EIA Energy Information Administration
Short-Term Energy Outlook

July 2000

Summary

Based on the results of OPEC's June meeting and the July 3 announcement by Saudi Arabia of its intention to push for an additional 500,000 barrels per day of new output, we conclude that the probability of significant declines in world oil prices by yearend is larger than it was a month ago. We now expect a decline of between $4 and $5 per barrel in average crude oil prices between June and December 2000. Moreover, expected increases in petroleum inventories resulting from the anticipated increases in output from OPEC would tend to bring oil stock levels in industrialized countries much closer to average levels by yearend than was projected in last month's Outlook. However, with world demand growing at between 1.5 and 2.5 percent per year through 2001, in terms of forward coverage of demand, stocks may still be assessed as relatively tight, yielding relatively high oil prices (by historical standards) through 2001.

In the United States, the realization of feared instabilities in the gasoline market have resulted in high gasoline prices, particularly in the Midwest. We think that some near-term improvements to the tight supply situation there may balance out continued upward price pressure in other regions, particularly the West Coast, resulting in a leveling off of pump prices through August at the June average of $1.63 per gallon for regular. With gasoline inventories remaining on the low side for the remainder of the year, we do not expect prices to fall below year-ago levels in any month remaining in 2000. However, we still think that significant declines from current levels are possible by yearend, especially if crude oil prices weaken as expected.

U.S. natural gas prices remain high on the strength of increased demand, which so far this year relates to the sharp increase in requirements from the electric power sector. In prospect is a jump in domestic consumption related to expectations of large increases in heating demand in Q4 2000 and Q1 2001, compared to year-earlier levels, if weather is normal. New supply in North America has not kept pace with incremental demand, resulting in year-to-year declines in gas volumes in storage dating back to July 1999. Admittedly, these declines are from abnormally high levels, and even today gas in storage in the United States is within what most analysts would consider a "normal" range. Still, unless demonstrable improvements in North American gas production materialize soon, a break in gas wellhead prices from the current $4.00-$4.50 per-

thousand-cubic-feet range may not develop until next spring. The sensitivity of spot gas prices to weather variations could sharply alter this outlook if temperatures remain moderate through the rest of the summer and if fall weather is warm.

Electricity demand in the United States appears to have increased between 3.5 and 4.0 percent over 1999 levels during the first half of 2000. Fears of new problems with electric reliability this year have already been realized in Northern California where some emergency steps to alleviate impending shortages have already been taken. However, improvements in the Midwest, South and Southeast, in terms of increased generating capacity, may forestall reliability problems in those areas this summer. Reliability concerns persist in the Northeast. There is a good chance that Q3 2000 demand will be flat or down relative to Q3 1999, although, on any given day, distribution systems in New York and New England may be severely tested.

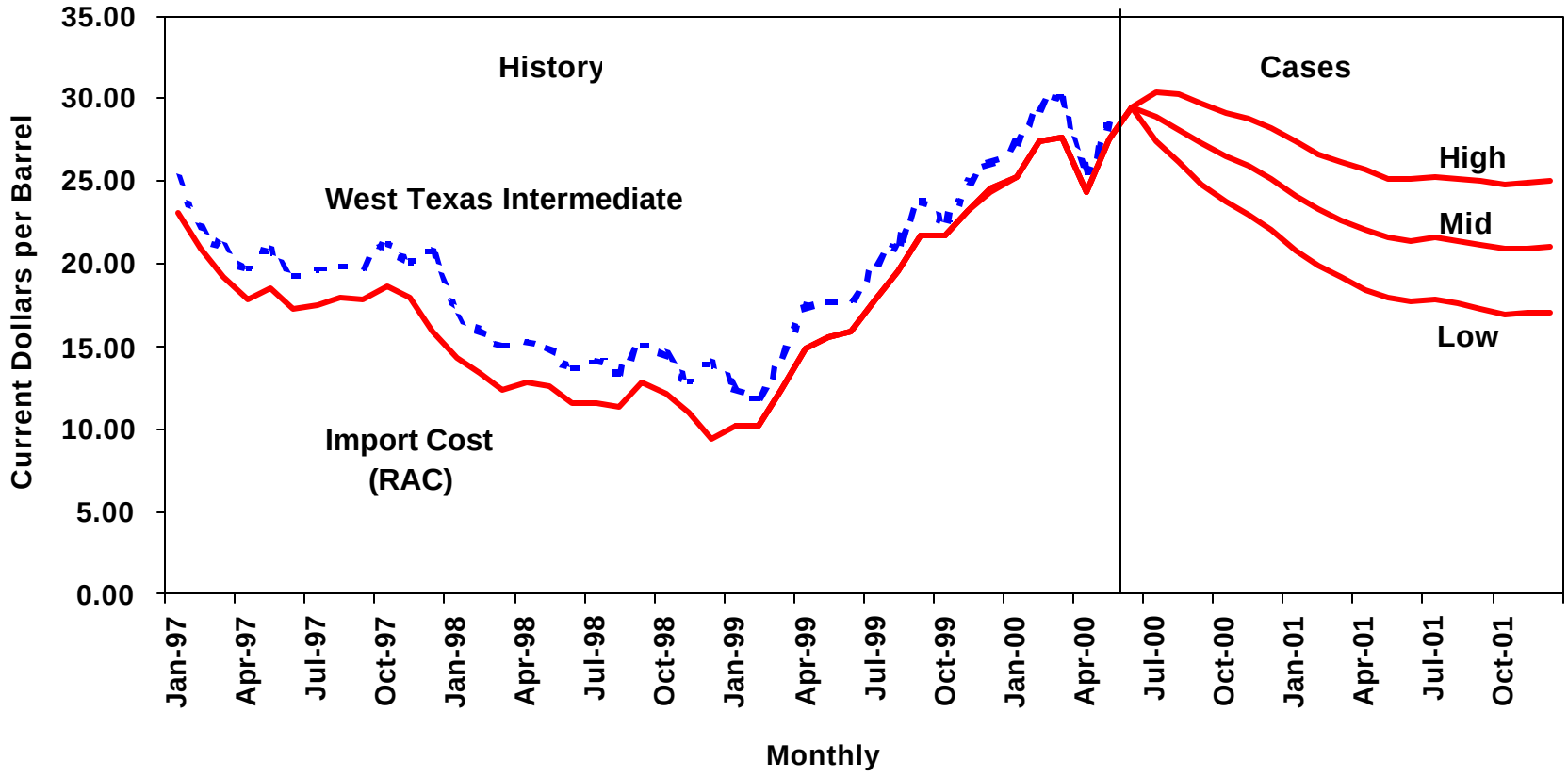
International Oil Markets

Crude Oil Prices: The monthly U.S. imported crude oil price rose in June to an estimated $29.50 per barrel level ($31.82 estimated for West Texas Intermediate crude oil), almost $2 more than the previous peak seen in March (Figure 1) and well above previous expectations. EIA estimates of world oil supply and demand suggest that world oil prices will begin to decline to $27 per barrel by the end of the summer, but still remain at or above $25 per barrel ($27 per barrel for West Texas Intermediate crude oil) for the remainder of 2000. Prices are then expected to gradually decline in 2001, such that the average world oil price in 2001 will be about $22 per barrel, more than $5.00 below the annual average for 2000.

With the increase in world oil prices during the past few months, the average OPEC basket price over a 20-day period began to exceed the $22 - $28 range that OPEC had set as its target price during its March meeting. OPEC deferred action on prices until its June meeting, when the OPEC 10 (Organization of Petroleum Exporting Countries excluding Iraq) agreed to increase their production quotas by 708,000 barrels per day. EIA expects actual production increases from this quota adjustment to be about 600,000 barrels per day, as not all of the OPEC 10 countries will be able to increase production by as much as their quota increase. After this latest round of quota adjustments, only Saudi Arabia, Kuwait and, to a lesser degree, the United Arab Emirates will have significant capacity to expand production.

However, Saudi Arabia announced on July 3 that crude oil supplies would be increased by an additional 500,000 barrels per day if oil prices remained high, adding that it wanted to bring the OPEC basket price down to $25 per barrel. EIA

Figure 1. U.S. Monthly Crude Oil Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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assumes that actual production increases from this announcement will result in an additional 400,000 barrels per day of crude oil on world markets in the near term. If OPEC 10 countries fail to increase production in the third or fourth quarters of 2000 in line with assumptions made in this forecast, higher oil prices would be expected.

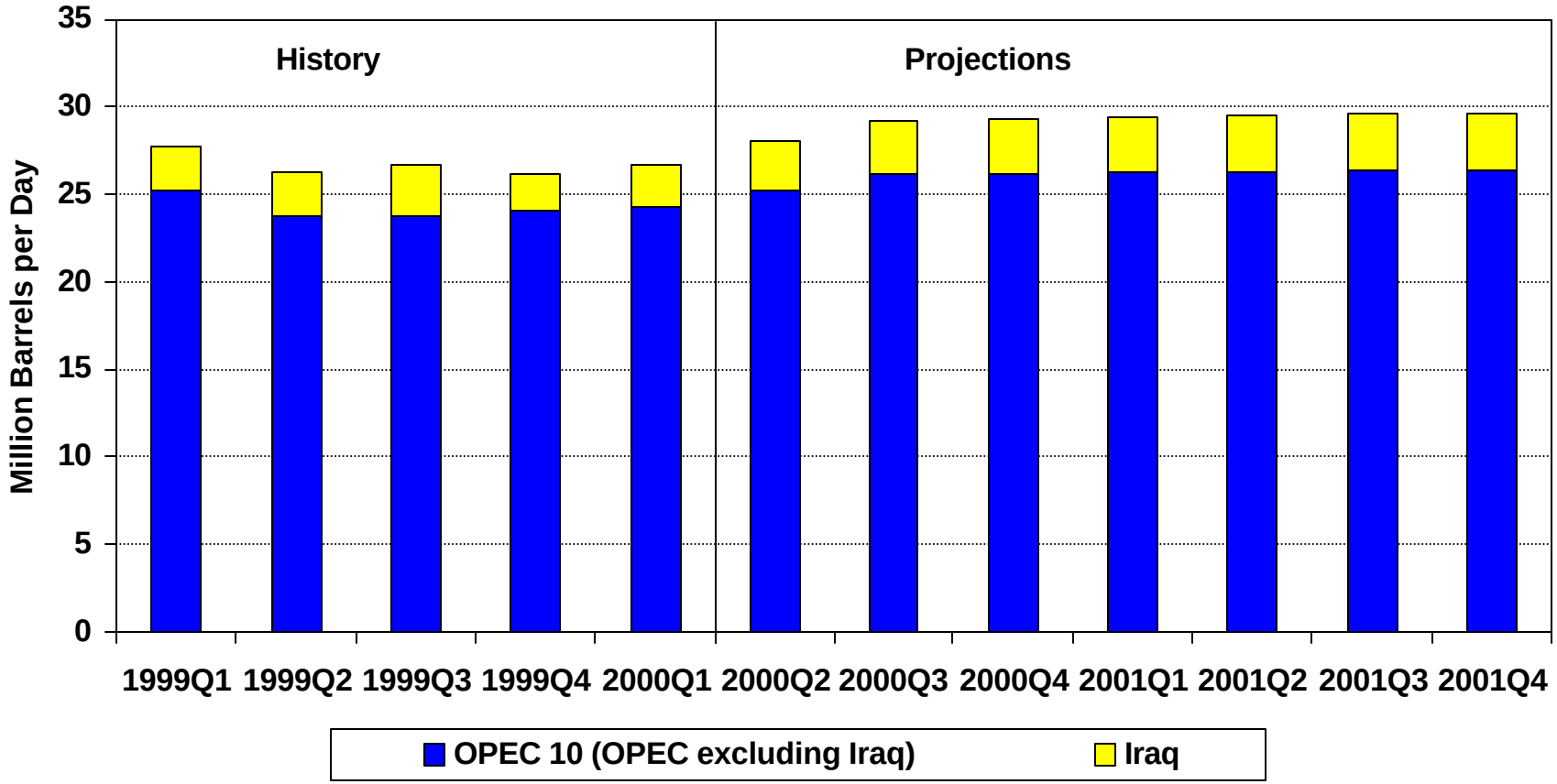
International Oil Supply: This forecast assumes that OPEC 10 crude oil production will be 26.2 million barrels per day in the third quarter, almost 1 million barrels per day above second quarter production levels (Figure 2) and about 0.8 million barrels per day above the production target of 25.4 million barrels per day set at OPEC's June meeting. Of course, the quota set at OPEC's June meeting does not reflect any increases related to the recent announcement by Saudi Arabia. The forecast then assumes additional increases so that OPEC 10 production in the fourth quarter of 2001 will be 0.2 million barrels per day higher than year-earlier levels for the corresponding period.

Iraqi crude oil production is estimated to have increased from 2.3 million barrels per day in the first quarter to 2.9 million barrels per day in the second quarter of 2000. Iraq's production is projected to increase to 3.0 - 3.1 million barrels per day through the remainder of the year, and Iraqi oil production is assumed to increase even more in 2001. These projections of Iraqi crude oil production are assumptions and do not reflect any official U.S. Government view on the future of Iraqi oil exports.

Non-OPEC production is expected to increase by about 1.0 million barrels per day in 2000 and by another 0.5 million barrels per day in 2001, primarily from the former Soviet Union, Mexico, South America and Africa (Table 3). Oil production from the former Soviet Union countries in the first quarter of 2000 was the most since the third quarter of 1993, and further increases are expected at end-2001 with the opening of the Caspian Pipeline Consortium (CPC)'s pipeline to transport oil from Kazakhstan to world oil markets. In the North Sea, significant increases are not expected next year.

International Oil Demand: This month's forecast assumes growth in world oil demand in 2000 of 1.2 million barrels per day (about 1.6 percent), to average about 76 million barrels per day (Table 3). In 1999, world oil demand grew by 1.1 million barrels per day (1.4 percent). World oil demand growth in 2001 is expected to be about 2.1 million barrels per day, similar to the growth that was seen in the 1995-1997 period. The U.S., which accounted for more than half of the growth in world oil demand in 1998 and 1999, is expected to account for only 8 percent of world oil demand growth in 2000 and a little more than 20 percent in 2001. As Asia continues to recover from the economic crisis of 1997-1998, it is expected to once again become an important engine for world oil demand

Figure 2. OPEC Crude Oil Production 1999-2001



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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growth. By 2001, world oil demand is expected to be more than 78 million barrels per day.

In 1999, world oil demand growth was mainly concentrated in OECD countries, particularly the United States. In 2000, non-OECD Asia is expected once again to be the predominant region for oil demand growth, although near-term growth rates there are unlikely to match those seen in the early to mid 1990s. By 2001, not only is non-OECD oil demand expected to grow even more, but OECD oil demand growth is expected to be strong as well (Figure 3).

World Oil Inventories: While EIA does not attempt to estimate oil inventory levels on a global basis, the direction oil inventories are headed is discerned from EIA's world oil supply and demand estimates. Following a 0.8 million barrel per day implied draw on world inventories in 1999 (based on world oil consumption averaging 74.8 million barrels per day while world oil supply averaged 73.9 million barrels per day, with differences due to rounding), oil inventories are expected to be built by 0.6 million barrels per day in 2000, as both OPEC and non-OPEC oil production increase substantially. However, while this leaves global oil inventories in a better position than in last month's forecast, stocks would still be low when viewed on a forward-cover or days-supply basis. In 2001, a build of 0.2 million barrels per day in world oil inventories is projected, as supply exceeds demand once again.

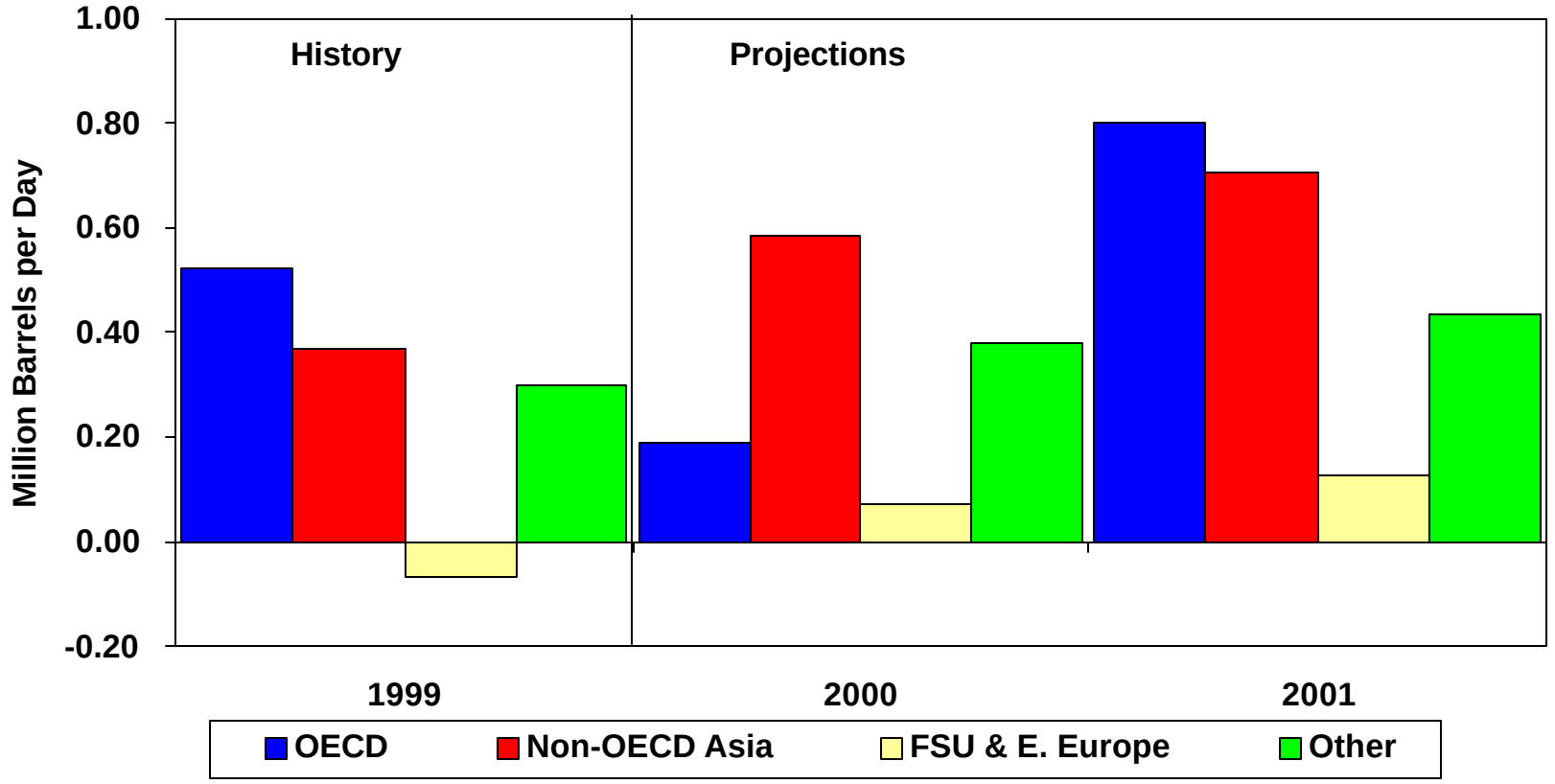
OECD stock levels, which EIA does estimate, are expected to increase with the rise in OPEC production to reach average 1990-1995 levels by end-2000 (Figure 4). This means that inventories will not be at the extremely low levels seen earlier this year, and that there will be greater flexibility in the world oil system to react to a cutoff in oil supplies somewhere or an extreme cold snap during next winter.

