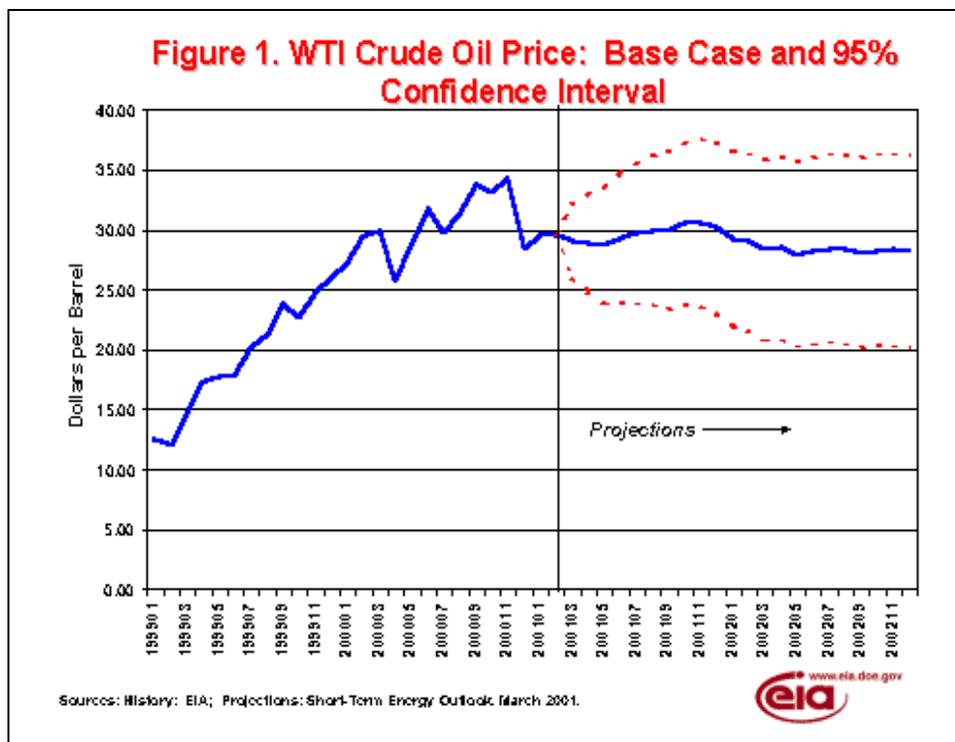


Short-Term Energy Outlook

March 2001

Overview

U.S. economic growth assumptions have been lowered for this edition of the Outlook from last month's report, resulting in somewhat weaker expected growth in U.S. energy consumption. We now expect U.S. real GDP to advance at about 2.2 percent in 2001 instead of the 2.6 percent projected in February. A result of the downward revision in projected growth this year is a slightly more rapid rebound in 2002 but overall levels of economic activity are lower throughout the projection period. Oil demand in the United States and other

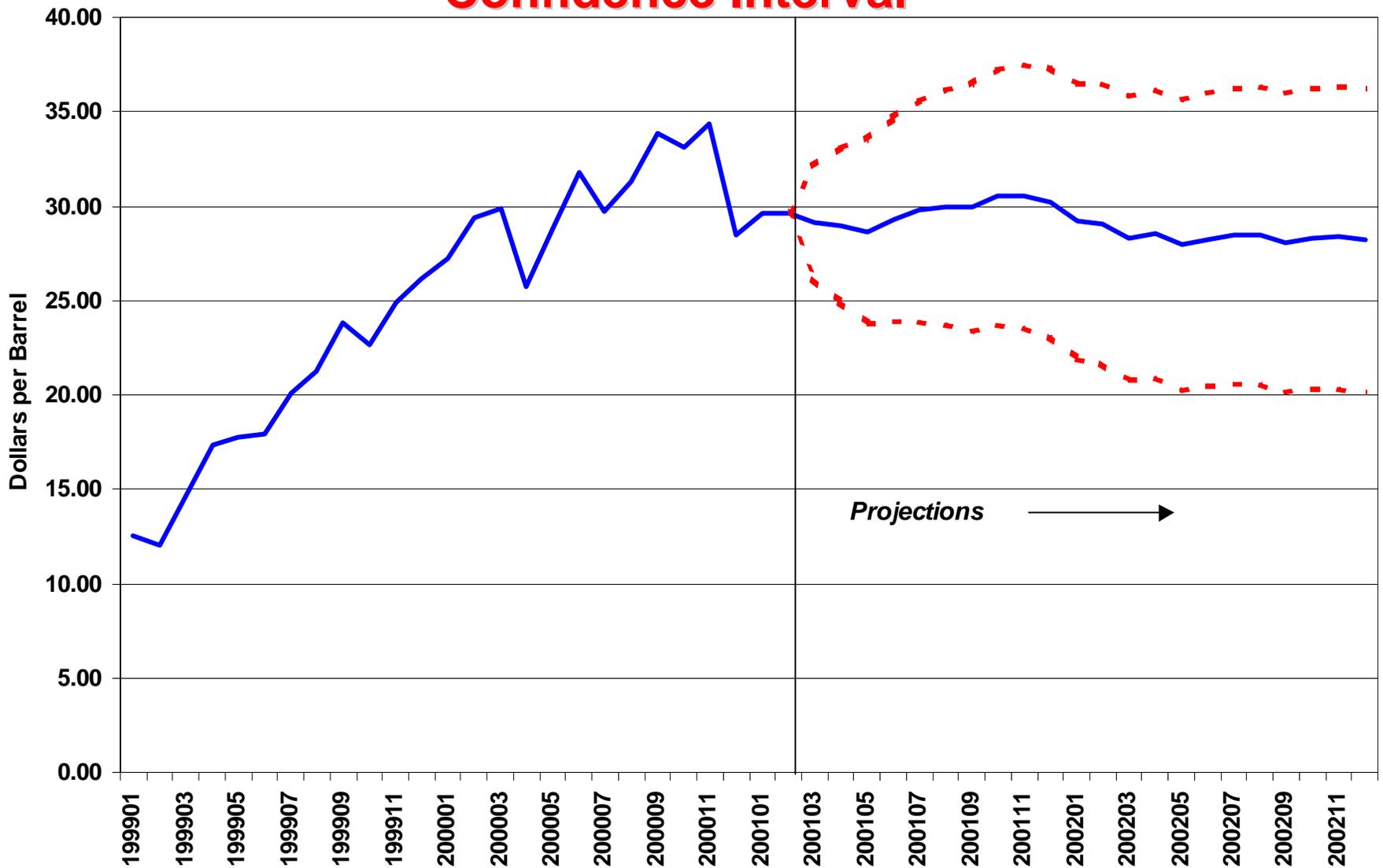


consuming regions is now seen as likely to increase less rapidly in 2001 than projected previously. We have adjusted global oil demand growth for this year downward to 1.5 million barrels per day from the 1.6 million barrels per day indicated last month. This results in projected world demand levels of 77.2 million barrels per day in 2001 and 78.9 million barrels per day in 2002. Cumulatively, we have lowered the world demand total expected for 2001 by 700,000 barrels per day from the level projected three months ago.

Despite the lower demand outlook, industrialized country oil stocks continue to fall below expectations, effectively offsetting most if not all of any resulting downward pressure on prices relative to the levels indicated in our previous Outlook. Thus, we see the U.S. refiner cost of crude oil likely to average around \$26.60 per barrel this year compared to \$27.70 per barrel in 2000. Our view of the world oil balance suggests that significant improvement in the inventory situation (on a seasonally adjusted basis) over the next 21 months is rather unlikely, so prices are likely to remain relatively high through 2002 (Figure 1). A more severe slowdown in economic growth in consuming countries than we are allowing for in our base case could alter the price outlook significantly. We have evaluated in some detail the sort of overall demand impacts in the United States that could be expected under a very low short-term growth scenario. In such a case, U.S. oil demand growth could be reduced by as much as 150,000 - 200,000 barrels per day relative to the base case. Reverberations worldwide from such a development would be expected to generate additional reductions in demand elsewhere in 2001 or 2002.

The U.S. natural gas supply picture seemed to brighten a little last month as average storage withdrawals during the month were below normal and below previous expectations. However, even if only modest withdrawals are required this month, we are still likely to end the heating season with the total level of gas in storage below the previous low recorded by EIA. In our view, only a spectacular performance from the

Figure 1. WTI Crude Oil Price: Base Case and 95% Confidence Interval



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



U.S. and Canadian gas industry in terms of increased production or an extremely mild summer this year would generate much in the way of additional reductions in natural gas prices beyond what has already happened since mid winter. As we currently expect working gas to reach 689 billion cubic feet at end-March, seasonal injections of 2,310 billion cubic feet would be required from April through October to reach 3 trillion cubic feet (the approximate average end-October level between 1995 and 1999) before the next heating season. That kind of build would be about 500 billion cubic feet (25 percent) above average (1995-1999). Consequently we expect the industry to fall well short. Average monthly gas spot prices below \$4 per thousand cubic feet between now and next winter are possible but do not seem very likely under these circumstances.

More good news for Northeast heating oil customers arrived since last month. Average residential heating oil prices fell to an estimated \$1.32 per gallon in February from the \$1.37 per gallon seen in January. This was 9 cents below the December average. The winter average is now expected to be \$1.36 per gallon, 8 percent below the \$1.48 price we projected as recently as January. Household heating oil expenditures for the winter will still be about 27 percent above last year's estimated level, but this is certainly less dramatic than the 40 percent projected in January ([Figure 2](#)). Because of strong production and imports and a respite from the kind of abnormally cold weather seen at the beginning of winter, inventories of heating oil are now within the normal range. For natural gas consumers, the expected level of winter expenditures has not changed much. We still expect that the increase in household gas bills over last winter will amount to 70-75 percent ([Figure 3](#)).

International

Crude Oil Prices. The monthly average U.S. imported crude oil price in February was about \$26 per barrel (almost \$30 per barrel for West Texas Intermediate crude oil), about \$1 per barrel higher than January's average U.S. imported crude oil price ([Figure 1](#)).

Price declines during the past few weeks had indicated weakness in the near-term market. However, EIA believes that the OPEC 10's (OPEC excluding Iraq) decision to cut oil production quotas effective February 1 will provide enough support to maintain world oil prices near current levels. EIA does not believe that further quota cuts are necessary to maintain the OPEC basket oil price (roughly equivalent to the average U.S. imported crude oil price) within OPEC's target range of \$22 - \$28 per barrel in 2001 and 2002.

International Oil Supply Although OPEC cut production quotas by 1.5 million barrels per day effective February 1, OPEC has suggested that further cuts could be needed to maintain the OPEC basket price within its desired range. In addition, some OPEC delegates have suggested that further quota cuts may be adopted even if the OPEC basket prices remain within this range, in part because of concerns that a seasonal second quarter decline in demand and a world economic slowdown could weaken the demand for OPEC oil. OPEC Secretary-General Ali Rodriguez was earlier quoted as saying that there was "almost a conviction" among producers for a production cut ahead of a forecasted drop in demand in the second quarter, with the cuts totaling up to 1 million barrels per day.

EIA's assessment does not factor in any further cuts in 2001 because EIA's analysis indicates that the February 1 quotas are sufficient to support OPEC's desired price range. The seasonal decline in demand during the second quarter is seen as a necessary accompaniment to the seasonal stock build normally associated with this time of year. EIA expects that oil stocks in the OECD countries will continue to be tight compared to normal levels and will provide enough support to prevent prices from falling significantly.

Iraqi efforts to end U.N. sanctions have continued to result in lowered exports and production since December. The U.N. reported that reduced Iraqi exports have resulted in a revenue loss of over \$2.2 billion or \$2.4 billion (euros) to the program since December 2000. Despite these revenue losses, EIA's projections

Figure 2. Consumer Winter Heating Oil Costs

Average Northeast Household Heating With Oil				
	97-98	98-99	99-00	00-01
	Actual	Actual	Actual	Base Fcst.
Gal	<i>636</i>	<i>650</i>	<i>644</i>	<i>711</i>
\$/gal	<i>\$0.92</i>	<i>\$0.80</i>	<i>\$1.18</i>	<i>\$1.36</i>
Cost (\$)	<i>\$585</i>	<i>\$520</i>	<i>\$760</i>	<i>\$967</i>

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



Figure 3. Consumer Winter Natural Gas Costs

<i>Average Midwest Household, U.S. Prices</i>				
	97-98	98-99	99-00	00-01
	Actual	Actual	Actual	Base Fcst
<i>Mcf</i>	<i>82.4</i>	<i>84.5</i>	<i>81.7</i>	<i>96.7</i>
<i>(\$/Mcf)</i>	<i>\$6.56</i>	<i>\$6.27</i>	<i>\$6.61</i>	<i>\$9.65</i>
<i>Cost (\$)</i>	<i>\$541</i>	<i>\$530</i>	<i>\$540</i>	<i>\$933</i>

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

assume that Iraqi efforts to end sanctions will continue in 2001 with negative consequences on Iraqi exports and production (Figure 4). Iraqi production in 2001 is not assumed to exceed the 3 million barrels per day level reached as recently as October 2000.

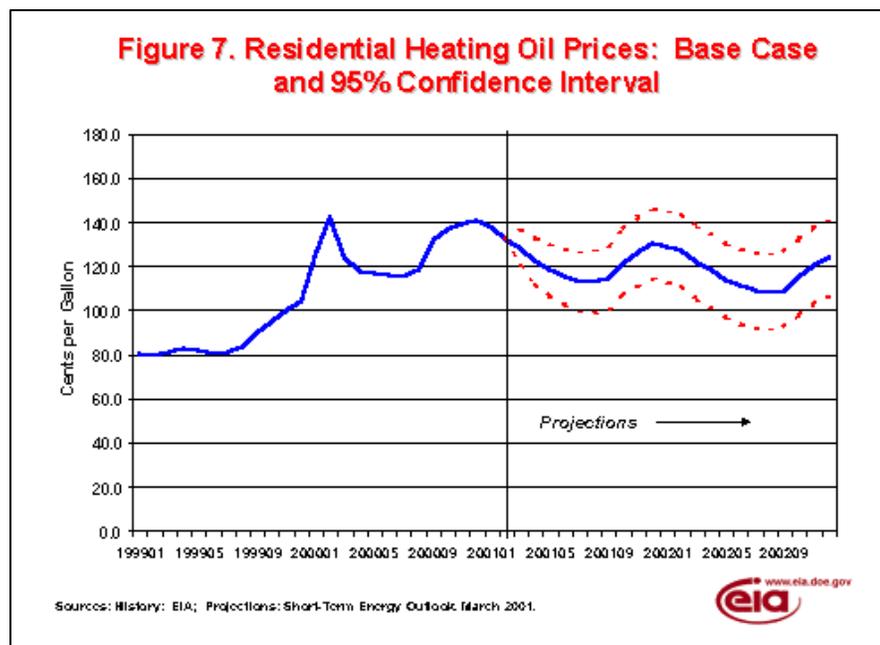
Non-OPEC production is expected to increase by another 0.7 million barrels per day in 2001, and another 0.9 million barrels per day in 2002. This represents an increase of 100,00 barrels per day from the previous Outlook, with the gain expected primarily from the former Soviet Union.

International Oil Demand. World oil demand is expected to continue to grow despite concerns over a gradual economic slowdown in the industrialized countries (Figure 5). However, EIA has lowered its projected world oil demand in 2001 by 100,000 barrels per day from the previous Outlook, reducing world oil demand growth to 1.5 million barrels per day in 2001. Non-OECD Asia is still expected to be the leading region for oil demand growth over the next two years.

World Oil Inventories. EIA does not attempt to estimate oil inventory levels on a global basis, however, the direction global oil inventories are headed is discerned from EIA's world oil supply and demand estimates. These estimates provide only a rough guide because of what has come to be known as the "missing barrels problem". The available limited data for tracking inventories suggest that inventories have not been building as fast as any of the global supply/demand estimates (including EIA's) would indicate, and that the inventory estimates are being overstated.

The most reliable inventory data are from the OECD countries. The data indicates that there was very little stockbuild in 2000 for these countries, which account for a little more than half of total world oil demand (Figure 6). However, EIA's global supply/demand estimates suggest that OECD inventories should have been building by almost 400,000 barrels per day in 2000. EIA's projections for OECD inventories are adjusted to reflect the assumption that the "missing barrels problem" will continue in 2001, but will be diminished by 2002. With this adjustment, OECD inventories are projected to grow relatively slowly in 2001 and 2002. EIA believes that this stock growth will be small enough to provide continued price support because inventories will continue to be low compared to levels required to provide normal coverage for forward demand.

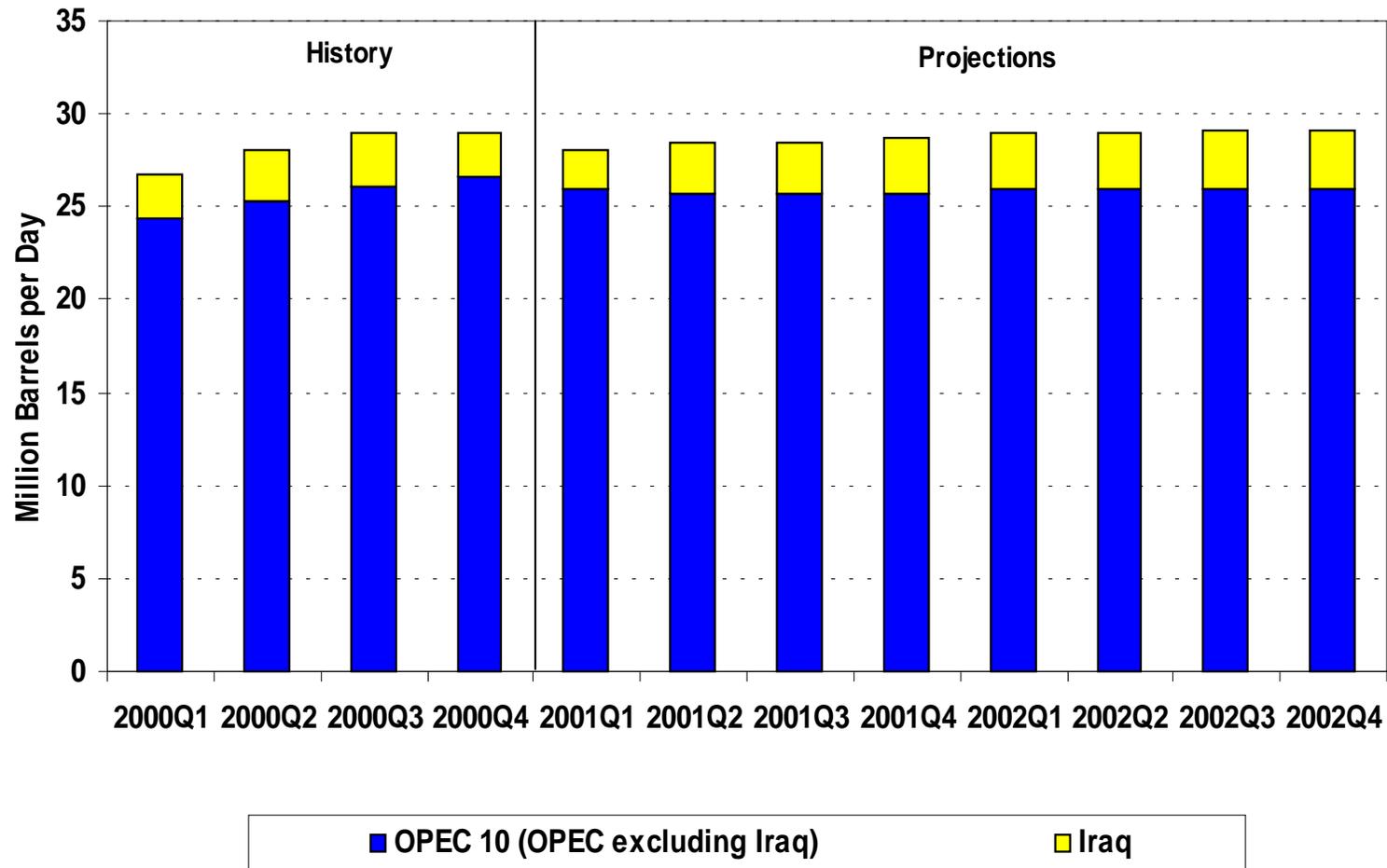
EIA's evaluation of normal OECD stock levels accounts for both historical averages and increasing inventory requirements, reflecting world demand increases. For this reason, EIA's assessments of OECD stocks are more bullish for prices than those using just historical averages.



