4	1034.8	1101.2	1096.4
Secondary Stock Levels ^b															
Opening.....	143.5	141.2	137.2	120.3	108.1	113.8	126.7	112.7	119.4	124.4	130.2	116.1	143.5	108.1	119.4
Closing.....	141.2	137.2	120.3	108.1	113.8	126.7	112.7	119.4	124.4	130.2	116.1	122.4	108.1	119.4	122.4
Net Withdrawals.....	2.3	3.9	16.9	12.2	-5.7	-12.9	14.1	-6.8	-5.0	-5.8	14.1	-6.2	35.4	-11.3	-2.9
Waste Coal Supplied to IPPs ^c	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.8	2.8	2.8	2.8	10.1	10.6	11.1
Total Supply.....	263.2	261.0	281.5	274.6	268.3	267.2	292.1	272.8	275.1	262.8	292.8	273.9	1080.3	1100.5	1104.5
Demand															
Coke Plants.....	7.3	7.4	7.3	6.9	6.8	6.7	6.7	6.3	6.7	6.4	6.6	6.3	28.9	26.5	26.1
Electricity Production															
Electric Utilities.....	214.5	202.6	227.8	214.5	203.9	199.1	225.9	203.7	201.9	195.4	219.6	200.5	859.3	832.7	817.4
Nonutilities (Excl. Cogen.) ^d	25.6	27.6	35.1	35.0	37.7	36.7	46.4	44.1	48.3	45.3	51.0	48.7	123.3	165.0	193.3
Retail and General Industry.....	18.3	16.4	16.8	18.6	17.8	16.5	16.3	18.7	18.1	15.7	15.6	18.4	70.0	69.3	67.8
Total Demand ^e	265.6	254.0	287.0	275.0	266.3	259.0	295.4	272.8	275.1	262.8	292.8	273.9	1081.5	1093.5	1104.5
Discrepancy ^f	-2.4	7.0	-5.5	-0.3	2.1	8.2	-3.2	0.0	0.0	0.0	0.0	0.0	-1.3	7.0	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 2000 and projections for 2001 and 2002 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999 and 2000, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

^eTotal Demand includes estimated IPP consumption.^fThe discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period.

