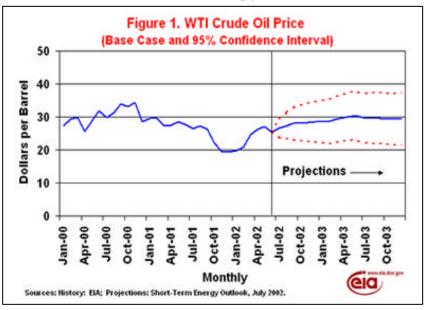


### **E** Short-Term Energy Outlook



### July 2002

### Overview

**World Oil Markets:** World oil price markers fell in June, with both Brent crude oil and the OPEC basket prices averaging \$1.00 - \$1.50 per barrel below May averages. Nevertheless, June marked the fourth consecutive month that the OPEC basket price averaged above \$22 per barrel, the lower end of OPEC's target range. The basket price has been above \$22 per barrel since March 8 and is projected to remain within the target range (\$22-28 per barrel) through 2003. Moderate OPEC restraint, combined with accelerating world demand growth later in 2002 and into 2003 is expected to maintain elevated prices. The

U.S. benchmark West Texas Intermediate (WTI) oil price averaged almost \$2 per barrel lower in June than in May but WTI prices were rising at month's end and averaged more than \$1 per barrel higher than the June average of \$25.50 per barrel during the first week of July (Figure 1). Our base case projection for WTI in 2002 is almost \$26 per barrel, rising to just above \$29 in 2003.

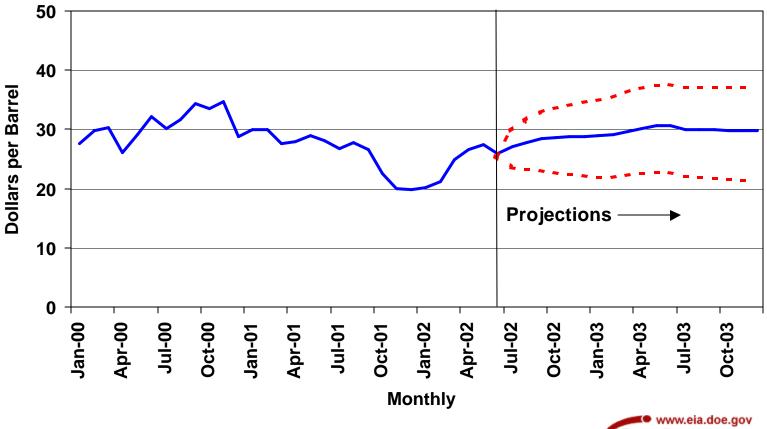
**Summer Motor Gasoline Update:** The U.S. national average pump price for gasoline continued to waffle within a very narrow range in June, posting an estimated average of \$1.42 per gallon for the month, within a penny or two of the averages reported since late March. On a <u>weekly basis</u> U.S. average gasoline prices did not vary by more than 3 cents per gallon between the first week in April and the last week in June. This level of calm for the second quarter period is reminiscent of the relative tranquility exhibited for the period 1997 to 1999. (Average prices, however, were much lower then than now. More horizontal drift seems likely for the very near term, but beyond that, gradual upward movements in pump prices in concert with the upward drift in crude oil prices is expected (Figure 2).

**U.S. Natural Gas Markets:** Spot wellhead prices have generally stayed over \$3.00 per thousand cubic feet (mcf) since mid-March. The market has been fairly volatile over the last several months, with spot gas prices bouncing up or down by as much as 25 cents per thousand cubic feet on a daily basis. Weather forecasts and underground storage reports are two factors that have had an exaggerated effect on the spot price of gas. Working gas in underground storage has remained at unusually high levels for the past several months. Since the lack of underlying demand strength and excess gas in storage have failed to keep prices below \$3.00 mcf for 3 months now, we project prices to remain in the \$2.90- to \$3.20-per-mcf range for the remainder of the summer. However, if relatively cool weather prevails in the third quarter, sharply lower prices are expected later this summer.

### **International Oil Markets**

**Crude Oil Prices**. Although the U.S. benchmark West Texas Intermediate (WTI) oil price averaged almost \$2 per barrel lower in June than in May, WTI prices were rising at month's end and averaged more than \$1

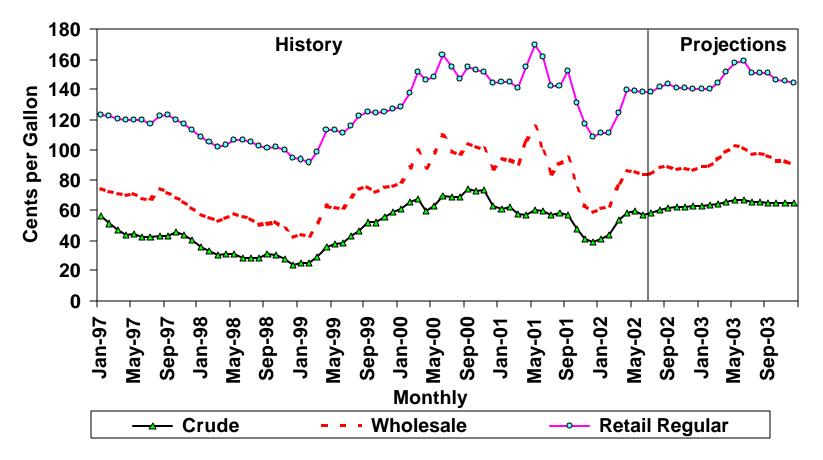
## **Figure 1. WTI Crude Oil Price** (Base Case and 95% Confidence Interval)



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2002.