U. S. Energy Prices

Heating Oil. Retail heating oil prices have been sliding down from their winter peak of \$1.41 per gallon last December. Our winter heating oil prices are expected to average around \$1.36 compared to \$1.39 in our previous Outlook. Nevertheless, retail heating oil prices have been quite high in historical terms. The national average price for the 4th quarter (October-December) of last year was almost 40 cents per gallon above the 1999 4th quarter price (Figure 7). Now that the heating season (October-March) is nearly

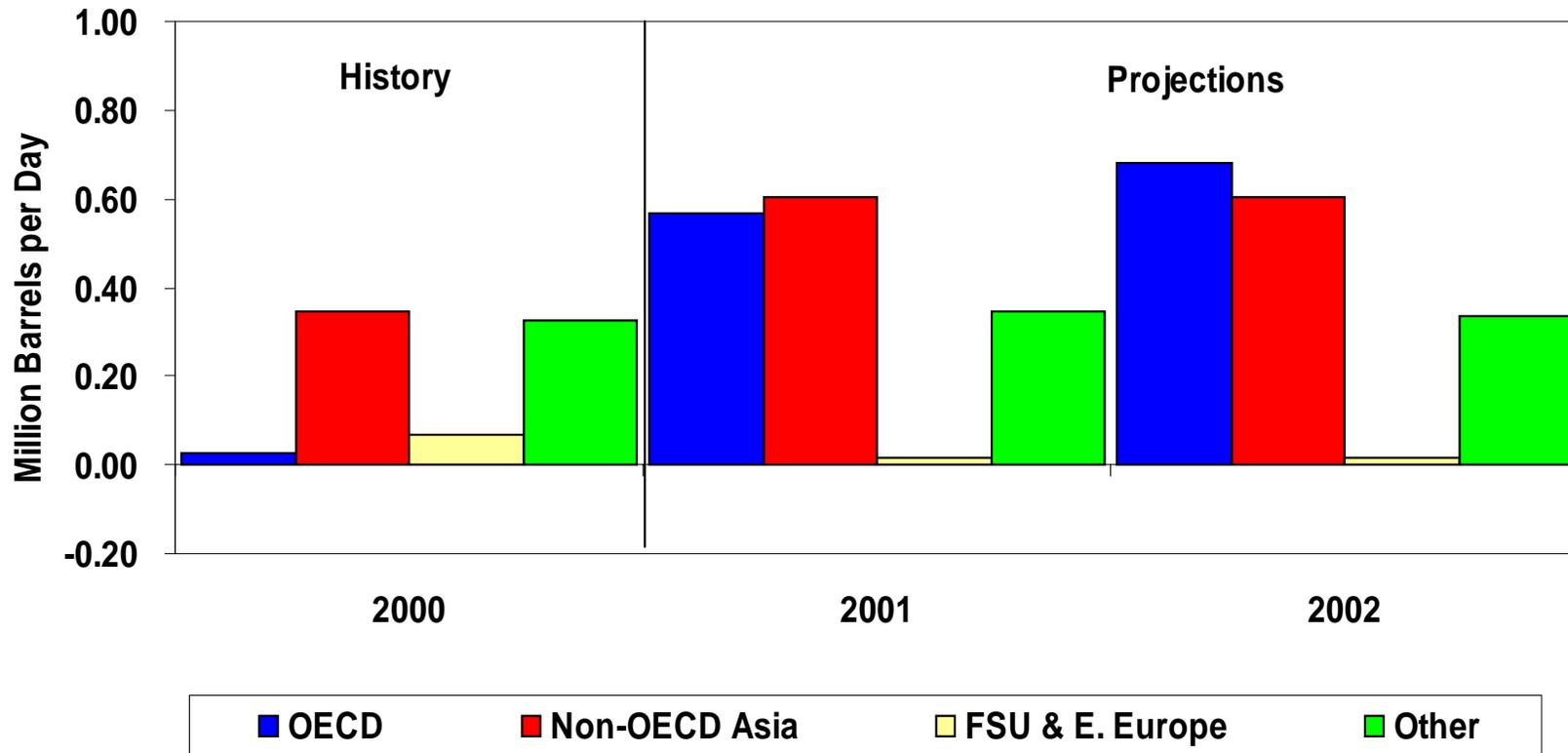
Figure 4. OPEC Crude Oil Production 2000-2002



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



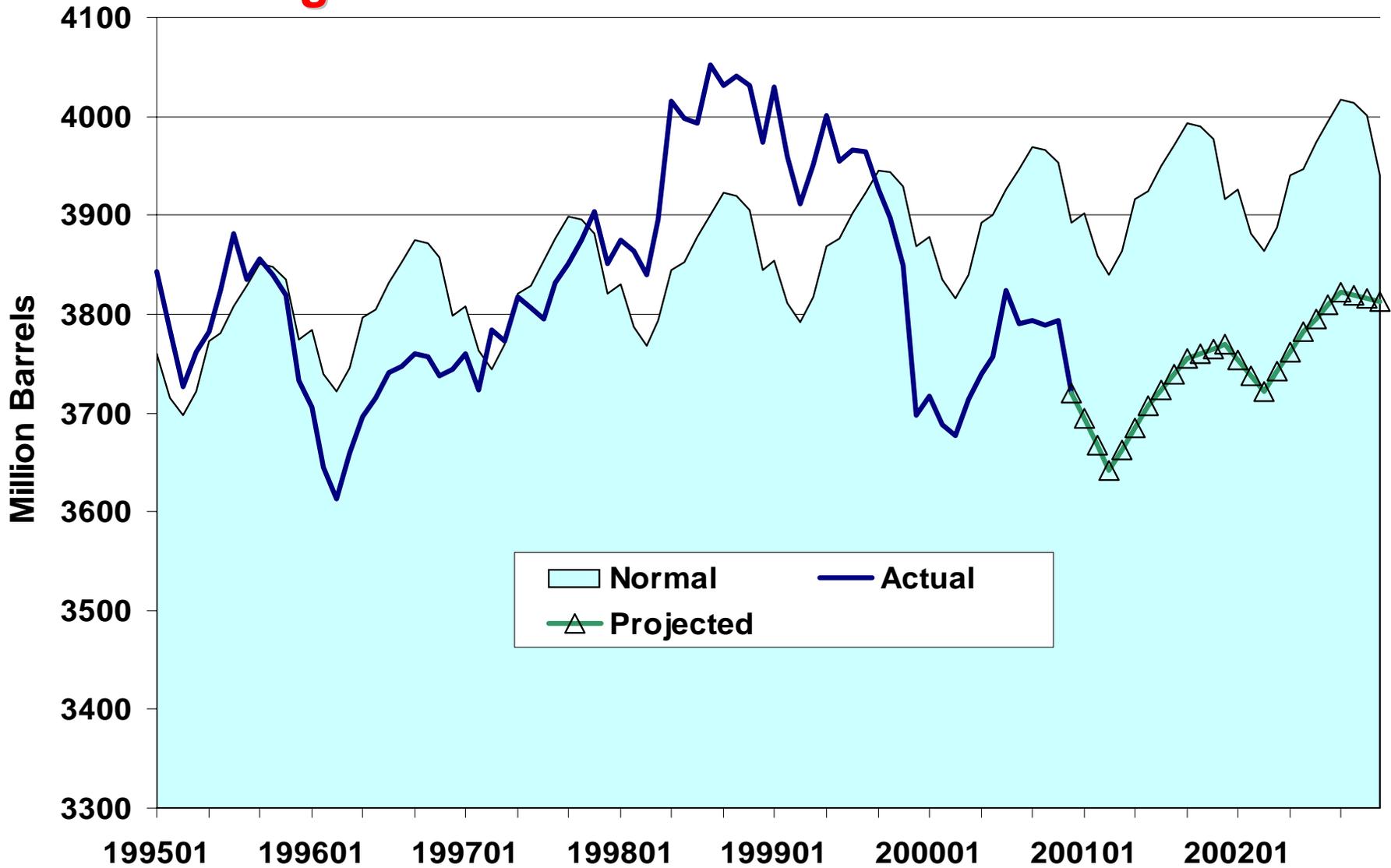
Figure 5. Annual World Oil Demand (Changes from Previous Year)



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



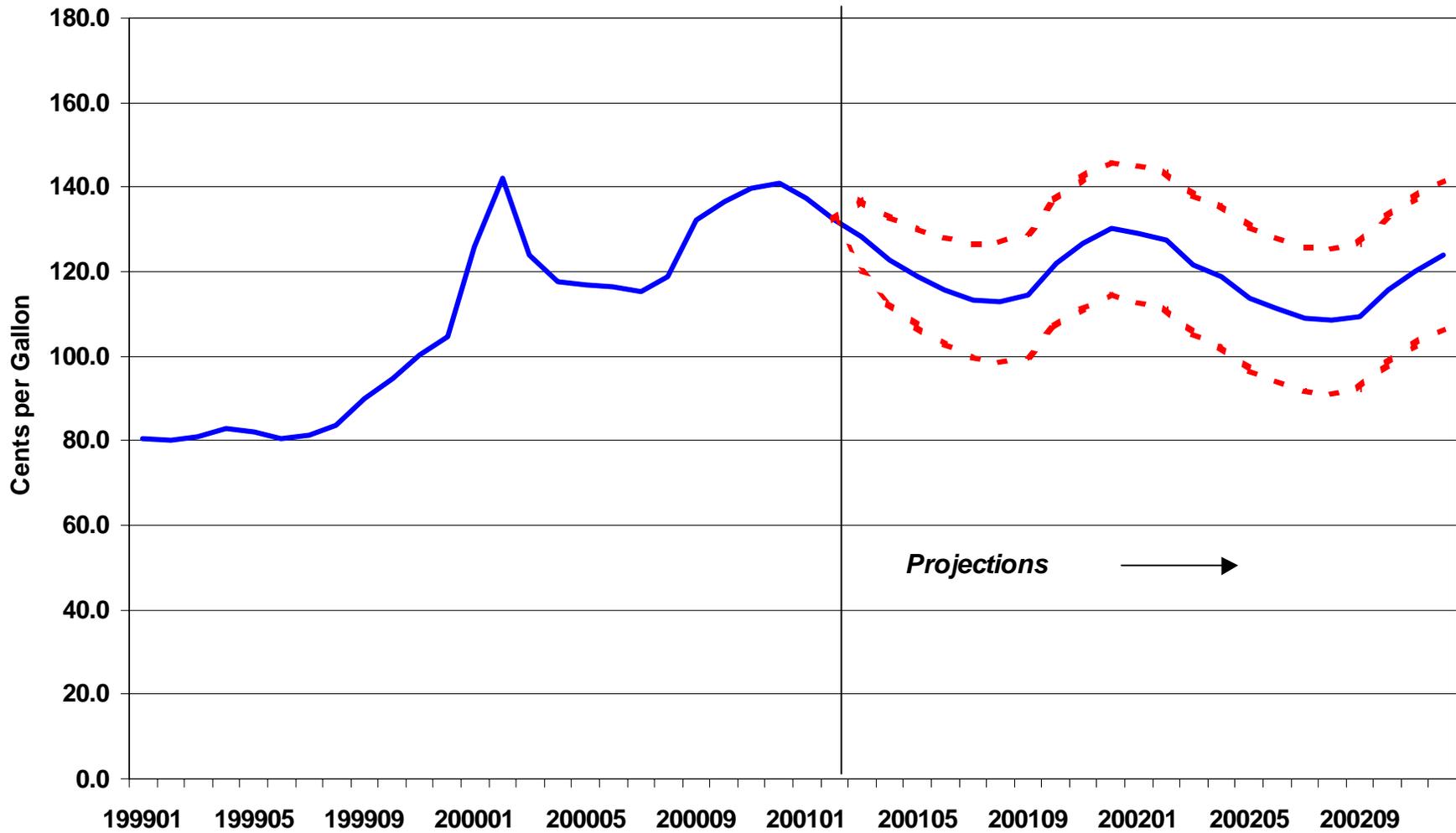
Figure 6. Total OECD Petroleum Stocks



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



Figure 7. Residential Heating Oil Prices: Base Case and 95% Confidence Interval



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



over, we can be confident that retail heating oil prices have peaked for the winter, provided that no sustained crude oil price shocks occur over the next month. Warmer than normal weather for the first two months of the year accompanied by falling crude oil prices in December (dropping about \$5.00 dollars per barrel from November) and January, have helped ease heating oil prices. Because of the relatively mild weather in the Northeast during the last half of January and portions of February, heating oil stock levels have stayed fairly steady over the past two months. For the first time since November 1999, U.S. distillate stocks are currently within bounds of the normal range ([Figure 8](#)). Also, heating oil production had been quite vigorous, running several hundred thousand barrels per day over last year's pace.

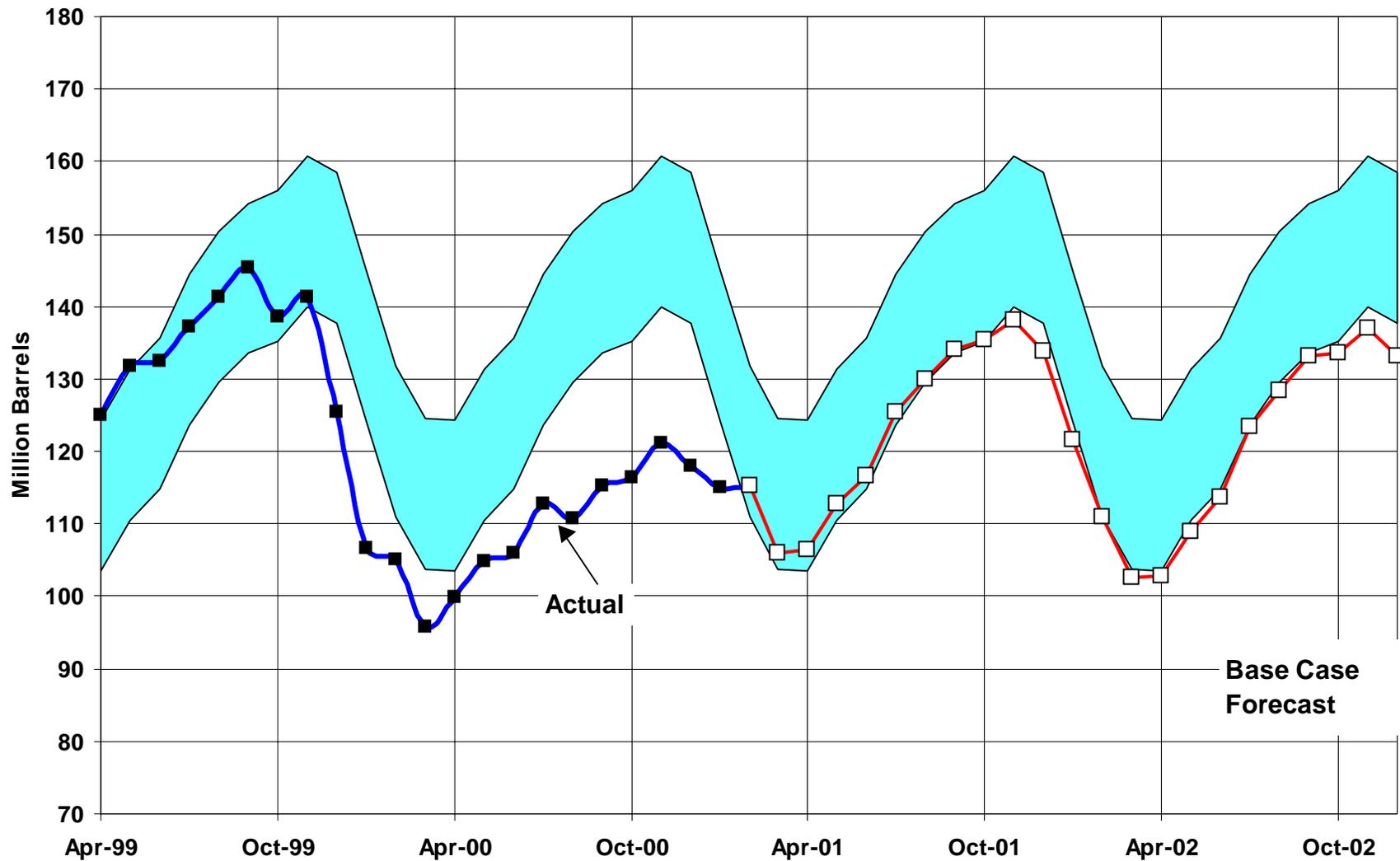
Motor Gasoline. Pump prices have dropped about 10 cents per gallon since last September, but will soon be heading back up as we enter the driving season in April. With crude oil prices gaining about \$1.00 per barrel from their December lows, combined with lower than normal stock levels, we project that prices at the pump will rise to about \$1.49 per gallon (for regular unleaded self-service) during the peak months of the driving season ([Figure 9](#)). For the summer of 2001, we are projecting an average price of \$1.47 per gallon, compared to \$1.53 seen during the previous driving season. Even though motor gasoline stocks during the driving season are projected to be slightly lower than they were a year ago ([Figure 10](#)), crude oil prices are also projected to be lower. Moreover, last year the high national average prices were skewed by exceedingly high pump prices in the Midwest (over \$2.00 per gallon at times), which, in turn, were the result of critical regional supply problems. Although in our base we do not project a repeat of last year, the current situation of relatively low inventories for gasoline could once again set the stage for some regional imbalances in supply that could bring about significant price volatility in the U.S. gasoline market.

Natural Gas. Natural gas prices ([Figure 11](#)) began an ascent that originated last summer primarily in response to low levels of underground gas storage. Spot prices have increased well over \$4.00 per thousand cubic feet since late June, even topping \$10.00 per thousand cubic feet on several occasions this winter. The wellhead price this heating season is likely to end up more than double the price of last heating season. The length of time that gas prices have remained so high is unprecedented. Moreover, the current dynamics of the natural gas market leads us to believe that prices at the wellhead will not soon be returning to the low \$2.00 per thousand cubic feet experienced just one year ago. The chief basis for our view is our outlook for robust levels of gas demand growth over the next two years, particularly in the electric power sector. By the year 2002, more than half of the increases in electricity generation are expected to come from natural gas. Furthermore, gas demand in the industrial sector (the single largest gas consuming sector) is also expected to make strong gains over the same time period. Although gas production and imports are expected to increase in the forecast period, we believe that the gains in supply will not be enough to bring the wellhead price down to the \$2.00-3.00 range in the short-term.

We expect that winter (October 2000-March 2001) natural gas prices at the wellhead will end up averaging about \$5.64 per thousand cubic feet. In our base case, residential prices for natural gas this winter would be about 46 percent higher than last year during that period. When the heating season ends next month, average wellhead prices are projected to decline, averaging about \$4.05 per thousand cubic feet for the spring and summer. However, if the summer weather is exceedingly hot in regions that consume large quantities of gas-fired electricity, (California and Texas for example), then injections into underground storage for the next winter would be strained and prices could start rising more sharply and sooner than expected. In 2001, the annual average wellhead price is projected to be about \$4.73 per thousand cubic feet. Next year, we expect the storage situation to improve modestly and with that, a decrease in the average annual wellhead price. Increases in production and imports of natural gas needed to keep pace with the rapidly growing demand for natural gas will be accompanied, for the time being, by relatively expensive supplies for gas due to rising production costs and capacity constraints on the pipelines.