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

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

Table 10. U.S. Electricity Supply and Demand: Mid World Oil Price Case

(Billion Kilowatt-hours)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Net Utility Generation															
Coal.....	426.7	402.3	447.1	420.5	399.8	383.5	420.8	377.4	384.7	372.1	414.9	378.5	1696.6	1581.4	1550.2
Petroleum.....	10.9	16.2	23.2	21.8	24.2	22.3	24.3	15.0	18.7	13.7	22.0	12.3	72.2	85.9	66.7
Natural Gas.....	54.5	79.3	100.8	56.1	45.7	71.8	92.4	48.1	42.7	66.7	84.1	41.4	290.7	257.9	235.0
Nuclear.....	185.0	177.4	182.0	161.1	135.8	125.2	138.6	127.1	131.4	122.6	139.7	128.2	705.4	526.6	521.8
Hydroelectric.....	67.1	73.2	57.6	50.3	50.4	53.9	55.0	58.6	68.3	73.8	62.5	61.7	248.2	217.9	266.3
Geothermal and Other ^a	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	2.2	2.4	2.3
Subtotal.....	744.7	749.0	811.2	710.4	656.5	657.2	731.7	626.7	646.3	649.4	723.9	622.7	3015.4	2672.1	2642.3
Nonutility Generation ^b															
Coal.....	55.4	58.3	79.4	77.9	93.5	87.3	116.3	112.8	105.7	105.2	132.4	129.9	271.1	410.0	473.2
Petroleum.....	8.0	6.6	8.9	13.2	17.0	12.6	12.3	11.4	14.6	9.6	13.6	11.3	36.6	53.3	49.0
Natural Gas.....	65.2	71.8	90.6	78.4	78.4	84.7	105.8	91.3	88.8	97.2	121.6	102.8	305.9	360.2	410.4
Other Gaseous Fuels ^c	3.4	3.7	4.7	4.0	4.0	4.3	5.3	4.8	4.6	4.9	5.9	5.4	15.8	18.4	20.8
Nuclear.....	5.2	5.0	16.7	21.6	56.2	54.7	63.0	57.8	59.7	55.8	63.6	58.3	48.5	231.8	237.4
Hydroelectric.....	6.3	6.7	6.3	5.6	5.3	6.5	6.0	6.5	7.2	9.0	6.9	6.8	24.9	24.3	30.0
Geothermal and Other ^d	20.2	20.1	20.9	20.7	20.4	21.2	22.0	20.6	20.4	21.1	22.3	20.8	81.8	84.3	84.6
Subtotal.....	163.6	172.2	227.5	221.3	275.0	271.3	330.8	305.2	301.0	302.7	366.2	335.4	784.6	1182.2	1305.4
Total Generation.....	908.3	921.2	1038.7	931.7	931.4	928.5	1062.5	931.9	947.3	952.1	1090.2	958.1	3799.9	3854.3	3947.7
Net Imports ^e	9.2	8.7	13.1	4.6	5.0	8.2	12.6	7.6	7.3	8.3	12.0	8.6	35.6	33.5	36.2
Total Supply.....	917.5	929.9	1051.8	936.3	936.4	936.7	1075.1	939.5	954.6	960.4	1102.2	966.7	3835.5	3887.8	3983.9
Losses and Unaccounted for ^f	53.7	67.8	49.6	58.6	38.1	76.2	64.8	60.5	42.9	69.9	66.2	65.2	229.7	239.6	244.1
Demand															
Retail Sales ^g															
Residential.....	291.2	264.1	353.4	284.7	322.0	269.5	365.0	284.9	323.4	284.5	371.5	291.0	1193.4	1241.4	1270.4
Commercial.....	239.5	254.2	291.6	252.7	253.1	261.5	296.0	260.3	260.5	263.2	303.4	266.7	1037.9	1071.1	1093.8
Industrial.....	260.0	267.3	277.4	266.1	248.5	252.8	267.8	259.3	252.8	265.4	277.0	267.0	1070.8	1028.5	1062.1
Other.....	26.3	26.9	30.1	27.4	26.4	26.9	29.9	27.0	26.8	27.0	30.3	27.4	110.6	110.2	111.6
Subtotal.....	817.0	812.4	952.5	830.9	850.1	811.3	958.7	831.6	863.5	840.1	982.2	852.1	3412.8	3451.6	3537.9
Nonutility Use/Sales ^h	46.8	49.7	49.7	46.8	48.2	49.3	51.7	47.4	48.3	50.4	53.8	49.4	193.0	196.5	201.8
Total Demand.....	863.8	862.1	1002.2	877.7	898.3	860.6	1010.3	879.0	911.7	890.5	1036.0	901.5	3605.8	3648.2	3739.8
Memo:															
Nonutility Sales to															
Electric Utilities ^b	116.8	122.5	177.8	174.5	226.8	222.0	279.1	257.8	252.8	252.3	312.4	286.0	591.5	985.7	1103.5

^a"Other" includes generation from wind, wood, waste, and solar sources.

^bElectricity (net Generation) from nonutility sources, including cogenerators and small power producers.

^cIncludes refinery still gas and other process or waste gases and liquefied petroleum gases.

^dIncludes geothermal, solar, wind, wood, waste, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.

^eData for 2000 are estimates.

^fBalancing item, mainly transmission and distribution losses.

^gTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S *Electric Power Monthly* and *Electric Power Annual*. Power marketers' sales are reported annually in Appendix C of EIA's *Electric Sales and Revenue*. Quarterly data for power marketers (and thus retail sales totals) are imputed. Data for 2000 are estimated.