# Figure 2. Gasoline Prices and Crude Oil Costs



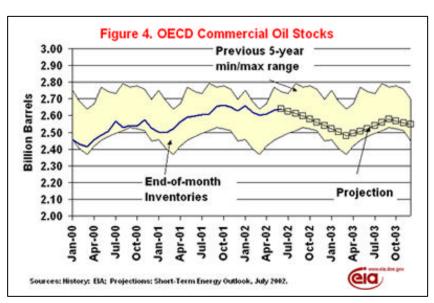


per barrel higher than the June average of \$25.50 per barrel during the first week in July. June marked the fourth consecutive month that the OPEC basket price averaged above \$22 per barrel, the lower end of OPEC's target range for its basket price. The basket price has been above \$22 per barrel since March 8 and is projected to remain within the target range (\$22-\$28 per barrel) throughout the forecast period, with prices rising at the end of the year and in early 2003 before declining again in mid-2003 (Figure 1).

**International Oil Supply and Demand.** At OPEC's June meeting, Saudi Oil Minister Ali Naimi listed 3 conditions that OPEC will consider before making any future increases to it's production quotas: 1) the OPEC basket price, which some Gulf sources have suggested needs to be above \$25 per barrel; 2) oil inventories levels; and 3) the world oil supply-demand outlook over the next year.

The first of OPEC's conditions is already close to being satisfied, as June OPEC basket prices exceeded \$24 per barrel by month's end. The timing for the other two OPEC conditions is less certain. The continued slump in global oil demand and a warm winter led to a counter-seasonal rise in OECD inventories during the early part of the year, as OECD commercial oil inventories closed over 40 million barrels higher in June than the 5-year average for this month. EIA's current *Outlook* has revised its estimate of world oil demand growth down slightly to 0.4 million barrels per day in 2002, both because of the continued slump in jet fuel demand and because of the continued weakness in oil demand that occurred in the first half of the year due to economic and weather factors.

However, EIA still projects a demand recovery beginning in the latter half of 2002 that could meet the second OPEC criteria for increased production quotas. With the expected recovery of the economy in 2003, particularly in the United States, where GDP growth is projected to reach over 3 percent annually, oil demand could increase by 1.3 million barrels per day in 2003, with most of this increase coming from the OECD countries, particularly the United States (Figure 3).



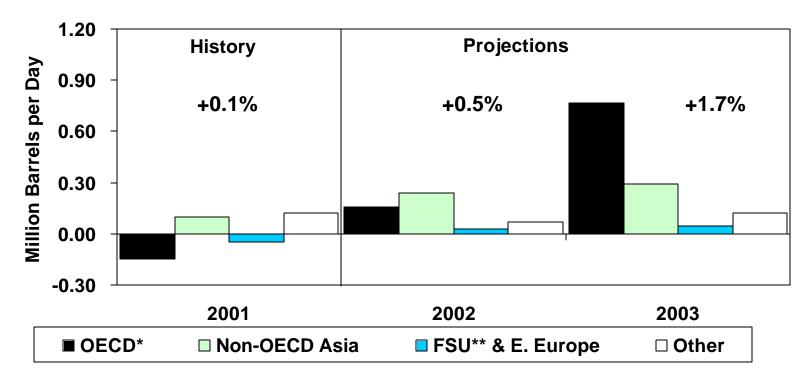
The combination of these demand increases and the effects of the OPEC quota cuts, which totaled 5 million

barrels per day since the start of 2001, should become increasingly visible in the form of lower inventories, building support for rising world oil prices (Figure <u>4</u>). If world oil demand turns around as expected, OECD commercial inventories could fall toward the lower boundary of the 5-year average sometime during the third quarter of 2002, meeting the last of OPEC's criteria and setting the stage for future OPEC production increases, which may be announced at OPEC's planned September meeting.

OPEC 10 production in June is estimated to have been 1.4 million barrels per day above quota levels, about the same level

as during May. Iraqi U.N.-sanctioned exports (and consequently production) fell by 300,000 barrels per day below its low May levels of 0.8 million barrels per day. The *Outlook* assumes that Iraqi production will continue to fluctuate, with another downturn expected following the next rollover of the United Nation's oil-for-food program at the end of November. EIA's current *Outlook* assumes that OPEC production will need to rise even further over the rest of 2002 in order to prevent prices from rising above OPEC's target range. The expected turnaround in world oil demand in the second half of 2002, combined with OPEC's

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

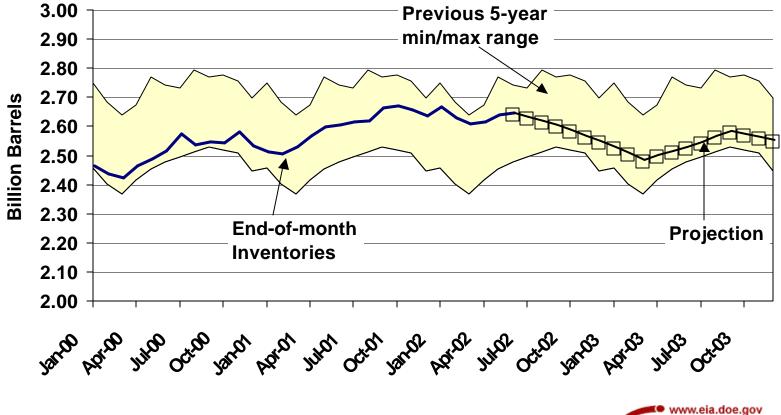


\* Note: OECD now defined to include the Czech Republic, Hungary, Mexico, Poland and South Korea in EIA's statistics.

\*\* FSU = Former Soviet Union



## Figure 4. OECD Commercial Oil Stocks



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2002.



very low quota level, is projected to reduce world oil inventories rapidly unless the OPEC 10 increase their production by another half million barrels per day by the fourth quarter.