U. S. Energy Prices

Motor Gasoline. The retail price of motor gasoline reached the highest level recorded by EIA (in nominal, not inflation-adjusted terms) in the third week of June, averaging $1.68 per gallon in the U.S. for regular self-service gasoline. It is worth noting that in March 1981, motor gasoline prices were almost 60 percent higher than today's prices, when adjusted for inflation. Recent gasoline prices rose nearly 20 cents per gallon in less than one month. Some of this increase can be attributed to rising crude oil prices, which had gained more than $5.00 per barrel (12 cents per gallon) since April. In addition, stocks of motor gasoline have been low. A particularly important aspect of the price runup was the spectacular price jump that occurred in the Midwest region of the country. Pump prices there were the highest in the country, gaining an average of nearly 40 cents per gallon from the end of the third week of May to the third week of

Figure 3. Annual World Oil Demand

(Changes from Previous Year)



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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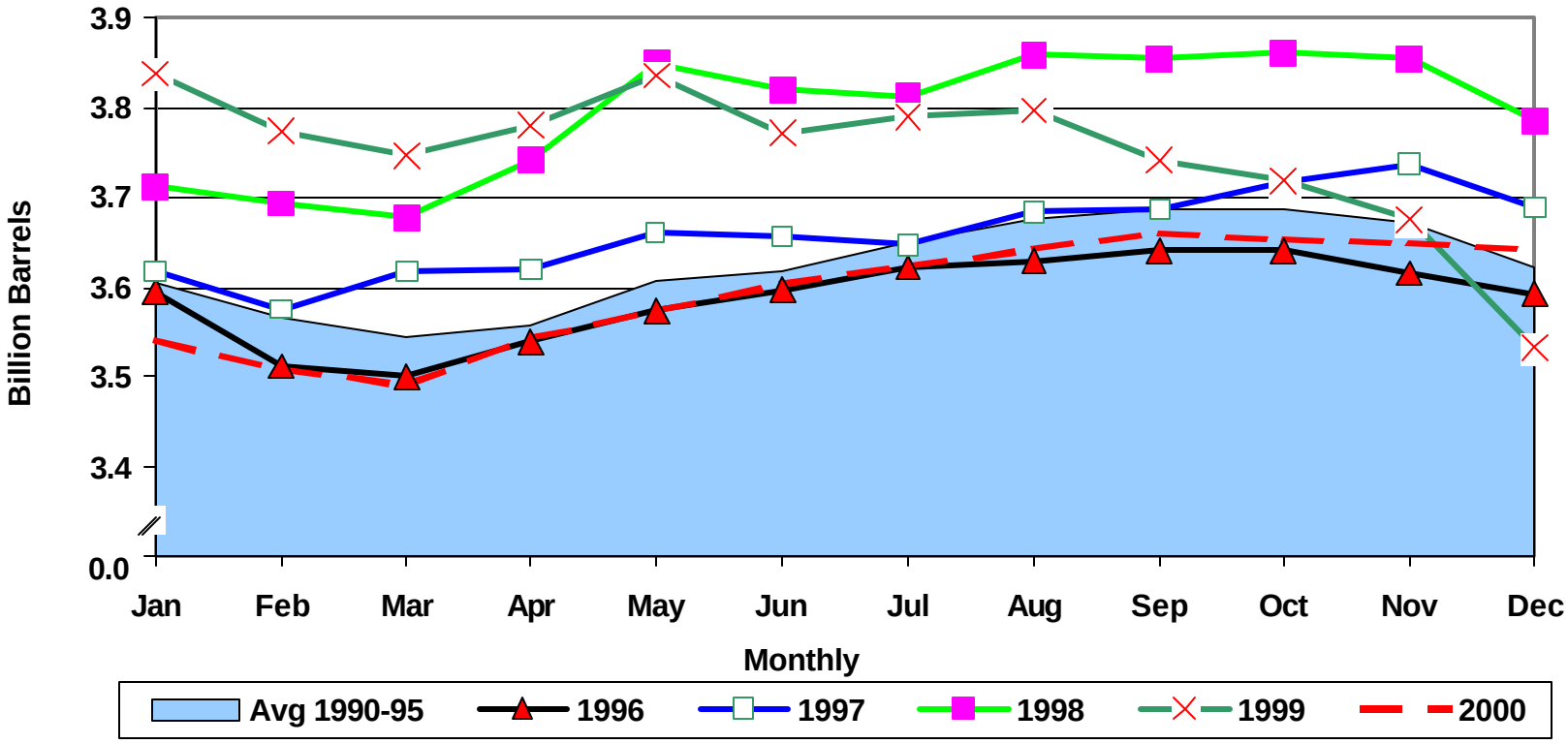
Figure 4. Total OECD Oil Stocks*



*Total includes commercial and government stocks.

Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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June. Pipeline disruptions and difficulties in meeting the Federal reformulated gasoline (RFG) Phase 2 Summer specifications propelled prices to record levels (see below). In several Midwest metropolitan areas the pump prices averaged more than $2.00 per gallon. However, over a two-week period ending July 3, the average pump price in the Midwest had dropped by nearly 20 cents per gallon, an indication that some of the Phase 2 startup problems were being ironed out. Interestingly, pump prices in the other regions continued to inch upward in late June.

While prices in the Midwest may continue to fall over the next few weeks from their abnormally high levels, retail prices in the other regions may continue to creep upward for awhile due to the price increases at the wholesale level still making their way to the pump. Assuming that our declining crude oil price path holds, we project that monthly average retail gasoline prices will plateau in July and August, the height of the driving season, at $1.63 per gallon. Prices are expected to average about $1.56 per gallon for the entire summer driving season (Figure 5 and Table 4). By September, with the peak driving season over, the pump price should fall considerably, then continue to decline though the end of the year as long as major refining or pipeline problems are avoided.

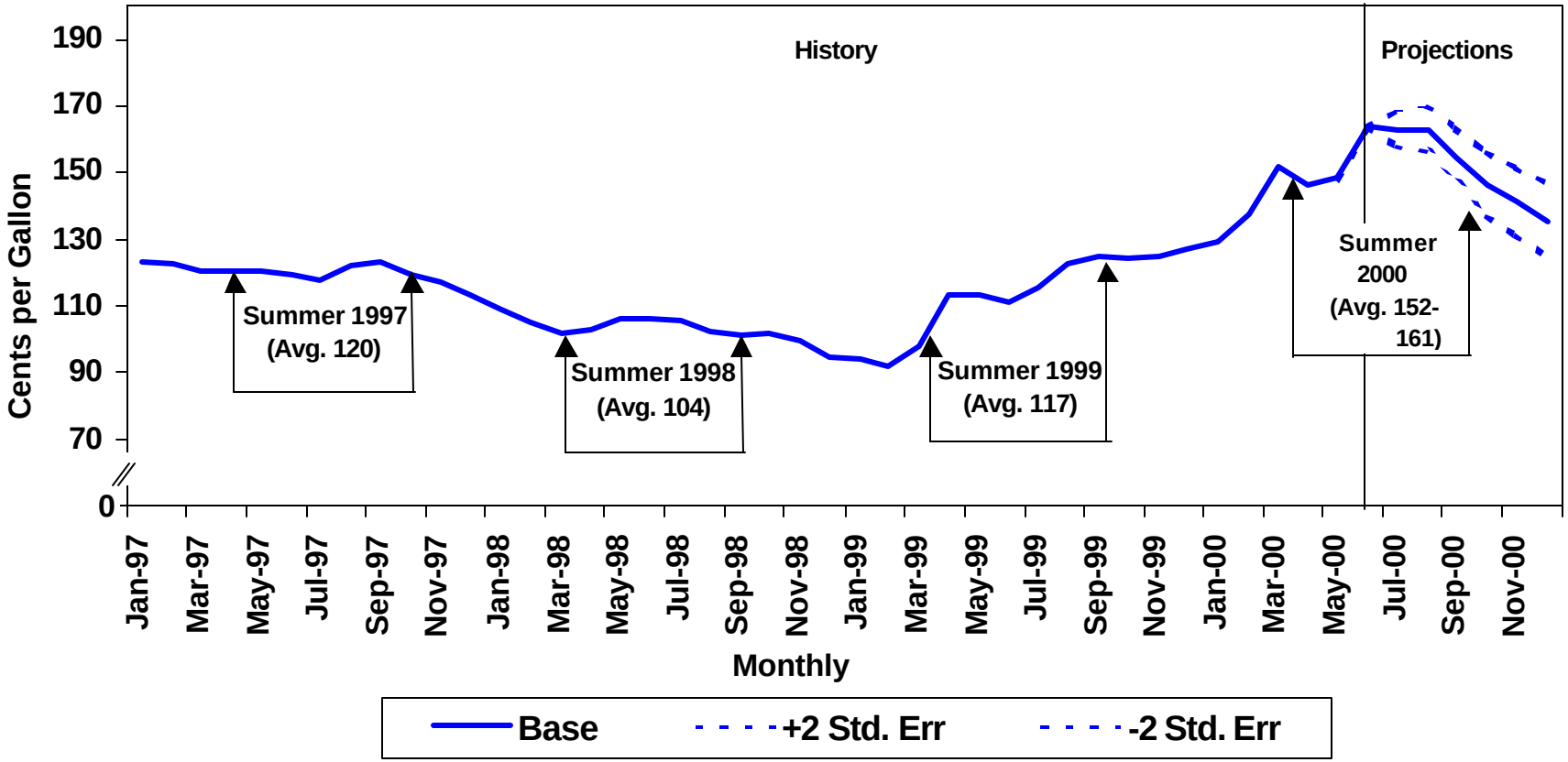
For 2001, we expect a drop of about 18 cents in gasoline prices, assuming that our declining crude oil price path holds.

The West Coast, particularly California, normally has the highest gasoline prices in the nation. Although the Midwest gasoline prices are currently (and probably temporarily) the highest, the California market bears watching. California prices generally are more expensive than others because of the State's unique mandated clean blend of gasoline. The market there (for diesel fuel as well as motor gasoline) is almost always tight, making any major refinery disruption on the West Coast an event with the potential to result in price spikes. Currently, gasoline production in that region is at full capacity and the pump price has jumped over a nickel per gallon in the most recent weekly EIA survey, while prices in the rest of the country have fallen or remained flat.

There is, as always, significant uncertainty about the price of gasoline for the summer. An approximate 95-percent confidence range for the average pump price for regular self-service gasoline is illustrated in Figure 5 (the range is based on the normal error distributions associated with the Short-Term Integrated Forecasting System model). The probability of prices ranging above or below these curves is, for any month, approximately 5 percent. This range is, in effect, conditional on more-or-less smooth operating conditions for refineries and pipelines throughout the summer.

Figure 5. Retail Gasoline Price Cases*

(Base Case and 95 Percent Confidence Range)



* Regular gasoline, self-serve cash.

Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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Reformulated Gasoline.

About a third of gasoline sold in the U.S. must meet Federal reformulated gasoline (RFG) specifications. The Federal RFG program transitioned from Phase 1 to Phase 2 on January 1, 2000, with new requirements for reducing toxic air pollutants (TAP) and nitrogen oxides (NOx). While refiners were able to meet these new year-round TAP and NOx requirements, there are also new, more stringent, summer requirements for reductions in volatile organic compounds (VOC) and NOx. This Phase 2 Summer-grade RFG had to be in place at distribution terminals by May 1 and at retail outlets by June 1. The summer phase ends on September 15.

The price premium for reformulated gasoline (RFG) this summer has been higher than originally expected, particularly in the Midwest. The EIA originally forecast a summer wholesale price premium for RFG over conventional gasoline of about 4 cents per gallon. (See "Demand and Price Outlook for Phase 2 Reformulated Gasoline, 2000.") In the U.S. Gulf Coast and East Coast (New York harbor) the RFG wholesale spot price premium has ranged from 7 to 12 cents per gallon. The primary reason for the higher-than-expected price premium is the higher cost of petroleum. Since our original RFG forecast was published in April 1999, the wholesale spot prices of conventional unleaded regular gasoline and methyl-tertiary-butyl-ether (MTBE) have almost doubled. The estimated current variable cost for producing RFG from conventional gasoline is now 6 to 8 cents per gallon.

The price premium for reformulated gasoline in the Midwest (Chicago and Milwaukee) has been greater than in other areas of the country. Reformulated gasoline in this area is unique because it contains ethanol rather than MTBE to satisfy the RFG minimum oxygen content requirement. Because ethanol has a higher vapor pressure than MTBE, ethanol-blended RFG is more difficult and costly to produce the gasoline need to blend with ethanol during the summer months (this is not a constraint during the winter). Moreover, it is difficult to substitute RFG with MTBE from other areas of the country because of constraints in the flexibility of the distribution system to handle the different types of RFG. While some of the higher price premium for RFG in the Midwest is attributed to the higher cost of producing RFG, the more significant issue is probably supply constraints. In the current tight supply situation, higher prices probably have induced people to drive less, while providing an incentive for alternative sources of supply to develop.

The price premium for RFG should fall by a few cents per gallon after September 15, as the RFG program transitions from the summer to the winter programs.

Moreover, because winter-grade RFG is easier to produce and demand should be less, the tight supply situation related to RFG should be relieved.

Distillate Fuel (Diesel Fuel Oil and Heating Oil). Diesel fuel prices usually, but not always, move in tandem with the seasonal motor gasoline price path. However, during the past several weeks, while motor gasoline prices moved rapidly, diesel fuel prices remained quite calm, though they have been inching up as of late. Higher crude oil prices and strong demand, coupled with low inventories for distillate, will exert upward pressure on the price through the end of the year. The level of distillate stocks is currently quite low, thus creating the possibility of price volatility when the heating season kicks in. As demonstrated last February, the price of diesel fuel can be strongly affected by the heating oil situation. A combination of factors, including severe weather in the Northeast and extremely low inventories of distillate fuel, led to retail diesel and heating oil prices that topped $2.00 per gallon in New England and other areas in the Northeast.

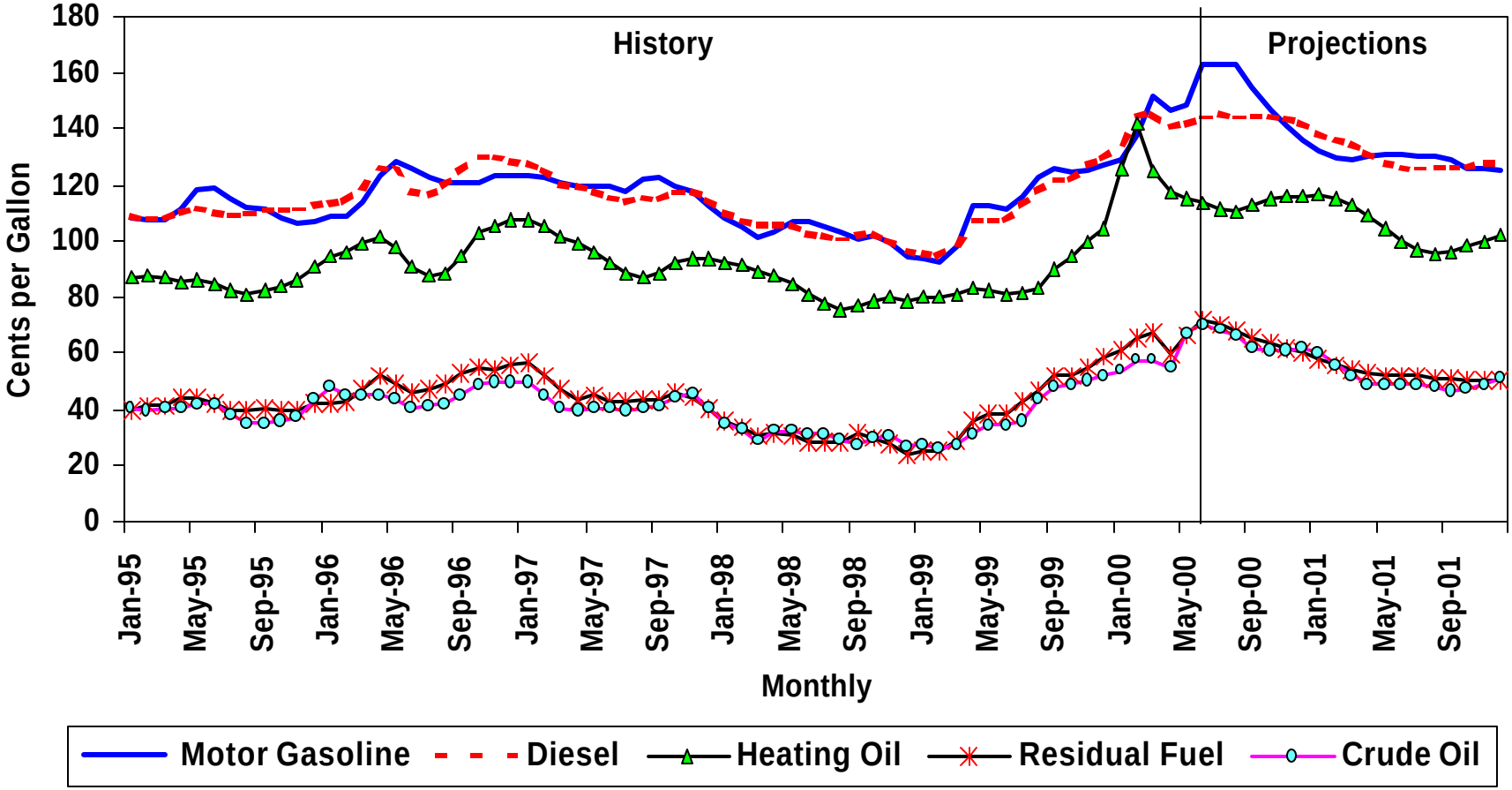
In California, however the prices are taking a different path. Production problems intensified the normally tight California diesel market. Like gasoline, the diesel pump price has jumped over 5 cents per gallon in the most recent weekly EIA survey.

There is a risk of price spikes similar to last winter in the Northeast for heating oil as well as for diesel fuel if inventories are not built to adequate levels by the end of the year. We are projecting that distillate inventories will grow through November. By the middle of the winter, the levels will be strained but somewhat higher than those of last year. However, these projected stock levels will not leave much of a cushion if the winter in the Northeast is unusually cold.