Electric Utility Fuels. The rapid rise in gas prices last summer and fall has pulled delivered gas prices above heavy fuel oil prices on a cost per Btu basis ([Figure 12](#)). As this situation is likely to persist, we

Figure 8. U.S. Total Distillate Fuel Stocks

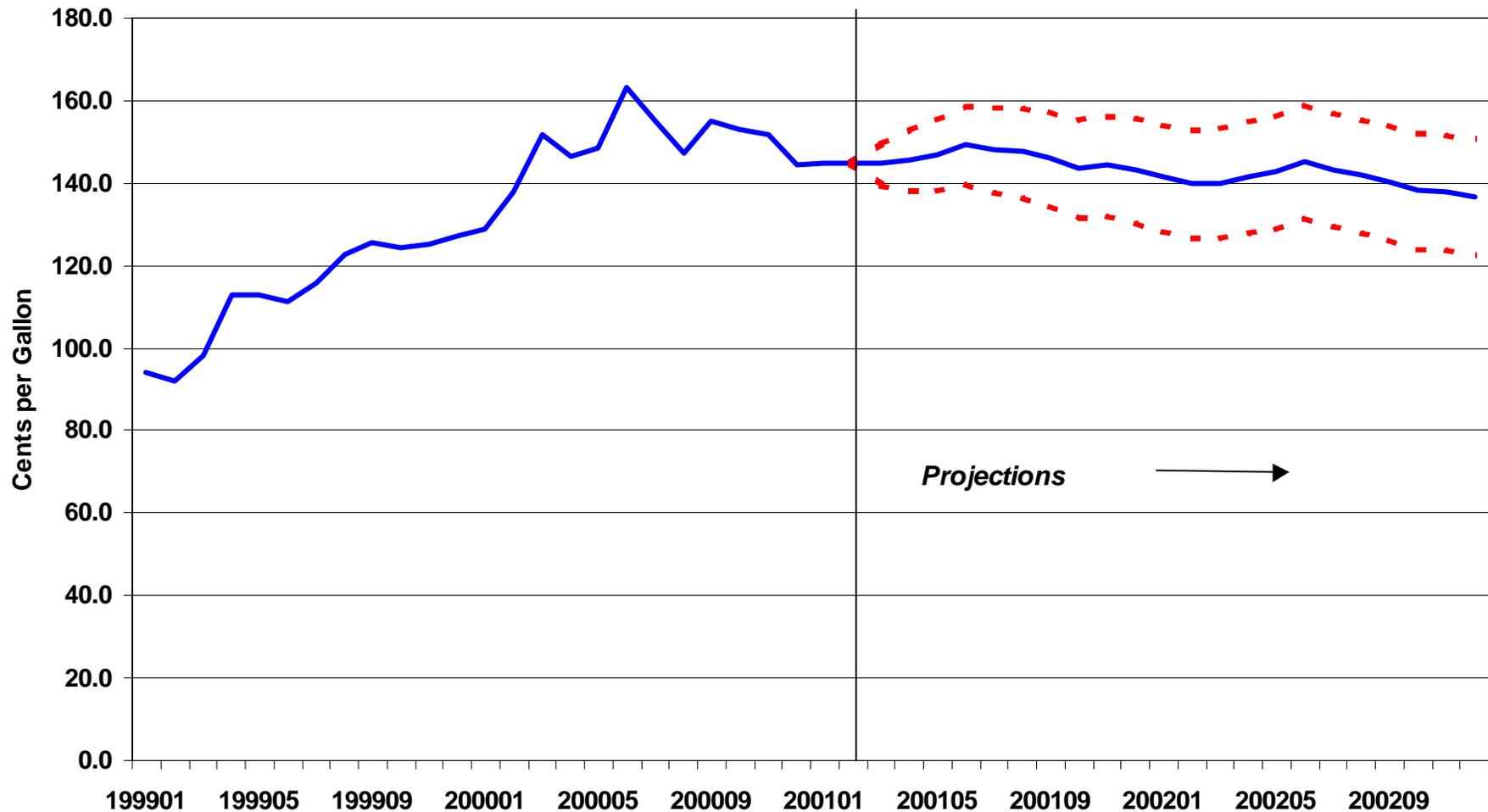


NOTE: Colored band is normal stock range

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



Figure 9. Retail Motor Gasoline Prices*: Base Case and 95% Confidence Interval

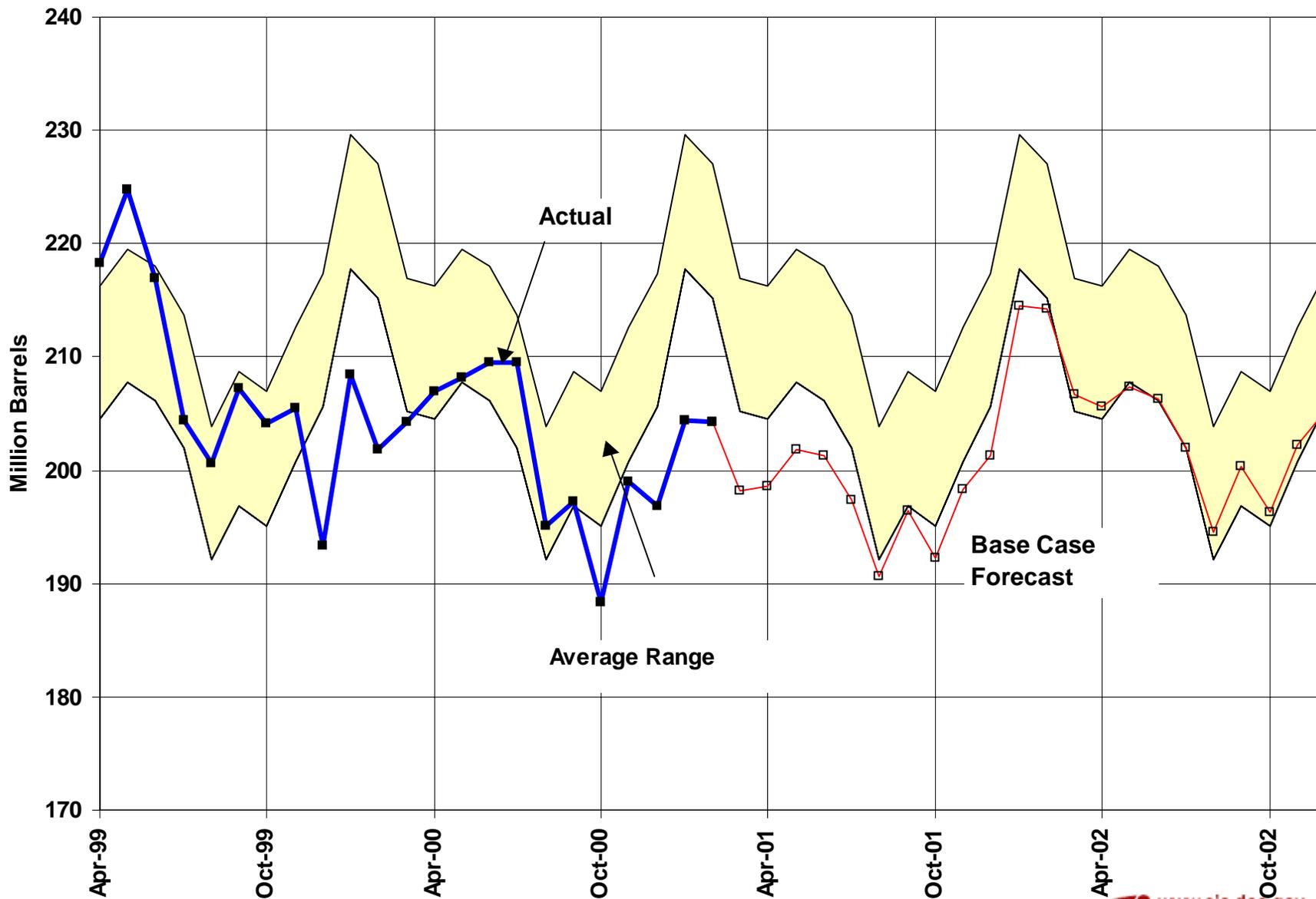


* Regular unleaded self-service



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

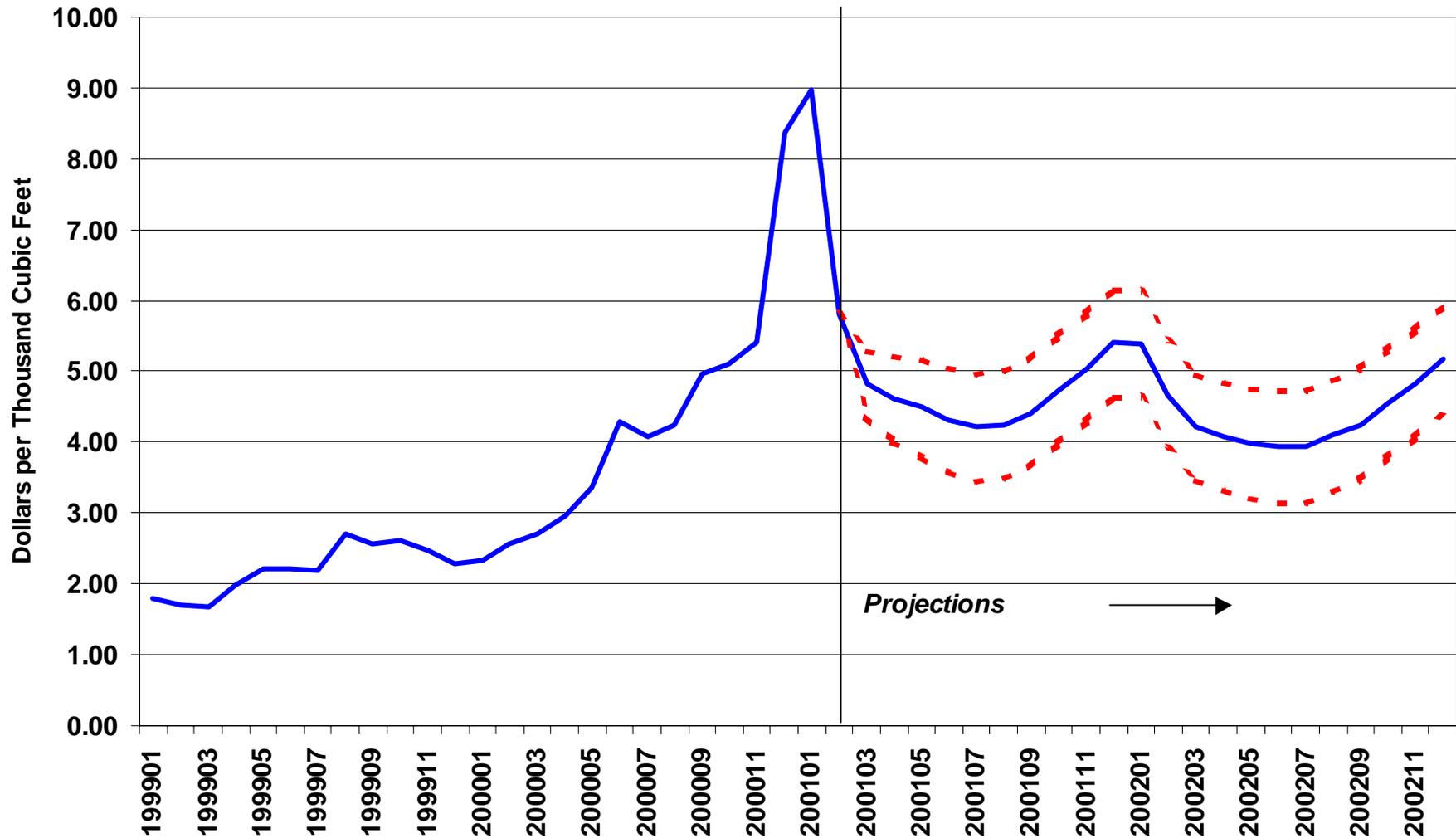
Figure 10. Gasoline Stocks



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



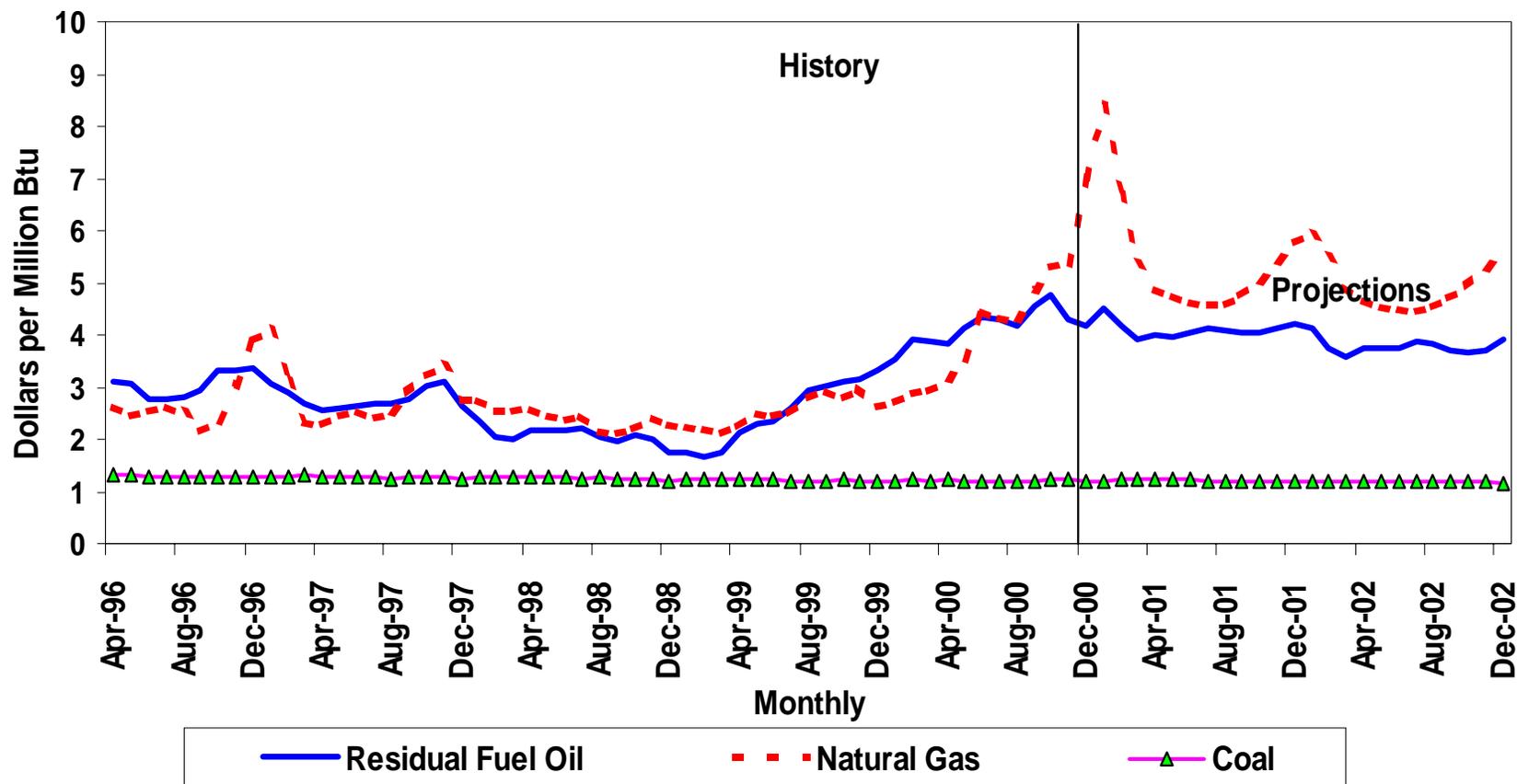
Figure 11. Natural Gas Spot Prices: Base Case and 95% Confidence Interval



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



Figure 12. Fossil Fuel Prices to Electric Utilities



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



anticipate some recovery in the amount of oil used for power generation over the very low levels seen since late 1999. In 2001, the cost of coal to electric utilities is projected to increase slightly, after years of slow but continual decline, as coal, like oil, is being used more intensively for electricity generation in lieu of expensive or unavailable natural gas. On an inflation-adjusted basis, however, coal prices should still show a decline this year.

U.S. Oil Demand

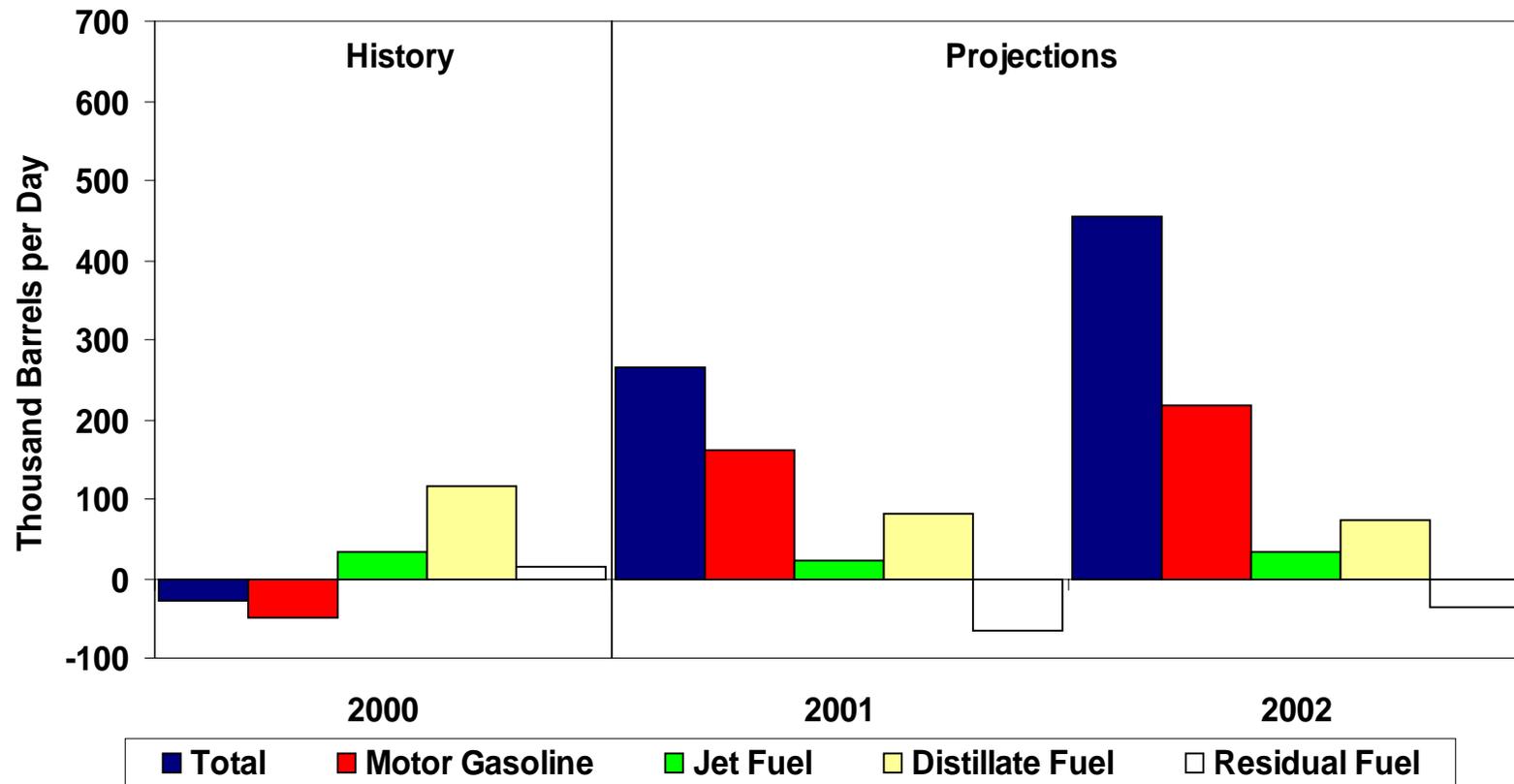
The recent release of December 2000 monthly data confirms the overall shrinkage in last year's petroleum demand that had become increasingly apparent for the past several months. The data for last year show that shipments of petroleum products declined by 30,000 barrels per day despite substantial growth in major economic indicators for much of the year ([Figure 13](#)). Despite robust economic growth and the presence of colder-than-normal weather of the fourth quarter, petroleum markets were unable to overcome the effects of a record mild first quarter--the peak heating season--and the substantial increase in energy prices that eroded demand during the second half of the year.

Motor gasoline demand in 2000 fell by almost 50,000 barrels per day, reflecting a fractional decline in highway travel activity brought about by a 30-percent year-to-year increase in retail motor gasoline prices. Although highway travel declined during the third quarter--the peak driving season--from that of the previous year, the lagged effects of the earlier price increases and the moderation in economic growth resulted in an even larger year-over-year contraction in the fourth quarter. Despite a 10-percent hike in ticket prices in 2000, commercial jet fuel demand, buoyed by 6.5- and 4.5-percent increases in utilization and capacity, respectively, rose 3.5 percent. (The resultant 2-percent increase in load factor boosted consumption by constraining fuel-efficiency increases to only one percent, half the long-term average). Total jet fuel deliveries, which include corporate, military, and weather-related components, rose just 2.0 percent, down from 3.1 percent in the previous year. The record mild warm weather of the first quarter depressed shipments of jet fuel used as a blending component during the winter months. Distillate fuel oil demand grew by 3.2 percent in 2000 led mostly by strength in transportation diesel demand. Residual fuel shipments, highly sensitive to changes in relative prices, fluctuated wildly but managed to increase by 1.8 percent for the year as a whole. Following a year of double-digit increases, the combination of slowdowns in petrochemical activity, and mild weather resulted in a slight decline in the total demand for liquefied petroleum gas and oil-based petrochemical products.

During the forecast interval, total petroleum demand is projected to increase once again. Despite the current economic slowdown, growth in real disposable income is projected to be 3.1 percent in 2001, and a robust 4.6 percent in 2002. Petroleum prices, which are expected to decline slowly throughout the forecast interval, will not have the same kind of negative impact on demand this year that was brought about last year by large average price increases. Weather patterns are assumed to exhibit normal seasonality. In this environment, total petroleum demand is projected to increase by 260,000 barrels per day in 2001, accelerating to 443,000 barrels per day next year, a 1.8-percent average increase. Reversing last year's declines, motor gasoline demand and highway travel activity are both expected to increase, but at an average of only 2.2 percent despite the steady downward trend in retail gasoline prices and robust growth in disposable income. Total jet fuel demand is expected to increase by an average 1.6-percent rate, with commercial demand rising by 3 percent. Distillate fuel demand is projected to rise by an average of 2.1 percent, down from the 3-percent average of the previous 2 years, due to a moderation in transportation demand. Demand for residual fuel oil is projected to continue to decline throughout the forecast interval, as declines in non-power generation demand offset a modest recovery in shipments to power generators.