### U. S. Energy Prices

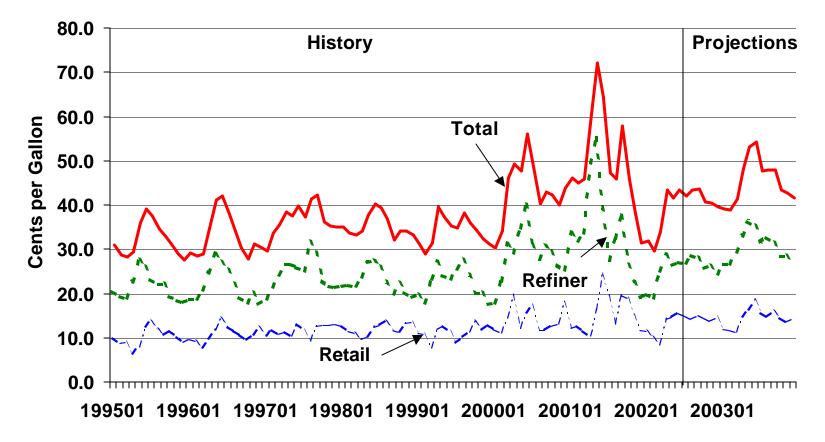
Motor Gasoline: Average monthly retail motor gasoline prices fell by one cent per gallon for the second month in a row (Figure 2). Earlier in the year, it was anticipated that the pump price would continue to rise through the early summer after jumping nearly 30 cents per gallon between February and April. Historically, motor gasoline prices are inclined to peak during this time of the year when school is out and the summer travel season gets into full swing. In this driving season, US average pump prices for regular grade gasoline are not expected to rise much above \$1.40 per gallon. Last year, the average monthly price for regular gasoline peaked at \$1.70 per gallon (a record high price in nominal terms) in May. Last year's price spike was largely the result of supply disruptions and summer grade gasoline transition problems. This year, the seasonal changeover to reformulated gasoline was much less problematic. Adequate stocks of gasoline combined with strong levels of gasoline imports are factors mitigating high motor gasoline prices this summer, even as demand for this fuel attains record levels. Still, pump prices could creep up a bit, since both crude oil prices and demand for gasoline are both expected to increase over the next several months. The U.S. average retail price of gasoline is expected to peak at around \$1.43 per gallon later this summer. There could still be scattered occurrences of price spikes around the nation if supply problems arise or if crude oil prices surge. On the other hand, prices could ease a bit further if crude oil prices slip. Refiner margins (the difference between the refiner price of gasoline and the refiner acquisition cost of crude oil) have been tepid this summer, due to the strong supply situation of gasoline, especially when compared to the situation during the last two summers (Figure 5). In 2003, retail gasoline prices are expected to increase by 10-15 cents per gallon on an annual basis, assuming rising crude oil prices and recovering refiner margins, as continuing economic growth boosts gasoline demand. At the end of June, motor gasoline inventories stood at 216 million barrels, which is at the high end of the summer "normal" range (Figure 6).

**Distillate Fuel Oil (Diesel and Heating Oil):** Diesel fuel oil prices have been quite stable since late March, actually easing a little over the summer. Inventories for distillate have been quite robust, putting a ceiling on any near-term price increases. At the end of June, distillate fuel oil inventories were about 128 million barrels, at the upper range of the 5-year average (Figure 7). We do not anticipate any major shift in the price of distillate fuel until the fall, when the heating season begins and winter demand for fuel oil normally boosts both heating oil and diesel fuel prices. A stronger economy along with the expectation of higher crude oil prices in 2003 are expected to boost prices by an average of 10-15 cents per gallon for retail heating oil and diesel fuel (Figure 8). However, residential prices are projected to be higher next winter, by about 20 cents per gallon compared to the previous winter. Assumptions of higher crude oil prices next winter, averaging \$7.50 per barrel (or 18 cents per gallon) more than the previous winter, will account for most of the projected difference. In addition, the weather last winter in the Northeast was considerably milder (18 percent fewer heating degree-days) than average, easing demand pressure on prices.

**Natural Gas:** On a monthly average basis, spot wellhead prices have generally stayed over \$3.00 per thousand cubic feet since mid-March (Figure 9). The market has been fairly volatile over the last several months with spot gas prices bouncing up or down by as much as 25 cents per thousand cubic feet on a daily basis. It seems that any market information that can affect the price of gas such as a weather forecast or an underground storage report has had an exaggerated effect on the spot price of gas.

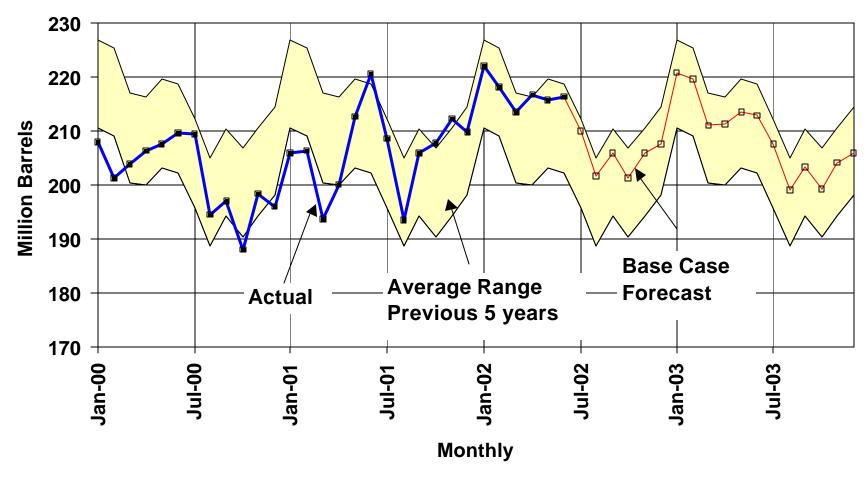
Related factors that drive the market are the amount of working gas currently in underground storage and the amount that is expected to be in place by November 1, (i.e., at the start of the heating season). A level of 3 - 3.2 trillion cubic feet of working gas in storage by November 1 is the target generally considered by the industry to insure adequate gas for the heating season. During the spring and summer, gas is typically