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

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

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

Table 11. U.S. Renewable Energy Use by Sector: Mid World Oil Price Case
(Quadrillion Btu)

	Year				Annual Percentage Change		
	1999	2000	2001	2002	1999-2000	2000-2001	2001-2002
Electric Utilities							
Hydroelectric Power ^a	3.079	<i>2.600</i>	<i>2.283</i>	<i>2.789</i>	-15.6	-12.2	22.2
Geothermal, Solar and Wind Energy ^b	0.036	<i>0.004</i>	<i>0.004</i>	<i>0.004</i>	-88.9	0.0	0.0
Biofuels ^c	0.021	<i>0.021</i>	<i>0.022</i>	<i>0.021</i>	0.0	4.8	-4.5
Total	3.136	<i>2.625</i>	<i>2.309</i>	<i>2.815</i>	-16.3	-12.0	21.9
Nonutility Power Generators							
Hydroelectric Power ^a	0.149	<i>0.257</i>	<i>0.210</i>	<i>0.186</i>	72.5	-18.3	-11.4
Geothermal, Solar and Wind Energy ^b	0.335	<i>0.355</i>	<i>0.385</i>	<i>0.391</i>	6.0	8.5	1.6
Biofuels ^c	0.523	<i>0.642</i>	<i>0.644</i>	<i>0.639</i>	22.8	0.3	-0.8
Total.....	1.007	<i>1.254</i>	<i>1.239</i>	<i>1.217</i>	24.5	-1.2	-1.8
Total Power Generation.....	4.142	<i>3.879</i>	<i>3.547</i>	<i>4.032</i>	-6.3	-8.6	13.7
Other Sectors ^d							
Residential and Commercial ^e	0.553	<i>0.576</i>	<i>0.547</i>	<i>0.577</i>	4.2	-5.0	5.5
Industrial ^f	1.942	<i>2.003</i>	<i>2.008</i>	<i>2.058</i>	3.1	0.2	2.5
Transportation ^g	0.100	<i>0.114</i>	<i>0.117</i>	<i>0.117</i>	14.0	2.6	0.0
Total.....	2.595	<i>2.692</i>	<i>2.671</i>	<i>2.751</i>	3.7	-0.8	3.0
Net Imported Electricity ^h	0.219	<i>0.255</i>	<i>0.240</i>	<i>0.260</i>	16.4	-5.9	8.3
Total Renewable Energy Demand	6.956	<i>6.826</i>	<i>6.458</i>	<i>7.043</i>	-1.9	-5.4	9.1

^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.

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

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

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	6368	6592	6708	6676	6880	7063	7348	7544	7813	8159	8509	8857	<i>9224</i>	<i>9381</i>	<i>9657</i>
Imported Crude Oil Price ^a (nominal dollars per barrel)	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	<i>27.72</i>	<i>24.65</i>	<i>24.66</i>
Petroleum Supply															
Crude Oil Production ^b (million barrels per day)	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	<i>5.82</i>	<i>5.85</i>	<i>5.91</i>
Total Petroleum Net Imports (including SPR) (million barrels per day)	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	<i>10.42</i>	<i>10.71</i>	<i>11.11</i>
Energy Demand															
World Petroleum (million barrels per day)	64.8	65.9	65.7	66.6	66.8	67.0	68.3	69.9	71.4	73.0	73.6	74.9	<i>75.6</i>	<i>76.5</i>	<i>77.9</i>
U.S. Petroleum (million barrels per day)	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	<i>19.70</i>	<i>19.86</i>	<i>20.29</i>
Natural Gas (trillion cubic feet)	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.74</i>	<i>22.44</i>	<i>23.47</i>
Coal (million short tons).....	877	895	903	899	907	943	950	962	1006	1030	1038	1045	<i>1082</i>	<i>1093</i>	<i>1105</i>
Electricity (billion kilowatthours)															
Retail Sales ^c	2578	2647	2713	2762	2763	2861	2935	3013	3101	3146	3264	3312	<i>3413</i>	<i>3452</i>	<i>3538</i>
Nonutility Own Use ^d	NA	100	104	111	122	127	141	149	149	149	160	189	<i>193</i>	<i>197</i>	<i>202</i>
Total	2578	2747	2817	2873	2885	2988	3075	3162	3250	3295	3424	3501	<i>3606</i>	<i>3648</i>	<i>3740</i>
Total Energy Demand ^e (quadrillion Btu)	NA	84.2	84.2	84.5	85.6	87.4	89.2	90.9	93.9	94.2	95.2	97.2	<i>99.5</i>	<i>99.4</i>	<i>101.9</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar).....	NA	12.77	12.55	12.66	12.44	12.37	12.14	12.07	12.02	11.54	11.19	10.97	<i>10.78</i>	<i>10.59</i>	<i>10.55</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. Data for 2000 are estimates.