U.S. Oil Supply

Figure 13. Petroleum Products Demand (Year-to-Year Change)



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



Average domestic oil production is expected to be flat in 2001, at a level of 5.83 million barrels of oil per day ([Figure 14](#)). For 2002, a 0.20 percent rise is expected to result in a production rate of 5.84 million barrels of oil per day average for the year.

In the Lower-48 States, oil production is expected to decline by 53,000 barrels per day to a rate of 4.80 million barrels per day in 2001, and followed by an decrease of 13,000 barrels per day in 2002. Oil production from the Mars, Troika, Ursa, and Brutus Federal Offshore fields is expected to account for about 8.2 percent of the lower-48 oil production by the 4th quarter of 2002.

Alaska is expected to account for about 18 percent of the total U.S. oil production in 2002. Its oil production is expected to increase by 5.6 percent in 2001 and by 2.4 percent in 2002. The gain in 2001 is the result of adding two new satellite fields, Colville River (Alpine) and Prudhoe Bay (Aurora) which contributed to the Alaska North Slope production. Initial rates from Alpine averaged 67,000 barrels per day during January and it is expected to peak at 80,000 barrels per day in mid-2001, while Aurora peak production should occur later in the year. Another satellite field, North Star, is expected to come on in early to mid-2002 and will peak at a rate of 65,000 barrels per day by year's end. A substantial portion of the oil production from Alaska comes from the giant Prudhoe Bay Field. As a result of maintenance, better well work, more development drilling, and better coordination of occasional down time, this field's decline rate last year has changed from the usual 10 percent to only 3 percent per year. However, the field is expected to follow a steeper decline during this forecast period. Oil production from recent discoveries is expected to substantially offset the decline in oil production from the Prudhoe Bay field in the North Slope in 2001. Production from the Kuparuk River field plus like production from West Sak, Tabasco and Tarn fields is expected to stay at an average of 236,000 barrels per day in the 2001-2002 forecast period.

Natural Gas Demand and Supply

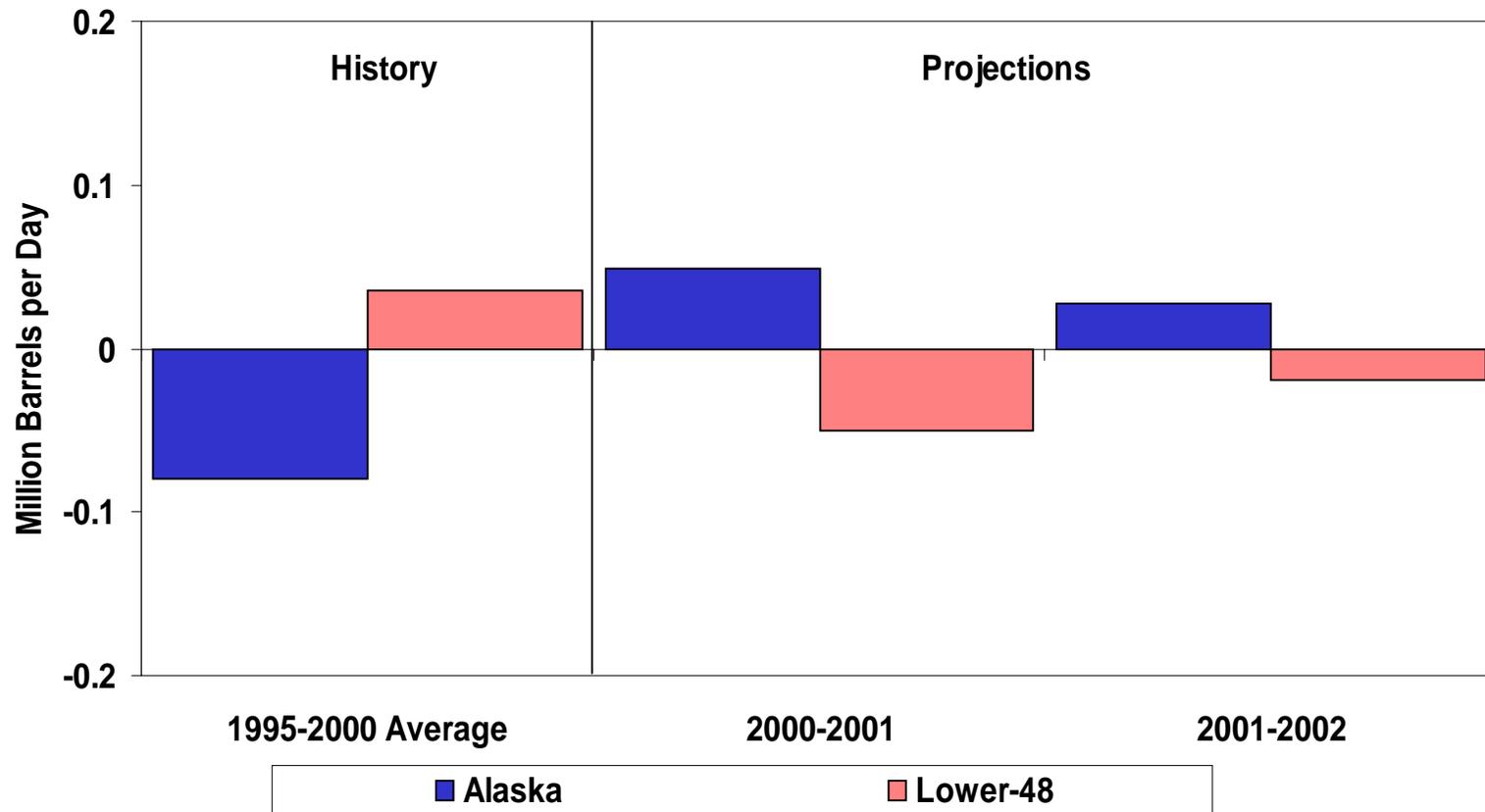
U.S. natural gas demand is expected to grow at about a 2.3-percent rate this year, following the strong 4.4-percent performance in 2000 ([Figure 15](#)). A slowing economy and less rapid demand growth in the industrial and commercial sectors is the reason. Growth in 2002 is expected to heat up again to about 4.1 percent as the economy picks up again and as new gas-fired power generation requirements continue to mount.

Domestic gas production for 2001 and 2002 is expected to rise as production responds to the high rates of drilling experienced over the past year. Production is estimated to have risen by 3.1 percent in 2000 and it is forecast to continue to increase by 3.3 percent rate in 2001 and 2.5 percent in 2002.

According to the American Gas Association (AGA), during the week ending February 23, a total of 101 billion cubic feet (bcf) was withdrawn from storage, bringing the total of working gas to 26 percent full ([Figure 16](#)). Based on this information, we estimate that, on an EIA survey basis, working gas in storage at end-February will reach 901 billion cubic feet. From this we project that end-season (March 31) working gas will fall to 689 bcf. This level is more than 100 bcf above last month's projections. While this represents an improvement over previous estimates (and expectations for March spot prices have softened some over the last 2 months) such an end-season level would still represent the lowest recorded by EIA and is 38 percent below the previous 5-year average. We estimate that net injection, between April 1 and October 31, would have to be about 500 bcf (25 percent) above average to bring working gas to average pre-season levels for next winter. We think that only about 60 percent of the extra 500 bcf is likely during the injection season, so that a 200 bcf deficit relative to the 5-year average is likely at end-October.

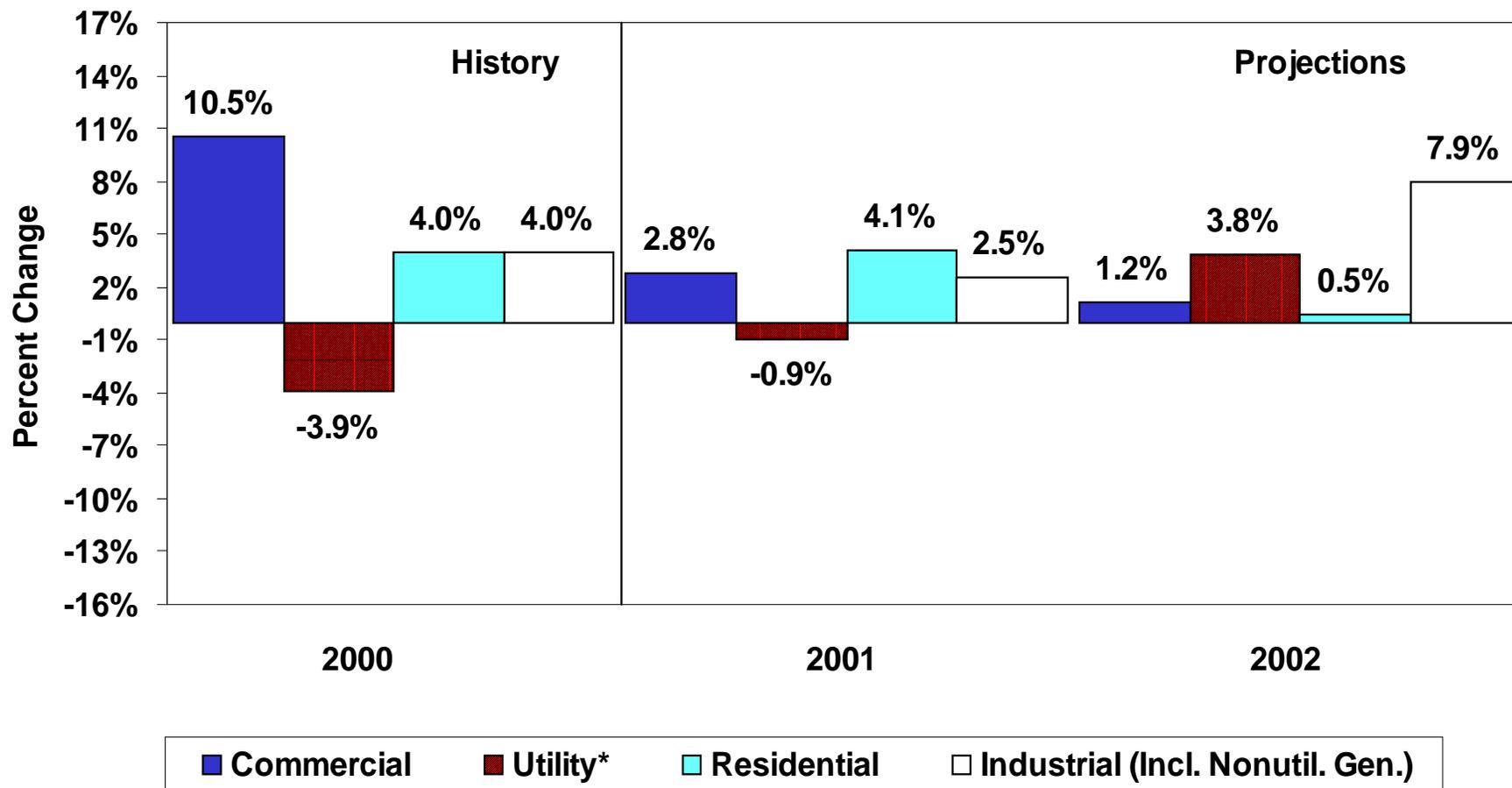
Net imports of natural gas are projected to rise by about 15 percent in 2001 and by another 4 percent in 2002. For this winter, we expect net imports to be 6.6 percent higher than last winter's imports. The Alliance

Figure 14. U.S. Crude Oil Production (Year-to-Year Change)



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

Figure 15. Annual Changes in Natural Gas Demand by Sector

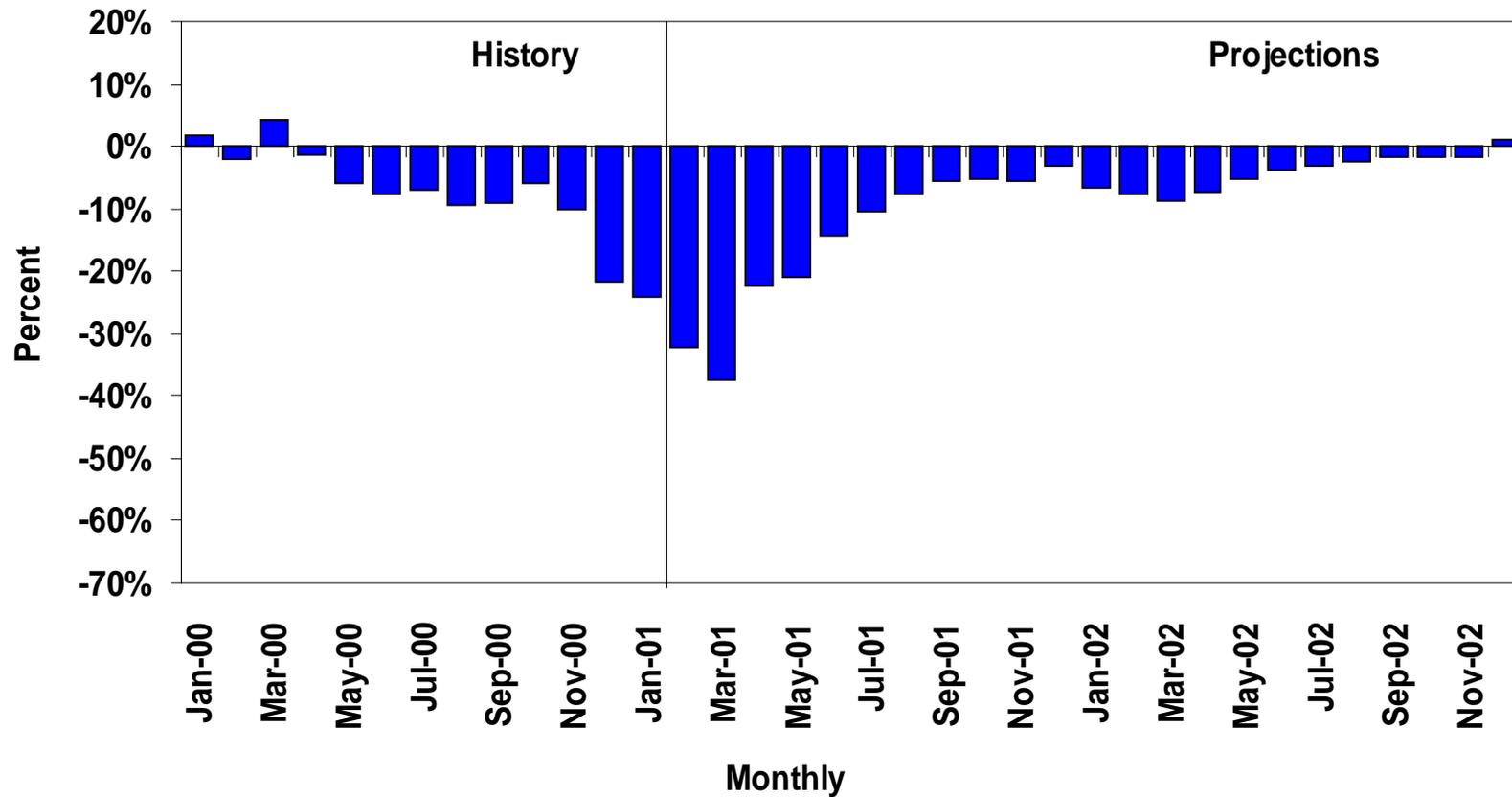


* Electric utility gas demand changes in recent years in part reflect sale of assets to the nonutility sector

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



**Figure 16. Working Gas in Storage
(Percentage Difference from Previous 5-Year
Average)**



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



Pipeline began carrying gas from western Canada to the Midwest on December 1, having been delayed from its original October 2 opening. A new report by Canada's National Energy Board predicts that gas deliverability from Western Canada will rise by 1.1 bcf/d by 2002, due to the ongoing drilling boom. Western Canada supplies 15 percent of the gas consumed in the United States.

Electricity Demand and Supply

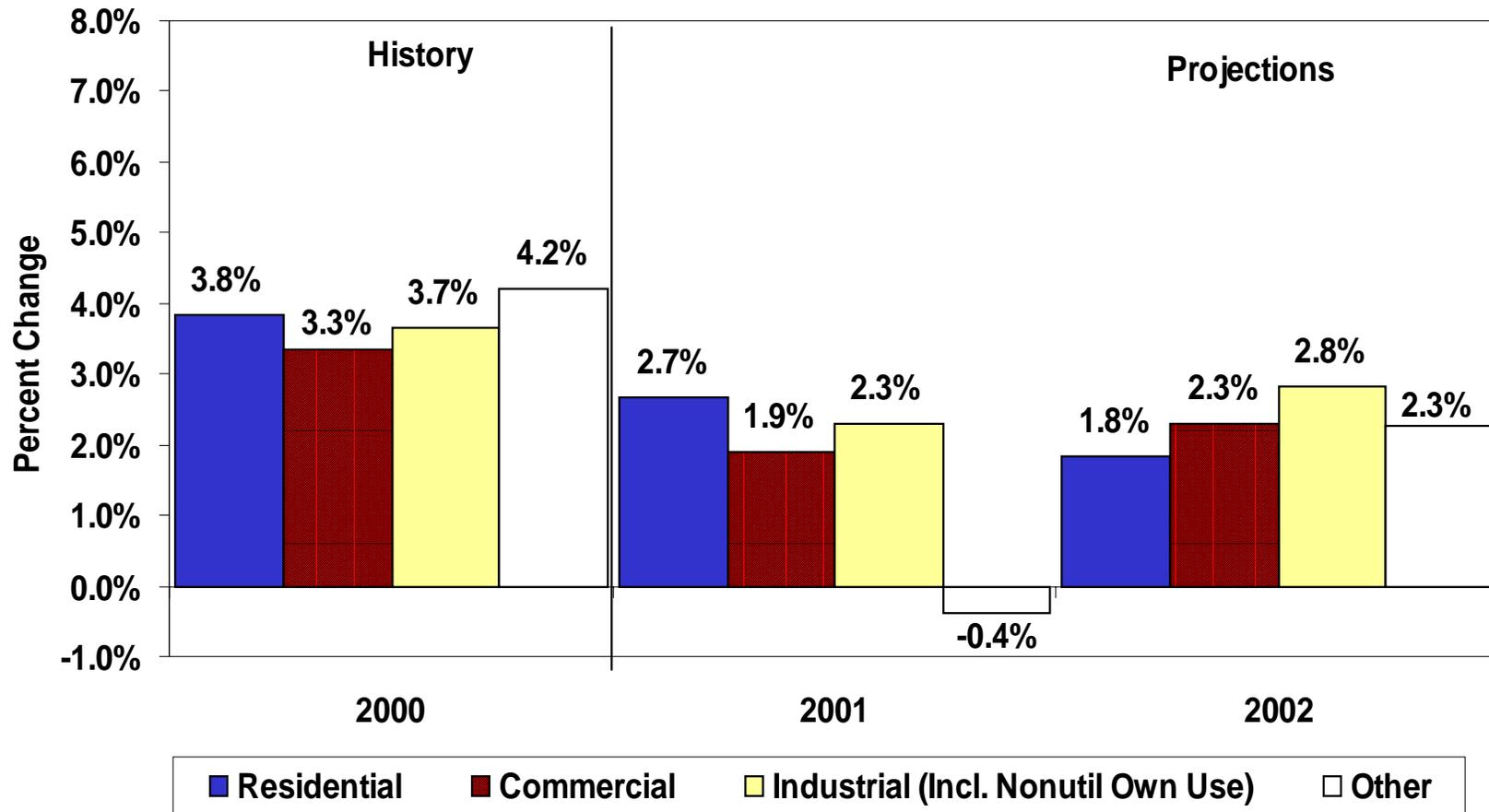
Total annual electricity demand growth (retail sales plus industrial generation for own use) is projected at about 2.2 percent in 2001 and 2.3 percent in 2002. This is compared with estimated demand in 2000 that was 3.6 percent higher than the previous year's level. Electricity demand growth is expected to be slower in the forecast years than it was in 2000 partly because economic growth is also slowing from its higher 2000 level.

This winter's overall heating degree-days (HDD) are assumed to be about 17 percent above last winter's HDD, which were well below normal. This is based on the very cold temperatures seen in November and December, the somewhat more moderate rise in HDD in January and February, as well as on the assumption that the less than one month remaining of winter will be normal. This winter, total electricity demand is expected to be up by 4.6 percent over last winter's level, driven by increased demand in the residential and commercial sectors, which are expected to be up by 8 and 4 percent, respectively ([Figure 17](#) and [Table 10](#)).