# **Figure 5. Motor Gasoline Spreads**





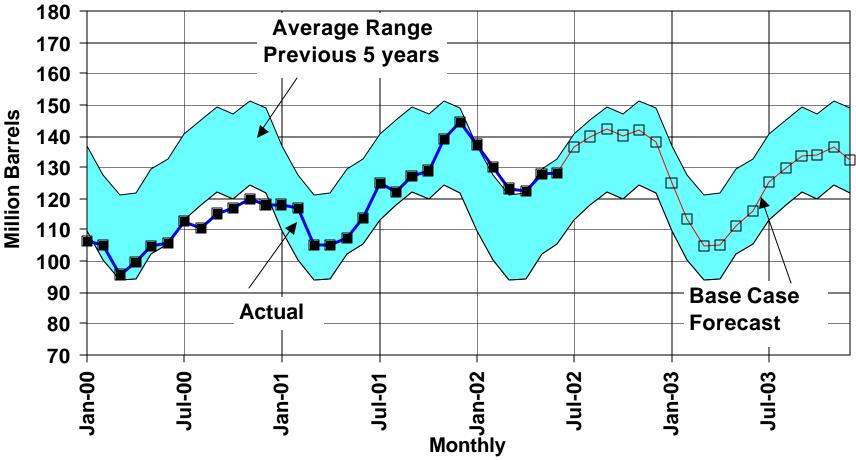
# **Figure 6. U.S. Gasoline Inventories**





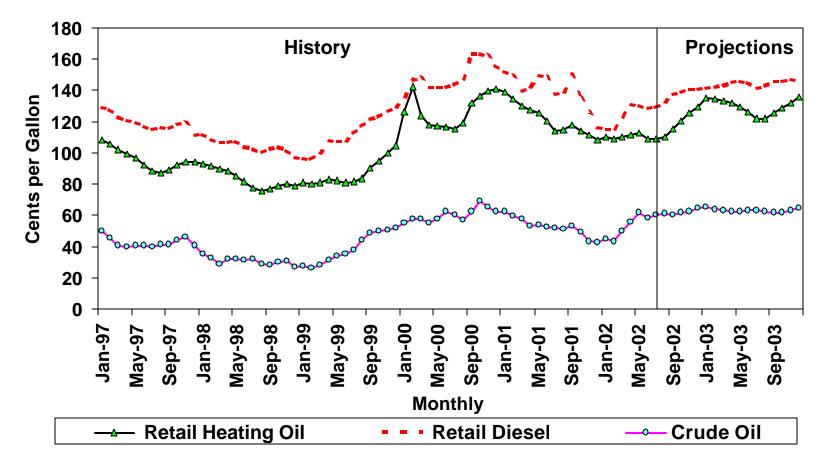


# **Figure 7. Distillate Fuel Inventories**



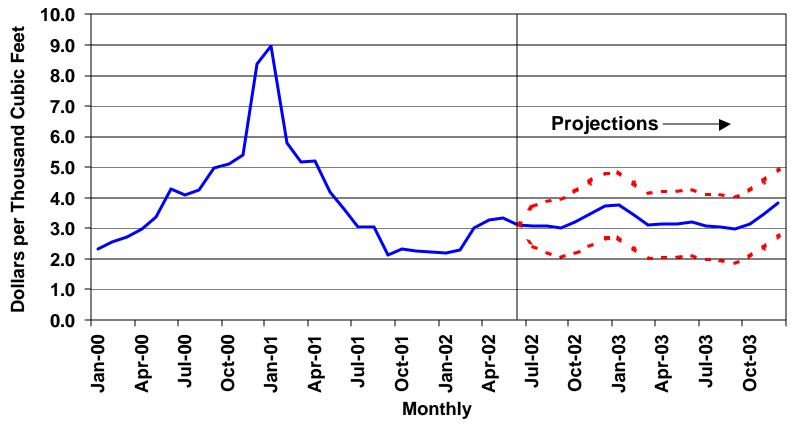


# **Figure 8. Distillate Fuel Prices**





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



Sources: History: Natural Gas Week; Projections: Short-Term Energy Outlook, July 2002.



added (injected) to storage. However, if the summer is unusually hot, gas will be diverted from storage for incremental electricity generation to run the additional air-conditioning demand. A prolonged hot summer would result in less storage injections and in a more bullish sentiment among gas market participants.

Although the early part of the cooling season was warmer than normal, our base case forecast assumes that the remainder of the cooling season will be "normal." Working gas in underground storage has remained at unusually high levels for the past several months. By the end of June, the storage level for working gas was about 19 percent above the previous 5-year average for that month. If we have mild weather for the reminder of the summer, resulting in less incremental demand for gas-fired electricity generation (to run air-conditioners), then we could see wellhead prices dropping below \$3.00 per thousand cubic feet.

Besides the weather, two factors that would tend to boost gas prices are: rising world oil prices and a growing economy. There are other underlying issues that may also be propping up prices. Within the industry, there has been some concern that natural gas production has been declining this year, resulting in a diminished supply situation for the short-term. On the other hand, the drop in production may be more the result of lower demand combined with ample storage, than of the reduction in drilling.

By the end of the summer, the winter storage outlook will obviously be much clearer. Meanwhile, if gas demand for power generation turns out to be relatively weak and high storage levels (relative to normal) persist, sharply lower prices could result before next fall.