For the summer, assuming our declining crude oil price path holds, the retail diesel price is expected to average $1.43 per gallon, about 30 cents per gallon more than one year ago (Figure 6 and Table 4). In our current base case projection, we expect the retail price to gain slightly in the fourth quarter, as normal heating demand and tight stocks offset projected falling crude oil prices. However, if crude oil prices fail to decline, then we would naturally expect the diesel fuel price path to be higher. Residential heating oil prices are projected to continue to increase through the first quarter of 2001.

Stocks of high-sulfur distillate fuel oil (heating oil) particularly in the Northeast, where most of the nation's heating oil is consumed, are currently at extremely low levels. As stated before, there is a potential for a repeat of last winter's home heating oil price shock. A rapid stock build, which is likely once the driving season ends, and higher levels of imports of distillate fuel would make

Figure 6. Petroleum Product Prices



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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the high price scenario less probable. A mild winter in the Northeast would also ease the pressure.

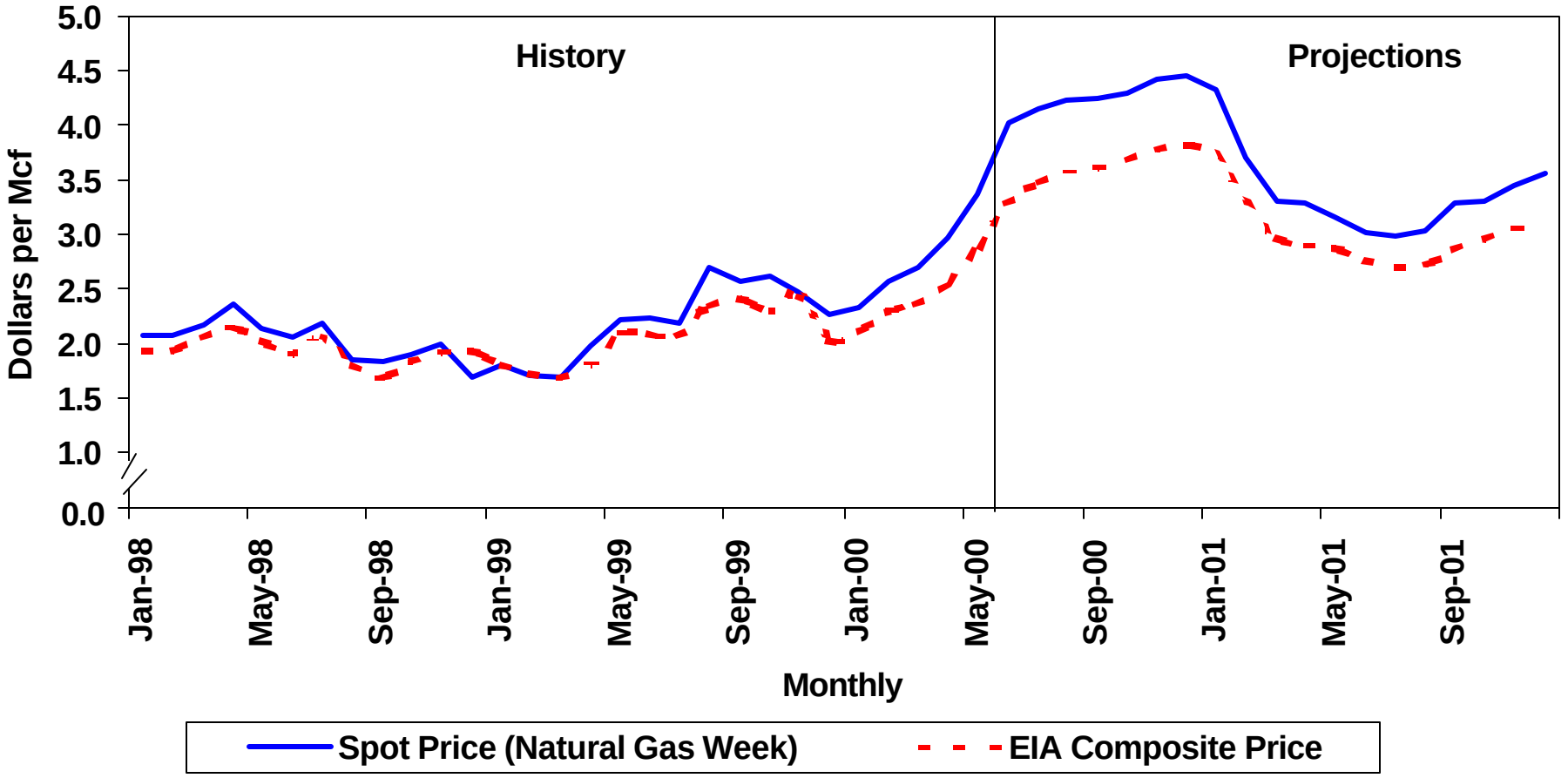
Natural Gas. Spot wellhead prices are averaging over $4.00 per thousand cubic feet, about double the price since the beginning of the year (Figure 7). Although rising crude oil prices have encouraged natural gas prices to advance, the primary cause of these elevated gas prices has been the delicate supply situation. In other words, the injection rate for gas into storage continues to be too sluggish to comfort the market for next winter's heating season. Underground working gas storage levels are currently about 18 percent below year-ago levels (Figure 8). At current injection rates, the availability of natural gas for next winter has become chancy, as seen in the buoyancy and levels of today's prices. Hot summer weather in portions of the country that consume large amounts of gas-generated electricity has also contributed to the low storage injection rate. Natural gas that would normally be injected into storage has, to some extent, been used (indirectly through electric utilities) to run air conditioners. Furthermore, demand for natural gas has been growing due to the expanding economy over the last 7-8 years and the widening role of gas generation at power facilities.

While natural gas imports have generally been rising significantly in recent years, the United States may be running into some short-term supply constraints. Several years of relatively low prices have slowed down exploration and drilling for new sources of supply. Recent higher prices have caused drilling to rebound, but new supplies are not likely to augment production until after the summer.

We are projecting that natural gas prices will increase by 50 percent this summer (April-September) compared to last summer and by 60 percent this winter (October-March) compared to last winter. Naturally, higher end-use prices will result from higher projected wellhead prices. The wellhead price for the year is projected to average over $3.00 per thousand cubic feet. In nominal terms, this projected price represents the highest annual wellhead price on record; in real (inflation-adjusted) terms this projected price would be the highest annual average price since 1985. Our base case projections assume normal weather for both the summer and winter. However, there is a downside risk to any high priced commodity: the market reacts fairly quickly. These projected price increases could evaporate if mild weather occurs for sustained periods of time in the gas consuming regions of the nation. For next year, we project a slight easing of the price.

Electric Utility Fuels. Natural gas for power generation is projected to yield its apparent average price advantage over residual fuel oil by the fourth quarter of

Figure 7. Natural Gas wellhead Prices: Composite and Spot



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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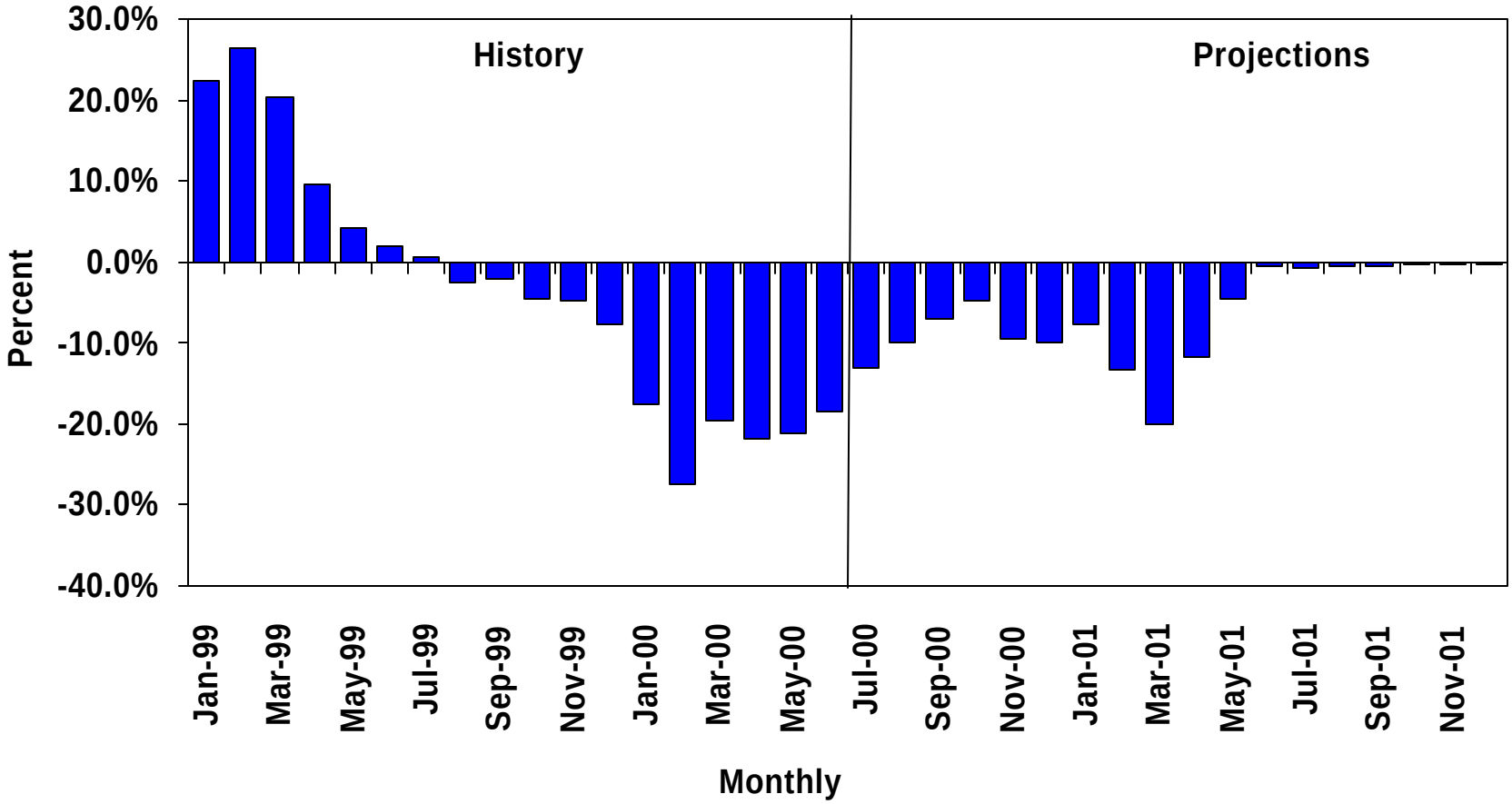
Figure 8. Working Gas in Underground Storage

(Percent Change from Year Ago)



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this year (Figure 9 and Table 4). Oil is also projected to be the cheaper of the two fuels for most of the year 2001.

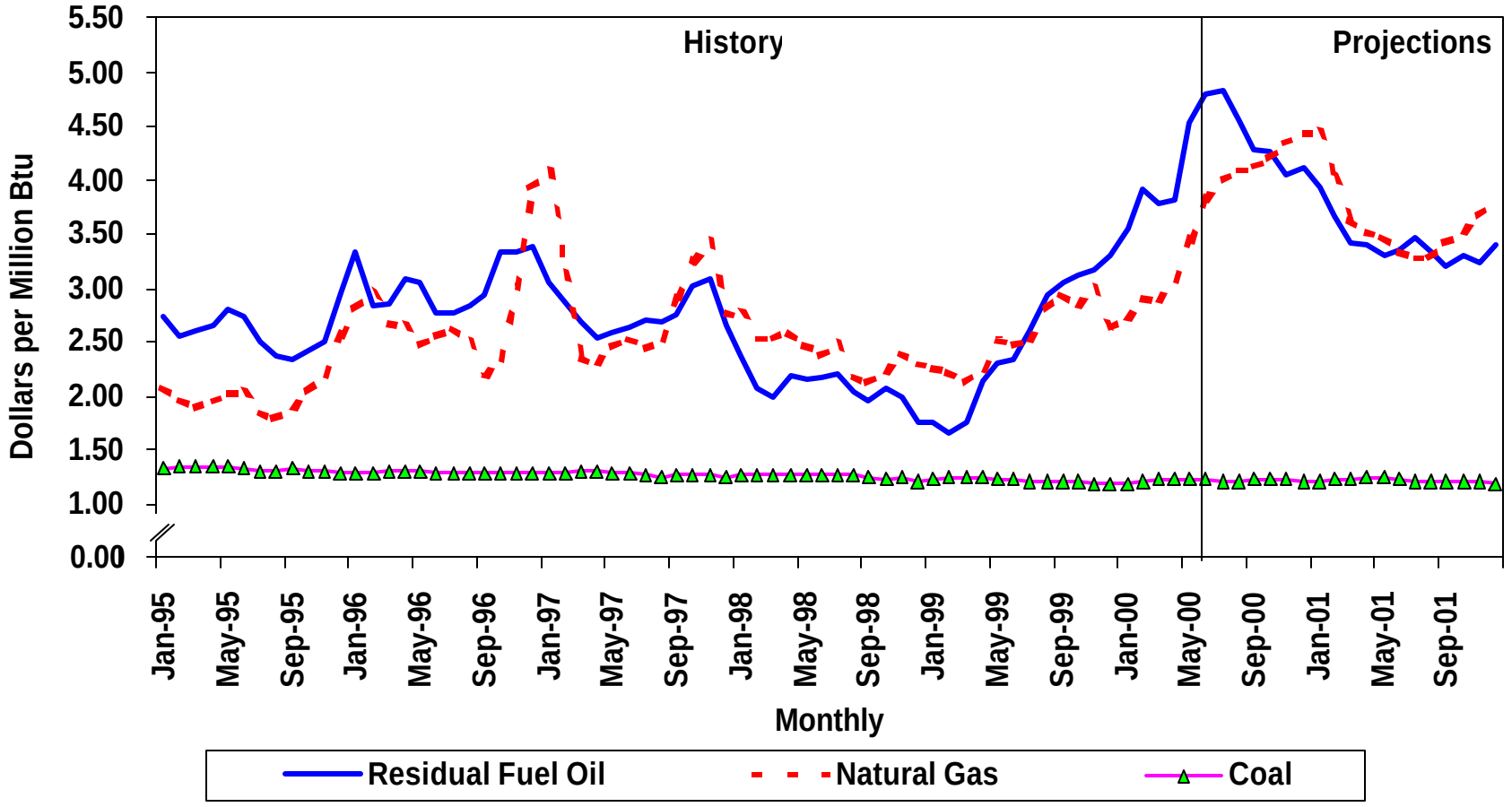
U.S. Petroleum Demand

Total petroleum product demand in 1999 grew by just over 600,000 barrels per day, or 3.2 percent. That is the largest year-to-year increase since 1988. Transportation-related demand accounted for more than 335,000 barrels per day of that growth, and petrochemical demand grew by an estimated 300,000 barrels per day. Product price increases during much of that year, however, dampened oil demand by electric utilities by an estimated 135,000 barrels per day. The recent highs in product prices and generally mild weather patterns early this year are expected to result in considerably slower demand growth in 2000, but easing prices and normal weather should strengthen growth in 2001. Total demand is expected to grow by 75,000 barrels per day (0.4 percent) in 2000 and by about 500,000 barrels per day (2.6 percent) in 2001.

The virtual lack of growth in product demand in 2000 is projected to occur despite projections of robust growth in gross domestic product (almost 5 percent), disposable income (almost 4 percent) and industrial production (almost 4 percent). Several factors are believed to account for much of the slowdown in product demand growth in 2000. The increase in product prices is believed to be the most important. Although prices eased in April from their highs of the previous month, they have once again increased rapidly, reaching new highs. Despite tentative indications that prices may have reached their peak and have, in some instances, started to decline, annual retail product price increases are still expected to be 27 percent for diesel fuel, 30 percent for motor gasoline, 48 percent for heating oil and 57 percent for kerosene-based jet fuel. For the third quarter, retail regular motor gasoline prices are projected to average $1.61 per gallon, up 40 cents from last year. Total transportation sector fuels demand growth is therefore projected to be 250,000 barrels per day, almost 100,000 barrels per day less than the growth in 1999. Higher prices are also projected to bring about fuel substitution in the electric utility and industrial sectors. Total residual fuel oil demand, having shrunk 6 percent in 1999, is projected to contract a further 15 percent this year, with electric power generation demand declining by almost 40 percent to less than 190,000 barrels per day, a historic low. In contrast to last year's robust growth, little change is expected for petrochemical demand for LPG's as a result of hikes in feedstock prices.

Weather patterns are an additional factor dampening growth in the current year in both peak seasons. For the winter quarter, weather (in terms of population-weighted heating-degree days) was 7 percent (leap year-adjusted) milder than that in 1999. For the third quarter, the projection assumes normal weather

Figure 9. Fossil Fuel Prices to Electric Utilities



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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patterns (in terms of cooling-degree days) compared to the 6-percent warmer-than-normal summer in 1999. Although electricity demand is expected to increase for the year as a whole, the assumption of normal weather the third quarter is expected to keep total electricity demand for this summer little changed from that of last summer. But a third quarter as warm as those of the two previous years would, of course, result in higher petroleum product demand by electric utilities to supply the additional air conditioning requirement. Distillate fuel demand as a peaking fuel during that quarter could increase by more than 50,000 barrels per day under such weather conditions, especially if natural gas prices remain high and supplies remain tight.

The expected acceleration in petroleum demand growth in 2001 assumes a return to normal weather patterns during the first quarter and a continuing decline in product prices. Transportation demand growth is projected to accelerate as prices continue to decline. Moreover, residual fuel oil is projected to stage a price-induced recovery in the electric utility and industrial sectors but is unlikely to recapture little more than half of the market share lost during the prior two years.