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

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

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520, and *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0801.

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Macroeconomic															
Real Gross Domestic Product (billion chained 1996 dollars)	6368	6592	6708	6676	6880	7063	7348	7544	7813	8159	8509	8857	<i>9224</i>	<i>9381</i>	<i>9657</i>
GDP Implicit Price Deflator (Index, 1996=1.000).....	0.802	0.833	0.865	0.897	0.919	0.941	0.960	0.981	1.000	1.019	1.032	1.047	<i>1.070</i>	<i>1.094</i>	<i>1.117</i>
Real Disposable Personal Income (billion chained 1996 Dollars).....	4784	4907	5014	5033	5189	5261	5397	5539	5678	5854	6169	6320	<i>6539</i>	<i>6786</i>	<i>7010</i>
Manufacturing Production (Index, 1996=1.000).....	0.800	0.816	0.812	0.792	0.824	0.854	0.906	0.953	1.000	1.076	1.134	1.188	<i>1.259</i>	<i>1.223</i>	<i>1.266</i>
Real Fixed Investment (billion chained 1996 dollars)	887	911	895	833	886	958	1046	1109	1213	1329	1480	1595	<i>1716</i>	<i>1692</i>	<i>1684</i>
Real Exchange Rate (Index, 1996=1.000).....	NA	NA	0.913	0.915	0.923	0.958	0.938	0.875	0.920	0.990	1.040	1.040	<i>1.078</i>	<i>1.131</i>	<i>1.106</i>
Business Inventory Change (billion chained 1996 dollars)	17.0	14.2	8.9	-6.8	-4.7	3.6	12.1	14.1	10.1	14.8	27.2	13.3	<i>13.1</i>	<i>-14.8</i>	<i>5.3</i>
Producer Price Index (index, 1982=1.000).....	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.255	<i>1.328</i>	<i>1.362</i>	<i>1.353</i>
Consumer Price Index (index, 1982-1984=1.000)	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	1.631	1.667	<i>1.723</i>	<i>1.775</i>	<i>1.812</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	<i>0.913</i>	<i>0.905</i>	<i>0.854</i>
Non-Farm Employment (millions).....	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.8	128.9	<i>131.8</i>	<i>132.6</i>	<i>134.4</i>
Commercial Employment (millions).....	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.6	89.6	<i>92.1</i>	<i>93.5</i>	<i>95.6</i>
Total Industrial Production (index, 1996=1.000).....	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	<i>1.2</i>	<i>1.2</i>	<i>1.2</i>
Housing Stock (millions).....	101.4	102.8	103.4	104.4	105.4	106.7	108.0	109.6	110.9	112.3	114.1	115.7	<i>116.2</i>	<i>118.1</i>	<i>119.7</i>
Weather ^a															
Heating Degree-Days															
U.S.	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4169	<i>4454</i>	<i>4439</i>	<i>4459</i>
New England.....	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	5680	5952	<i>6497</i>	<i>6530</i>	<i>6462</i>
Middle Atlantic	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	4812	5351	<i>5768</i>	<i>5652</i>	<i>5698</i>
U.S. Gas-Weighted	4804	4856	4139	4337	4458	4754	4659	4707	4980	4802	4183	4399	<i>4684</i>	<i>4695</i>	<i>4710</i>
Cooling Degree-Days (U.S.).....	1283.0	1156.0	1260.0	1331.0	1040.0	1218.0	1220.0	1293.0	1180.0	1156.0	1410.0	1297.0	<i>1229.0</i>	<i>1282.9</i>	<i>1236.7</i>

^aPopulation-weighted degree-days. A degree-day indicates the temperature variation from 65 degrees Fahrenheit (calculated as the simple average of the daily minimum and maximum temperatures) weighted by 1990 population.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0801.