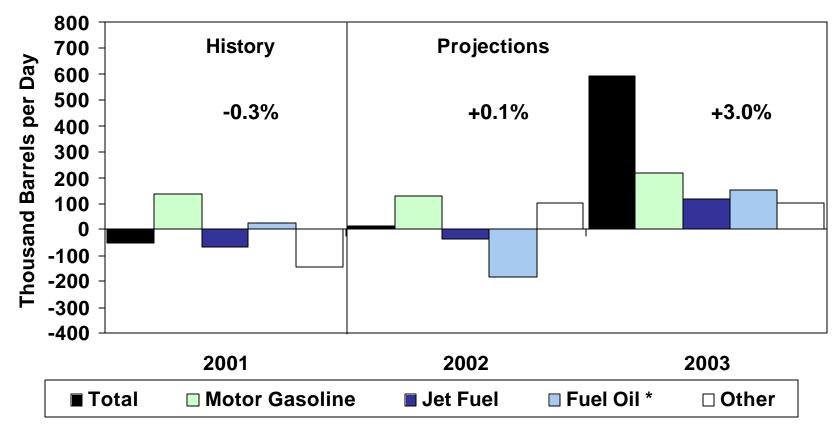
It is expected that next winter natural gas prices, assuming normal weather, will average close to \$3.40 per thousand cubic feet, which is about \$1.00 per thousand cubic feet above last winter's price, but only about 10-15 percent higher than the current gas price. For all of 2002, the annual average natural gas wellhead price is projected to be about \$2.90 per thousand cubic feet compared to over \$4.00 last year. In 2003, assuming normal weather, the combination of projected lower levels of underground gas storage, continuing economic gains, and rising crude oil prices is expected to push natural gas wellhead prices higher, to just over \$3.20 per thousand cubic feet.

### U.S. Oil Demand

Total annual U.S. oil demand, languishing between 19.5 and 19.7 million barrels per day from 1999 to 2001, is not expected to break out of the rather narrow range in 2002, taking the year as a whole. It will, in fact, take increasingly strong year-over-year increases through the rest 2002 to move closer to the 19.7 million-barrels-per-day mark. We believe that, with normal weather (particularly in the fourth quarter) and reasonably steady real prices, such an acceleration is likely, so long as improvement in the overall economy continues. Solid economic growth next year and (again) normal weather should result in 2003 being the breakout year from the 4-year stagnation seen since 1999. The expected increase next year (about 600,000 barrels per day, or 3.0 percent) would be similar to the growth exhibited in U.S. demand in 1996 and 1999.

Total petroleum products demand for the current year is projected to average 19.66 million barrels per day, about even with the 2001 average (Figure 10). Growth in motor gasoline demand, buoyed by continued increases in real disposable income, is projected to be 1.5 percent; demand declines in the other petroleum products are expected to offset that increase. Despite projections of a turnaround later this year, weakness in industrial activity as well as record warm weather for the first quarter account for much of the 3.1 percent decline in distillate demand projected for the year. Although air-travel activity has been gradually recovering from its recent lows resulting from the events of last September, total jet fuel demand is still projected to have witnessed an 8-percent decline in demand compared to the same period a year ago. In contrast to the months leading up to the events of last September, freight activity has been the strongest component since the beginning of the year, approaching levels seen during the same period last year. But,

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



\* Sum of distillate and residual fuel.



as with distillate fuel demand, continuing strength in that market depends partly on the magnitude of recovery in industrial production. Residual fuel oil demand this year is expected to contract 7.9 percent to a record low of about 750,000 barrels per day. That contraction stems primarily from unusually warm weather during the first quarter and a decline in industrial activity. The presumed return to normal weather in the fourth quarter and a recovery in industrial activity are expected to result in a firming of demand during the rest of the year.

In 2003, petroleum demand is expected to respond to accelerations of disposable income and industrial output growth as well as assumptions of normal weather. Total demand in 2003 is projected to average 20.25 million barrels per day, or 3.0 percent, from that of the current year. That would be the first time in which average total petroleum demand would exceed 20 million barrels per day. Motor gasoline demand is projected to climb by 2.5 percent, buoyed by brisk growth in disposable income. Moreover, other fuels are expected to register increases in demand. Distillate fuel oil demand is projected to climb 2.9 percent, reflecting substantial increases in transportation, heating, and industrial sectors. Jet-fuel demand, responding to continued recovery in flight activity, is projected to surpass those attained in that year. In response to continued recovery in industrial activity and higher average natural gas prices, residual fuel oil demand is projected to increase 5.6 percent to about 790,000 barrels per day.

### U.S. Oil Supply

Average domestic crude oil production is expected to increase by nearly 100,000 barrels per day or 1.7 percent in 2002, to a level of 5.90 million barrels of oil per day <u>(Figure 11)</u>. For 2003, a 0.2 percent decrease is expected resulting in a production rate of 5.89 million barrels of oil per day average for the year.

Lower-48 States oil production is expected to increase by 54,000 barrels per day to a rate of 4.89 million barrels per day in 2002, followed by a decrease of 60 thousand barrels per day in 2003. Shell's Brutus platform is expected to peak its oil production at 100 thousand barrels per day in 2002. Oil production from the Mars, Troika, Ursa, Dianna-Hoover and Brutus Federal Offshore fields is expected to account for about 9.3 percent of the lower-48 oil production by the 4th quarter of 2003.