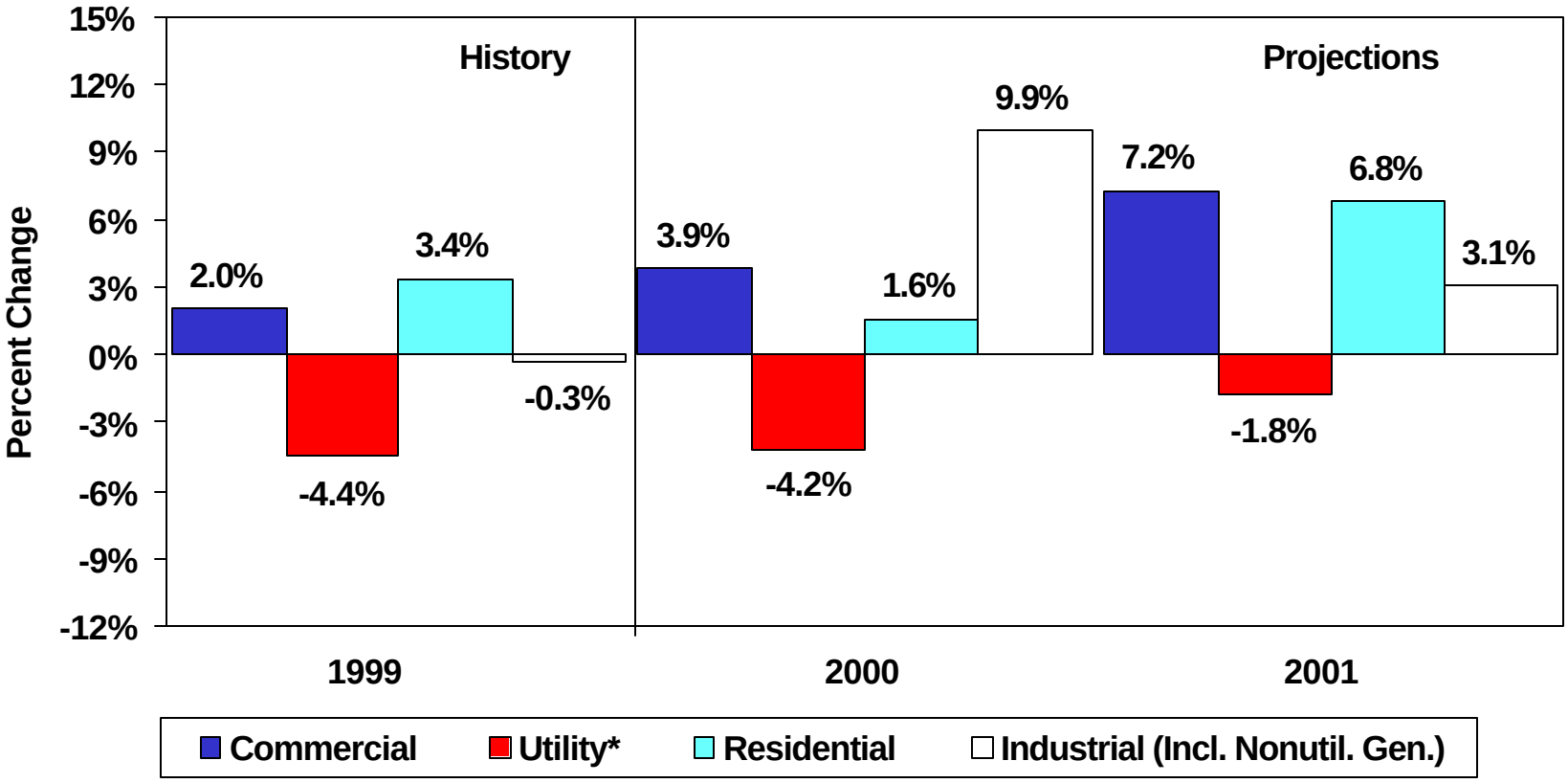
Natural Gas Supply and Demand

The forecast for overall natural gas demand in 2000 and 2001 has been revised upward from the levels previously forecasted in our June Outlook. This is primarily due to an upward revision in projected rates of growth in commercial and industrial activity in the United States. We now expect about 5 percent growth in U.S. GDP in 2000 compared to about 4 percent in our previous projections. This shift yields a 4.3 percent annual growth rate in 2000 for gas demand compared to 3.4 percent projected last month (Figure 10).

Concerns regarding the natural gas supply and demand balance in the rest of 2000 and in early 2001, particularly gas storage levels, even if weather is normal, are the primary factors driving gas prices upward. The very high prices for natural gas may lead to increased use of fuel oil for power generation, which would contribute (along with high prices) to relatively low stock builds for refined petroleum products as well as for natural gas.

The American Gas Association (AGA) reported that during the week ending June 30 the total amount of working gas in storage was 1,636 billion cubic feet (bcf), or 50 percent full. This implies that stocks are now 480 bcf (23 percent) lower than at the same time last year, the equivalent of between 6 and 7 days of total U.S. gas consumption during the heating season. The Energy Information Administration's own survey of natural gas in storage facilities in the United States suggests a slightly different story. Based on EIA's April survey result and AGA net storage injection information for May and June, the level of working

Figure 10. Annual Changes in Natural Gas Demand by Sector



* Electric utility gas demand changes in recent years in part reflect sale of assets to the nonutility sector.

Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2000.

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gas in storage at the end of June was actually near 1,760 bcf, about 18 percent below the year-ago level. In any case, it should be pointed out that natural gas storage levels at this time last year were abnormally high. Using a five-year (1995 to 1999) average for working gas levels at the end of June, we estimate the current storage "deficit" to be only about 140 bcf, not really outside of the normal range. Still, with current and expected demand growing strongly, even a small deficit relative to historical averages can have significant implications for market prices. Working gas in all Canadian storage facilities increased to 45.2 percent of capacity as of June 23 compared with 56.8 percent full a year ago.

Projections of US dry gas production are unchanged from June's *Outlook*. Storage levels remain in the lower half of the normal range. The ability of the domestic industry to push gas storage to comfortable levels by the beginning of autumn remains in question at this time. However, we have revised expected gas net imports upward for late fall and into 2001 under the assumption that the current price regime will generate greater success by Canadian suppliers in filling new export capacity on the Alliance pipelines.

The U.S. natural gas rig count on June 30 was a high of 718 rigs. Exploration and production budgets for many natural gas producers are reportedly expected to increase in the latter part of 2000 and into 2001, spurred by the incentive of higher prices. However, the effects of increased drilling for gas will probably not appear in the form of increased production until after the next heating season.

Electricity Demand and Supply

Total annual electricity demand for 2000 and 2001 has been revised upward slightly compared with the June Outlook. From our own estimates and from weekly data available from the Edison Electric Institute (EEI), it is apparent that electricity use in the United States through June of this year has increased by between 3.5 and 4.0 percent compared to the same period in 1999. Aside from the sharp cold spell in the Northeast in late January and early February, weather did not seem to be responsible for much of this growth, as heating demand was generally weak. Strong economic growth is the primary reason, as GDP grew by 5.3 percent in this same period. May and June were quite warm, however, which gave a strong start to the cooling season. Given the above-normal rate of cooling demand at this time last year, it is likely that for third quarter 2000 little or no growth in overall electricity demand will occur. The last quarter of this year should yield some weather-related growth in electric power demand compared to the weak showing in fourth quarter 1999, yielding an overall growth rate for 2000 of about 2.5 percent.

Fears of electric power reliability for this summer persist as a result of the power outages and other problems of last summer. The summer of 1999 (second and third quarters) was 6 percent hotter than normal. The month of July, in particular, was 14.4 percent hotter than normal. However, our forecast is based on the assumption of normal weather, which implies that this summer's cooling degree-days (CDD) would be 2.0 percent below last summer's CDD. Still, underlying demand remains strong and shortages cannot be ruled out, particularly if there is a repeat of last summer's record heat in July and August. Major concerns for utilities are the possibility of severely spiking power prices and transmission equipment failure during hot spells.

During the week ending June 24, according to the Edison Electric Institute, electricity output in the Pacific Southwest, Southeast and Mid-Atlantic all experienced increases of over 11 percent compared with year ago.

Much of California has recently seen temperatures of over 100 degrees, leading the California Independent System Operator (ISO) to raise the level of statewide electric emergency to Stage 2 on June 27. This means that utilities activate voluntary load management, requiring curtailment of enough megawatts to maintain 5 percent of operating reserves with minimum impact to customers. Interruptible customers, mainly commercial users, receive a reduced rate in exchange for curtailing power when asked to do so. Operating reserves for much of the western US are slim due to the widespread heat wave. Electricity imports from the Northwest and Southwest are scarce due to the high heat in those areas also. Higher demand in the Pacific Northwest than usual, and a major power plant in the region being down, reduced available power by more than 1,200 MW. This has been a factor in California's shortage of operational reserves, since California normally counts on imports from the Pacific Northwest at this time of year.

According to the North American Electric Reliability Council (NERC), peak demand for electricity this summer is expected to be up by 1.7 percent over last summer. Areas of concern due to low operating margins are New York and New England and the Southwest, including California. Improved areas are: the Southeast, where reportedly more than 10,000 megawatts (mw) of new capacity will be in service this summer; Texas, where more than 5,000 mw of new capacity will be available; and Illinois, eastern Wisconsin and eastern Missouri, where 3,000+ mw of new capacity will be available this summer compared with last summer.

Table HL1. U. S. Energy Supply and Demand

	Year				Annual Percentage Change		
	1998	1999	2000	2001	1998-1999	1999-2000	2000-2001
Real Gross Domestic Product (GDP)							
(billion chained 1996 dollars)	**8513**	**8864**	*9303*	*9676*	**4.1**	*5.0*	*4.0*
Imported Crude Oil Price [a]							
(nominal dollars per barrel)	**12.08**	**17.21**	*27.00*	*21.83*	**42.5**	*56.9*	*-19.1*
Petroleum Supply (million barrels per day)							
Crude Oil Production [b]	**6.25**	**5.88**	*5.83*	*5.76*	**-5.9**	*-0.9*	*-1.2*
Total Petroleum Net Imports							
(including SPR)	**9.76**	**9.91**	*10.28*	*10.91*	**1.5**	*3.7*	*6.1*
Energy Demand							
World Petroleum							
(million barrels per day)	**73.6**	**74.8**	*76.0*	*78.1*	**1.6**	*1.6*	*2.8*
Petroleum							
(million barrels per day)	**18.92**	**19.52**	*19.57*	*20.08*	**3.2**	*0.3*	*2.6*
Natural Gas							
(trillion cubic feet)	**21.26**	**21.38**	*22.29*	*23.12*	**0.6**	*4.3*	*3.7*
Coal [c]							
(million short tons)	**1039**	**1038**	*1074*	*1104*	**-0.1**	*3.5*	*2.8*
Electricity (billion kilowatthours)							
Utility Sales [d]	**3240**	**3296**	*3365*	*3436*	**1.7**	*2.1*	*2.1*
Nonutility/Sales [e]	**156**	**165**	*184*	*185*	**5.8**	*11.5*	*0.5*
Total	**3396**	**3461**	*3549*	*3621*	**1.9**	*2.5*	*2.0*
Total Energy Demand [f]							
(quadrillion Btu)	**94.4**	**96.1**	*97.8*	*100.1*	**1.8**	*1.8*	*2.4*
Total Energy Demand per Dollar of GDP							
(thousand Btu per 1996 Dollar)	**11.09**	**10.84**	*10.51*	*10.35*	**-2.3**	*-3.0*	*-1.5*
Renewable Energy as Percent of Total [g]	**7.0**	**6.9**	*6.7*	*6.6*			

[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 annual electric utility sales for historical periods are initially derived from the sum of monthly sales figures based on submissions by electric utilities of Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions." Final annual totals are taken from compilations from Form EIA -861, ":Annual Electric Utility Report."

[e] Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1999 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 CONTROL0600.

Table 1. U.S. Macroeconomic and Weather Assumptions

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Macroeconomic [a]															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR)	**8731**	**8772**	**8901**	**9051**	**9171**	*9263*	*9341*	*9438*	*9541*	*9635*	*9726*	*9803*	**8864**	*9303*	*9676*
Percentage Change from Prior Year	**3.8**	**3.7**	**4.4**	**4.6**	**5.0**	*5.6*	*4.9*	*4.3*	*4.0*	*4.0*	*4.1*	*3.9*	**4.1**	*5.0*	*4.0*
Annualized Percent Change from Prior Quarter	**3.6**	**1.9**	**5.9**	**6.8**	**5.3**	*4.0*	*3.4*	*4.2*	*4.4*	*3.9*	*3.8*	*3.2*			
GDP Implicit Price Deflator (Index, 1996=1.000)	**1.039**	**1.042**	**1.044**	**1.050**	**1.057**	*1.063*	*1.067*	*1.071*	*1.076*	*1.080*	*1.084*	*1.089*	**1.044**	*1.065*	*1.082*
Percentage Change from Prior Year	**1.4**	**1.4**	**1.2**	**1.6**	**1.8**	*2.1*	*2.1*	*2.0*	*1.8*	*1.6*	*1.6*	*1.6*	**1.4**	*2.0*	*1.7*
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	**6284**	**6333**	**6385**	**6453**	**6488**	*6557*	*6641*	*6716*	*6826*	*6916*	*6982*	*7048*	**6364**	*6601*	*6943*
Percentage Change from Prior Year	**4.2**	**4.0**	**3.8**	**3.7**	**3.3**	*3.5*	*4.0*	*4.1*	*5.2*	*5.5*	*5.1*	*4.9*	**3.9**	*3.7*	*5.2*
Manufacturing Production (Index, 1992=1.000)	**1.392**	**1.409**	**1.425**	**1.449**	**1.473**	*1.484*	*1.500*	*1.513*	*1.525*	*1.541*	*1.557*	*1.570*	**1.419**	*1.493*	*1.549*
Percentage Change from Prior Year	**3.5**	**4.1**	**4.4**	**4.8**	**5.8**	*5.4*	*5.3*	*4.4*	*3.5*	*3.8*	*3.8*	*3.8*	**4.2**	*5.2*	*3.7*
OECD Economic Growth (percent) [b]													**2.6**	*3.5*	*3.1*
Weather [c]															
Heating Degree-Days															
U.S.	**2153**	**489**	**79**	**1448**	**2025**	*504*	*86*	*1623*	*2236*	*519*	*86*	*1622*	**4169**	*4238*	*4463*
New England	**3040**	**784**	**86**	**2043**	**3055**	*961*	*167*	*2239*	*3177*	*885*	*167*	*2238*	**5953**	*6422*	*6467*
Middle Atlantic	**2816**	**628**	**68**	**1839**	**2725**	*717*	*105*	*2004*	*2895*	*701*	*105*	*2003*	**5351**	*5551*	*5703*
U.S. Gas-Weighted	**2275**	**517**	**85**	**1522**	**2079**	*526*	*90*	*1714*	*2354*	*555*	*90*	*1714*	**4399**	*4410*	*4714*
Cooling Degree-Days (U.S.)	**35**	**353**	**831**	**58**	**36**	*380*	*780*	*75*	*32*	*346*	*781*	*76*	**1277**	*1272*	*1235*

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

[b] OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, 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.

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

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0600.

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

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Macroeconomic [a]															
Real Fixed Investment (billion chained 1996 dollars-SAAR)	**1556**	**1581**	**1607**	**1618**	**1693**	*1718*	*1739*	*1761*	*1796*	*1819*	*1842*	*1858*	**1591**	*1728*	*1829*
Real Exchange Rate (index)	**1.134**	**1.170**	**1.163**	**1.144**	**1.174**	*1.213*	*1.223*	*1.226*	*1.201*	*1.173*	*1.149*	*1.127*	**1.153**	*1.209*	*1.163*
Business Inventory Change (billion chained 1996 dollars-SAAR)	**0.0**	**-8.3**	**1.7**	**8.2**	**12.8**	*5.2*	*11.6*	*18.0*	*14.9*	*15.4*	*18.7*	*21.8*	**0.4**	*11.9*	*17.7*
Producer Price Index (index, 1982=1.000)	**1.228**	**1.245**	**1.268**	**1.277**	**1.299**	*1.317*	*1.323*	*1.320*	*1.314*	*1.305*	*1.305*	*1.312*	**1.255**	*1.315*	*1.309*
Consumer Price Index (index, 1982-1984=1.000)	**1.649**	**1.662**	**1.672**	**1.684**	**1.699**	*1.714*	*1.721*	*1.727*	*1.735*	*1.740*	*1.749*	*1.761*	**1.667**	*1.715*	*1.746*
Petroleum Product Price Index (index, 1982=1.000)	**0.446**	**0.591**	**0.682**	**0.716**	**0.833**	*0.918*	*0.924*	*0.838*	*0.795*	*0.736*	*0.699*	*0.692*	**0.609**	*0.878*	*0.731*
Non-Farm Employment (millions)	**127.8**	**128.4**	**128.9**	**129.8**	**130.6**	*131.6*	*132.0*	*132.7*	*133.5*	*134.2*	*134.9*	*135.5*	**128.7**	*131.8*	*134.5*
Commercial Employment (millions)	**88.6**	**89.2**	**89.8**	**90.5**	**91.2**	*91.7*	*92.5*	*93.1*	*93.8*	*94.6*	*95.2*	*95.8*	**89.5**	*92.1*	*94.9*
Total Industrial Production (index, 1992=1.000)	**1.346**	**1.361**	**1.377**	**1.395**	**1.416**	*1.428*	*1.443*	*1.456*	*1.468*	*1.481*	*1.495*	*1.506*	**1.370**	*1.436*	*1.488*
Housing Stock (millions)	**115.4**	**115.8**	**116.0**	**116.1**	**116.5**	*116.8*	*117.1*	*117.5*	*117.8*	*118.1*	*118.4*	*118.7*	**115.8**	*117.0*	*118.3*
Miscellaneous															
Gas Weighted Industrial Production (index, 1992=1.000)	**1.179**	**1.176**	**1.186**	**1.212**	**1.219**	*1.225*	*1.229*	*1.235*	*1.242*	*1.250*	*1.258*	*1.263*	**1.188**	*1.227*	*1.253*
Vehicle Miles Traveled [b] (million miles/day)	**6731**	**7556**	**7706**	**7358**	**6847**	*7688*	*7847*	*7434*	*6991*	*7837*	*8007*	*7580*	**7341**	*7455*	*7606*
Vehicle Fuel Efficiency (index, 1999=1.000)	**0.991**	**0.992**	**1.007**	**1.006**	**1.000**	*1.014*	*1.008*	*0.999*	*0.991*	*1.014*	*1.012*	*1.001*	**0.999**	*1.005*	*1.005*
Real Vehicle Fuel Cost (cents per mile)	**2.98**	**3.35**	**3.51**	**3.76**	**4.15**	*4.27*	*4.47*	*4.13*	*3.84*	*3.61*	*3.57*	*3.60*	**3.40**	*4.25*	*3.65*
Air Travel Capacity (mill. available ton-miles/day)	**431.0**	**452.4**	**467.2**	**452.2**	**452.7**	*474.8*	*492.2*	*483.5*	*480.8*	*500.5*	*518.4*	*508.2*	**450.8**	*475.9*	*502.1*
Aircraft Utilization (mill. revenue ton-miles/day)	**242.2**	**263.4**	**276.3**	**260.5**	**260.8**	*279.6*	*294.4*	*280.0*	*275.7*	*293.6*	*308.1*	*293.4*	**260.7**	*278.7*	*292.8*
Airline Ticket Price Index (index, 1982-1984=1.000)	**2.130**	**2.186**	**2.180**	**2.254**	**2.309**	*2.401*	*2.400*	*2.413*	*2.438*	*2.434*	*2.423*	*2.438*	**2.188**	*2.381*	*2.433*
Raw Steel Production (millions tons)	**25.11**	**25.97**	**26.26**	**26.36**	**27.00**	*26.96*	*26.88*	*27.31*	*27.55*	*27.79*	*27.60*	*27.91*	**103.71**	*108.15*	*110.85*

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

[b] Includes all highway travel.

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); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0600.