In the fourth quarter of 2000, previously falling demand for oil-fired generation began to turn around as the price differential between natural gas and oil in the electricity generating sector shifted to favor oil, prompting those plants which can switch to oil to do so. This trend is projected to continue through first quarter 2001. Although the favorable price differential for oil relative to gas is expected to continue through the forecast period, by the second half of 2001, expected increases in gas-fired capacity are expected to keep gas demand for power generation growing.

Natural gas supply and deliverability problems in California for gas-fired electricity generation have helped to boost gas price to electricity producers and other consumers. The situation in California is characterized by low gas storage, gas pipeline bottlenecks, high demand and low hydropower availability. These supply problems are following on last summer's supply problems with no obvious end visible over the next two years. Average California gas prices dramatically outstripped prices elsewhere in the country through December but have since been coming down as weather-related demand has eased up somewhat ([Figure 18](#)).

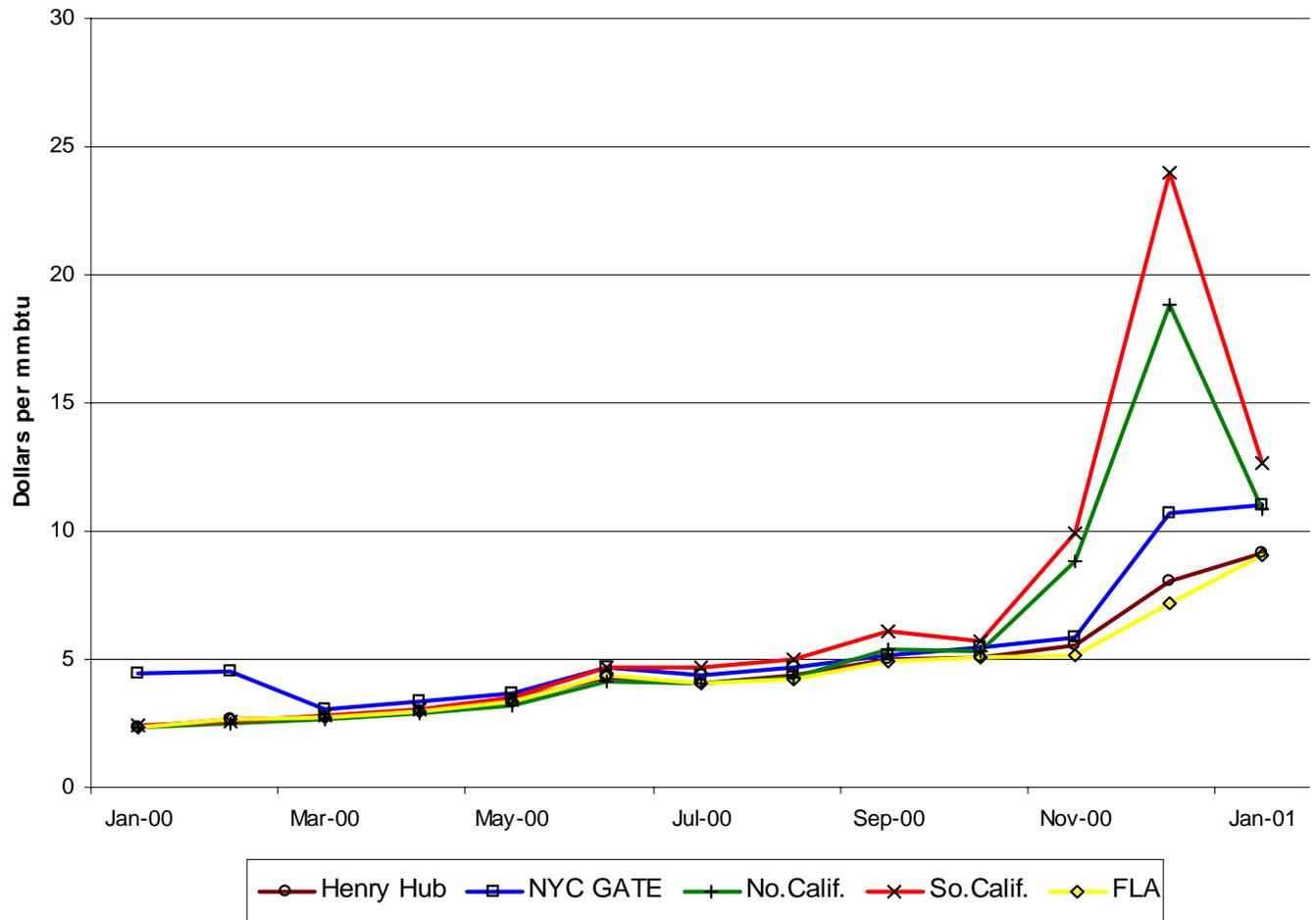
Figure 17. Annual Changes in U.S. Electricity Demand



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



Figure 18. Comparison of Key Natural Gas Prices: Monthly Average Delivered to Pipeline Prices in 2000



Source: Natural Gas Week



 **Special Analysis:**

Energy Demand Impacts of a Low Economic Growth Scenario in the Near Term

March 2001

**Alternative Macroeconomic Cases:
 March 2001 Short-Term Energy Outlook**

	2000	2001	2002
	(percent growth)		
Real GDP			
Base Case	5.0%	2.2%	4.2%
Low Case		0.6%	5.2%
Petroleum Demand			
Base Case	-0.1%	1.2%	2.0%
Low Case		0.4%	2.4%
Natural Gas Demand			
Base Case	4.4%	2.3%	4.1%
Low Case		1.4%	4.5%
Electricity Demand			
Base Case	3.6%	2.2%	2.3%
Low Case		1.5%	2.6%
Total Energy Demand			
Base Case	4.4%	2.3%	4.1%
Low Case		1.4%	4.5%

Recent evidence shows that the economy is slowing much faster than was expected several months ago. Measures of consumer confidence fell sharply in January and February. Further declines in consumer confidence would increase the likelihood of additional weakness in growth of GDP. Weak growth in consumer spending for goods and business investment in equipment have contributed to a decline in manufacturing production. In February, purchasing managers of large manufacturing firms reported continuing declines in manufacturing activity. Manufacturing activity showed little improvement in February from very weak conditions in January.

Source: EIA, Short-Term Integrated Forecasting System database, March 2001. Macroeconomic projections are based on DRI/McGraw-Hill Forecasts CONTROL0201 and PESSIM0201.

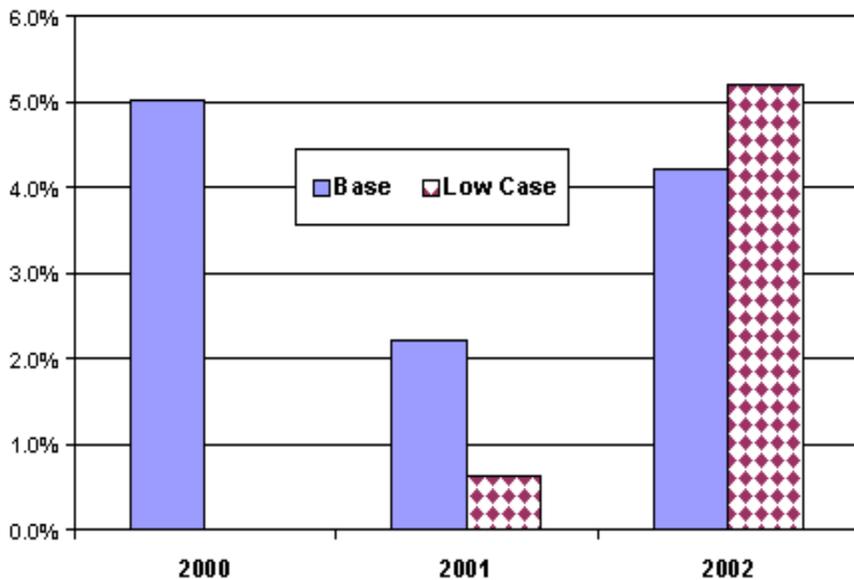
obviously has implications for energy demand this year and 2002 as well. This analysis provides some quantitative substance to those implications for a particular low growth scenario. A higher growth scenario that may evolve from a quicker resurgence in the U.S. economy than currently expected would also be of interest and will be examined in the next Outlook.

The possibility that the U.S. economy may be slowing down faster than is allowed for in the current (March 2001) base case

We have evaluated the implications of very low growth this year for short-term energy demand by comparing our current base case macroeconomic outlook (based on DRI/McGraw-Hill's (DRI) CONTROL0201 scenario) with a modified version of DRI's pessimistic (PESSIM0201) case. The lower growth scenario assumes that both consumer and business confidence continues to decline rather significantly. Overly optimistic sales projections creates inventory problems for businesses. Additional uncertainty may come from large declines in the stock market, eroding substantial asset wealth of consumers. Softer employment markets further weakens the consumer's willingness to spend. Interest rates decline faster compared to the baseline scenario and the economy begins to recover by the third quarter. The base case calls for average GDP growth in 2001 of 2.2 percent following the 5.0-percent rate seen in 2000. GDP growth then rebounds to 4.2 percent in 2002 under base case assumptions. The PESSIM case generates a 1.6-percentage-point reduction in 2001 growth, leaving the average GDP growth this year

at 0.6 percent. The rate of recovery in 2002 jumps to 5.2 percent in 2002 under the PESSIM case, but that still leaves real GDP 0.6 percent the below base level next year.

Real GDP Growth Cases



Sources: Based on IRI/McGraw-Hill Forecasts CO-STRD0201 and PESSIM0201



The low economic growth case considered here would generate a 0.7-percentage-point reduction in overall energy demand in 2001 compared to the base case. Total U.S. petroleum demand would be 0.8 percent (170,000 barrels per day) below the base case level in 2001 and would remain about one half percentage point below the base case in 2002. Natural gas demand growth slips to 1.4 percent in 2001 from 2.3 percent between the base and low growth cases (a demand difference of about 220 billion cubic feet). Natural gas demand remains 0.6 percent below base case levels in the PESSIM case for 2002.

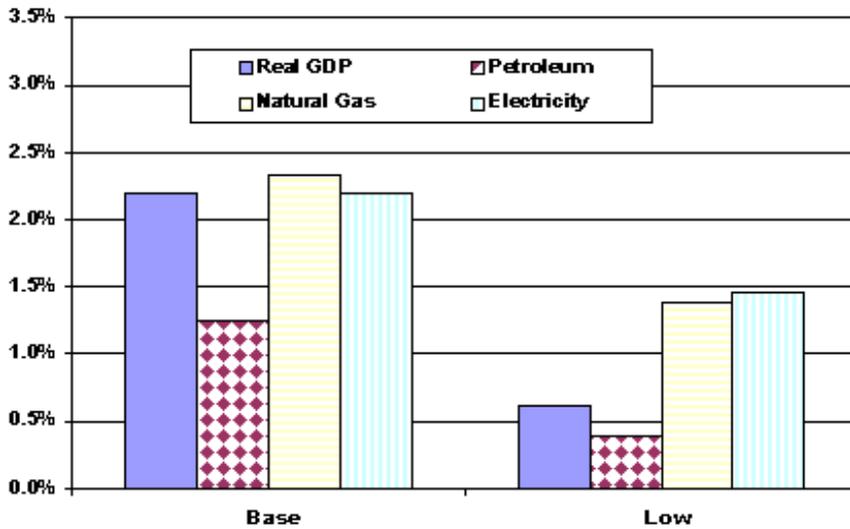
Meanwhile, electricity demand

growth, which stands at 2.2 percent this year under the base case scenario, is reduced to 1.5 percent under the PESSIM case. Electricity demand rises by 2.6 percent next year under the PESSIM case, but that leaves power consumption in 2002 0.5 percent below the base case level.

A weaker energy demand scenario, such as the one outlined above would obviously have some important consequences for domestic energy market balances in the short run. To the extent that a sharp slowdown in output in the United States spread to other consuming countries this year and next would also change the likely outcomes for international energy markets as well. With respect to the international oil market, assuming that world oil production remained at base case levels, the U.S. demand reduction (totaling approximately 100 million barrels through 2002) would be sufficient in itself to reduce world oil prices by about \$2-\$3 per barrel by late 2002. If significant additional demand reductions are induced abroad the price weakness would be expected to be somewhat more. If the world demand reduction were, for example, twice that expected for the United States, prices would tend to fall by about \$4-\$6 per barrel relative to the base case during 2002 or shortly thereafter. It is unlikely that production, either in OPEC or non-OPEC areas, would remain entirely constant between the growth cases but we assume that some net increase in supply (commercial stocks) would ultimately result from the demand slowdown.

In U.S. gas markets, the lower demand that would accompany the low economic growth case could ease many of the concerns surrounding the ability of U.S. gas suppliers to meet potential surges in gas demand

Economic and Energy Demand Growth Cases for 2001



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



this summer without leaving gas in storage at very low levels at the onset of the next heating season. Spot gas prices would likely fall below \$4.00 for some of the period between now and the end of the year. We note that, for 2001, the expected reduction in demand between cases (220 billion cubic feet) would not be sufficient to entirely obviate the necessity for an above-average net injection rate through October to close in on normal working gas levels prior to the next

heating season.

Table HL1. U. S. Energy Supply and Demand

	Year				Annual Percentage Change		
	1999	2000	2001	2002	1999-2000	2000-2001	2001-2002
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	8876	<i>9321</i>	<i>9526</i>	<i>9928</i>	5.0	2.2	4.2
Imported Crude Oil Price ^a (nominal dollars per barrel).....	17.22	<i>27.72</i>	<i>26.57</i>	<i>25.43</i>	61.0	-4.1	-4.3
Petroleum Supply (million barrels per day)							
Crude Oil Production ^b	5.88	<i>5.84</i>	<i>5.84</i>	<i>5.84</i>	-0.7	0.0	0.0
Total Petroleum Net Imports (including SPR)	9.91	<i>10.11</i>	<i>10.71</i>	<i>11.00</i>	2.0	5.9	2.7
Energy Demand							
World Petroleum (million barrels per day).....	74.9	<i>75.7</i>	<i>77.2</i>	<i>78.9</i>	1.1	2.0	2.2
Petroleum (million barrels per day).....	19.52	<i>19.49</i>	<i>19.76</i>	<i>20.21</i>	-0.2	1.4	2.3
Natural Gas (trillion cubic feet)	21.70	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>	4.4	2.3	4.1
Coal ^c (million short tons)	1044	<i>1078</i>	<i>1085</i>	<i>1095</i>	3.3	0.6	0.9
Electricity (billion kilowatthours)							
Retail Sales ^d	3312	<i>3414</i>	<i>3468</i>	<i>3543</i>	3.1	1.6	2.2
Nonutility Use/Sales ^e	185	<i>210</i>	<i>236</i>	<i>247</i>	13.5	12.4	4.7
Total	3497	<i>3624</i>	<i>3704</i>	<i>3790</i>	3.6	2.2	2.3
Total Energy Demand ^f (quadrillion Btu).....	97.1	<i>98.4</i>	<i>99.2</i>	<i>101.3</i>	1.3	0.8	2.1
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar)	10.94	<i>10.56</i>	<i>10.42</i>	<i>10.20</i>	-3.5	-1.3	-2.1
Renewable Energy as Percent of Total ^g ...	7.2	<i>7.0</i>	<i>7.0</i>	<i>7.0</i>			

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

^b Includes lease condensate.

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

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

^e Defined as the 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 2000 are estimates.

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

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

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0101.

Table 1. U.S. Macroeconomic and Weather Assumptions

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Macroeconomic^a															
Real Gross Domestic Product (billion chained 1996 dollars - SAAR).....	9192	9319	9374	<i>9402</i>	<i>9421</i>	<i>9482</i>	<i>9554</i>	<i>9647</i>	<i>9751</i>	<i>9870</i>	<i>9988</i>	<i>10103</i>	<i>9321</i>	<i>9526</i>	<i>9928</i>
Percentage Change from Prior Year	5.3	6.1	5.3	<i>3.5</i>	<i>2.5</i>	<i>1.7</i>	<i>1.9</i>	<i>2.6</i>	<i>3.5</i>	<i>4.1</i>	<i>4.5</i>	<i>4.7</i>	<i>5.0</i>	<i>2.2</i>	<i>4.2</i>
Annualized Percent Change from Prior Quarter.....	4.7	5.5	2.3	<i>1.2</i>	<i>0.8</i>	<i>2.6</i>	<i>3.1</i>	<i>3.9</i>	<i>4.3</i>	<i>4.9</i>	<i>4.8</i>	<i>4.6</i>			
GDP Implicit Price Deflator (Index, 1996=1.000)	1.062	1.068	1.073	<i>1.078</i>	<i>1.082</i>	<i>1.087</i>	<i>1.092</i>	<i>1.096</i>	<i>1.101</i>	<i>1.104</i>	<i>1.108</i>	<i>1.112</i>	<i>1.070</i>	<i>1.089</i>	<i>1.106</i>
Percentage Change from Prior Year	1.8	2.1	2.3	<i>2.3</i>	<i>1.9</i>	<i>1.8</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>1.5</i>	<i>1.5</i>	<i>1.5</i>	<i>2.1</i>	<i>1.8</i>	<i>1.5</i>
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR)	6443	6502	6541	<i>6551</i>	<i>6614</i>	<i>6677</i>	<i>6745</i>	<i>6804</i>	<i>6891</i>	<i>6988</i>	<i>7064</i>	<i>7142</i>	<i>6509</i>	<i>6710</i>	<i>7021</i>
Percentage Change from Prior Year	2.9	3.1	3.1	<i>2.2</i>	<i>2.7</i>	<i>2.7</i>	<i>3.1</i>	<i>3.9</i>	<i>4.2</i>	<i>4.7</i>	<i>4.7</i>	<i>5.0</i>	<i>2.8</i>	<i>3.1</i>	<i>4.6</i>
Manufacturing Production (Index, 1996=1.000)	1.216	1.239	1.251	<i>1.266</i>	<i>1.252</i>	<i>1.256</i>	<i>1.263</i>	<i>1.274</i>	<i>1.287</i>	<i>1.306</i>	<i>1.325</i>	<i>1.342</i>	<i>1.243</i>	<i>1.261</i>	<i>1.315</i>
Percentage Change from Prior Year	4.5	5.1	6.5	<i>5.9</i>	<i>3.0</i>	<i>1.4</i>	<i>1.0</i>	<i>0.7</i>	<i>2.8</i>	<i>4.0</i>	<i>4.9</i>	<i>5.4</i>	<i>5.5</i>	<i>1.5</i>	<i>4.3</i>
OECD Economic Growth (percent) ^b													<i>3.6</i>	<i>2.7</i>	<i>3.3</i>
Weather^c															
Heating Degree-Days															
U.S.....	2023	485	96	<i>1856</i>	<i>2223</i>	<i>519</i>	<i>86</i>	<i>1622</i>	<i>2234</i>	<i>518</i>	<i>86</i>	<i>1622</i>	<i>4460</i>	<i>4451</i>	<i>4459</i>
New England	3007	909	200	<i>2383</i>	<i>3196</i>	<i>885</i>	<i>167</i>	<i>2238</i>	<i>3174</i>	<i>883</i>	<i>167</i>	<i>2237</i>	<i>6499</i>	<i>6486</i>	<i>6462</i>
Middle Atlantic.....	2713	692	126	<i>2194</i>	<i>2832</i>	<i>701</i>	<i>105</i>	<i>2003</i>	<i>2891</i>	<i>700</i>	<i>105</i>	<i>2002</i>	<i>5725</i>	<i>5641</i>	<i>5698</i>
U.S. Gas-Weighted.....	2115	512	100	<i>1957</i>	<i>2346</i>	<i>555</i>	<i>90</i>	<i>1714</i>	<i>2351</i>	<i>555</i>	<i>90</i>	<i>1714</i>	<i>4684</i>	<i>4705</i>	<i>4710</i>
Cooling Degree-Days (U.S.)	45	380	759	<i>69</i>	<i>26</i>	<i>346</i>	<i>781</i>	<i>76</i>	<i>33</i>	<i>347</i>	<i>782</i>	<i>76</i>	<i>1253</i>	<i>1228</i>	<i>1237</i>

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

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

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

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0101.