Table A3. Annual International Petroleum Supply and Demand Balance
(Millions Barrels per Day, Except OECD Commercial Stocks)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Demand ^a															
OECD															
U.S. (50 States)	17.3	17.3	17.0	16.7	17.0	17.2	17.7	17.7	18.3	18.6	18.9	19.5	19.7	19.9	20.3
Europe ^b	12.4	12.5	12.6	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.7	14.5	14.4	14.4	14.5
Japan.....	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.6	5.5	5.5	5.5
Other OECD	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.3	3.4	3.5
Total OECD	37.1	37.6	37.5	38.1	38.8	39.0	39.9	40.6	41.4	41.8	42.3	42.8	42.9	43.2	43.8
Non-OECD															
Former Soviet Union.....	8.9	8.7	8.4	8.4	6.8	5.6	4.8	4.6	4.0	3.9	3.8	3.7	3.7	3.7	3.8
Europe	2.2	2.1	1.7	1.4	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.6	1.6
China.....	2.3	2.4	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.1	4.3	4.6	4.8	5.0
Other Asia	4.4	4.9	5.3	5.7	6.2	6.8	7.3	7.9	8.5	9.0	8.7	9.0	9.0	9.2	9.4
Other Non-OECD.....	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.1	12.4	12.9	13.3	13.6	13.9	14.1	14.4
Total Non-OECD.....	27.7	28.3	28.2	28.5	28.0	28.0	28.4	29.3	30.0	31.2	31.4	32.1	32.7	33.4	34.1
Total World Demand.....	64.8	65.9	65.7	66.6	66.8	67.0	68.3	69.9	71.4	73.0	73.6	74.9	75.6	76.5	77.9
Supply ^c															
OECD															
U.S. (50 States)	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.3	9.0	9.1	9.0	9.1
Canada	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.6	2.7	2.9	2.9
North Sea ^d	3.8	3.7	3.9	4.1	4.5	4.8	5.5	5.9	6.3	6.2	6.2	6.3	6.0	6.0	6.0
Other OECD	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.5	2.0	2.0	1.9
Total OECD	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.9	19.7	19.4	19.8	19.8	19.9
Non-OECD															
OPEC	21.5	23.3	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	29.3	30.9	30.1	30.6
Former Soviet Union.....	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.6	8.1	8.7	8.9
China.....	2.7	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.2	3.2	3.1
Mexico.....	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.4	3.5	3.5	3.7
Other Non-OECD.....	7.3	12.0	8.0	8.1	8.4	8.7	9.2	9.9	10.2	10.5	10.8	11.3	11.3	11.5	12.0
Total Non-OECD.....	47.0	48.9	49.7	49.1	49.1	49.4	49.6	50.7	52.0	54.2	55.2	54.8	57.0	57.1	58.2
Total World Supply.....	64.8	65.9	66.8	66.7	67.0	67.4	68.3	69.9	71.8	74.1	74.9	74.2	76.8	76.9	78.1
Total Stock Withdrawals.....	0.1	0.0	-1.1	-0.1	-0.3	-0.4	0.0	0.0	-0.4	-1.1	-1.3	0.7	-1.3	-0.3	-0.2
OECD Comm. Stocks, End (bill. bbls.)	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.5	2.5	2.5	2.5
Net Exports from Former Soviet Union.....	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.6	3.0	3.3	3.5	3.9	4.4	5.0	5.1

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

^bOECD Europe includes the former East Germany.

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

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Czech Republic, Hungary, Mexico, Poland, and South Korea are all members of OECD, but are not yet included in our OECD estimates.