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

(Million Barrels per Day, Except OECD Commercial Stocks)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Demand [a]															
OECD															
U.S. (50 States)	**19.2**	**19.2**	**19.8**	**19.8**	**19.1**	*19.3*	*19.8*	*20.1*	*19.8*	*19.8*	*20.2*	*20.5*	**19.5**	*19.6*	*20.1*
U.S. Territories	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	*0.4*	**0.3**	*0.4*	*0.4*
Canada	**1.9**	**1.8**	**1.9**	**1.9**	**1.9**	*1.8*	*2.0*	*2.0*	*1.9*	*1.9*	*2.0*	*2.0*	**1.9**	*1.9*	*2.0*
Europe	**15.3**	**13.8**	**14.1**	**14.9**	**14.5**	*14.1*	*14.6*	*15.2*	*15.0*	*14.1*	*14.7*	*15.3*	**14.5**	*14.6*	*14.8*
Japan	**6.2**	**5.0**	**5.2**	**5.9**	**5.7**	*5.3*	*5.4*	*5.8*	*6.2*	*5.1*	*5.3*	*5.7*	**5.6**	*5.5*	*5.6*
Australia and New Zealand	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	*1.0*	*1.0*	*1.0*	*1.0*	*1.1*	*1.0*	*1.1*	**1.0**	*1.0*	*1.0*
Total OECD	**43.8**	**41.2**	**42.3**	**43.9**	**42.5**	*41.8*	*43.1*	*44.6*	*44.4*	*42.2*	*43.6*	*45.0*	**42.8**	*43.0*	*43.8*
Non-OECD															
Former Soviet Union	**3.8**	**3.5**	**3.6**	**3.7**	**3.8**	*3.6*	*3.6*	*3.6*	*3.8*	*3.7*	*3.7*	*3.7*	**3.6**	*3.7*	*3.7*
Europe	**1.6**	**1.6**	**1.5**	**1.6**	**1.6**	*1.6*	*1.6*	*1.6*	*1.7*	*1.7*	*1.7*	*1.7*	**1.6**	*1.6*	*1.7*
China	**4.4**	**4.3**	**4.3**	**4.3**	**4.6**	*4.5*	*4.5*	*4.5*	*4.8*	*4.8*	*4.7*	*4.8*	**4.3**	*4.5*	*4.8*
Other Asia	**8.8**	**8.8**	**8.7**	**9.0**	**9.2**	*9.2*	*9.0*	*9.4*	*9.7*	*9.7*	*9.4*	*9.9*	**8.8**	*9.2*	*9.7*
Other Non-OECD	**13.4**	**13.6**	**13.7**	**13.7**	**13.7**	*14.0*	*14.1*	*14.0*	*14.2*	*14.4*	*14.5*	*14.5*	**13.6**	*14.0*	*14.4*
Total Non-OECD	**31.9**	**31.8**	**31.7**	**32.3**	**32.9**	*33.0*	*32.8*	*33.2*	*34.2*	*34.3*	*34.0*	*34.5*	**31.9**	*33.0*	*34.2*
Total World Demand	**75.7**	**73.0**	**74.1**	**76.2**	**75.4**	*74.9*	*75.9*	*77.8*	*78.6*	*76.5*	*77.6*	*79.5*	**74.8**	*76.0*	*78.1*
Supply [b]															
OECD															
U.S. (50 States)	**8.8**	**8.9**	**9.0**	**9.3**	**9.2**	*9.1*	*9.0*	*9.1*	*9.1*	*9.0*	*9.0*	*8.9*	**9.0**	*9.1*	*9.0*
Canada	**2.6**	**2.6**	**2.6**	**2.7**	**2.7**	*2.7*	*2.7*	*2.8*	*2.8*	*2.8*	*2.8*	*2.8*	**2.6**	*2.7*	*2.8*
North Sea [c]	**6.3**	**6.0**	**6.2**	**6.7**	**6.6**	*6.4*	*6.5*	*6.6*	*6.6*	*6.5*	*6.5*	*6.7*	**6.3**	*6.5*	*6.5*
Other OECD	**1.5**	**1.5**	**1.5**	**1.6**	**1.7**	*1.7*	*1.7*	*1.7*	*1.7*	*1.8*	*1.8*	*1.8*	**1.5**	*1.7*	*1.8*
Total OECD	**19.2**	**19.0**	**19.3**	**20.2**	**20.2**	*19.8*	*20.0*	*20.2*	*20.1*	*20.0*	*20.0*	*20.2*	**19.4**	*20.1*	*20.1*
Non-OECD															
OPEC	**30.4**	**28.9**	**29.2**	**28.7**	**29.3**	*30.8*	*31.8*	*31.9*	*32.0*	*32.1*	*32.3*	*32.3*	**29.3**	*31.0*	*32.2*
Former Soviet Union	**7.3**	**7.3**	**7.5**	**7.5**	**7.6**	*7.5*	*7.5*	*7.6*	*7.6*	*7.6*	*7.7*	*7.8*	**7.4**	*7.5*	*7.7*
China	**3.2**	**3.2**	**3.2**	**3.2**	**3.3**	*3.3*	*3.3*	*3.3*	*3.3*	*3.3*	*3.3*	*3.3*	**3.2**	*3.3*	*3.3*
Mexico	**3.6**	**3.4**	**3.3**	**3.3**	**3.5**	*3.6*	*3.7*	*3.7*	*3.7*	*3.7*	*3.7*	*3.7*	**3.4**	*3.6*	*3.7*
Other Non-OECD	**11.3**	**11.2**	**11.2**	**11.2**	**11.3**	*11.1*	*11.2*	*11.3*	*11.3*	*11.4*	*11.4*	*11.5*	**11.2**	*11.2*	*11.4*
Total Non-OECD	**55.7**	**54.0**	**54.5**	**54.0**	**54.9**	*56.2*	*57.5*	*57.6*	*57.9*	*58.0*	*58.3*	*58.6*	**54.5**	*56.6*	*58.2*
Total World Supply	**74.9**	**72.9**	**73.8**	**74.2**	**75.1**	*76.1*	*77.4*	*77.9*	*78.0*	*78.0*	*78.2*	*78.8*	**73.9**	*76.6*	*78.3*
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	**0.3**	**-0.2**	**0.3**	**1.3**	**0.2**	*-0.6*	*-0.4*	*0.3*	*0.2*	*-0.6*	*-0.2*	*0.5*	**0.4**	*-0.1*	*0.0*
Other	**0.5**	**0.4**	**0.0**	**0.7**	**0.1**	*-0.6*	*-1.1*	*-0.4*	*0.5*	*-0.9*	*-0.4*	*0.2*	**0.4**	*-0.5*	*-0.2*
Total Stock Withdrawals	**0.8**	**0.1**	**0.3**	**2.0**	**0.3**	*-1.2*	*-1.5*	*-0.1*	*0.6*	*-1.5*	*-0.6*	*0.6*	**0.8**	*-0.6*	*-0.2*
OECD Comm. Stocks, End (bill. bbls.)	**2.8**	**2.8**	**2.8**	**2.6**	**2.5**	*2.6*	*2.7*	*2.7*	*2.6*	*2.7*	*2.8*	*2.7*	**2.6**	*2.7*	*2.7*
Non-OPEC Supply	**44.6**	**44.0**	**44.5**	**45.4**	**45.8**	*45.3*	*45.6*	*46.0*	*46.0*	*45.9*	*45.9*	*46.5*	**44.6**	*45.7*	*46.1*
Net Exports from Former Soviet Union	**3.5**	**3.8**	**3.9**	**3.8**	**3.9**	*3.9*	*3.9*	*3.9*	*3.8*	*3.9*	*4.0*	*4.1*	**3.8**	*3.9*	*4.0*

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

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

[c]Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, 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)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Imported Crude Oil [a]															
(dollars per barrel)	**10.91**	**15.44**	**19.63**	**23.01**	**26.84**	*27.15*	*28.11*	*25.83*	*23.36*	*21.67*	*21.38*	*20.97*	**17.21**	*27.00*	*21.83*
Natural Gas Wellhead															
(dollars per thousand cubic feet)	**1.74**	**2.00**	**2.27**	**2.26**	**2.26**	*2.91*	*3.56*	*3.77*	*3.34*	*2.86*	*2.76*	*3.05*	**2.07**	*3.12*	*3.00*
Petroleum Products															
Gasoline Retail [b] (dollars per gallon)															
All Grades	**0.99**	**1.17**	**1.25**	**1.30**	**1.44**	*1.57*	*1.64*	*1.45*	*1.34*	*1.34*	*1.34*	*1.29*	**1.18**	*1.53*	*1.33*
Regular Unleaded	**0.95**	**1.13**	**1.21**	**1.26**	**1.40**	*1.53*	*1.60*	*1.41*	*1.30*	*1.31*	*1.30*	*1.26*	**1.14**	*1.49*	*1.29*
No. 2 Diesel Oil, Retail															
(dollars per gallon)	**0.97**	**1.08**	**1.18**	**1.26**	**1.42**	*1.42*	*1.45*	*1.44*	*1.37*	*1.29*	*1.26*	*1.28*	**1.12**	*1.43*	*1.30*
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	**0.36**	**0.44**	**0.56**	**0.65**	**0.85**	*0.80*	*0.85*	*0.83*	*0.76*	*0.67*	*0.64*	*0.65*	**0.51**	*0.83*	*0.69*
No. 2 Heating Oil, Retail															
(dollars per gallon)	**0.80**	**0.82**	**0.86**	**1.01**	**1.31**	*1.16*	*1.12*	*1.16*	*1.15*	*1.06*	*0.96*	*1.01*	**0.88**	*1.22*	*1.08*
No. 6 Residual Fuel Oil, Retail [c]															
(dollars per barrel)	**11.28**	**14.03**	**17.94**	**21.06**	**23.56**	*26.96*	*27.60*	*25.80*	*23.57*	*20.58*	*20.10*	*20.59*	**15.92**	*25.98*	*21.25*
Electric Utility Fuels															
Coal															
(dollars per million Btu)	**1.24**	**1.23**	**1.21**	**1.20**	**1.21**	*1.23*	*1.21*	*1.21*	*1.22*	*1.23*	*1.21*	*1.20*	**1.22**	*1.21*	*1.22*
Heavy Fuel Oil [d]															
(dollars per million Btu)	**1.73**	**2.26**	**2.82**	**3.17**	**3.72**	*4.59*	*4.59*	*4.13*	*3.68*	*3.34*	*3.35*	*3.31*	**2.39**	*4.29*	*3.42*
Natural Gas															
(dollars per million Btu)	**2.19**	**2.42**	**2.74**	**2.82**	**2.84**	*3.51*	*4.07*	*4.32*	*4.01*	*3.43*	*3.33*	*3.66*	**2.57**	*3.73*	*3.53*
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	**6.07**	**6.84**	**8.60**	**6.84**	**6.38**	*7.50*	*9.52*	*8.15*	*7.73*	*7.93*	*9.14*	*7.60*	**6.62**	*7.32*	*7.82*
Electricity															
(cents per kilowatthour)	**7.76**	**8.25**	**8.40**	**8.10**	**7.76**	*8.48*	*8.65*	*8.08*	*7.57*	*8.14*	*8.37*	*7.89*	**8.14**	*8.26*	*8.00*

[a] Refiner acquisition cost (RAC) of imported crude oil.

[b] Average self-service cash prices.

[c] Average for all sulfur contents.

[d] Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

Notes: Data are estimated for the first 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)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Supply															
Crude Oil Supply															
Domestic Production [a]	**5.94**	**5.84**	**5.79**	**5.96**	**5.86**	*5.80*	*5.78*	*5.88*	*5.85*	*5.79*	*5.71*	*5.69*	**5.88**	*5.83*	*5.76*
Alaska	**1.13**	**1.04**	**0.98**	**1.05**	**1.02**	*0.94*	*0.91*	*0.98*	*0.96*	*0.94*	*0.93*	*0.94*	**1.05**	*0.96*	*0.94*
Lower 48	**4.80**	**4.80**	**4.82**	**4.91**	**4.84**	*4.86*	*4.87*	*4.90*	*4.89*	*4.85*	*4.79*	*4.75*	**4.83**	*4.87*	*4.82*
Net Imports (including SPR) [b]	**8.43**	**8.90**	**8.85**	**8.27**	**8.07**	*9.09*	*9.68*	*9.29*	*9.04*	*9.57*	*9.74*	*9.44*	**8.61**	*9.03*	*9.45*
Other SPR Supply	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.17*	*0.07*	*0.07*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.08*	*0.00*
SPR Stock Withdrawn or Added (-)	**-0.01**	**-0.03**	**-0.01**	**0.09**	**-0.02**	*-0.02*	*-0.07*	*-0.07*	*0.00*	*0.00*	*0.00*	*0.00*	**0.01**	*-0.05*	*0.00*
Other Stock Withdrawn or Added (-)	**-0.24**	**0.15**	**0.31**	**0.21**	**-0.14**	*0.01*	*0.10*	*-0.01*	*-0.19*	*-0.02*	*0.17*	*0.02*	**0.11**	*-0.01*	*-0.01*
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	**0.30**	**0.15**	**0.27**	**0.05**	**0.32**	*0.50*	*0.22*	*0.21*	*0.21*	*0.22*	*0.22*	*0.22*	**0.19**	*0.31*	*0.22*
Total Crude Oil Supply	**14.42**	**15.01**	**15.22**	**14.57**	**14.16**	*15.38*	*15.70*	*15.30*	*14.90*	*15.56*	*15.84*	*15.37*	**14.80**	*15.14*	*15.42*
Other Supply															
NGL Production	**1.72**	**1.82**	**1.90**	**1.95**	**1.97**	*1.94*	*1.95*	*1.95*	*1.97*	*1.96*	*1.95*	*1.96*	**1.85**	*1.95*	*1.96*
Other Hydrocarbon and Alcohol Inputs	**0.37**	**0.37**	**0.38**	**0.38**	**0.38**	*0.39*	*0.36*	*0.38*	*0.37*	*0.36*	*0.36*	*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	**0.82**	**0.86**	**0.90**	**0.97**	**0.95**	*0.93*	*0.92*	*0.91*	*0.87*	*0.92*	*0.93*	*0.91*	**0.89**	*0.93*	*0.90*
Net Product Imports [c]	**1.34**	**1.52**	**1.41**	**0.92**	**1.27**	*1.21*	*1.30*	*1.21*	*1.31*	*1.52*	*1.56*	*1.44*	**1.30**	*1.25*	*1.46*
Product Stock Withdrawn or Added (-) [c]	**0.54**	**-0.36**	**0.00**	**1.03**	**0.33**	*-0.59*	*-0.43*	*0.38*	*0.39*	*-0.54*	*-0.41*	*0.46*	**0.30**	*-0.08*	*-0.03*
Total Supply	**19.21**	**19.23**	**19.80**	**19.83**	**19.06**	*19.26*	*19.80*	*20.14*	*19.81*	*19.78*	*20.23*	*20.51*	**19.52**	*19.57*	*20.08*
Demand															
Motor Gasoline	**7.95**	**8.60**	**8.61**	**8.55**	**8.01**	*8.56*	*8.77*	*8.70*	*8.26*	*8.73*	*8.91*	*8.85*	**8.43**	*8.51*	*8.69*
Jet Fuel	**1.69**	**1.63**	**1.68**	**1.69**	**1.64**	*1.68*	*1.74*	*1.78*	*1.77*	*1.73*	*1.79*	*1.81*	**1.67**	*1.71*	*1.78*
Distillate Fuel Oil	**3.71**	**3.38**	**3.45**	**3.75**	**3.74**	*3.57*	*3.45*	*3.71*	*3.93*	*3.60*	*3.54*	*3.79*	**3.57**	*3.62*	*3.71*
Residual Fuel Oil	**0.93**	**0.78**	**0.84**	**0.78**	**0.70**	*0.69*	*0.70*	*0.69*	*0.80*	*0.74*	*0.75*	*0.72*	**0.83**	*0.70*	*0.75*
Other Oils [d]	**4.93**	**4.84**	**5.23**	**5.05**	**4.97**	*4.76*	*5.14*	*5.26*	*5.05*	*4.97*	*5.24*	*5.35*	**5.01**	*5.03*	*5.15*
Total Demand	**19.21**	**19.23**	**19.80**	**19.83**	**19.06**	*19.26*	*19.80*	*20.14*	*19.81*	*19.78*	*20.23*	*20.51*	**19.52**	*19.57*	*20.08*
Total Petroleum Net Imports	**9.77**	**10.43**	**10.27**	**9.19**	**9.34**	*10.31*	*10.97*	*10.50*	*10.35*	*11.09*	*11.30*	*10.88*	**9.91**	*10.28*	*10.91*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**345**	**332**	**304**	**284**	**297**	*296*	*287*	*288*	*305*	*307*	*292*	*290*	**284**	*288*	*290*
Total Motor Gasoline	**217**	**217**	**207**	**193**	**204**	*204*	*196*	*200*	*204*	*202*	*197*	*201*	**193**	*200*	*201*
Finished Motor Gasoline	**169**	**173**	**162**	**154**	**157**	*160*	*155*	*160*	*159*	*162*	*156*	*160*	**154**	*160*	*160*
Blending Components	**48**	**44**	**45**	**39**	**47**	*44*	*41*	*41*	*46*	*41*	*41*	*41*	**39**	*41*	*41*
Jet Fuel	**42**	**46**	**49**	**41**	**40**	*44*	*45*	*43*	*41*	*43*	*45*	*43*	**41**	*43*	*43*
Distillate Fuel Oil	**125**	**133**	**145**	**125**	**96**	*106*	*129*	*133*	*102*	*113*	*135*	*133*	**125**	*133*	*133*
Residual Fuel Oil	**40**	**42**	**41**	**36**	**36**	*38*	*40*	*41*	*38*	*38*	*40*	*41*	**36**	*41*	*41*
Other Oils [e]	**280**	**298**	**294**	**246**	**235**	*273*	*294*	*252*	*250*	*289*	*307*	*261*	**246**	*252*	*261*
Total Stocks (excluding SPR)	**1048**	**1068**	**1039**	**926**	**908**	*961*	*992*	*958*	*940*	*991*	*1014*	*970*	**926**	*958*	*970*
Crude Oil in SPR	**572**	**575**	**575**	**567**	**569**	*571*	*578*	*584*	*584*	*584*	*584*	*584*	**567**	*584*	*584*
Total Stocks (including SPR)	**1620**	**1642**	**1615**	**1493**	**1478**	*1532*	*1569*	*1542*	*1525*	*1576*	*1598*	*1554*	**1493**	*1542*	*1554*

[a] Includes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

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

(Percent Deviation Base Case)

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

[a]Percent change in demand quantity resulting from specified percent changes in model inputs.

[b]Short-Term Integrated Forecasting System.

[c]Refiner acquisitions cost of imported crude oil.

[d]Average unit value of marketed natural gas production reported by States.

[e]Refers to percent changes in degree-days.