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

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Macroeconomic ^a															
Real Fixed Investment															
(billion chained 1996 dollars-SAAR)	1731	1779	1792	<i>1784</i>	<i>1789</i>	<i>1803</i>	<i>1812</i>	<i>1832</i>	<i>1856</i>	<i>1888</i>	<i>1925</i>	<i>1960</i>	<i>1771</i>	<i>1809</i>	<i>1907</i>
Real Exchange Rate															
(index)	1.163	1.210	1.247	<i>1.297</i>	<i>1.277</i>	<i>1.267</i>	<i>1.253</i>	<i>1.230</i>	<i>1.213</i>	<i>1.193</i>	<i>1.177</i>	<i>1.160</i>	<i>1.229</i>	<i>1.257</i>	<i>1.186</i>
Business Inventory Change															
(billion chained 1996 dollars-SAAR)	10.3	17.6	21.0	<i>16.7</i>	<i>0.5</i>	<i>-0.8</i>	<i>0.4</i>	<i>0.4</i>	<i>1.3</i>	<i>3.9</i>	<i>6.6</i>	<i>8.2</i>	<i>16.4</i>	<i>0.1</i>	<i>5.0</i>
Producer Price Index															
(index, 1982=1.000)	1.301	1.321	1.334	<i>1.349</i>	<i>1.356</i>	<i>1.340</i>	<i>1.335</i>	<i>1.336</i>	<i>1.338</i>	<i>1.337</i>	<i>1.335</i>	<i>1.338</i>	<i>1.326</i>	<i>1.342</i>	<i>1.337</i>
Consumer Price Index															
(index, 1982-1984=1.000).....	1.702	1.717	1.730	<i>1.742</i>	<i>1.750</i>	<i>1.757</i>	<i>1.764</i>	<i>1.772</i>	<i>1.780</i>	<i>1.786</i>	<i>1.792</i>	<i>1.800</i>	<i>1.723</i>	<i>1.761</i>	<i>1.790</i>
Petroleum Product Price Index															
(index, 1982=1.000)	0.830	0.899	0.954	<i>0.974</i>	<i>0.905</i>	<i>0.859</i>	<i>0.846</i>	<i>0.874</i>	<i>0.868</i>	<i>0.829</i>	<i>0.806</i>	<i>0.821</i>	<i>0.914</i>	<i>0.871</i>	<i>0.831</i>
Non-Farm Employment															
(millions)	130.6	131.6	131.6	<i>131.8</i>	<i>132.3</i>	<i>132.4</i>	<i>132.4</i>	<i>132.5</i>	<i>132.8</i>	<i>133.2</i>	<i>133.7</i>	<i>134.2</i>	<i>131.4</i>	<i>132.4</i>	<i>133.5</i>
Commercial Employment															
(millions)	91.2	91.7	92.1	<i>92.5</i>	<i>93.1</i>	<i>93.2</i>	<i>93.5</i>	<i>93.7</i>	<i>94.1</i>	<i>94.6</i>	<i>95.1</i>	<i>95.6</i>	<i>91.9</i>	<i>93.4</i>	<i>94.8</i>
Total Industrial Production															
(index, 1996=1.000)	1.187	1.210	1.221	<i>1.238</i>	<i>1.232</i>	<i>1.233</i>	<i>1.239</i>	<i>1.247</i>	<i>1.257</i>	<i>1.274</i>	<i>1.290</i>	<i>1.306</i>	<i>1.214</i>	<i>1.238</i>	<i>1.282</i>
Housing Stock															
(millions)	115.7	115.8	116.2	<i>116.8</i>	<i>117.1</i>	<i>117.4</i>	<i>117.7</i>	<i>118.0</i>	<i>118.3</i>	<i>118.5</i>	<i>118.8</i>	<i>119.1</i>	<i>116.1</i>	<i>117.6</i>	<i>118.7</i>
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1996=1.000)	1.096	1.096	1.091	<i>1.109</i>	<i>1.101</i>	<i>1.109</i>	<i>1.118</i>	<i>1.131</i>	<i>1.145</i>	<i>1.160</i>	<i>1.176</i>	<i>1.192</i>	<i>1.098</i>	<i>1.115</i>	<i>1.168</i>
Vehicle Miles Traveled ^b															
(million miles/day).....	6822	7676	7688	<i>7275</i>	<i>7009</i>	<i>7726</i>	<i>7899</i>	<i>7443</i>	<i>7184</i>	<i>7926</i>	<i>8134</i>	<i>7691</i>	<i>7366</i>	<i>7522</i>	<i>7736</i>
Vehicle Fuel Efficiency															
(index, 1999=1.000)	0.999	1.024	0.996	<i>1.000</i>	<i>1.014</i>	<i>1.014</i>	<i>1.003</i>	<i>0.997</i>	<i>1.009</i>	<i>1.013</i>	<i>1.011</i>	<i>1.007</i>	<i>1.005</i>	<i>1.007</i>	<i>1.010</i>
Real Vehicle Fuel Cost															
(cents per mile).....	4.17	4.23	4.24	<i>4.28</i>	<i>4.15</i>	<i>4.02</i>	<i>3.98</i>	<i>4.05</i>	<i>3.98</i>	<i>3.86</i>	<i>3.74</i>	<i>3.79</i>	<i>4.23</i>	<i>4.05</i>	<i>3.84</i>
Air Travel Capacity															
(mill. available ton-miles/day).....	455.0	474.7	485.4	<i>483.6</i>	<i>485.3</i>	<i>505.7</i>	<i>519.9</i>	<i>511.2</i>	<i>504.3</i>	<i>524.6</i>	<i>543.5</i>	<i>534.4</i>	<i>474.7</i>	<i>505.6</i>	<i>526.8</i>
Aircraft Utilization															
(mill. revenue ton-miles/day).....	256.3	287.1	291.4	<i>283.6</i>	<i>276.1</i>	<i>292.7</i>	<i>306.5</i>	<i>291.7</i>	<i>287.0</i>	<i>307.1</i>	<i>322.7</i>	<i>309.4</i>	<i>279.6</i>	<i>291.8</i>	<i>306.6</i>
Airline Ticket Price Index															
(index, 1982-1984=1.000).....	2.309	2.419	2.474	<i>2.375</i>	<i>2.422</i>	<i>2.452</i>	<i>2.465</i>	<i>2.499</i>	<i>2.541</i>	<i>2.552</i>	<i>2.553</i>	<i>2.578</i>	<i>2.394</i>	<i>2.459</i>	<i>2.556</i>
Raw Steel Production															
(millions tons)	29.02	29.53	27.45	<i>25.38</i>	<i>26.14</i>	<i>27.24</i>	<i>27.24</i>	<i>27.95</i>	<i>28.38</i>	<i>28.64</i>	<i>28.82</i>	<i>29.03</i>	<i>111.38</i>	<i>108.58</i>	<i>114.88</i>

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

^bIncludes 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 CONTROL0101.

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

(Million Barrels per Day, Except OECD Commercial Stocks)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Demand ^a															
OECD															
U.S. (50 States)	19.1	19.3	19.8	19.7	19.6	19.5	19.8	20.0	19.8	19.9	20.3	20.3	19.5	19.7	20.1
U.S. Territories	0.4	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.....	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.2	2.1	2.0	2.0	2.1
Europe.....	14.6	14.0	14.4	15.2	15.0	14.0	14.6	15.2	15.1	14.2	14.7	15.4	14.5	14.7	14.9
Japan	6.0	5.0	5.4	5.8	6.2	5.1	5.3	5.8	6.3	5.1	5.3	5.8	5.5	5.6	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	1.1
Total OECD.....	43.0	41.5	42.9	44.2	44.2	41.9	43.2	44.5	44.7	42.7	44.0	45.2	42.9	43.5	44.1
Non-OECD															
Former Soviet Union.....	3.9	3.7	3.7	3.7	3.8	3.7	3.7	3.7	3.9	3.7	3.7	3.7	3.7	3.7	3.8
Europe.....	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6	1.6
China.....	4.6	4.6	4.6	4.6	4.9	4.9	4.8	4.9	5.2	5.1	5.1	5.1	4.6	4.9	5.1
Other Asia.....	9.0	9.1	8.8	9.2	9.4	9.4	9.1	9.5	9.7	9.7	9.4	9.8	9.0	9.3	9.7
Other Non-OECD.....	13.7	13.9	14.0	14.0	14.0	14.3	14.4	14.3	14.3	14.6	14.7	14.6	13.9	14.2	14.6
Total Non-OECD	32.7	32.9	32.7	33.0	33.8	33.8	33.5	34.0	34.7	34.8	34.5	34.9	32.8	33.8	34.7
Total World Demand.....	75.7	74.3	75.6	77.2	78.0	75.8	76.7	78.4	79.4	77.4	78.5	80.1	75.7	77.2	78.9
Supply ^b															
OECD															
U.S. (50 States)	9.1	9.1	9.1	9.0	8.9	9.0	8.9	9.0	9.0	9.1	9.0	9.1	9.1	9.0	9.0
Canada.....	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.9	2.8	2.8	3.0	3.0	2.7	2.8	2.9
North Sea ^c	6.6	6.2	6.2	6.4	6.4	6.2	6.3	6.7	6.4	6.1	6.2	6.7	6.3	6.4	6.4
Other OECD.....	1.7	1.7	1.6	1.6	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total OECD.....	20.2	19.6	19.6	19.8	19.8	19.7	19.8	20.4	19.9	19.7	19.9	20.5	19.8	19.9	20.0
Non-OECD															
OPEC.....	29.3	30.8	31.6	31.7	30.8	31.2	31.2	31.5	31.8	31.8	31.9	31.9	30.9	31.2	31.8
Former Soviet Union.....	7.6	7.7	7.9	8.2	8.1	8.2	8.3	8.3	8.4	8.5	8.6	8.7	7.9	8.2	8.6
China.....	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.2	3.2	3.1
Mexico.....	3.5	3.5	3.5	3.4	3.8	3.8	3.8	3.7	4.0	4.0	4.0	3.9	3.5	3.8	4.0
Other Non-OECD.....	11.2	11.2	11.4	11.5	11.1	11.2	11.4	11.5	11.4	11.5	11.7	11.8	11.3	11.3	11.6
Total Non-OECD	54.9	56.5	57.7	58.1	56.9	57.6	57.9	58.3	58.6	58.9	59.4	59.4	56.8	57.7	59.1
Total World Supply	75.0	76.1	77.3	77.9	76.7	77.3	77.8	78.7	78.5	78.6	79.3	79.9	76.6	77.6	79.1
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR).....	0.2	-0.6	0.0	0.6	0.2	-0.6	-0.4	0.2	0.2	-0.6	-0.2	0.4	0.1	-0.2	-0.1
Other.....	0.5	-1.2	-1.8	-1.3	1.1	-0.9	-0.6	-0.5	0.8	-0.6	-0.6	-0.2	-1.0	-0.2	-0.2
Total Stock Withdrawals	0.7	-1.8	-1.8	-0.7	1.3	-1.5	-1.0	-0.3	0.9	-1.2	-0.8	0.2	-0.9	-0.4	-0.2
OECD Comm. Stocks, End (bill. bbls.).....	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.6	2.7	2.8
Non-OPEC Supply	45.7	45.4	45.7	46.2	45.9	46.0	46.5	47.2	46.7	46.9	47.4	48.0	45.7	46.4	47.3
Net Exports from Former Soviet Union...	3.8	4.0	4.2	4.5	4.2	4.5	4.6	4.6	4.5	4.8	4.9	4.9	4.1	4.5	4.8

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

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

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

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

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

SPR: Strategic Petroleum Reserve

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

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

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

Table 4. U. S. Energy Prices

(Nominal Dollars)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Imported Crude Oil Prices															
Imported Average ^a	26.84	26.55	29.11	28.25	26.03	25.92	26.87	27.43	25.88	25.25	25.33	25.30	27.72	26.57	25.43
WTI ^b Spot Average.....	28.82	28.78	31.61	31.96	29.43	28.98	29.89	30.43	28.88	28.25	28.32	28.29	30.29	29.68	28.44
Natural Gas Wellhead															
(dollars per thousand cubic feet).....	2.26	3.06	3.87	5.22	6.07	4.10	4.01	4.74	4.72	3.94	3.97	4.64	3.62	4.73	4.32
Petroleum Products															
Gasoline Retail ^c (dollars per gallon)															
All Grades	1.44	1.57	1.56	1.54	1.49	1.51	1.51	1.47	1.45	1.47	1.45	1.41	1.53	1.49	1.44
Regular Unleaded.....	1.40	1.53	1.52	1.50	1.45	1.47	1.47	1.44	1.41	1.43	1.42	1.38	1.49	1.46	1.41
No. 2 Diesel Oil, Retail															
(dollars per gallon)	1.42	1.41	1.50	1.58	1.49	1.42	1.42	1.46	1.41	1.40	1.39	1.41	1.48	1.45	1.40
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.85	0.78	0.91	0.97	0.86	0.78	0.79	0.87	0.81	0.74	0.74	0.80	0.88	0.83	0.78
No. 2 Heating Oil, Retail															
(dollars per gallon)	1.31	1.17	1.23	1.40	1.33	1.20	1.14	1.28	1.27	1.16	1.09	1.21	1.31	1.28	1.22
No. 6 Residual Fuel Oil, Retail ^d															
(dollars per barrel)	23.64	24.55	25.10	27.35	27.39	24.54	24.55	25.95	24.75	22.90	22.82	23.55	25.33	25.72	23.50
Electric Utility Fuels															
Coal															
(dollars per million Btu).....	1.21	1.21	1.18	1.21	1.22	1.22	1.20	1.19	1.20	1.21	1.19	1.18	1.20	1.21	1.19
Heavy Fuel Oil ^e															
(dollars per million Btu).....	3.74	4.18	4.34	4.37	4.26	4.01	4.10	4.15	3.84	3.74	3.81	3.79	4.22	4.14	3.80
Natural Gas															
(dollars per million Btu).....	2.85	3.78	4.46	5.78	6.64	4.75	4.64	5.38	5.43	4.56	4.57	5.25	4.21	5.12	4.82
Other Residential															
Natural Gas															
(dollars per thousand cubic feet).....	6.45	7.67	9.93	9.01	10.06	10.48	10.68	8.59	8.87	9.55	10.56	8.93	7.73	9.77	9.13
Electricity															
(cents per kilowatthour).....	7.78	8.37	8.59	8.19	7.91	8.47	8.71	8.22	7.89	8.47	8.74	8.28	8.25	8.34	8.36

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

Notes: Data are estimated for the 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)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Crude Oil Supply															
Domestic Production ^a	5.86	5.84	5.79	5.86	5.88	5.84	5.77	5.85	5.85	5.86	5.84	5.82	5.84	5.84	5.84
Alaska.....	1.02	0.97	0.91	0.99	1.01	1.01	0.98	1.08	1.06	1.05	1.04	1.05	0.97	1.02	1.05
Lower 48.....	4.84	4.87	4.88	4.87	4.88	4.83	4.79	4.77	4.79	4.82	4.80	4.77	4.87	4.82	4.80
Net Imports (including SPR) ^b	8.15	9.22	9.51	8.73	8.75	9.63	9.75	9.17	9.15	9.82	9.90	9.32	8.90	9.33	9.55
Other SPR Supply	0.02	0.17	0.07	0.07	0.00	0.00	0.17	0.17	0.00	0.00	0.00	0.00	0.08	0.09	0.00
SPR Stock Withdrawn or Added (-)	-0.02	0.01	-0.02	0.32	-0.01	0.00	-0.17	-0.17	0.00	0.00	0.00	0.00	0.07	-0.09	0.00
Other Stock Withdrawn or Added (-) ..	-0.13	0.04	0.13	-0.09	-0.03	-0.05	0.14	0.00	-0.21	-0.04	0.15	0.00	-0.01	0.01	-0.03
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.....	0.28	0.32	0.20	0.29	0.27	0.22	0.22	0.21	0.21	0.22	0.23	0.21	0.27	0.23	0.22
Total Crude Oil Supply	14.16	15.41	15.63	15.10	14.87	15.64	15.71	15.05	14.99	15.86	16.11	15.35	15.08	15.32	15.58
Other Supply															
NGL Production.....	1.97	1.94	1.93	1.79	1.77	1.85	1.84	1.90	1.94	1.94	1.91	1.99	1.91	1.84	1.95
Other Inputs	0.37	0.40	0.39	0.38	0.35	0.37	0.37	0.39	0.35	0.34	0.34	0.36	0.38	0.37	0.35
Crude Oil Product Supplied.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.94	0.94	0.95	0.97	0.92	0.96	0.94	0.90	0.90	0.94	0.95	0.91	0.95	0.93	0.92
Net Product Imports ^c	1.36	1.22	1.10	1.15	1.52	1.24	1.37	1.40	1.39	1.48	1.48	1.46	1.21	1.38	1.45
Product Stock Withdrawn or Added (-).....	0.33	-0.62	-0.14	0.41	0.21	-0.58	-0.35	0.38	0.38	-0.55	-0.37	0.37	-0.01	-0.09	-0.04
Total Supply	19.12	19.30	19.85	19.81	19.63	19.48	19.88	20.03	19.94	20.01	20.42	20.46	19.52	19.76	20.21
Demand															
Motor Gasoline.....	8.03	8.49	8.58	8.41	8.13	8.63	8.76	8.63	8.38	8.87	8.95	8.83	8.38	8.54	8.76
Jet Fuel	1.64	1.67	1.78	1.74	1.71	1.70	1.75	1.77	1.75	1.72	1.78	1.80	1.71	1.73	1.76
Distillate Fuel Oil.....	3.76	3.56	3.61	3.81	4.02	3.65	3.58	3.83	4.04	3.72	3.68	3.93	3.69	3.77	3.84
Residual Fuel Oil	0.73	0.75	0.90	0.99	0.94	0.70	0.75	0.73	0.77	0.74	0.82	0.64	0.85	0.78	0.74
Other Oils ^d	4.96	4.82	4.97	4.75	4.84	4.79	5.04	5.07	5.00	4.96	5.20	5.25	4.87	4.94	5.10
Total Demand.....	19.12	19.29	19.85	19.70	19.63	19.48	19.88	20.03	19.94	20.01	20.42	20.46	19.49	19.76	20.21
Total Petroleum Net Imports	9.51	10.44	10.61	9.89	10.27	10.87	11.13	10.57	10.54	11.29	11.38	10.78	10.11	10.71	11.00
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	296	292	280	289	291	296	283	284	303	306	293	293	289	284	293
Total Motor Gasoline.....	204	209	197	197	198	201	196	201	207	206	200	205	197	201	205
Finished Motor Gasoline	158	165	154	154	152	160	155	160	160	165	159	164	154	160	164
Blending Components	47	45	43	43	46	42	41	41	46	42	41	41	43	41	41
Jet Fuel	41	44	42	45	42	43	45	46	43	43	45	46	45	46	46
Distillate Fuel Oil.....	96	106	115	118	106	117	134	134	103	114	134	134	118	134	134
Residual Fuel Oil	36	37	38	36	36	37	38	39	36	36	38	38	36	39	38
Other Oils ^e	235	272	288	248	242	280	296	256	254	292	309	268	248	256	268
Total Stocks (excluding SPR)	908	960	961	932	916	973	993	959	944	998	1018	984	932	959	984
Crude Oil in SPR.....	569	569	570	541	542	542	557	573	573	573	573	573	541	573	573
Heating Oil Reserve.....	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2
Total Stocks (including SPR).....	1477	1529	1531	1473	1457	1515	1551	1532	1517	1571	1591	1557	1473	1532	1557

^aIncludes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

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

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

^bShort-Term Integrated Forecasting System.

^cRefiner acquisitions cost of imported crude oil.

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

^eRefers to percent changes in degree-days.