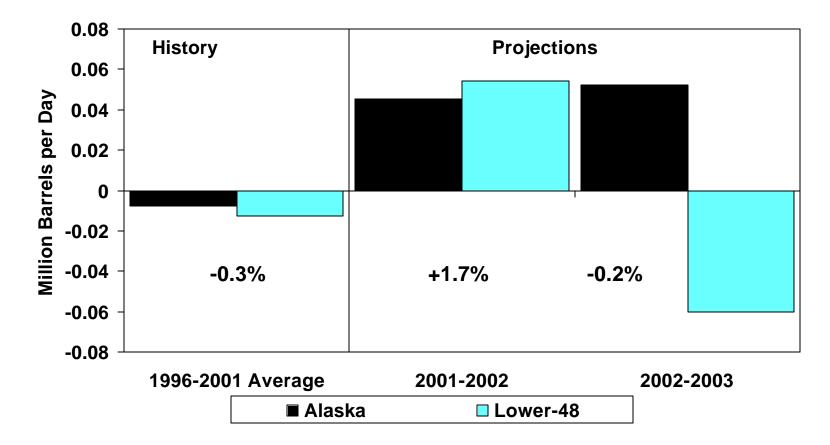
Alaska is expected to account for 18.0 percent of the total U.S. oil production in 2003. Alaska oil production is expected to increase by 4.7 percent in 2002 and by 5.2 percent in 2003. The increase in 2003 will be the result of field facilities expansion in the new satellite Colville River (Alpine) field. Another satellite field, North Star, came on in November 2001 at a rate of over 50 thousand barrels per day. Production from the Kuparuk River, West Sak, Tabasco, Tarn and Meltwater fields is expected to stay at an average of 220 thousand barrels per day in 2002 and 2003.

### Natural Gas Demand and Supply

In 2002, natural gas demand is projected to increase by 1.7 percent over 2001 levels, a downward revision of projected demand in the last *Outlook*. The revision is due to unexpectedly low demand figures for February now being included in the 2002 totals and to the fact that assumptions about GDP growth for this year have been revised downward. Growth is for the most part limited to the industrial sector. In 2003, natural gas demand growth is expected to increase by 3.5 percent, boosted by higher expected heating-related demand and an accelerating economy. In 2003, natural gas demand growth is expected across all sectors (Figure 12).

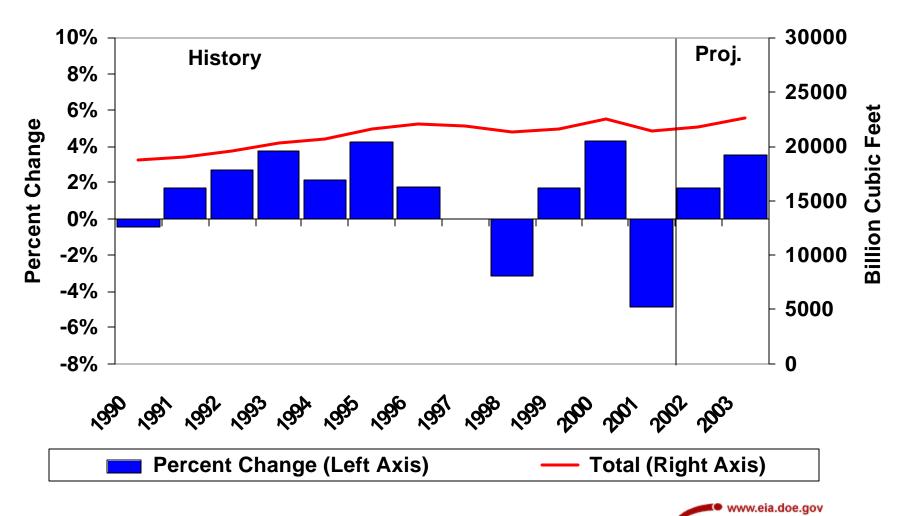
Summer natural gas demand is now projected to be 3.6 percent above last summer's level, rather than the 4.7 percent projected in the last *Outlook*. Growth is due mainly to the fall in natural gas prices since a year ago and the slowly reviving economy.

# Figure 11. U.S. Crude Oil Production Growth (Change from Year Ago)





# Figure 12. Total Natural Gas Demand Growth Patterns



Sources: History: EIA; Projections: Short-Term Energy Outlook, July 2002. Note: This chart replaces a previous Figure 12 because of revised data for January 2002. EIA recently posted upward <u>revisions in its historical storage data</u> encompassing the entire 2001-2002 heating season. These revisions were due to confusion among some storage operators over how to report their storage data. Incorporating the revisions, storage is now estimated to have reached 2,284 billion cubic feet (bcf) by the end of June, 19 percent above the 5-year average. Storage levels are now about 400 bcf higher than year ago, and almost half of that surplus is in the producing region. Storage is expected to remain above average levels right up through the beginning of the next heating season (Figure 13). In June 2002, spot natural gas prices averaged about \$3.10 per thousand cubic feet (mcf) compared with an average of \$3.63 in June 2001.

Domestic dry natural gas production is projected to fall by about 2.3 percent in 2002 compared to the 2001 growth rate of 2.4 percent. Lower natural gas prices have reduced production and resource development incentives from their highs of last summer. Still, current supplies, including natural gas in storage, appear to be at very comfortable levels. In 2003, production is expected to rebound by 4.1 percent as demand rises.

Gas-directed drilling, while down sharply from summer 2001 levels, is still quite strong by a longer historical perspective. Nevertheless, natural gas drilling activity has fallen significantly from the peaks seen last July. <u>Baker Hughes</u> reported average active rigs drilling for natural gas at 716 on July 3, 32 percent below the year-ago level. However, this latest posting is 21 percent above the recent low of 591 posted for the week of April 5, 2002. Aggregate lease revenues from domestic oil and gas production are expected to move up this year and settle at about \$340 million per month in 2003, which would be approximately a 40 percent increase over the rates seen at the end of 2001 (Figure 14). Inasmuch as these revenues are a strong determinant of industry cash flow, which in turn is a powerful driver of drilling activity levels, an upward trend in drilling levels generally (and natural gas-directed drilling in particular) is anticipated for this year and into 2003 (Figure 15). Thus, natural gas drilling rates appear to be at the beginning of a rise in the current drilling cycle.