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

Table 7. Forecast Components for U.S. Crude Oil Production

(Million Barrels per Day)

	High Price Case	Low Price Case	Difference		
			Total	Uncertainty	Price Impact
United States	*6.16*	*5.23*	*0.93*	*0.08*	*0.85*
Lower 48 States	*5.20*	*4.30*	*0.90*	*0.07*	*0.83*
Alaska	*0.96*	*0.93*	*0.03*	*0.02*	*0.02*

Note: Components provided are for the fourth quarter 2001. 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)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Supply															
Total Dry Gas Production	**4.69**	**4.66**	**4.64**	**4.67**	**4.74**	*4.71*	*4.72*	*4.72*	*4.72*	*4.73*	*4.75*	*4.75*	**18.66**	*18.89*	*18.94*
Net Imports	**0.83**	**0.79**	**0.87**	**0.88**	**0.87**	*0.83*	*0.90*	*0.93*	*0.95*	*0.94*	*1.00*	*1.00*	**3.38**	*3.53*	*3.89*
Supplemental Gaseous Fuels	**0.03**	**0.02**	**0.02**	**0.03**	**0.03**	*0.03*	*0.03*	*0.03*	*0.04*	*0.03*	*0.03*	*0.03*	**0.10**	*0.12*	*0.13*
Total New Supply	**5.55**	**5.48**	**5.53**	**5.58**	**5.64**	*5.56*	*5.65*	*5.68*	*5.70*	*5.70*	*5.78*	*5.79*	**22.13**	*22.53*	*22.96*
Total Underground Storage															
Opening	**7.04**	**5.79**	**6.50**	**7.24**	**6.88**	*5.51*	*6.12*	*7.04*	*6.62*	*5.28*	*6.11*	*7.03*	**7.04**	*6.88*	*6.62*
Closing	**5.79**	**6.50**	**7.24**	**6.88**	**5.51**	*6.12*	*7.04*	*6.62*	*5.28*	*6.11*	*7.03*	*6.61*	**6.88**	*6.62*	*6.61*
Net Withdrawals	**1.25**	**-0.71**	**-0.74**	**0.36**	**1.37**	*-0.61*	*-0.92*	*0.43*	*1.34*	*-0.83*	*-0.92*	*0.42*	**0.16**	*0.26*	*0.00*
Total Supply	**6.80**	**4.77**	**4.79**	**5.94**	**7.01**	*4.95*	*4.73*	*6.11*	*7.03*	*4.87*	*4.86*	*6.20*	**22.30**	*22.79*	*22.96*
Balancing Item [a]	**-0.03**	**-0.06**	**-0.26**	**-0.57**	**-0.15**	*-0.06*	*-0.11*	*-0.19*	*0.32*	*0.14*	*-0.13*	*-0.18*	**-0.92**	*-0.51*	*0.15*
Total Primary Supply	**6.77**	**4.71**	**4.53**	**5.37**	**6.86**	*4.89*	*4.62*	*5.92*	*7.35*	*5.01*	*4.73*	*6.03*	**21.38**	*22.29*	*23.12*
Demand															
Lease and Plant Fuel	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	*0.30*	*0.31*	*0.31*	*0.31*	*0.31*	*0.31*	*0.31*	**1.23**	*1.23*	*1.23*
Pipeline Use	**0.20**	**0.14**	**0.14**	**0.16**	**0.20**	*0.13*	*0.13*	*0.17*	*0.21*	*0.14*	*0.13*	*0.17*	**0.64**	*0.63*	*0.66*
Residential	**2.24**	**0.81**	**0.38**	**1.25**	**2.19**	*0.79*	*0.32*	*1.45*	*2.46*	*0.83*	*0.33*	*1.46*	**4.67**	*4.75*	*5.07*
Commercial	**1.25**	**0.58**	**0.43**	**0.80**	**1.25**	*0.60*	*0.44*	*0.90*	*1.41*	*0.63*	*0.45*	*0.92*	**3.06**	*3.18*	*3.41*
Industrial (Incl. Nonutility Use)	**2.24**	**2.02**	**2.13**	**2.27**	**2.36**	*2.25*	*2.37*	*2.54*	*2.48*	*2.31*	*2.43*	*2.60*	**8.66**	*9.52*	*9.82*
Electric Utilities	***0.53***	***0.85***	***1.15***	**0.59**	**0.56**	*0.81*	*1.06*	*0.56*	*0.49*	*0.79*	*1.08*	*0.56*	**3.11**	*2.98*	*2.93*
Total Demand	**6.77**	**4.71**	**4.53**	**5.37**	**6.86**	*4.89*	*4.62*	*5.92*	*7.35*	*5.01*	*4.73*	*6.03*	**21.38**	*22.29*	*23.12*

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

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

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

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

(Million Short Tons)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Supply															
Production	**283.5**	**264.0**	**273.9**	**272.6**	**272.1**	*269.5*	*279.1*	*288.7*	*279.5*	*285.6*	*280.1*	*287.4*	**1094.0**	*1109.4*	*1132.7*
Appalachia	**114.8**	**103.4**	**103.0**	**102.1**	**108.4**	*103.4*	*102.4*	*105.8*	*109.5*	*107.3*	*100.6*	*103.1*	**423.3**	*420.1*	*420.4*
Interior	**40.4**	**40.8**	**42.4**	**38.9**	**37.1**	*40.2*	*41.5*	*39.3*	*36.6*	*40.9*	*39.9*	*37.3*	**162.5**	*158.1*	*154.8*
Western	**128.3**	**119.8**	**128.5**	**131.6**	**126.6**	*125.9*	*135.2*	*143.5*	*133.4*	*137.4*	*139.7*	*147.0*	**508.2**	*531.3*	*557.5*
Primary Stock Levels [a]															
Opening	**36.5**	**42.4**	**41.5**	**35.1**	**36.4**	*41.3*	*41.9*	*35.5*	*36.4*	*41.3*	*41.9*	*35.5*	**36.5**	*36.4*	*36.4*
Closing	**42.4**	**41.5**	**35.1**	**36.4**	**41.3**	*41.9*	*35.5*	*36.4*	*41.3*	*41.9*	*35.5*	*34.6*	**36.4**	*36.4*	*34.6*
Net Withdrawals	**-5.8**	**0.8**	**6.5**	**-1.3**	**-4.9**	*-0.6*	*6.4*	*-0.9*	*-4.9*	*-0.6*	*6.4*	*0.9*	**0.2**	*(S)*	*1.7*
Imports	**2.2**	**2.1**	**2.4**	**2.4**	**2.8**	*2.5*	*2.5*	*2.6*	*2.9*	*2.9*	*2.9*	*2.9*	**9.1**	*10.5*	*11.6*
Exports	**13.0**	**14.4**	**16.1**	**15.0**	**13.6**	*13.6*	*15.2*	*15.2*	*14.9*	*15.1*	*15.3*	*15.2*	**58.5**	*57.6*	*60.5*
Total Net Domestic Supply	**267.0**	**252.5**	**266.6**	**258.7**	**256.4**	*257.8*	*272.8*	*275.3*	*262.6*	*272.8*	*274.1*	*276.0*	**1044.8**	*1062.3*	*1085.5*
Secondary Stock Levels [b]															
Opening	**129.4**	**143.3**	**151.9**	**139.7**	**143.5**	*140.3*	*149.1*	*136.1*	*144.2*	*135.0*	*147.0*	*132.2*	**129.4**	*143.5*	*144.2*
Closing	**143.3**	**151.9**	**139.7**	**143.5**	**140.3**	*149.1*	*136.1*	*144.2*	*135.0*	*147.0*	*132.2*	*137.8*	**143.5**	*144.2*	*137.8*
Net Withdrawals	**-13.9**	**-8.6**	**12.2**	**-3.8**	**3.2**	*-8.8*	*13.0*	*-8.1*	*9.2*	*-12.0*	*14.8*	*-5.7*	**-14.1**	*-0.7*	*6.4*
Waste Coal Supplied to IPPs [c]	**2.1**	**2.2**	**2.6**	**2.8**	**3.1**	*3.1*	*3.1*	*3.1*	*3.1*	*3.1*	*3.1*	*3.1*	**9.7**	*12.2*	*12.2*
Total Supply	**255.2**	**246.1**	**281.4**	**257.6**	**262.6**	*252.1*	*288.9*	*270.2*	*274.8*	*263.9*	*292.0*	*273.4*	**1040.4**	*1073.9*	*1104.1*
Demand															
Coke Plants	**6.8**	**7.1**	**7.0**	**7.0**	**7.3**	*7.0*	*7.0*	*7.2*	*7.4*	*7.1*	*7.1*	*7.2*	**27.9**	*28.6*	*28.8*
Electricity Production															
Electric Utilities	**216.4**	**213.8**	**247.3**	**216.7**	**214.1**	*205.6*	*239.0*	*218.9*	*224.8*	*216.7*	*241.5*	*221.3*	**894.1**	*877.6*	*904.3*
Nonutilities (Excl. Cogen.) [d]	**8.4**	**10.3**	**12.3**	**15.0**	**23.2**	*22.3*	*25.5*	*24.2*	*23.8*	*22.8*	*26.1*	*24.8*	**45.9**	*95.2*	*97.6*
Retail and General Industry	**18.6**	**17.1**	**16.9**	**17.6**	**18.0**	*17.3*	*17.4*	*19.9*	*18.8*	*17.3*	*17.3*	*20.1*	**70.3**	*72.5*	*73.4*
Total Demand [e]	**250.2**	**248.3**	**283.6**	**256.3**	**262.6**	*252.1*	*288.9*	*270.2*	*274.8*	*263.9*	*292.0*	*273.4*	**1038.3**	*1073.9*	*1104.1*
Discrepancy [f]	**5.0**	**-2.1**	**-2.1**	**1.3**	**0.0**	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	***2.1***	*0.0*	*0.0*

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

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

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

[d] Estimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1999 and projections for 2000 and 2001 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1998 and 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

[e] Total Demand includes estimated IPP consumption.

[f] The discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period.

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

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

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

(Billion Kilowatt-hours)

	1999				2000				2001				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1999	2000	2001
Supply															
Net Utility Generation															
Coal	**430.0**	**423.8**	**487.6**	**426.2**	**425.7**	*413.8*	*479.4*	*436.9*	*449.4*	*433.4*	*482.7*	*439.7*	**1767.7**	*1755.8*	*1805.3*
Petroleum	**25.7**	**22.2**	**27.4**	**11.7**	**11.0**	*8.7*	*18.9*	*13.2*	*18.9*	*18.4*	*22.6*	*15.6*	**86.9**	*51.8*	*75.5*
Natural Gas	**51.5**	**80.7**	**107.5**	**56.7**	**54.4**	*76.9*	*100.8*	*53.3*	*46.9*	*75.6*	*103.6*	*53.8*	**296.4**	*285.4*	*279.9*
Nuclear	**181.2**	**166.1**	**195.0**	**182.6**	**185.0**	*184.0*	*184.2*	*166.1*	*180.8*	*164.1*	*192.7*	*173.7*	**725.0**	*719.3*	*711.2*
Hydroelectric	**83.4**	**79.8**	**69.9**	**60.9**	**66.9**	*77.3*	*65.3*	*61.9*	*72.8*	*74.5*	*62.0*	*61.1*	**293.9**	*271.5*	*270.4*
Geothermal and Other [a]	**1.6**	**1.0**	**0.6**	**0.5**	**0.5**	*0.5*	*0.6*	*0.6*	*0.5*	*0.5*	*0.6*	*0.6*	**3.7**	*2.2*	*2.2*
Subtotal	**773.4**	**773.6**	**888.0**	**738.7**	**743.4**	*761.3*	*849.3*	*732.0*	*769.4*	*766.5*	*864.2*	*744.4*	**3173.7**	*3086.1*	*3144.5*
Nonutility Generation [b]															
Coal	**20.6**	**24.7**	**33.6**	**38.2**	**55.8**	*51.8*	*60.2*	*57.6*	*56.2*	*53.1*	*61.7*	*59.0*	**117.2**	*225.4*	*230.0*
Petroleum	**6.5**	**7.2**	**7.4**	**4.8**	**9.3**	*7.5*	*8.1*	*9.1*	*7.7*	*7.5*	*8.1*	*9.1*	**25.9**	*33.9*	*32.5*
Natural Gas	**52.0**	**57.1**	**73.4**	**65.9**	**67.1**	*74.7*	*91.8*	*81.2*	*66.8*	*78.2*	*96.2*	*85.0*	**248.4**	*314.9*	*326.2*
Other Gaseous Fuels [c]	**1.9**	**2.1**	**2.7**	**2.4**	**2.3**	*1.9*	*2.0*	*2.3*	*2.0*	*1.9*	*2.1*	*2.3*	**9.1**	*8.5*	*8.2*
Nuclear	**0.0**	**0.0**	**1.1**	**2.1**	**4.4**	*3.1*	*3.1*	*2.8*	*3.0*	*2.7*	*3.2*	*2.9*	**3.2**	*13.3*	*11.8*
Hydroelectric	**3.4**	**3.4**	**2.4**	**2.6**	**3.4**	*2.8*	*2.7*	*3.2*	*2.8*	*2.8*	*2.8*	*3.2*	**11.9**	*12.1*	*11.7*
Geothermal and Other [d]	**18.7**	**20.1**	**21.0**	**19.6**	**23.5**	*20.6*	*22.7*	*25.3*	*21.8*	*20.9*	*23.0*	*25.6*	**79.4**	*92.1*	*91.4*
Subtotal	**103.2**	**114.7**	**141.6**	**135.6**	**165.8**	*162.3*	*190.7*	*181.5*	*160.4*	*167.2*	*197.1*	*187.2*	**495.1**	*700.3*	*711.8*
Total Generation	**876.5**	**888.3**	**1029.6**	**874.3**	**909.3**	*923.7*	*1040.0*	*913.5*	*929.8*	*933.7*	*1061.3*	*931.6*	**3668.8**	*3786.4*	*3856.3*
Net Imports [e]	**2.0**	**7.6**	**11.5**	**8.2**	**6.7**	*7.6*	*9.0*	*7.2*	*6.2*	*7.7*	*10.5*	*7.0*	**29.3**	*30.5*	*31.4*
Total Supply	**878.5**	**895.9**	**1041.1**	**882.5**	**916.0**	*931.2*	*1049.0*	*920.6*	*935.9*	*941.4*	*1071.7*	*938.6*	**3698.1**	*3816.9*	*3887.6*
Losses and Unaccounted for [f]	**51.7**	**75.0**	**57.2**	**52.8**	**58.7**	*81.1*	*64.7*	*63.5*	*54.1*	*81.7*	*66.1*	*64.8*	**236.7**	*268.0*	*266.7*
Demand															
Electric Utility Sales															
Residential	**287.7**	**251.0**	**350.9**	**256.1**	**294.2**	*265.6*	*341.5*	*268.2*	*306.8*	*266.3*	*349.7*	*273.6*	**1145.7**	*1169.5*	*1196.4*
Commercial	**227.8**	**238.6**	**279.6**	**236.8**	**234.7**	*245.7*	*283.0*	*244.9*	*245.4*	*250.1*	*290.9*	*251.4*	**982.9**	*1008.4*	*1037.8*
Industrial	**252.1**	**267.7**	**277.6**	**265.7**	**258.4**	*270.1*	*280.5*	*269.8*	*261.7*	*273.3*	*284.1*	*273.4*	**1063.3**	*1078.8*	*1092.4*
Other	**24.7**	**25.3**	**28.4**	**25.7**	**26.3**	*26.0*	*29.2*	*26.5*	*26.3*	*26.5*	*29.8*	*26.9*	**104.2**	*108.0*	*109.5*
Subtotal	**792.4**	**782.6**	**936.6**	**784.4**	**813.6**	*807.5*	*934.1*	*809.4*	*840.2*	*816.3*	*954.4*	*825.2*	**3296.0**	*3364.6*	*3436.1*
Nonutility Use/Sales [b]	**34.5**	**38.3**	**47.3**	**45.3**	**43.6**	*42.7*	*50.2*	*47.7*	*41.6*	*43.4*	*51.2*	*48.6*	**165.4**	*184.2*	*184.8*
Total Demand	**826.8**	**820.9**	**983.9**	**829.7**	**857.2**	*850.2*	*984.3*	*857.1*	*881.8*	*859.7*	*1005.6*	*873.8*	**3461.4**	*3548.8*	*3620.9*
Memo:															
Nonutility Sales to Electric Utilities [b]	**68.7**	**76.4**	**94.3**	**90.3**	**122.2**	*119.6*	*140.5*	*133.7*	*118.8*	*123.8*	*145.9*	*138.6*	**329.7**	*516.1*	*527.0*

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

[b] Electricity(net Generation) from nonutility sources, including cogenerators and small power producers.

[c] Includes refinery still gas and other process or waste gases and liquefied petroleum gases.

[d] Includes geothermal, solar, wind, wood, waste, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.

[e] Data for 1999 are estimates.

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

[g] Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1999 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		
	1998	1999	2000	2001	1998-1999	1999-2000	2000-2001
Electric Utilities							
Hydroelectric Power [a]	**3.178**	**3.069**	*2.834*	*2.823*	**-3.4**	*-7.7*	*-0.4*
Geothermal, Solar and Wind Energy [b]	**0.109**	**0.036**	*0.004*	*0.004*	**-67.0**	*-88.9*	*0.0*
Biofuels [c]	**0.021**	**0.021**	*0.021*	*0.021*	**0.0**	*0.0*	*0.0*
Total	**3.307**	**3.125**	*2.859*	*2.847*	**-5.5**	*-8.5*	*-0.4*
Nonutility Power Generators							
Hydroelectric Power [a]	**0.149**	**0.122**	*0.125*	*0.120*	**-18.1**	*2.5*	*-4.0*
Geothermal, Solar and Wind Energy [b]	**0.240**	**0.303**	*0.398*	*0.436*	**26.3**	*31.4*	*9.5*
Biofuels [c]	**0.523**	**0.649**	*0.710*	*0.700*	**24.1**	*9.4*	*-1.4*
Total	**0.912**	**1.075**	*1.233*	*1.257*	**17.9**	*14.7*	*1.9*
Total Power Generation	**4.219**	**4.200**	*4.091*	*4.104*	**-0.5**	*-2.6*	*0.3*
Other Sectors [d]							
Residential and Commercial [e]	**0.568**	**0.574**	*0.583*	*0.583*	**1.1**	*1.6*	*0.0*
Industrial [f]	**1.515**	**1.542**	*1.569*	*1.569*	**1.8**	*1.8*	*0.0*
Transportation [g]	**0.095**	**0.100**	*0.103*	*0.100*	**5.3**	*3.0*	*-2.9*
Total	**2.178**	**2.216**	*2.255*	*2.252*	**1.7**	*1.8*	*-0.1*
Net Imported Electricity [h]	**0.224**	**0.237**	*0.247*	*0.254*	**5.8**	*4.2*	*2.8*
Total Renewable Energy Demand	**6.621**	**6.653**	*6.594*	*6.611*	**0.5**	*-0.9*	*0.3*

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

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

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

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

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

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

[g] Ethanol blended into gasoline.