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

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

	High Price Case	Low Price Case	Difference		
			Total	Uncertainty	Price Impact
United States	6.09	5.45	0.64	0.08	0.56
Lower 48 States.....	5.02	4.42	0.60	0.07	0.53
Alaska.....	1.07	1.03	0.04	0.02	0.02

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

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

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

(Trillion Cubic Feet)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Total Dry Gas Production	4.74	4.74	4.82	<i>4.91</i>	<i>4.89</i>	<i>4.88</i>	<i>4.95</i>	<i>5.12</i>	<i>5.07</i>	<i>5.04</i>	<i>5.05</i>	<i>5.17</i>	<i>19.21</i>	<i>19.84</i>	<i>20.34</i>
Net Imports	0.87	0.82	0.88	<i>0.91</i>	<i>0.97</i>	<i>0.97</i>	<i>1.04</i>	<i>1.04</i>	<i>1.04</i>	<i>1.02</i>	<i>1.07</i>	<i>1.06</i>	<i>3.49</i>	<i>4.02</i>	<i>4.19</i>
Supplemental Gaseous Fuels.....	0.03	0.02	0.02	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.04</i>	<i>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.10</i>	<i>0.12</i>	<i>0.13</i>
Total New Supply	5.64	5.58	5.73	<i>5.84</i>	<i>5.90</i>	<i>5.87</i>	<i>6.01</i>	<i>6.20</i>	<i>6.15</i>	<i>6.09</i>	<i>6.15</i>	<i>6.27</i>	<i>22.80</i>	<i>23.98</i>	<i>24.65</i>
Working Gas in Storage															
Opening.....	2.51	1.15	1.71	<i>2.47</i>	<i>1.79</i>	<i>0.69</i>	<i>1.59</i>	<i>2.57</i>	<i>2.21</i>	<i>1.01</i>	<i>1.78</i>	<i>2.68</i>	<i>2.51</i>	<i>1.79</i>	<i>2.21</i>
Closing.....	1.15	1.71	2.47	<i>1.79</i>	<i>0.69</i>	<i>1.59</i>	<i>2.57</i>	<i>2.21</i>	<i>1.01</i>	<i>1.78</i>	<i>2.68</i>	<i>2.31</i>	<i>1.79</i>	<i>2.21</i>	<i>2.31</i>
Net Withdrawals.....	1.36	-0.56	-0.77	<i>0.68</i>	<i>1.10</i>	<i>-0.90</i>	<i>-0.99</i>	<i>0.36</i>	<i>1.20</i>	<i>-0.77</i>	<i>-0.90</i>	<i>0.37</i>	<i>0.72</i>	<i>-0.42</i>	<i>-0.10</i>
Total Supply.....	7.00	5.03	4.96	<i>6.52</i>	<i>7.00</i>	<i>4.98</i>	<i>5.03</i>	<i>6.56</i>	<i>7.35</i>	<i>5.32</i>	<i>5.25</i>	<i>6.64</i>	<i>23.51</i>	<i>23.56</i>	<i>24.56</i>
Balancing Item ^a	-0.06	-0.03	-0.25	<i>-0.52</i>	<i>0.23</i>	<i>0.11</i>	<i>-0.07</i>	<i>-0.64</i>	<i>0.06</i>	<i>0.04</i>	<i>0.04</i>	<i>-0.55</i>	<i>-0.86</i>	<i>-0.38</i>	<i>-0.41</i>
Total Primary Supply.....	6.95	5.00	4.71	<i>6.00</i>	<i>7.22</i>	<i>5.09</i>	<i>4.95</i>	<i>5.92</i>	<i>7.41</i>	<i>5.35</i>	<i>5.29</i>	<i>6.09</i>	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>
Demand															
Lease and Plant Fuel.....	0.31	0.31	0.32	<i>0.32</i>	<i>0.32</i>	<i>0.31</i>	<i>0.32</i>	<i>0.33</i>	<i>0.32</i>	<i>0.32</i>	<i>0.32</i>	<i>0.33</i>	<i>1.26</i>	<i>1.28</i>	<i>1.30</i>
Pipeline Use.....	0.24	0.17	0.16	<i>0.20</i>	<i>0.24</i>	<i>0.17</i>	<i>0.16</i>	<i>0.20</i>	<i>0.24</i>	<i>0.17</i>	<i>0.17</i>	<i>0.20</i>	<i>0.76</i>	<i>0.77</i>	<i>0.77</i>
Residential.....	2.20	0.77	0.39	<i>1.56</i>	<i>2.47</i>	<i>0.85</i>	<i>0.39</i>	<i>1.41</i>	<i>2.44</i>	<i>0.86</i>	<i>0.39</i>	<i>1.46</i>	<i>4.92</i>	<i>5.12</i>	<i>5.14</i>
Commercial.....	1.29	0.62	0.48	<i>0.98</i>	<i>1.43</i>	<i>0.65</i>	<i>0.47</i>	<i>0.91</i>	<i>1.42</i>	<i>0.67</i>	<i>0.49</i>	<i>0.93</i>	<i>3.36</i>	<i>3.46</i>	<i>3.50</i>
Industrial (Incl. Nonutility Use).....	2.35	2.30	2.30	<i>2.40</i>	<i>2.34</i>	<i>2.30</i>	<i>2.50</i>	<i>2.45</i>	<i>2.52</i>	<i>2.48</i>	<i>2.72</i>	<i>2.63</i>	<i>9.36</i>	<i>9.59</i>	<i>10.35</i>
Electric Utilities.....	0.56	0.83	1.06	<i>0.54</i>	<i>0.44</i>	<i>0.80</i>	<i>1.11</i>	<i>0.62</i>	<i>0.48</i>	<i>0.85</i>	<i>1.20</i>	<i>0.54</i>	<i>2.99</i>	<i>2.97</i>	<i>3.08</i>
Total Demand.....	6.95	5.00	4.71	<i>6.00</i>	<i>7.22</i>	<i>5.09</i>	<i>4.95</i>	<i>5.92</i>	<i>7.41</i>	<i>5.35</i>	<i>5.29</i>	<i>6.09</i>	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>

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

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

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

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

(Million Short Tons)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Production	274.1	260.5	273.2	278.9	285.7	276.5	279.0	281.2	288.7	280.9	283.8	278.3	1086.6	1122.4	1131.6
Appalachia	109.5	105.3	104.0	103.4	110.9	109.7	103.9	101.8	111.4	109.2	103.3	98.4	422.3	426.2	422.3
Interior	36.1	35.2	37.6	37.8	36.7	35.7	36.7	36.3	34.3	34.6	35.5	34.1	146.6	145.3	138.6
Western.....	128.5	120.0	131.6	137.7	138.1	131.1	138.5	143.1	142.9	137.0	145.0	145.8	517.7	550.9	570.7
Primary Stock Levels ^a															
Opening.....	39.5	44.4	40.4	37.1	34.2	41.3	40.2	36.5	34.9	40.8	41.0	36.2	39.5	34.2	34.9
Closing.....	44.4	40.4	37.1	34.2	41.3	40.2	36.5	34.9	40.8	41.0	36.2	35.2	34.2	34.9	35.2
Net Withdrawals.....	-4.9	4.0	3.3	2.9	-7.1	1.1	3.7	1.6	-6.0	-0.2	4.8	1.0	5.3	-0.7	-0.3
Imports.....	2.8	2.7	3.6	3.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.3	12.5	12.8	13.0
Exports	13.6	14.4	15.8	14.7	14.8	15.0	15.2	15.1	15.2	15.3	15.6	15.5	58.5	60.1	61.6
Total Net Domestic Supply.....	258.3	252.8	264.3	270.5	267.1	265.8	270.8	270.9	270.8	268.6	276.2	267.1	1045.9	1074.5	1082.6
Secondary Stock Levels ^b															
Opening.....	143.5	139.9	135.6	118.5	114.9	111.5	125.4	109.6	112.6	112.2	123.7	107.6	143.5	114.9	112.6
Closing.....	139.9	135.6	118.5	114.9	111.5	125.4	109.6	112.6	112.2	123.7	107.6	111.6	114.9	112.6	111.6
Net Withdrawals.....	3.6	4.3	17.2	3.6	3.4	-13.9	15.8	-3.0	0.4	-11.5	16.1	-3.9	28.6	2.2	1.1
Waste Coal Supplied to IPPs ^c	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.8	2.8	2.8	2.8	10.1	10.6	11.1
Total Supply.....	264.5	259.6	283.9	276.6	273.1	254.6	289.2	270.5	274.0	259.8	295.2	265.9	1084.6	1087.3	1094.8
Demand															
Coke Plants.....	7.3	7.4	7.5	6.4	6.7	6.8	7.1	6.8	7.2	7.0	7.3	6.9	28.6	27.5	28.4
Electricity Production															
Electric Utilities.....	214.1	202.1	227.3	217.3	211.9	198.6	228.4	208.8	212.4	201.9	232.2	202.3	860.8	847.7	848.8
Nonutilities (Excl. Cogen.) ^d	25.3	25.6	32.9	33.1	34.1	32.1	36.6	35.1	35.9	33.9	38.6	36.9	116.9	137.9	145.3
Retail and General Industry.....	18.1	16.7	17.1	19.7	18.5	17.0	17.0	19.8	18.5	17.0	17.0	19.8	71.7	72.3	72.3
Total Demand ^e	264.8	251.8	284.8	276.5	271.2	254.6	289.2	270.5	274.0	259.8	295.2	265.9	1077.9	1085.4	1094.8
Discrepancy ^f	-0.3	7.8	-0.9	0.1	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	1.9	0.0

^aPrimary stocks are held at the mines, preparation plants, and distribution points.^bSecondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.^cEstimated independent power producers' (IPPs) consumption of waste coal. This item includes waste coal and coal slurry reprocessed into briquettes.^dEstimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA).

Quarterly coal consumption estimates for 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).

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

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

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

Table 10. U.S. Electricity Supply and Demand: Mid World Oil Price Case
(Billion Kilowatt-hours)

	2000				2001				2002				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2000	2001	2002
Supply															
Net Utility Generation															
Coal.....	425.7	401.2	445.9	<i>425.0</i>	<i>428.4</i>	<i>409.3</i>	<i>467.5</i>	<i>415.9</i>	<i>424.8</i>	<i>424.7</i>	<i>488.4</i>	<i>390.8</i>	<i>1697.7</i>	<i>1721.1</i>	<i>1728.6</i>
Petroleum.....	11.0	16.4	23.3	<i>19.1</i>	<i>21.7</i>	<i>15.2</i>	<i>22.0</i>	<i>15.5</i>	<i>17.4</i>	<i>18.6</i>	<i>26.3</i>	<i>11.2</i>	<i>69.7</i>	<i>74.4</i>	<i>73.5</i>
Natural Gas.....	54.4	79.1	100.5	<i>51.5</i>	<i>41.3</i>	<i>75.5</i>	<i>105.3</i>	<i>59.3</i>	<i>45.4</i>	<i>81.1</i>	<i>114.4</i>	<i>51.4</i>	<i>285.5</i>	<i>281.4</i>	<i>292.2</i>
Nuclear	185.0	177.4	182.0	<i>162.3</i>	<i>173.7</i>	<i>165.9</i>	<i>175.2</i>	<i>159.7</i>	<i>167.5</i>	<i>153.0</i>	<i>179.3</i>	<i>163.5</i>	<i>706.6</i>	<i>674.6</i>	<i>663.3</i>
Hydroelectric	66.9	73.0	57.4	<i>56.5</i>	<i>67.8</i>	<i>73.3</i>	<i>60.5</i>	<i>60.4</i>	<i>71.4</i>	<i>75.2</i>	<i>63.1</i>	<i>62.3</i>	<i>253.8</i>	<i>262.0</i>	<i>272.0</i>
Geothermal and Other ^a	0.5	0.6	0.5	<i>0.6</i>	<i>0.5</i>	<i>0.5</i>	<i>0.6</i>	<i>0.6</i>	<i>0.5</i>	<i>0.5</i>	<i>0.6</i>	<i>0.6</i>	<i>2.2</i>	<i>2.2</i>	<i>2.2</i>
Subtotal.....	743.4	747.6	809.6	<i>714.9</i>	<i>733.5</i>	<i>739.7</i>	<i>831.1</i>	<i>711.4</i>	<i>727.0</i>	<i>753.0</i>	<i>872.1</i>	<i>679.8</i>	<i>3015.5</i>	<i>3015.7</i>	<i>3031.9</i>
Nonutility Generation ^b															
Coal.....	55.2	58.5	82.1	<i>71.6</i>	<i>75.9</i>	<i>76.0</i>	<i>88.9</i>	<i>75.7</i>	<i>86.5</i>	<i>87.4</i>	<i>87.4</i>	<i>101.1</i>	<i>267.3</i>	<i>316.5</i>	<i>362.4</i>
Petroleum.....	11.1	8.8	11.7	<i>11.0</i>	<i>9.7</i>	<i>9.7</i>	<i>11.3</i>	<i>9.6</i>	<i>10.0</i>	<i>10.1</i>	<i>10.1</i>	<i>11.7</i>	<i>42.6</i>	<i>40.4</i>	<i>41.8</i>
Natural Gas.....	66.9	76.0	98.0	<i>80.0</i>	<i>73.0</i>	<i>83.5</i>	<i>114.4</i>	<i>90.1</i>	<i>84.1</i>	<i>83.5</i>	<i>95.2</i>	<i>128.9</i>	<i>320.9</i>	<i>361.1</i>	<i>391.7</i>
Other Gaseous Fuels ^c	2.5	2.8	3.6	<i>2.4</i>	<i>2.1</i>	<i>2.1</i>	<i>2.1</i>	<i>2.2</i>	<i>2.3</i>	<i>2.2</i>	<i>2.2</i>	<i>2.2</i>	<i>11.2</i>	<i>8.5</i>	<i>8.9</i>
Nuclear	5.2	5.0	16.7	<i>20.2</i>	<i>21.5</i>	<i>20.5</i>	<i>21.7</i>	<i>19.7</i>	<i>20.7</i>	<i>18.9</i>	<i>22.2</i>	<i>20.2</i>	<i>47.1</i>	<i>83.4</i>	<i>82.0</i>
Hydroelectric	3.9	5.0	4.2	<i>4.1</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>4.5</i>	<i>17.3</i>	<i>18.0</i>	<i>18.0</i>
Geothermal and Other ^d	21.8	22.2	23.4	<i>23.8</i>	<i>22.1</i>	<i>22.0</i>	<i>22.3</i>	<i>22.7</i>	<i>22.1</i>	<i>22.0</i>	<i>22.3</i>	<i>22.7</i>	<i>91.2</i>	<i>89.1</i>	<i>89.1</i>
Subtotal.....	166.6	178.3	239.7	<i>213.2</i>	<i>208.7</i>	<i>218.3</i>	<i>265.2</i>	<i>224.6</i>	<i>230.1</i>	<i>228.5</i>	<i>243.8</i>	<i>291.3</i>	<i>797.7</i>	<i>916.9</i>	<i>993.7</i>
Total Generation	910.0	925.9	1049.2	<i>928.1</i>	<i>942.2</i>	<i>958.0</i>	<i>1096.3</i>	<i>936.0</i>	<i>957.1</i>	<i>981.5</i>	<i>1115.9</i>	<i>971.0</i>	<i>3813.2</i>	<i>3932.5</i>	<i>4025.6</i>
Net Imports ^e	9.2	8.7	13.1	<i>8.3</i>	<i>7.7</i>	<i>8.8</i>	<i>12.0</i>	<i>8.6</i>	<i>7.3</i>	<i>8.3</i>	<i>11.7</i>	<i>8.6</i>	<i>39.3</i>	<i>37.2</i>	<i>35.9</i>
Total Supply	919.2	934.6	1062.3	<i>936.4</i>	<i>950.0</i>	<i>966.8</i>	<i>1108.3</i>	<i>944.6</i>	<i>964.5</i>	<i>989.8</i>	<i>1127.6</i>	<i>979.6</i>	<i>3852.5</i>	<i>3969.7</i>	<i>4061.5</i>
Losses and Unaccounted for ^f ...	60.3	73.3	41.1	<i>53.6</i>	<i>53.9</i>	<i>81.8</i>	<i>65.4</i>	<i>64.8</i>	<i>54.6</i>	<i>83.9</i>	<i>67.1</i>	<i>66.2</i>	<i>228.3</i>	<i>265.9</i>	<i>271.9</i>
Demand															
Retail Sales ^g															
Residential	292.5	264.2	352.8	<i>279.4</i>	<i>310.8</i>	<i>274.1</i>	<i>361.7</i>	<i>274.2</i>	<i>312.7</i>	<i>280.8</i>	<i>370.0</i>	<i>279.5</i>	<i>1188.9</i>	<i>1220.7</i>	<i>1243.0</i>
Commercial.....	236.2	254.3	294.4	<i>250.7</i>	<i>246.3</i>	<i>257.7</i>	<i>301.2</i>	<i>249.8</i>	<i>249.1</i>	<i>264.4</i>	<i>310.6</i>	<i>255.1</i>	<i>1035.5</i>	<i>1055.0</i>	<i>1079.2</i>
Industrial	260.0	268.5	280.5	<i>269.6</i>	<i>258.2</i>	<i>269.9</i>	<i>281.6</i>	<i>271.4</i>	<i>263.9</i>	<i>276.4</i>	<i>288.5</i>	<i>278.4</i>	<i>1078.5</i>	<i>1081.2</i>	<i>1107.1</i>
Other.....	26.4	27.4	30.6	<i>27.1</i>	<i>26.7</i>	<i>27.0</i>	<i>30.1</i>	<i>27.3</i>	<i>27.1</i>	<i>27.5</i>	<i>30.9</i>	<i>28.0</i>	<i>111.5</i>	<i>111.1</i>	<i>113.6</i>
Subtotal.....	815.1	814.3	958.2	<i>826.8</i>	<i>842.0</i>	<i>828.7</i>	<i>974.6</i>	<i>822.7</i>	<i>852.7</i>	<i>849.2</i>	<i>1000.0</i>	<i>841.1</i>	<i>3414.4</i>	<i>3468.0</i>	<i>3542.9</i>
Nonutility Use/Sales ^h	43.8	46.9	63.1	<i>56.1</i>	<i>54.0</i>	<i>56.3</i>	<i>68.3</i>	<i>57.1</i>	<i>57.1</i>	<i>56.7</i>	<i>60.5</i>	<i>72.3</i>	<i>209.9</i>	<i>235.8</i>	<i>246.7</i>
Total Demand.....	858.9	861.2	1021.3	<i>882.9</i>	<i>896.0</i>	<i>885.0</i>	<i>1042.9</i>	<i>879.8</i>	<i>909.8</i>	<i>905.9</i>	<i>1060.5</i>	<i>913.4</i>	<i>3624.3</i>	<i>3703.8</i>	<i>3789.7</i>
Memo:															
Nonutility Sales to															
Electric Utilities ^b	122.8	131.4	176.6	157.1	154.7	162.0	<i>196.9</i>	<i>167.4</i>	<i>173.0</i>	<i>171.8</i>	<i>183.3</i>	<i>218.9</i>	587.8	<i>681.1</i>	<i>747.0</i>

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

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

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

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

^eData for 2000 are estimates.

^fBalancing item, mainly transmission and distribution losses.

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

^hDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA 860B, "Annual Electric Generator Report - Nonutility(1998 and 1999) and EIA-867, "Annual Nonutility Power Producer Report,"(prior to 1998). Data for 2000 are estimates.

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

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

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

	Year				Annual Percentage Change		
	1999	2000	2001	2002	1999-2000	2000-2001	2001-2002
Electric Utilities							
Hydroelectric Power ^a	3.079	2.659	2.745	2.849	-13.6	3.2	3.8
Geothermal, Solar and Wind Energy ^b	0.036	0.003	0.004	0.004	-91.7	33.3	0.0
Biofuels ^c	0.021	0.021	0.021	0.021	0.0	0.0	0.0
Total	3.136	2.683	2.769	2.874	-14.4	3.2	3.8
Nonutility Power Generators							
Hydroelectric Power ^a	0.149	0.179	0.186	0.186	20.1	3.9	0.0
Geothermal, Solar and Wind Energy ^b	0.373	0.341	0.333	0.333	-8.6	-2.3	0.0
Biofuels ^c	0.523	0.745	0.729	0.729	42.4	-2.1	0.0
Total.....	1.045	1.265	1.249	1.249	21.1	-1.3	0.0
Total Power Generation.....	4.180	3.948	4.018	4.122	-5.6	1.8	2.6
Other Sectors ^d							
Residential and Commercial ^e	0.553	0.576	0.547	0.577	4.2	-5.0	5.5
Industrial ^f	1.942	2.003	2.008	2.058	3.1	0.2	2.5
Transportation ^g	0.100	0.114	0.112	0.117	14.0	-1.8	4.5
Total.....	2.595	2.692	2.667	2.751	3.7	-0.9	3.1
Net Imported Electricity ^h	0.219	0.282	0.267	0.258	28.8	-5.3	-3.4
Total Renewable Energy Demand	6.994	6.922	6.951	7.131	-1.0	0.4	2.6

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

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

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

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

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

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

^gEthanol blended into gasoline.

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

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

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	6368	6592	6708	6676	6880	7063	7348	7544	7813	8159	8516	8876	<i>9321</i>	<i>9526</i>	<i>9928</i>
Imported Crude Oil Price ^a (nominal dollars per barrel)	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	<i>27.72</i>	<i>26.57</i>	<i>25.43</i>
Petroleum Supply															
Crude Oil Production ^b (million barrels per day)	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	<i>5.84</i>	<i>5.84</i>	<i>5.84</i>
Total Petroleum Net Imports (including SPR) (million barrels per day)	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	<i>10.11</i>	<i>10.71</i>	<i>11.00</i>
Energy Demand															
World Petroleum (million barrels per day)	64.8	65.9	65.7	66.6	66.8	67.0	68.3	69.9	71.4	73.0	73.6	74.9	<i>74.9</i>	<i>75.8</i>	<i>77.4</i>
U.S. Petroleum (million barrels per day)	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	<i>19.49</i>	<i>19.76</i>	<i>20.21</i>
Natural Gas (trillion cubic feet)	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>
Coal (million short tons).....	877	895	903	899	907	943	950	962	1006	1029	1039	1044	<i>1078</i>	<i>1085</i>	<i>1095</i>
Electricity (billion kilowatthours)															
Retail Sales ^c	2578	2647	2713	2762	2763	2861	2935	3013	3101	3146	3264	3312	<i>3414</i>	<i>3468</i>	<i>3543</i>
Nonutility Own Use ^d	NA	93	95	102	108	127	138	145	145	148	156	185	<i>210</i>	<i>236</i>	<i>247</i>
Total	NA	2740	2807	2864	2871	2988	3073	3159	3246	3294	3420	3497	<i>3624</i>	<i>3704</i>	<i>3790</i>
Total Energy Demand ^e (quadrillion Btu)	NA	84.2	84.2	84.5	85.6	87.4	89.2	90.9	93.9	94.2	95.2	97.1	<i>98.4</i>	<i>99.2</i>	<i>101.3</i>
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar).....	NA	12.77	12.55	12.66	12.44	12.37	12.14	12.07	12.02	11.54	11.18	10.94	<i>10.56</i>	<i>10.42</i>	<i>10.20</i>

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

^b Includes lease condensate.