### Electricity Demand and Supply

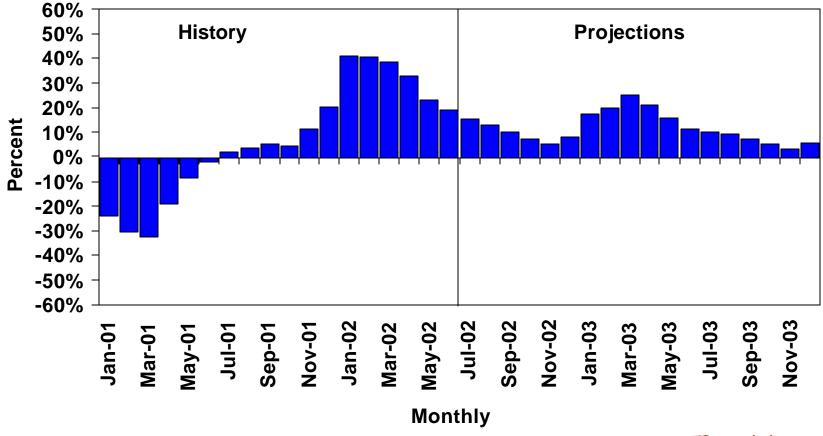
This summer, total electricity demand is expected to grow by less than 1 percent over last summer's demand level, following an actual decline in summer demand last year. Cooling degree-days (CDDs) for the cooling season (April through September), based on CDDs thus far, are assumed to be at around the same level as last summer, which was about 2 percent above normal. Also, while the economy is assumed to be growing through the summer months, significant year-over-year increases in industrial output are not expected to show up until after the third quarter of this year.

Total annual electricity demand growth (retail sales plus industrial generation for own use and other direct sales) is estimated to have been flat in 2001. For 2002, demand is also expected to be flat but it is expected to begin to revive in the third quarter of 2002, and to grow by 2.2 percent in 2003 (Figure 16) because the economy is assumed to gradually revive.

In 2001, total hydropower generation was down to lows not seen since 1966. In 2002, total hydro generation is expected to rise by 36 percent with normal precipitation in the Pacific Northwest, the main region affected. Total oil-fired generation is projected to be down considerably, by 39 percent from last year due to higher relative prices, while total gas-fired generation is projected to be about even with what it was last year.

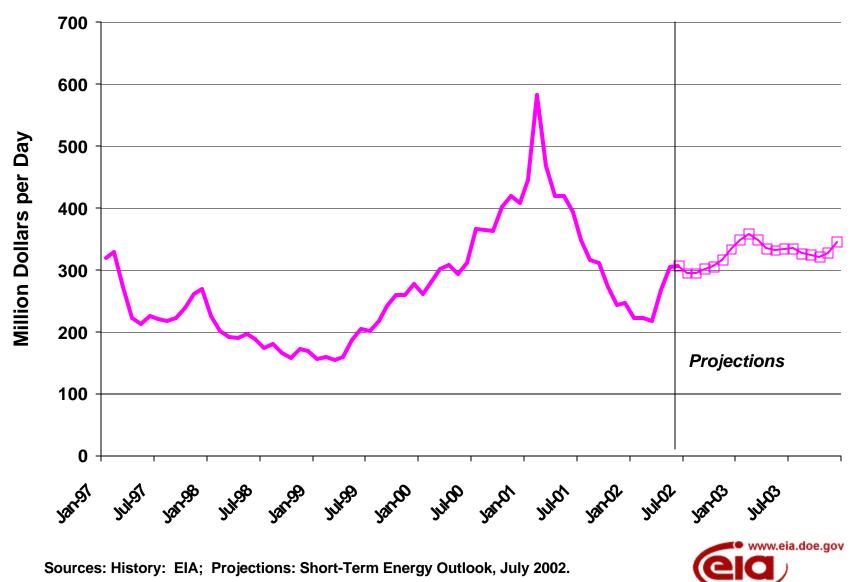
The total nuclear generation projection for 2002 is about 0.3 percent above the 2001 level and the 2003 projection shows an increase of about 2.2 percent over 2002. The capacity factor for 2001 was 89.5% and capacity factors for 2002 and 2003 are both projected to be slightly above 90%. The projection reflects revised and increasing capacities for the 103 operating units. Nuclear plant owners have filed applications with the Nuclear Regulatory Commission for uprates for many years, however there have recently been