[h] Represents 78.6 percent of total electricity net imports, which is the proportion of total 1994 net imported electricity (0.459 quadrillion Btu) attributable to renewable sources (0.361 quadrillion Btu).

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														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Real Gross Domestic Product (GDP)															
(billion chained 1996 dollars)	**6093**	**6349**	**6569**	**6684**	**6669**	**6891**	**7054**	**7338**	**7537**	**7813**	**8165**	**8513**	**8864**	*9303*	*9676*
Imported Crude Oil Price [a]															
(nominal dollars per barrel)	**18.13**	**14.57**	**18.08**	**21.75**	**18.70**	**18.20**	**16.14**	**15.52**	**17.14**	**20.61**	**18.50**	**12.08**	**17.21**	*27.00*	*21.83*
Petroleum Supply															
Crude Oil Production [b]															
(million barrels per day)	**8.35**	**8.14**	**7.61**	**7.36**	**7.42**	**7.17**	**6.85**	**6.66**	**6.56**	**6.46**	**6.45**	**6.25**	**5.88**	*5.83*	*5.76*
Total Petroleum Net Imports (including SPR)															
(million barrels per day)	**5.91**	**6.59**	**7.20**	**7.16**	**6.63**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	*10.28*	*10.91*
Energy Demand															
World Petroleum															
(million barrels per day)	**63.1**	**64.9**	**65.9**	**66.0**	**66.6**	**66.8**	**67.0**	**68.3**	**69.9**	**71.4**	**73.1**	**73.6**	**74.8**	*76.0*	*78.1*
U.S. Petroleum															
(million barrels per day)	**16.72**	**17.34**	**17.37**	**17.04**	**16.77**	**17.10**	**17.24**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	*19.57*	*20.08*
Natural Gas															
(trillion cubic feet)	**17.21**	**18.03**	**18.80**	**18.72**	**19.03**	**19.54**	**20.28**	**20.71**	**21.58**	**21.96**	**21.95**	**21.26**	**21.38**	*22.29*	*23.12*
Coal															
(million short tons)	**830**	**877**	**891**	**897**	**898**	**907**	**943**	**950**	**962**	**1006**	**1029**	**1039**	**1038**	*1074*	*1104*
Electricity (billion kilowatthours)															
Utility Sales [c]	**2457**	**2578**	**2647**	**2713**	**2762**	**2763**	**2861**	**2935**	**3013**	**3098**	**3140**	**3240**	**3296**	*3365*	*3436*
Nonutility Own Use [d]	**NA**	**NA**	**91**	**113**	**119**	**122**	**127**	**138**	**145**	**145**	**148**	**156**	**165**	*184*	*185*
Total	**NA**	**NA**	**2738**	**2826**	**2881**	**2885**	**2988**	**3073**	**3159**	**3243**	**3288**	**3396**	**3461**	*3549*	*3621*
Total Energy Demand [e]															
(quadrillion Btu)	**NA**	**NA**	**84.2**	**84.2**	**84.5**	**85.6**	**87.4**	**89.2**	**90.9**	**93.9**	**94.2**	**94.4**	**96.1**	*97.8*	*100.1*
Total Energy Demand per Dollar of GDP															
(thousand Btu per 1992 Dollar)	**NA**	**NA**	**12.82**	**12.60**	**12.67**	**12.42**	**12.39**	**12.16**	**12.07**	**12.02**	**11.54**	**11.09**	**10.84**	*10.51*	*10.35*

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

[b] Includes lease condensate.

[c] Total annual electric utility sales for historical periods are derived from the sum of monthly sales figures based on submissions by electric utilities of Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions." These historical values differ from annual sales totals based on *Form EIA-861*, reported in several EIA publications, but match alternate annual totals reported in EIA's *Electric Power Monthly*, DOE/EIA-0226.

[d] Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1999 are estimates.

[e] "Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, *Annual Energy Review*, 1997, DOE/EIA-0384(97) (AER), Table 1.1. Prior to 1990, some components of renewable energy consumption, particularly relating to consumption at nonutility electric generating facilities, were not available. For those years, a less compehensive measure of total energy demand can be found in EIA's *AER*. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, *Monthly Energy Review (MER)*. Consequently, the historical data may not precisely match those published in the *MER* or the *AER*.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130*; Electric Power Monthly*, DOE/EIA-0226; *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520, and Weekly Petroleum *Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0600.

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

	Year														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Macroeconomic															
Real Gross Domestic Product (billion chained 1996 dollars)	**6093**	**6349**	**6569**	**6684**	**6669**	**6891**	**7054**	**7338**	**7537**	**7813**	**8165**	**8513**	**8864**	*9303*	*9676*
GDP Implicit Price Deflator (Index, 1996=1.000)	**0.779**	**0.805**	**0.835**	**0.868**	**0.897**	**0.917**	**0.942**	**0.961**	**0.982**	**1.000**	**1.017**	**1.029**	**1.044**	*1.065*	*1.082*
Real Disposable Personal Income (billion chained 1996 Dollars)	**4563**	**4766**	**4885**	**4991**	**5026**	**5200**	**5254**	**5388**	**5533**	**5678**	**5885**	**6122**	**6364**	*6601*	*6943*
Manufacturing Production (Index, 1992=1.000)	**0.928**	**0.971**	**0.990**	**0.985**	**0.962**	**1.000**	**1.037**	**1.100**	**1.159**	**1.213**	**1.298**	**1.361**	**1.419**	*1.493*	*1.549*
Real Fixed Investment (billion chained 1996 dollars)	**856**	**887**	**911**	**895**	**833**	**887**	**958**	**1046**	**1109**	**1213**	**1316**	**1472**	**1591**	*1728*	*1829*
Real Exchange Rate (Index, 1990=1.000)	**NA**	**NA**	**NA**	**0.999**	**1.007**	**1.013**	**1.057**	**1.034**	**0.961**	**1.017**	**1.104**	**1.152**	**1.153**	*1.209*	*1.163*
Business Inventory Change (billion chained 1996 dollars)	**8.4**	**16.9**	**14.2**	**8.9**	**-6.8**	**-4.7**	**3.6**	**12.1**	**14.1**	**10.1**	**22.1**	**25.0**	**0.4**	*11.9*	*17.7*
Producer Price Index (index, 1982=1.000)	**1.028**	**1.069**	**1.122**	**1.163**	**1.165**	**1.172**	**1.189**	**1.205**	**1.248**	**1.277**	**1.276**	**1.244**	**1.255**	*1.315*	*1.309*
Consumer Price Index (index, 1982-1984=1.000)	**1.137**	**1.184**	**1.240**	**1.308**	**1.363**	**1.404**	**1.446**	**1.483**	**1.525**	**1.570**	**1.606**	**1.631**	**1.667**	*1.715*	*1.746*
Petroleum Product Price Index (index, 1982=1.000)	**0.568**	**0.539**	**0.612**	**0.748**	**0.671**	**0.647**	**0.620**	**0.591**	**0.608**	**0.701**	**0.680**	**0.513**	**0.609**	*0.878*	*0.731*
Non-Farm Employment (millions)	**102.0**	**105.2**	**107.9**	**109.4**	**108.3**	**108.6**	**110.7**	**114.1**	**117.2**	**119.6**	**122.7**	**125.8**	**128.7**	*131.8*	*134.5*
Commercial Employment (millions)	**65.2**	**67.8**	**70.0**	**71.3**	**70.8**	**71.2**	**73.2**	**76.1**	**78.8**	**81.1**	**83.9**	**86.6**	**89.5**	*92.1*	*94.9*
Total Industrial Production (index, 1992=1.000)	**0.932**	**0.974**	**0.991**	**0.989**	**0.970**	**1.000**	**1.034**	**1.091**	**1.144**	**1.195**	**1.270**	**1.324**	**1.370**	*1.436*	*1.488*
Housing Stock (millions)	**99.8**	**101.6**	**102.9**	**103.5**	**104.5**	**105.5**	**106.8**	**108.2**	**109.6**	**111.0**	**112.5**	**114.3**	**115.8**	*117.0*	*118.3*
Weather [a]															
Heating Degree-Days															
U.S.	**4334**	**4653**	**4726**	**4016**	**4200**	**4441**	**4700**	**4483**	**4531**	**4713**	**4542**	**3951**	**4169**	*4238*	*4463*
New England	**6546**	**6715**	**6887**	**5848**	**5960**	**6844**	**6728**	**6672**	**6559**	**6679**	**6662**	**5680**	**5953**	*6422*	*6467*
Middle Atlantic	**5699**	**6088**	**6134**	**4998**	**5177**	**5964**	**5948**	**5934**	**5831**	**5986**	**5809**	**4812**	**5351**	*5551*	*5703*
U.S. Gas-Weighted	**4391**	**4804**	**4856**	**4139**	**4337**	**4458**	**4754**	**4659**	**4707**	**4980**	**4802**	**4183**	**4399**	*4410*	*4714*
Cooling Degree-Days (U.S.)	**1269**	**1283**	**1156**	**1260**	**1331**	**1040**	**1218**	**1220**	**1293**	**1180**	**1156**	**1410**	**1277**	*1272*	*1235*

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

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release* G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0600.

Table A3. Annual International Petroleum Supply and Demand Balance

(Millions Barrels per Day, Except OECD Commercial Stocks)

	Year														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Demand [a]															
OECD															
U.S. (50 States)	**16.7**	**17.3**	**17.4**	**17.0**	**16.8**	**17.1**	**17.2**	**17.7**	**17.7**	**18.3**	**18.6**	**18.9**	**19.5**	*19.6*	*20.1*
Europe [b]	**12.3**	**12.4**	**12.5**	**12.6**	**13.4**	**13.6**	**13.5**	**13.6**	**14.1**	**14.3**	**14.4**	**14.7**	**14.5**	*14.6*	*14.8*
Japan	**4.5**	**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*	*5.6*
Other OECD	**2.5**	**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*
Total OECD	**36.0**	**37.1**	**37.6**	**37.5**	**38.1**	**38.8**	**39.0**	**39.9**	**40.6**	**41.4**	**41.8**	**42.3**	**42.8**	*43.0*	*43.8*
Non-OECD															
Former Soviet Union	**9.0**	**8.9**	**8.7**	**8.4**	**8.3**	**6.8**	**5.6**	**4.8**	**4.6**	**4.0**	**3.9**	**3.8**	**3.6**	*3.7*	*3.7*
Europe	**2.2**	**2.2**	**2.1**	**1.9**	**1.4**	**1.3**	**1.3**	**1.3**	**1.3**	**1.4**	**1.5**	**1.5**	**1.6**	*1.6*	*1.7*
China	**2.1**	**2.3**	**2.4**	**2.3**	**2.5**	**2.7**	**3.0**	**3.2**	**3.4**	**3.6**	**3.9**	**4.1**	**4.3**	*4.5*	*4.8*
Other Asia	**4.1**	**4.4**	**4.9**	**5.3**	**5.7**	**6.2**	**6.8**	**7.3**	**7.9**	**8.5**	**9.0**	**8.7**	**8.8**	*9.2*	*9.7*
Other Non-OECD	**9.7**	**10.0**	**10.3**	**10.5**	**10.6**	**11.0**	**11.4**	**11.8**	**12.1**	**12.4**	**13.0**	**13.3**	**13.6**	*14.0*	*14.4*
Total Non-OECD	**27.1**	**27.7**	**28.3**	**28.5**	**28.5**	**28.0**	**28.0**	**28.4**	**29.3**	**30.0**	**31.3**	**31.3**	**31.9**	*33.0*	*34.2*
Total World Demand	**63.1**	**64.9**	**66.0**	**66.0**	**66.6**	**66.8**	**67.0**	**68.3**	**69.9**	**71.4**	**73.1**	**73.6**	**74.8**	*76.0*	*78.1*
Supply [c]															
OECD															
U.S. (50 States)	**10.7**	**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*
Canada	**2.0**	**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*	*2.8*
North Sea [d]	**3.8**	**3.8**	**3.7**	**3.9**	**4.1**	**4.5**	**4.8**	**5.5**	**5.9**	**6.3**	**6.2**	**6.2**	**6.3**	*6.5*	*6.5*
Other OECD	**1.4**	**1.5**	**1.4**	**1.5**	**1.5**	**1.4**	**1.4**	**1.5**	**1.5**	**1.5**	**1.6**	**1.6**	**1.5**	*1.7*	*1.8*
Total OECD	**17.9**	**17.8**	**17.1**	**17.1**	**17.5**	**17.9**	**18.0**	**18.7**	**19.2**	**19.7**	**19.9**	**19.7**	**19.4**	*20.1*	*20.1*
Non-OECD															
OPEC	**19.6**	**21.5**	**23.3**	**24.5**	**24.6**	**25.8**	**26.6**	**27.0**	**27.6**	**28.3**	**29.9**	**30.4**	**29.3**	*31.0*	*32.2*
Former Soviet Union	**12.5**	**12.5**	**12.1**	**11.4**	**10.4**	**8.9**	**8.0**	**7.3**	**7.1**	**7.1**	**7.1**	**7.2**	**7.4**	*7.5*	*7.7*
China	**2.7**	**2.7**	**2.8**	**2.8**	**2.8**	**2.8**	**2.9**	**2.9**	**3.0**	**3.1**	**3.2**	**3.2**	**3.2**	*3.3*	*3.3*
Mexico	**2.9**	**2.9**	**2.9**	**3.0**	**3.2**	**3.2**	**3.2**	**3.2**	**3.1**	**3.3**	**3.4**	**3.5**	**3.4**	*3.6*	*3.7*
Other Non-OECD	**6.9**	**11.7**	**7.7**	**8.0**	**8.1**	**8.4**	**8.7**	**9.2**	**9.9**	**10.2**	**10.5**	**10.8**	**11.2**	*11.2*	*11.4*
Total Non-OECD	**44.6**	**47.0**	**48.9**	**49.7**	**49.1**	**49.1**	**49.4**	**49.6**	**50.7**	**52.0**	**54.2**	**55.2**	**54.5**	*56.6*	*58.2*
Total World Supply	**62.5**	**64.8**	**65.9**	**66.8**	**66.7**	**67.0**	**67.4**	**68.3**	**69.9**	**71.8**	**74.1**	**74.9**	**73.9**	*76.6*	*78.3*
Total Stock Withdrawals	**0.6**	**0.1**	**0.0**	**-0.8**	**-0.1**	**-0.2**	**-0.4**	**0.0**	**0.0**	**-0.4**	**-1.0**	**-1.3**	**0.8**	*-0.6*	*-0.2*
OECD Comm. Stocks, End (bill. bbls.)	**2.7**	**2.6**	**2.6**	**2.7**	**2.7**	**2.7**	**2.8**	**2.8**	**2.7**	**2.7**	**2.7**	**2.8**	**2.6**	*2.7*	*2.7*
Net Exports from Former Soviet Union	**3.5**	**3.6**	**3.4**	**3.0**	**2.1**	**2.1**	**2.3**	**2.4**	**2.6**	**3.0**	**3.3**	**3.5**	**3.8**	*3.9*	*4.0*

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

[b] OECD Europe includes the former East Germany.

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

[d] Includes 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														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Imported Crude Oil [a]															
(dollars per barrel)	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.21	*27.00*	*21.83*
Natural Gas Wellhead															
(dollars per thousand cubic feet)	1.66	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.95	2.07	*3.12*	*3.00*
Petroleum Products															
Gasoline Retail [b] (dollars per gallon)															
All Grades	0.91	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*	*1.33*
Regular Unleaded	0.91	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*	*1.29*
No. 2 Diesel Oil, Retail															
(dollars per gallon)	0.93	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.10	1.22	1.19	1.04	1.12	*1.43*	*1.30*
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.53	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.51	*0.83*	*0.69*
No. 2 Heating Oil, Retail															
(dollars per gallon)	0.80	0.81	0.90	1.06	1.02	0.93	0.91	0.88	0.87	0.99	0.99	0.85	0.88	*1.22*	*1.08*
No. 6 Residual Fuel Oil, Retail [c]															
(dollars per barrel)	17.76	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	15.92	*25.98*	*21.25*
Electric Utility Fuels															
Coal															
(dollars per million Btu)	1.51	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.22	*1.21*	*1.22*
Heavy Fuel Oil [d]															
(dollars per million Btu)	2.98	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.39	*4.29*	*3.42*
Natural Gas															
(dollars per million Btu)	2.24	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.57	*3.73*	*3.53*
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	5.55	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.83	6.62	*7.32*	*7.82*
Electricity															
(cents per kilowatthour)	7.4	7.5	7.6	7.8	8.1	8.2	8.3	8.4	8.4	8.4	8.4	8.3	8.1	*8.3*	*8.0*

[a] Refiner acquisition cost (RAC) of imported crude oil.

[b] Average self-service cash prices.

[c] Average for all sulfur contents.