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

Table A4. Annual Average U. S. Energy Prices

(Nominal Dollars)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Crude Oil Prices (dollars per barrel)															
Imported Average ^a	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	27.72	24.65	24.66
WTI ^b Spot Average.....	15.98	19.78	24.48	21.60	20.54	18.49	17.16	18.41	22.11	20.61	14.45	19.25	30.29	28.12	26.75
Natural Gas Wellhead															
(dollars per thousand cubic feet)	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.95	2.17	3.61	4.23	2.65
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades	0.92	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.18	1.53	1.53	1.46
Regular Unleaded.....	0.91	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.14	1.49	1.49	1.43
No. 2 Diesel Oil, Retail															
(dollars per gallon).....	0.92	0.99	1.16	1.13	1.11	1.11	1.11	1.11	1.24	1.20	1.04	1.12	1.49	1.45	1.42
No. 2 Heating Oil, Wholesale															
(dollars per gallon).....	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.51	0.89	0.83	0.79
No. 2 Heating Oil, Retail															
(dollars per gallon).....	0.81	0.90	1.06	1.02	0.93	0.91	0.88	0.87	0.99	0.99	0.85	0.88	1.31	1.31	1.25
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel)	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	16.02	25.34	23.85	23.15
Electric Utility Fuels															
Coal															
(dollars per million Btu).....	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.22	1.20	1.24	1.23
Heavy Fuel Oil ^d															
(dollars per million Btu).....	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.38	4.26	3.90	3.73
Natural Gas															
(dollars per million Btu).....	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.57	4.33	4.69	3.29
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.83	6.69	7.71	9.30	7.38
Electricity															
(cents per kilowatthour)	7.49	7.64	7.85	8.05	8.23	8.34	8.40	8.40	8.36	8.43	8.26	8.16	8.23	8.58	8.54

^aRefiner acquisition cost (RAC) of imported crude oil.^bWest Texas Intermediate.^cAverage self-service cash prices.^dAverage for all sulfur contents.^eIncludes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

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

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

Table A5. Annual U.S. Petroleum Supply and Demand

(Million Barrels per Day, Except Closing Stocks)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Crude Oil Supply															
Domestic Production ^a	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.85	5.91
Alaska	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.05	0.97	0.97	1.03
Lower 48	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.85	4.87	4.88
Net Imports (including SPR) ^b	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.60	8.61	9.02	9.07	9.52
Other SPR Supply	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.04	0.08
Stock Draw (Including SPR)	0.00	-0.09	0.02	-0.01	0.00	-0.08	-0.02	0.09	0.05	-0.06	-0.07	0.09	-0.01	-0.01	0.00
Product Supplied and Losses	-0.04	-0.03	-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
Unaccounted-for Crude Oil	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.15	0.27	0.22
Total Crude Oil Supply	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.80	<i>15.07</i>	<i>15.17</i>	<i>15.56</i>
Other Supply															
NGL Production	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.85	1.91	1.81	1.87
Other Inputs	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.38	0.37
Crude Oil Product Supplied	0.04	0.03	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
Processing Gain	0.66	0.66	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.94	0.94
Net Product Imports ^c	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.40	1.64	1.59
Product Stock Withdrawn	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	0.00	-0.06	-0.04
Total Supply	17.33	17.37	17.04	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	<i>19.70</i>	<i>19.87</i>	<i>20.29</i>
Demand															
Motor Gasoline ^d	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.47	8.60	8.82
Jet Fuel	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.73	1.74	1.80
Distillate Fuel Oil	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.72	3.88	3.87
Residual Fuel Oil	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.83	0.91	0.94	0.83
Other Oils ^e	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.70	4.97
Total Demand	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	<i>19.70</i>	<i>19.86</i>	<i>20.29</i>
Total Petroleum Net Imports	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	<i>10.42</i>	<i>10.71</i>	<i>11.11</i>
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	330	341	323	325	318	335	337	303	284	305	324	284	286	289	289
Total Motor Gasoline	228	213	220	219	216	226	215	202	195	210	216	193	196	199	204
Jet Fuel	44	41	52	49	43	40	47	40	40	44	45	41	45	44	45
Distillate Fuel Oil	124	106	132	144	141	141	145	130	127	138	156	125	118	123	128
Residual Fuel Oil	45	44	49	50	43	44	42	37	46	40	45	36	36	41	42
Other Oils	267	257	261	267	263	273	275	258	250	259	291	246	247	257	259

^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.