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

^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 2000 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 comprehensive measure of total energy demand can be found in EIA's *AER*. The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations performed for gross energy consumption in Energy Information Administration, *Monthly Energy Review (MER)*. Consequently, the historical data may not precisely match those published in the *MER* or the *AER*.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520, and *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0101.

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Macroeconomic															
Real Gross Domestic Product (billion chained 1996 dollars)	6368	6592	6708	6676	6880	7063	7348	7544	7813	8159	8516	8876	<i>9321</i>	<i>9526</i>	<i>9928</i>
GDP Implicit Price Deflator (Index, 1996=1.000).....	0.802	0.833	0.865	0.897	0.919	0.941	0.960	0.981	1.000	1.020	1.032	1.048	<i>1.070</i>	<i>1.089</i>	<i>1.106</i>
Real Disposable Personal Income (billion chained 1996 Dollars).....	4784	4907	5014	5033	5189	5261	5397	5539	5678	5854	6134	6331	<i>6509</i>	<i>6710</i>	<i>7021</i>
Manufacturing Production (Index, 1996=1.000).....	0.801	0.816	0.812	0.793	0.825	0.855	0.907	0.955	1.000	1.070	1.123	1.178	<i>1.243</i>	<i>1.261</i>	<i>1.315</i>
Real Fixed Investment (billion chained 1996 dollars)	887	911	895	833	886	958	1046	1109	1213	1329	1485	1621	<i>1771</i>	<i>1809</i>	<i>1907</i>
Real Exchange Rate (Index, 1996=1.000).....	NA	NA	0.963	0.966	0.960	1.001	0.981	0.927	1.000	1.102	1.122	1.118	<i>1.229</i>	<i>1.257</i>	<i>1.186</i>
Business Inventory Change (billion chained 1996 dollars)	17.0	14.2	8.9	-6.8	-4.7	3.6	12.1	14.1	10.1	15.2	25.6	0.1	<i>16.4</i>	<i>0.1</i>	<i>5.0</i>
Producer Price Index (index, 1982=1.000).....	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.247	1.277	1.275	1.244	1.255	<i>1.326</i>	<i>1.342</i>	<i>1.337</i>
Consumer Price Index (index, 1982-1984=1.000)	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	1.631	1.667	<i>1.723</i>	<i>1.761</i>	<i>1.790</i>
Petroleum Product Price Index (index, 1982=1.000).....	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	<i>0.914</i>	<i>0.871</i>	<i>0.831</i>
Non-Farm Employment (millions).....	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.8	128.8	<i>131.4</i>	<i>132.4</i>	<i>133.5</i>
Commercial Employment (millions).....	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.6	89.5	<i>91.9</i>	<i>93.4</i>	<i>94.8</i>
Total Industrial Production (index, 1996=1.000).....	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	<i>1.2</i>	<i>1.2</i>	<i>1.3</i>
Housing Stock (millions).....	101.6	102.9	103.5	104.5	105.5	106.8	108.2	109.6	111.0	112.5	114.1	115.7	<i>116.1</i>	<i>117.6</i>	<i>118.7</i>
Weather ^a															
Heating Degree-Days															
U.S.	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4169	<i>4460</i>	<i>4451</i>	<i>4459</i>
New England.....	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	5680	5952	<i>6499</i>	<i>6486</i>	<i>6462</i>
Middle Atlantic	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	4812	5351	<i>5725</i>	<i>5641</i>	<i>5698</i>
U.S. Gas-Weighted	4804	4856	4139	4337	4458	4754	4659	4707	4980	4802	4183	4399	<i>4684</i>	<i>4705</i>	<i>4710</i>
Cooling Degree-Days (U.S.).....	1283.0	1156.0	1260.0	1331.0	1040.0	1218.0	1220.0	1293.0	1180.0	1156.0	1410.0	1297.0	<i>1253.0</i>	<i>1228.1</i>	<i>1236.7</i>

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

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0101.

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Demand ^a															
OECD															
U.S. (50 States)	17.3	17.3	17.0	16.7	17.0	17.2	17.7	17.7	18.3	18.6	18.9	19.5	19.5	19.9	20.2
Europe ^b	12.4	12.5	12.6	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.7	14.5	14.5	14.7	14.8
Japan.....	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.6	5.6	5.6	5.6
Other OECD	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.3	3.3	3.4	3.5
Total OECD	37.1	37.6	37.5	38.1	38.8	39.0	39.9	40.6	41.4	41.8	42.3	42.9	42.9	43.6	44.2
Non-OECD															
Former Soviet Union.....	8.9	8.7	8.4	8.4	6.8	5.6	4.8	4.6	4.0	3.9	3.8	3.7	3.7	3.7	3.8
Europe	2.2	2.1	1.7	1.4	1.3	1.3	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.6	1.6
China.....	2.3	2.4	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.1	4.3	4.5	4.7	5.0
Other Asia	4.4	4.9	5.3	5.7	6.2	6.8	7.3	7.9	8.5	9.0	8.7	9.0	9.2	9.6	9.9
Other Non-OECD.....	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.1	12.4	12.9	13.3	13.6	13.9	14.3	14.6
Total Non-OECD.....	27.7	28.3	28.2	28.5	28.0	28.0	28.4	29.3	30.0	31.2	31.4	32.1	32.9	33.9	34.9
Total World Demand.....	64.8	65.9	65.7	66.6	66.8	67.0	68.3	69.9	71.4	73.0	73.6	74.9	75.8	77.4	79.1
Supply ^c															
OECD															
U.S. (50 States)	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.3	9.0	9.1	9.1	9.1
Canada	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.6	2.7	2.8	2.9
North Sea ^d	3.8	3.7	3.9	4.1	4.5	4.8	5.5	5.9	6.3	6.2	6.2	6.3	6.4	6.4	6.4
Other OECD	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.5	1.7	1.7	1.7
Total OECD	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.9	19.7	19.4	19.9	20.1	20.0
Non-OECD															
OPEC	21.5	23.3	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	29.3	30.8	31.2	32.1
Former Soviet Union.....	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.4	7.8	8.1	8.5
China.....	2.7	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.3	3.2	3.1
Mexico.....	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.4	3.5	3.8	4.0
Other Non-OECD.....	7.3	12.0	8.0	8.1	8.4	8.7	9.2	9.9	10.2	10.5	10.8	11.2	11.3	11.3	11.6
Total Non-OECD.....	47.0	48.9	49.7	49.1	49.1	49.4	49.6	50.7	52.0	54.2	55.2	54.5	56.7	57.6	59.3
Total World Supply.....	64.8	65.9	66.8	66.7	67.0	67.4	68.3	69.9	71.8	74.1	74.9	73.9	76.6	77.6	79.3
Total Stock Withdrawals.....	0.1	0.0	-1.1	-0.1	-0.3	-0.4	0.0	0.0	-0.4	-1.1	-1.3	1.0	-0.8	-0.2	-0.2
OECD Comm. Stocks, End (bill. bbls.)	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.6	2.6	2.7	2.8
Net Exports from Former Soviet Union.....	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.6	3.0	3.3	3.5	3.7	4.1	4.4	4.7

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

^bOECD Europe includes the former East Germany.

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

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

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

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

SPR: Strategic Petroleum Reserve

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

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

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

(Energy Information Administration/Short-Term Energy Outlook -- March 2001)

Table A4. Annual Average U. S. Energy Prices

(Nominal Dollars)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Imported Crude Oil Prices															
Imported Average ^a	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	27.72	26.57	25.43
WTI ^b Spot Average.....	15.98	19.78	24.48	21.60	20.54	18.49	17.16	18.41	22.11	20.61	14.45	19.25	30.29	29.68	28.44
Natural Gas Wellhead															
(dollars per thousand cubic feet)	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.95	2.17	3.62	4.73	4.32
Petroleum Products															
Gasoline Retail ^b (dollars per gallon)															
All Grades	0.92	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.18	1.53	1.49	1.44
Regular Unleaded.....	0.91	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.14	1.49	1.46	1.41
No. 2 Diesel Oil, Retail															
(dollars per gallon).....	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.10	1.22	1.19	1.04	1.12	1.48	1.45	1.40
No. 2 Heating Oil, Wholesale															
(dollars per gallon).....	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.51	0.88	0.83	0.78
No. 2 Heating Oil, Retail															
(dollars per gallon).....	0.81	0.90	1.06	1.02	0.93	0.91	0.88	0.87	0.99	0.99	0.85	0.88	1.31	1.28	1.22
No. 6 Residual Fuel Oil, Retail ^c															
(dollars per barrel)	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	16.02	25.33	25.72	23.50
Electric Utility Fuels															
Coal															
(dollars per million Btu).....	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.22	1.20	1.21	1.19
Heavy Fuel Oil ^d															
(dollars per million Btu).....	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.39	4.22	4.14	3.80
Natural Gas															
(dollars per million Btu).....	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.57	4.21	5.12	4.82
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.83	6.69	7.73	9.77	9.13
Electricity															
(cents per kilowatthour)	7.49	7.64	7.85	8.05	8.23	8.34	8.40	8.40	8.36	8.43	8.26	8.16	8.25	8.34	8.36

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

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

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

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

(Million Barrels per Day, Except Closing Stocks)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Crude Oil Supply															
Domestic Production ^a	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.84	5.84	5.84
Alaska	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.05	0.97	1.02	1.05
Lower 48	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.87	4.82	4.80
Net Imports (including SPR) ^b	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.60	8.61	8.90	9.33	9.55
Other SPR Supply	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.01	0.08	0.09	0.00
Stock Draw (Including SPR)	0.00	-0.09	0.02	-0.01	0.00	-0.08	-0.02	0.09	0.05	-0.06	-0.07	0.09	-0.02	0.01	-0.03
Product Supplied and Losses	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.27	0.23	0.22
Total Crude Oil Supply	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.80	15.08	15.32	15.58
Other Supply															
NGL Production	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.85	1.91	1.84	1.95
Other Inputs	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.37	0.35
Crude Oil Product Supplied	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.66	0.66	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.93	0.92
Net Product Imports ^c	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.21	1.38	1.45
Product Stock Withdrawn	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	-0.01	-0.09	-0.04
Total Supply	17.33	17.37	17.04	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	19.52	19.76	20.21
Demand															
Motor Gasoline ^d	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.38	8.54	8.76
Jet Fuel	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.71	1.73	1.76
Distillate Fuel Oil	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.69	3.77	3.84
Residual Fuel Oil	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.83	0.85	0.78	0.74
Other Oils ^e	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.94	5.10
Total Demand	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.49	19.76	20.21
Total Petroleum Net Imports	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.11	10.71	11.00
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	330	341	323	325	318	335	337	303	284	305	324	284	289	284	293
Total Motor Gasoline	228	213	220	219	216	226	215	202	195	210	216	193	197	201	205
Jet Fuel	44	41	52	49	43	40	47	40	40	44	45	41	45	46	46
Distillate Fuel Oil	124	106	132	144	141	141	145	130	127	138	156	125	118	134	134
Residual Fuel Oil	45	44	49	50	43	44	42	37	46	40	45	36	36	39	38
Other Oils	267	257	261	267	263	273	275	258	250	259	291	246	248	256	268

^aIncludes lease condensate.^bNet imports equals gross imports plus SPR imports minus exports.^cIncludes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.^dFor years prior to 1993, motor gasoline includes an estimate of fuel ethanol blended into gasoline and certain product reclassifications, not reported elsewhere in EIA. See Appendix B in Energy Information Administration, *Short-Term Energy Outlook*, EIA/DOE-0202(93/3Q), for details on this adjustment.^eIncludes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil.

Special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve. NGL: Natural Gas Liquids

Notes: Minor discrepancies with other EIA published historical data are due to rounding, with the following exception: recent petroleum demand and supply data displayed here reflect the incorporation of resubmissions of the data as reported in EIA's *Petroleum Supply Monthly*, Table C1. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109, and *Weekly Petroleum Status Report*, DOE/EIA-0208.

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

(Trillion Cubic Feet)

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Total Dry Gas Production	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.85	18.90	18.71	18.62	<i>19.21</i>	<i>19.84</i>	<i>20.34</i>
Net Imports	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	<i>3.49</i>	<i>4.02</i>	<i>4.19</i>
Supplemental Gaseous Fuels.....	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	<i>0.10</i>	<i>0.12</i>	<i>0.13</i>
Total New Supply	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.75	21.84	21.80	22.14	<i>22.80</i>	<i>23.98</i>	<i>24.65</i>
Working Gas in Storage															
Opening.....	2.76	2.85	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	<i>2.51</i>	<i>1.79</i>	<i>2.21</i>
Closing.....	2.85	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.51	<i>1.79</i>	<i>2.21</i>	<i>2.31</i>
Net Withdrawals.....	-0.09	0.34	-0.56	0.24	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.22	<i>0.72</i>	<i>-0.42</i>	<i>-0.10</i>
Total Supply.....	18.33	19.03	18.82	19.70	20.11	20.70	21.11	21.85	21.73	21.84	21.25	22.36	<i>23.51</i>	<i>23.56</i>	<i>24.56</i>
Balancing Item ^a	-0.30	-0.23	-0.11	-0.66	-0.56	-0.42	-0.40	-0.27	0.24	0.11	0.01	-0.67	<i>-0.86</i>	<i>-0.38</i>	<i>-0.41</i>
Total Primary Supply.....	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>
Demand															
Lease and Plant Fuel.....	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.16	1.08	<i>1.26</i>	<i>1.28</i>	<i>1.30</i>
Pipeline Use.....	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.64	0.74	<i>0.76</i>	<i>0.77</i>	<i>0.77</i>
Residential.....	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	<i>4.92</i>	<i>5.12</i>	<i>5.14</i>
Commercial.....	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	<i>3.36</i>	<i>3.46</i>	<i>3.50</i>
Industrial (Incl. Nonutilities).....	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.83	8.69	9.00	<i>9.36</i>	<i>9.59</i>	<i>10.35</i>
Electric Utilities.....	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.26	3.11	<i>2.99</i>	<i>2.97</i>	<i>3.08</i>
Total Demand.....	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.70	<i>22.65</i>	<i>23.18</i>	<i>24.14</i>

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

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

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

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Production.....	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.2	<i>1086.6</i>	<i>1122.4</i>	<i>1131.6</i>
Appalachia.....	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	425.4	<i>422.3</i>	<i>426.2</i>	<i>422.3</i>
Interior.....	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	<i>146.6</i>	<i>145.3</i>	<i>138.6</i>
Western.....	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	488.8	512.3	<i>517.7</i>	<i>550.9</i>	<i>570.7</i>
Primary Stock Levels ^a															
Opening.....	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	<i>39.5</i>	<i>34.2</i>	<i>34.9</i>
Closing.....	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	<i>34.2</i>	<i>34.9</i>	<i>35.2</i>
Net Withdrawals.....	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-2.6	-2.9	<i>5.3</i>	<i>-0.7</i>	<i>-0.3</i>
Imports.....	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	9.1	<i>12.5</i>	<i>12.8</i>	<i>13.0</i>
Exports.....	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	<i>58.5</i>	<i>60.1</i>	<i>61.6</i>
Total Net Domestic Supply.....	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1045.7	1047.9	<i>1045.9</i>	<i>1074.5</i>	<i>1082.6</i>
Secondary Stock Levels ^b															
Opening.....	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	<i>143.5</i>	<i>114.9</i>	<i>112.6</i>
Closing.....	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	143.5	<i>114.9</i>	<i>112.6</i>	<i>111.6</i>
Net Withdrawals.....	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.6	-23.0	-14.1	<i>28.6</i>	<i>2.2</i>	<i>1.1</i>
Waste Coal Supplied to IPPs ^c	0.0	0.0	0.0	0.0	6.0	6.4	7.9	8.5	8.8	8.1	9.0	9.6	<i>10.1</i>	<i>10.6</i>	<i>11.1</i>
Total Supply.....	882.3	896.5	899.4	891.4	907.8	936.5	954.0	960.4	1006.7	1033.2	1031.6	1043.4	<i>1084.6</i>	<i>1087.3</i>	<i>1094.8</i>
Demand															
Coke Plants.....	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	<i>28.6</i>	<i>27.5</i>	<i>28.4</i>
Electricity Production															
Electric Utilities.....	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	910.9	894.1	<i>860.8</i>	<i>847.7</i>	<i>848.8</i>
Nonutilities (Excl. Co-gen.) ^d	NA	5.7	7.4	11.4	15.0	17.5	19.9	21.2	22.2	21.6	26.9	51.7	<i>116.9</i>	<i>137.9</i>	<i>145.3</i>
Retail and General Industry.....	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	76.9	77.1	73.0	70.3	<i>71.7</i>	<i>72.3</i>	<i>72.3</i>
Total Demand ^e	876.5	895.4	902.9	899.1	907.4	943.5	950.1	962.0	1005.6	1029.2	1039.0	1044.3	<i>1077.9</i>	<i>1085.4</i>	<i>1094.8</i>
Discrepancy ^f	5.8	1.1	-3.5	-7.7	0.5	-7.0	3.9	-1.6	1.2	4.0	-7.4	-0.9	<i>6.7</i>	<i>1.9</i>	<i>0.0</i>

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

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

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

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

^eTotal Demand includes estimated IPP consumption.

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

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

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

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

	Year														
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Supply															
Net Utility Generation															
Coal.....	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	1807.5	1767.7	1697.7	1721.1	1728.6
Petroleum	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	110.2	86.9	69.7	74.4	73.5
Natural Gas.....	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	309.2	296.4	285.5	281.4	292.2
Nuclear.....	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.6	673.7	725.0	706.6	674.6	663.3
Hydroelectric.....	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	337.2	304.4	293.9	253.8	262.0	272.0
Geothermal and Other ^a	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.5	7.2	3.7	2.2	2.2	2.2
Subtotal.....	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	3212.2	3173.7	3015.5	3015.7	3031.9
Nonutility Generation ^b	NA	187.6	216.7	246.3	286.1	314.4	343.1	363.3	369.6	371.7	405.7	554.7	797.7	916.9	993.7
Total Generation.....	2704.3	2971.9	3024.9	3071.3	3083.4	3196.9	3253.8	3357.8	3447.0	3494.2	3617.9	3728.4	3813.2	3932.5	4025.6
Net Imports ^c	31.8	11.0	2.3	19.6	25.4	27.8	44.8	39.2	38.0	36.6	27.6	30.6	39.3	37.2	35.9
Total Supply	2736.0	2982.8	3027.2	3091.0	3108.8	3224.7	3298.6	3397.1	3485.0	3530.8	3645.5	3759.0	3852.5	3969.7	4061.5
Losses and Unaccounted for ^d	NA	243.2	207.3	215.0	223.6	236.4	225.7	238.4	239.0	237.0	225.0	261.5	228.3	265.9	271.9
Demand															
Retail Sales ^e															
Residential.....	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.9	1130.1	1144.9	1188.9	1220.7	1243.0
Commercial.....	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1035.5	1055.0	1079.2
Industrial.....	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1033.6	1038.2	1051.2	1058.2	1078.5	1081.2	1107.1
Other.....	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	111.5	111.1	113.6
Subtotal.....	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3414.4	3468.0	3542.9
Nonutility Use/Sales ^f	NA	92.9	107.3	113.9	121.8	126.9	138.4	145.4	144.9	148.2	156.2	185.3	209.9	235.8	246.7
Total Demand.....	NA	2739.7	2819.9	2875.9	2885.2	2988.4	3073.0	3158.7	3246.0	3293.8	3420.5	3497.4	3624.3	3703.8	3789.7
Memo:															
Nonutility Sales															
to Electric Utilities	NA	94.7	109.4	132.4	164.4	187.5	204.7	217.9	224.7	223.5	249.5	369.4	587.8	681.1	747.0

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

^bNet generation.

^cData for 2000 are estimates.

^dBalancing item, mainly transmission and distribution losses.

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

^fDefined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA 860B, "Annual Electric Generator Report - Nonutility"(1998 and 1999) and EIA-867, "Annual Nonutility Power Producer Report,"(prior to 1998). Data for 2000 are estimates.

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

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

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