[d] Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

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

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

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

(Million Barrels per Day, Except Closing Stocks)

	Year														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Supply															
Crude Oil Supply															
Domestic Production [a]	**8.35**	**8.14**	**7.61**	**7.36**	**7.42**	**7.17**	**6.85**	**6.66**	**6.56**	**6.46**	**6.45**	**6.25**	**5.88**	*5.83*	*5.76*
Alaska	**1.96**	**2.02**	**1.87**	**1.77**	**1.80**	**1.71**	**1.58**	**1.56**	**1.48**	**1.39**	**1.30**	**1.17**	**1.05**	*0.96*	*0.94*
Lower 48	**6.39**	**6.12**	**5.74**	**5.58**	**5.62**	**5.46**	**5.26**	**5.10**	**5.08**	**5.07**	**5.16**	**5.08**	**4.83**	*4.87*	*4.82*
Net Imports (including SPR) [b]	**4.52**	**4.95**	**5.70**	**5.79**	**5.67**	**5.99**	**6.69**	**6.96**	**7.14**	**7.40**	**8.12**	**8.60**	**8.61**	*9.03*	*9.45*
Other SPR Supply	**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**	*0.08*	*0.00*
Stock Draw (Including SPR)	**-0.12**	**0.00**	**-0.09**	**0.02**	**-0.01**	**0.01**	**-0.06**	**-0.02**	**0.09**	**0.05**	**-0.06**	**-0.05**	**0.10**	*-0.01*	*-0.01*
Product Supplied and Losses	**-0.03**	**-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*
Unaccounted-for Crude Oil	**0.14**	**0.20**	**0.20**	**0.26**	**0.20**	**0.26**	**0.17**	**0.27**	**0.19**	**0.22**	**0.14**	**0.11**	**0.19**	*0.31*	*0.22*
Total Crude Oil Supply	**12.85**	**13.25**	**13.40**	**13.41**	**13.30**	**13.41**	**13.61**	**13.87**	**13.97**	**14.19**	**14.66**	**14.89**	**14.80**	*15.14*	*15.42*
Other Supply															
NGL Production	**1.59**	**1.62**	**1.55**	**1.56**	**1.66**	**1.70**	**1.74**	**1.73**	**1.76**	**1.83**	**1.82**	**1.76**	**1.85**	*1.95*	*1.96*
Other Hydrocarbon and Alcohol Inputs	**0.12**	**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*	*0.37*
Crude Oil Product Supplied	**0.03**	**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*
Processing Gain	**0.64**	**0.66**	**0.66**	**0.68**	**0.71**	**0.77**	**0.77**	**0.77**	**0.77**	**0.84**	**0.85**	**0.89**	**0.89**	*0.93*	*0.90*
Net Product Imports [c]	**1.39**	**1.63**	**1.50**	**1.38**	**0.96**	**0.94**	**0.93**	**1.09**	**0.75**	**1.10**	**1.04**	**1.17**	**1.30**	*1.25*	*1.46*
Product Stock Withdrawn	**0.09**	**0.03**	**0.13**	**-0.14**	**-0.04**	**0.06**	**-0.05**	**0.00**	**0.15**	**0.03**	**-0.09**	**-0.17**	**0.30**	*-0.08*	*-0.03*
Total Supply	**16.72**	**17.33**	**17.37**	**17.04**	**16.76**	**17.10**	**17.26**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	*19.57*	*20.08*
Demand															
Motor Gasoline [d]	**7.19**	**7.36**	**7.40**	**7.31**	**7.23**	**7.38**	**7.48**	**7.60**	**7.79**	**7.89**	**8.02**	**8.25**	**8.43**	*8.51*	*8.69*
Jet Fuel	**1.38**	**1.45**	**1.49**	**1.52**	**1.47**	**1.45**	**1.47**	**1.53**	**1.51**	**1.58**	**1.60**	**1.62**	**1.67**	*1.71*	*1.78*
Distillate Fuel Oil	**2.98**	**3.12**	**3.16**	**3.02**	**2.92**	**2.98**	**3.04**	**3.16**	**3.21**	**3.37**	**3.44**	**3.46**	**3.57**	*3.62*	*3.71*
Residual Fuel Oil	**1.26**	**1.38**	**1.37**	**1.23**	**1.16**	**1.09**	**1.08**	**1.02**	**0.85**	**0.85**	**0.80**	**0.89**	**0.83**	*0.70*	*0.75*
Other Oils [e]	**3.90**	**4.03**	**3.95**	**3.95**	**3.99**	**4.20**	**4.17**	**4.41**	**4.36**	**4.63**	**4.77**	**4.69**	**5.01**	*5.03*	*5.15*
Total Demand	**16.72**	**17.34**	**17.37**	**17.04**	**16.77**	**17.10**	**17.24**	**17.72**	**17.72**	**18.31**	**18.62**	**18.92**	**19.52**	*19.57*	*20.08*
Total Petroleum Net Imports	**5.91**	**6.59**	**7.20**	**7.16**	**6.63**	**6.94**	**7.62**	**8.05**	**7.89**	**8.50**	**9.16**	**9.76**	**9.91**	*10.28*	*10.91*
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	**349**	**330**	**341**	**323**	**325**	**318**	**335**	**337**	**303**	**284**	**305**	**324**	**284**	*288*	*290*
Total Motor Gasoline	**226**	**228**	**213**	**220**	**219**	**216**	**226**	**215**	**202**	**195**	**210**	**216**	**193**	*200*	*201*
Jet Fuel	**50**	**44**	**41**	**52**	**49**	**43**	**40**	**47**	**40**	**40**	**44**	**45**	**41**	*43*	*43*
Distillate Fuel Oil	**134**	**124**	**106**	**132**	**144**	**141**	**141**	**145**	**130**	**127**	**138**	**156**	**125**	*133*	*133*
Residual Fuel Oil	**47**	**45**	**44**	**49**	**50**	**43**	**44**	**42**	**37**	**46**	**40**	**45**	**36**	*41*	*41*
Other Oils [f]	**260**	**267**	**257**	**261**	**267**	**263**	**273**	**275**	**258**	**250**	**259**	**291**	**246**	*252*	*261*

[a] Includes lease condensate.

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

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

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

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

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

SPR: Strategic Petroleum Reserve. NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding, with the following exception: recent petroleum demand and supply data displayed here reflect the incorporation of resubmissions of the data as reported in EIA's *Petroleum Supply Monthly*, TableC1. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

Table A6. Annual U.S. Natural Gas Supply and Demand

(Trillion Cubic Feet)

	Year														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Supply															
Total Dry Gas Production	**16.62**	**17.10**	**17.31**	**17.81**	**17.70**	**17.84**	**18.10**	**18.82**	**18.60**	**18.85**	**18.90**	**18.71**	**18.66**	*18.89*	*18.94*
Net Imports	**0.94**	**1.22**	**1.27**	**1.45**	**1.64**	**1.92**	**2.21**	**2.46**	**2.69**	**2.78**	**2.84**	**2.99**	**3.38**	*3.53*	*3.89*
Supplemental Gaseous Fuels	**0.10**	**0.10**	**0.11**	**0.12**	**0.11**	**0.12**	**0.12**	**0.11**	**0.11**	**0.11**	**0.10**	**0.10**	**0.10**	*0.12*	*0.13*
Total New Supply	**17.66**	**18.42**	**18.69**	**19.38**	**19.45**	**19.88**	**20.42**	**21.39**	**21.40**	**21.75**	**21.84**	**21.80**	**22.13**	*22.53*	*22.96*
Total Underground Storage															
Opening	**6.57**	**6.55**	**6.65**	**6.33**	**6.94**	**6.78**	**6.64**	**6.65**	**6.97**	**6.50**	**6.51**	**6.52**	**7.04**	*6.88*	*6.62*
Closing	**6.55**	**6.65**	**6.33**	**6.94**	**6.78**	**6.64**	**6.65**	**6.97**	**6.50**	**6.51**	**6.52**	**7.04**	**6.88**	*6.62*	*6.61*
Net Withdrawals	**0.02**	**-0.10**	**0.33**	**-0.61**	**0.16**	**0.14**	**-0.01**	**-0.32**	**0.46**	**-0.01**	**-0.01**	**-0.52**	**0.16**	*0.26*	*0.00*
Total Supply	**17.68**	**18.32**	**19.02**	**18.77**	**19.61**	**20.02**	**20.42**	**21.08**	**21.86**	**21.74**	**21.84**	**21.28**	**22.30**	*22.79*	*22.96*
Balancing Item [a]	**-0.47**	**-0.29**	**-0.22**	**-0.05**	**-0.58**	**-0.47**	**-0.14**	**-0.37**	**-0.28**	**0.23**	**0.12**	**-0.02**	**-0.92**	*-0.51*	*0.15*
Total Primary Supply	**17.21**	**18.03**	**18.80**	**18.72**	**19.03**	**19.54**	**20.28**	**20.71**	**21.58**	**21.96**	**21.95**	**21.26**	**21.38**	*22.29*	*23.12*
Demand															
Lease and Plant Fuel	**1.15**	**1.10**	**1.07**	**1.24**	**1.13**	**1.17**	**1.17**	**1.12**	**1.22**	**1.25**	**1.20**	**1.16**	**1.23**	*1.23*	*1.23*
Pipeline Use	**0.52**	**0.61**	**0.63**	**0.66**	**0.60**	**0.59**	**0.62**	**0.69**	**0.70**	**0.71**	**0.75**	**0.64**	**0.64**	*0.63*	*0.66*
Residential	**4.31**	**4.63**	**4.78**	**4.39**	**4.56**	**4.69**	**4.96**	**4.85**	**4.85**	**5.24**	**4.98**	**4.52**	**4.67**	*4.75*	*5.07*
Commercial	**2.43**	**2.67**	**2.72**	**2.62**	**2.73**	**2.80**	**2.86**	**2.90**	**3.03**	**3.16**	**3.21**	**3.00**	**3.06**	*3.18*	*3.41*
Industrial (Incl. Nonutilities)	**5.95**	**6.38**	**6.82**	**7.02**	**7.23**	**7.53**	**7.98**	**8.17**	**8.58**	**8.87**	**8.83**	**8.69**	**8.66**	*9.52*	*9.82*
Electric Utilities	**2.84**	**2.64**	**2.79**	**2.79**	**2.79**	**2.77**	**2.68**	**2.99**	**3.20**	**2.73**	**2.97**	**3.26**	**3.11**	*2.98*	*2.93*
Total Demand	**17.21**	**18.03**	**18.80**	**18.72**	**19.03**	**19.54**	**20.28**	**20.71**	**21.58**	**21.96**	**21.95**	**21.26**	**21.38**	*22.29*	*23.12*

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

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

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

Table A7. Annual U.S. Coal Supply and Demand

(Million Short Tons)

	Year														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Supply															
Production	**918.8**	**950.3**	**980.7**	**1029.**	**996.0**	**997.5**	**945.4**	**1033.5**	**1033.0**	**1063.9**	**1089.9**	**1117.5**	**1094.0**	*1109.4*	*1132.7*
Appalachia	**NA**	**NA**	**464.8**	**489.0**	**457.8**	**456.6**	**409.7**	**445.4**	**434.9**	**451.9**	**467.8**	**460.4**	**423.3**	*420.1*	*420.4*
Interior	**NA**	**NA**	**198.1**	**205.8**	**195.4**	**195.7**	**167.2**	**179.9**	**168.5**	**172.8**	**170.9**	**168.4**	**162.5**	*158.1*	*154.8*
Western	**NA**	**NA**	**317.9**	**334.3**	**342.8**	**345.3**	**368.5**	**408.3**	**429.6**	**439.1**	**451.3**	**488.8**	**508.2**	*531.3*	*557.5*
Primary Stock Levels [a]															
Opening	**32.1**	**28.3**	**30.4**	**29.0**	**33.4**	**33.0**	**34.0**	**25.3**	**33.2**	**34.4**	**28.6**	**34.0**	**36.5**	*36.4*	*36.4*
Closing	**28.3**	**30.4**	**29.0**	**33.4**	**33.0**	**34.0**	**25.3**	**33.2**	**34.4**	**28.6**	**34.0**	**36.5**	**36.4**	*36.4*	*34.6*
Net Withdrawals	**3.8**	**-2.1**	**1.4**	**-4.4**	**0.4**	**-1.0**	**8.7**	**-7.9**	**-1.2**	**5.8**	**-5.3**	**-2.6**	**0.2**	*S*	*1.7*
Imports	**1.7**	**2.1**	**2.9**	**2.7**	**3.4**	**3.8**	**7.3**	**7.6**	**7.2**	**7.1**	**7.5**	**8.7**	**9.1**	*10.5*	*11.6*
Exports	**79.6**	**95.0**	**100.8**	**105.8**	**109.0**	**102.5**	**74.5**	**71.4**	**88.5**	**90.5**	**83.5**	**78.0**	**58.5**	*57.6*	*60.5*
Total Net Domestic Supply	**844.7**	**855.3**	**884.2**	**921.6**	**890.9**	**897.8**	**886.9**	**961.8**	**950.4**	**986.3**	**1008.5**	**1045.7**	**1044.8**	*1062.3*	*1085.5*
Secondary Stock Levels [b]															
Opening	**175.2**	**185.5**	**158.4**	**146.1**	**168.2**	**167.7**	**163.7**	**120.5**	**136.1**	**134.6**	**123.0**	**106.4**	**129.4**	*143.5*	*144.2*
Closing	**185.5**	**158.4**	**146.1**	**168.2**	**167.7**	**163.7**	**120.5**	**136.1**	**134.6**	**123.0**	**106.4**	**129.4**	**143.5**	*144.2*	*137.8*
Net Withdrawals	**-10.2**	**27.0**	**12.3**	**-22.1**	**0.5**	**4.0**	**43.2**	**-15.7**	**1.5**	**11.7**	**16.6**	**-23.0**	**-14.1**	*-0.7*	*6.4*
Waste Coal Supplied to IPPs [c]	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**6.0**	**6.4**	**7.9**	**8.5**	**8.8**	**8.1**	**8.6**	**9.7**	*12.2*	*12.2*
Total Supply	**834.4**	**882.3**	**896.5**	**899.4**	**891.4**	**907.8**	**936.5**	**954.0**	**960.4**	**1006.7**	**1033.2**	**1031.3**	**1040.4**	*1073.9*	*1104.1*
Demand															
Coke Plants	**37.0**	**41.9**	**40.5**	**38.9**	**33.9**	**32.4**	**31.3**	**31.7**	**33.0**	**31.7**	**30.2**	**28.2**	**27.9**	*28.6*	*28.8*
Electricity Production															
Electric Utilities	**717.9**	**758.4**	**766.9**	**773.5**	**772.3**	**779.9**	**813.5**	**817.3**	**829.0**	**874.7**	**900.4**	**910.9**	**894.1**	*877.6*	*904.3*
Nonutilities (Excl. Cogen.) [d]	**NA**	**NA**	**0.9**	**1.6**	**10.2**	**14.6**	**17.1**	**19.5**	**20.8**	**22.2**	**21.6**	**26.9**	**45.9**	*95.2*	*97.6*
Retail and General Industry	**75.2**	**76.3**	**82.3**	**83.1**	**81.5**	**80.2**	**81.1**	**81.2**	**78.9**	**76.9**	**77.1**	**73.0**	**70.3**	*72.5*	*73.4*
Total Demand [e]	**830.0**	**876.5**	**890.6**	**897.1**	**897.8**	**907.0**	**943.1**	**949.7**	**961.7**	**1005.6**	**1029.2**	**1039.0**	**1038.3**	*1073.9*	*1104.1*
Discrepancy [f]	**4.4**	**5.8**	**5.9**	**2.4**	**-6.4**	**0.8**	**-6.6**	**4.3**	**-1.3**	**1.2**	**4.0**	**-7.7**	***2.1***	*0.0*	*0.0*

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

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

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

[d] Estimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1999 and projections for 2000 and 2001 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

[e] Total Demand includes estimated IPP consumption.

[f] The discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period. 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														
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Supply															
Net Utility Generation															
Coal	**1463.8**	**1540.7**	**1553.7**	**1559.6**	**1551.2**	**1575.9**	**1639.2**	**1635.5**	**1652.9**	**1737.5**	**1787.8**	**1807.5**	**1767.7**	*1755.8*	*1805.3*
Petroleum	**118.5**	**148.9**	**158.3**	**117.0**	**111.5**	**88.9**	**99.5**	**91.0**	**60.8**	**67.3**	**77.8**	**110.2**	**86.9**	*51.8*	*75.5*
Natural Gas	**272.6**	**252.8**	**266.6**	**264.1**	**264.2**	**263.9**	**258.9**	**291.1**	**307.3**	**262.7**	**283.6**	**309.2**	**296.4**	*285.4*	*279.9*
Nuclear	**455.3**	**527.0**	**529.4**	**576.9**	**612.6**	**618.8**	**610.3**	**640.4**	**673.4**	**674.7**	**628.6**	**673.7**	**725.0**	*719.3*	*711.2*
Hydroelectric	**249.7**	**222.9**	**265.1**	**279.9**	**275.5**	**239.6**	**265.1**	**243.7**	**293.7**	**328.0**	**337.2**	**304.4**	**293.9**	*271.5*	*270.4*
Geothermal and Other [a]	**12.3**	**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*	*2.2*
Subtotal	**2572.1**	**2704.3**	**2784.3**	**2808.2**	**2825.0**	**2797.2**	**2882.5**	**2910.7**	**2994.5**	**3077.4**	**3122.5**	**3212.2**	**3173.7**	*3086.1*	*3144.5*
Nonutility Generation [b]	**0.0**	**0.0**	**187.6**	**216.7**	**246.3**	**286.1**	**314.4**	**343.1**	**363.3**	**369.6**	**371.7**	**405.7**	**495.1**	*700.3*	*711.8*
Total Generation	**2572.1**	**2704.3**	**2971.9**	**3024.9**	**3071.3**	**3083.4**	**3196.9**	**3253.8**	**3357.8**	**3447.0**	**3494.2**	**3617.9**	**3668.8**	*3786.4*	*3856.3*
Net Imports [c]	**46.3**	**31.8**	**11.0**	**2.3**	**19.6**	**25.4**	**27.8**	**44.8**	**39.2**	**38.0**	**36.6**	**27.6**	**29.3**	*30.5*	*31.4*
Total Supply	**2618.5**	**2736.0**	**2982.8**	**3027.2**	**3091.0**	**3108.8**	**3224.7**	**3298.6**	**3397.1**	**3485.0**	**3530.8**	**3645.5**	**3698.1**	*3816.9*	*3887.6*
Losses and Unaccounted for [d]	**NA**	**NA**	**243.1**	**207.3**	**215.0**	**223.6**	**236.3**	**225.7**	**238.4**	**242.3**	**242.9**	**249.4**	**236.7**	*268.0*	*266.7*
Demand															
Electric Utility Sales															
Residential	**850.4**	**892.9**	**905.5**	**924.0**	**955.4**	**935.9**	**994.8**	**1008.5**	**1042.5**	**1082.5**	**1075.8**	**1127.7**	**1145.7**	*1169.5*	*1196.4*
Commercial	**660.4**	**699.1**	**725.9**	**751.0**	**765.7**	**761.3**	**794.6**	**820.3**	**862.7**	**887.4**	**928.4**	**968.5**	**982.9**	*1008.4*	*1037.8*
Industrial	**858.2**	**896.5**	**925.7**	**945.5**	**946.6**	**972.7**	**977.2**	**1008.0**	**1012.7**	**1030.4**	**1032.7**	**1040.0**	**1063.3**	*1078.8*	*1092.4*
Other	**88.2**	**89.6**	**89.8**	**92.0**	**94.3**	**93.4**	**94.9**	**97.8**	**95.4**	**97.5**	**102.9**	**103.5**	**104.2**	*108.0*	*109.5*
Subtotal	**2457.3**	**2578.1**	**2646.8**	**2712.6**	**2762.0**	**2763.4**	**2861.5**	**2934.6**	**3013.3**	**3097.8**	**3139.8**	**3239.8**	**3296.0**	*3364.6*	*3436.1*
Nonutility Own Use [e]	**NA**	**NA**	**94.7**	**101.5**	**108.0**	**121.8**	**126.9**	**138.4**	**145.4**	**144.9**	**148.2**	**156.2**	**165.4**	*184.2*	*184.8*
Total Demand	**NA**	**NA**	**2739.7**	**2819.9**	**2875.9**	**2885.1**	**2988.4**	**3073.0**	**3158.7**	**3242.7**	**3287.9**	**3396.0**	**3461.4**	*3548.8*	*3620.9*
Memo:															
Nonutility Sales to Electric Utilities	**NA**	**NA**	**92.9**	**115.2**	**138.3**	**164.4**	**187.5**	**204.7**	**217.9**	**224.6**	**223.5**	**249.5**	**329.7**	*516.1*	*527.0*

[a]Other includes generation from wind, wood, waste, and solar sources.

[b]Net generation.

[c]Data for 1999 are estimates.

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

[e]Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1999 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.