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

(Trillion Cubic Feet)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Total Dry Gas Production	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.85	18.90	18.71	18.62	<i>19.08</i>	<i>19.38</i>	<i>19.79</i>
Net Imports	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	<i>3.53</i>	<i>3.69</i>	<i>4.03</i>
Supplemental Gaseous Fuels.....	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	<i>0.10</i>	<i>0.10</i>	<i>0.12</i>
Total New Supply	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.75	21.84	21.80	22.14	<i>22.71</i>	<i>23.17</i>	<i>23.94</i>
Working Gas in Storage															
Opening.....	2.76	2.85	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	<i>2.51</i>	<i>1.72</i>	<i>2.43</i>
Closing.....	2.85	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.51	<i>1.72</i>	<i>2.43</i>	<i>2.40</i>
Net Withdrawals.....	-0.09	0.34	-0.56	0.24	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.22	<i>0.79</i>	<i>-0.71</i>	<i>0.03</i>
Total Supply.....	18.33	19.03	18.82	19.70	20.11	20.70	21.11	21.85	21.73	21.84	21.25	22.36	<i>23.50</i>	<i>22.46</i>	<i>23.97</i>
Balancing Item ^a	-0.30	-0.23	-0.11	-0.66	-0.56	-0.42	-0.40	-0.27	0.24	0.11	0.01	-0.67	<i>-0.76</i>	<i>-0.01</i>	<i>-0.50</i>
Total Primary Supply.....	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.74</i>	<i>22.44</i>	<i>23.47</i>
Demand															
Lease and Plant Fuel.....	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.16	1.08	<i>1.10</i>	<i>1.13</i>	<i>1.14</i>
Pipeline Use.....	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.64	0.74	<i>0.77</i>	<i>0.77</i>	<i>0.76</i>
Residential.....	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	<i>4.97</i>	<i>5.03</i>	<i>5.13</i>
Commercial.....	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	<i>3.26</i>	<i>3.32</i>	<i>3.38</i>
Industrial (Incl. Nonutilities).....	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.83	8.69	9.00	<i>9.58</i>	<i>9.50</i>	<i>10.58</i>
Electric Utilities.....	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.26	3.11	<i>3.05</i>	<i>2.70</i>	<i>2.48</i>
Total Demand.....	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.74</i>	<i>22.44</i>	<i>23.47</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.

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
(Million Short Tons)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Production.....	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.4	<i>1075.5</i>	<i>1140.1</i>	<i>1135.2</i>
Appalachia.....	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	425.6	<i>420.9</i>	<i>434.2</i>	<i>426.3</i>
Interior.....	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	<i>144.7</i>	<i>150.6</i>	<i>138.6</i>
Western.....	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	488.8	512.3	<i>509.9</i>	<i>555.4</i>	<i>570.3</i>
Primary Stock Levels ^a															
Opening.....	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	<i>39.5</i>	<i>34.2</i>	<i>34.6</i>
Closing.....	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	<i>34.2</i>	<i>34.6</i>	<i>34.6</i>
Net Withdrawals.....	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-2.6	-2.9	<i>5.3</i>	<i>-0.4</i>	<i>S</i>
Imports.....	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	9.1	<i>12.5</i>	<i>16.8</i>	<i>18.1</i>
Exports.....	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	<i>58.5</i>	<i>55.3</i>	<i>57.0</i>
Total Net Domestic Supply.....	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1045.7	1048.1	<i>1034.8</i>	<i>1101.2</i>	<i>1096.4</i>
Secondary Stock Levels ^b															
Opening.....	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	<i>143.5</i>	<i>108.1</i>	<i>119.4</i>
Closing.....	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	143.5	<i>108.1</i>	<i>119.4</i>	<i>122.4</i>
Net Withdrawals.....	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.6	-23.0	-14.1	<i>35.4</i>	<i>-11.3</i>	<i>-2.9</i>
Waste Coal Supplied to IPPs ^c	0.0	0.0	0.0	0.0	6.0	6.4	7.9	8.5	8.8	8.1	9.0	9.6	<i>10.1</i>	<i>10.6</i>	<i>11.1</i>
Total Supply.....	882.3	896.5	899.4	891.4	907.8	936.5	954.0	960.4	1006.7	1033.2	1031.6	1043.6	<i>1080.3</i>	<i>1100.5</i>	<i>1104.5</i>
Demand															
Coke Plants.....	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	<i>28.9</i>	<i>26.5</i>	<i>26.1</i>
Electricity Production															
Electric Utilities.....	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	910.9	894.1	<i>859.3</i>	<i>832.7</i>	<i>817.4</i>
Nonutilities (Excl. CoGen.) ^d	NA	5.7	7.4	11.4	15.0	17.5	19.9	21.2	22.2	21.6	26.9	52.7	<i>123.3</i>	<i>165.0</i>	<i>193.3</i>
Retail and General Industry.....	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	77.7	78.0	72.3	69.6	<i>70.0</i>	<i>69.3</i>	<i>67.8</i>
Total Demand ^e	876.5	895.4	902.9	899.1	907.4	943.5	950.1	962.0	1006.3	1030.1	1038.3	1044.5	<i>1081.5</i>	<i>1093.5</i>	<i>1104.5</i>
Discrepancy ^f	5.8	1.1	-3.5	-7.7	0.5	-7.0	3.9	-1.6	0.4	3.1	-6.7	-0.9	<i>-1.3</i>	<i>7.0</i>	<i>0.0</i>

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

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

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

^dEstimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 2000 and projections for 2001 and 2002 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).

^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. 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
(Billion Kilowatt-hours)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Net Utility Generation															
Coal.....	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	1807.5	1767.7	1696.6	1581.4	1550.2
Petroleum	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	110.2	86.9	72.2	85.9	66.7
Natural Gas.....	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	309.2	296.4	290.7	257.9	235.0
Nuclear.....	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.6	673.7	725.0	705.4	526.6	521.8
Hydroelectric.....	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	337.2	304.4	293.9	248.2	217.9	266.3
Geothermal and Other ^a	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.5	7.2	3.7	2.2	2.4	2.3
Subtotal.....	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	3212.2	3173.7	3015.4	2672.1	2642.3
Nonutility Generation ^b	NA	187.6	216.7	246.3	286.1	314.4	343.1	363.3	369.6	371.7	405.7	530.9	784.6	1182.2	1305.4
Total Generation.....	2704.3	2971.9	3024.9	3071.3	3083.4	3196.9	3253.8	3357.8	3447.0	3494.2	3617.9	3704.5	3799.9	3854.3	3947.7
Net Imports ^c	31.8	11.0	2.3	19.6	25.4	27.8	44.8	39.2	38.0	36.6	27.6	30.6	35.6	33.5	36.2
Total Supply	2736.0	2982.8	3027.2	3091.0	3108.8	3198.0	3298.6	3397.1	3485.0	3530.8	3645.5	3735.1	3835.5	3887.8	3983.9
Losses and Unaccounted for ^d	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Demand															
Retail Sales ^e															
Residential.....	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.9	1130.1	1144.9	1193.4	1241.4	1270.4
Commercial.....	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1037.9	1071.1	1093.8
Industrial.....	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1033.6	1038.2	1051.2	1058.2	1070.8	1028.5	1062.1
Other.....	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	110.6	110.2	111.6
Subtotal.....	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3412.8	3451.6	3537.9
Nonutility Use/Sales ^f	NA	100.4	104.2	111.0	121.8	126.9	140.9	149.2	148.9	149.0	159.8	188.8	193.0	196.5	201.8
Total Demand.....	2578.1	2747.2	2816.7	2873.0	2885.1	2988.4	3075.5	3162.4	3250.1	3294.6	3424.0	3500.9	3605.8	3648.2	3739.8
Memo:															
Nonutility Sales															
to Electric Utilities	NA	87.1	112.5	135.3	164.4	187.5	202.2	214.2	220.6	222.7	245.9	342.0	591.5	985.7	1103.5

^aOther includes generation from wind, wood, waste, and solar sources.

^bNet generation.

^cData for 2000 are estimates.

^dBalancing item, mainly transmission and distribution losses.

^eTotal of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA's *Electric Power Monthly* and *Electric Power Annual*. Power marketers' sales for historical periods are reported in EIA's *Electric Sales and Revenue*, Appendix C. Data for 2000 are estimates.

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

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold; forecasts are in italics.

Sources: Historical data: Energy Information Administration; latest data available from EIA databases supporting the following report: *Electric Power Monthly*, DOE/EIA-0226 and *Electric Power Annual*, DOE/EIA-0348.

Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.