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

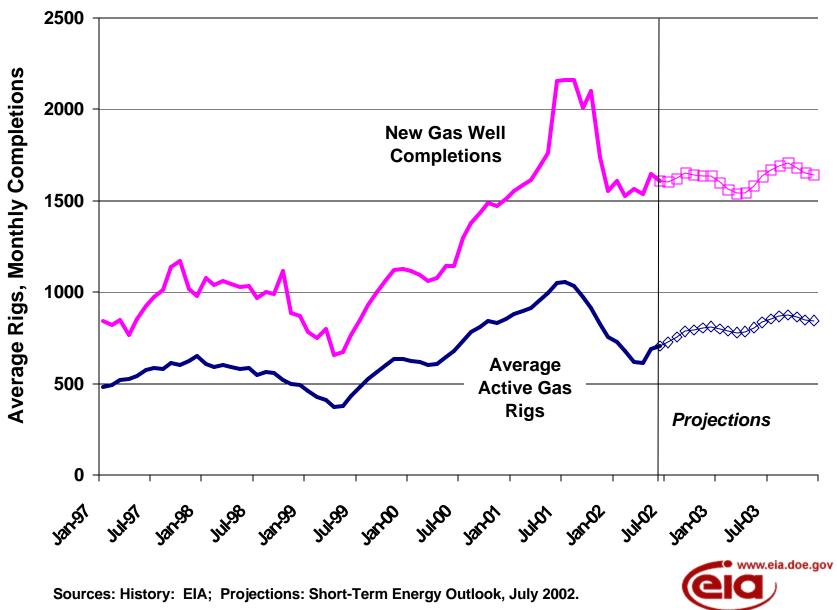




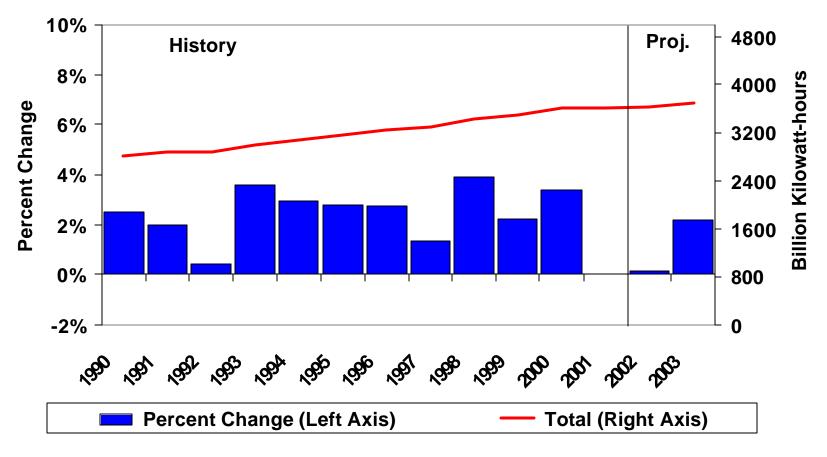
# Figure 14. U.S. Oil and Gas Production Revenues



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



# **Figure 16. Total Electricity Demand Growth Patterns**





many more and larger uprates sought. There were applications for uprates at 22 units in 2001 and an equal number is expected through 2003. The planned expansions range from 1 to 20 percent of the current capacities and each could take from 12 to 36 months to implement. The resulting capacity increases reflected in this projection are for 295 megawatts electric (Mwe) in 2001, 994 Mwe in 2002 and 644 Mwe in 2003, for a total exceeding 1,900 Mwe. Currently, the only major outage is with the Davis Besse facility, which is projected to resume operation by November.

Table HL1. U.S. Energy Sup	piy and	Year	IU. Das	e Gase	Δηριμ	al Percentage Cl	nange
	2000	2001	2002	2003	2000-2001	2001-2002	2002-2003
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	9224	9334	9557	9855	1.2	2.4	3.1
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel)	27.72	22.02	23.65	26.97	-20.6	7.4	14.0
<b>Petroleum Supply</b> (million barrels per day) Crude Oil Production <sup>b</sup>	5.82	5.80	5.90	5.89	-0.3	1.7	-0.2
Total Petroleum Net Imports (including SPR)	10.42	10.90	10.33	11.01	4.6	-5.2	6.6
Energy Demand							
World Petroleum (million barrels per day)	76.0	76.1	76.5	77.8	0.1	0.5	1.7
Petroleum (million barrels per day)	19.70	19.65	19.66	20.25	-0.3	0.1	3.0
Natural Gas (trillion cubic feet)	22.54	21.44	21.81	22.58	-4.9	1.7	3.5
Coal <sup>c</sup> (million short tons)	1081	1050	1082	1100	-2.9	3.0	1.7
Electricity (billion kilowatthours) Retail Sales <sup>d</sup> Nonutility Use/Sales <sup>e</sup> Total	3421 199 3620	3402 219 3621	3404 221 3626	3478 228 3706	-0.6 10.1 0.0	0.1 0.9 0.1	2.2 3.2 2.2
Total Energy Demand <sup>f</sup> (quadrillion Btu)	99.6	97.0	98.9	101.7	-2.6	1.9	2.9
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar)	10.80	10.40	10.34	10.32	-3.7	-0.6	-0.2
Renewable Energy æ Percent of Total <sup>g</sup>	7.2	6.6	7.4	7.5			

<sup>a</sup>Refers to the refiner acquisition cost (RAC) of imported crude oil.

<sup>b</sup>Includes lease condensate.

<sup>c</sup>Total Demand includes estimated Independent Power Producer (IPP) coal consumption.

<sup>d</sup>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.

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

<sup>1</sup>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).

<sup>9</sup>Renewable energy includes minor components of non-marketed renewable energy, which is renewable energy that is neither bought nor sold, either directly or indirectly, as inputs to marketed energy. The Energy Information Administration does not estimate or project total consumption of non-marketed renewable energy.

SPR: Strategic Petroleum Reserve.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; and Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-0520; Weekly Petroleum Status Report, DOE/EIA-0208. Macroeconomic projections are based on DRI-WEFA Forecast CONTROL0602.

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

		2001				2002				2003				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Macroeconomic <sup>a</sup>															
Real Gross Domestic Product															
(billion chained 1996 dollars - SAAR)	9334	9342	9310	9349	9482	9519	9576	9652	9727	9814	9894	9985	9334	9557	9855
Percentage Change from Prior Year	2.5	1.2	0.5	0.5	1.6	1.9	2.9	3.2	2.6	3.1	3.3	3.5	1.2	2.4	3.1
Annualized Percent Change															
from Prior Quarter	1.3	0.3	-1.3	1.6	5.7	1.6	2.4	3.2	3.1	3.6	3.3	3.7			
GDP Implicit Price Deflator															
(Index, 1996=1.000)	1.087	1.092	1.098	1.098	1.100	1.106	1.112	1.119	1.128	1.133	1.140	1.148	1.094	1.109	1.137
Percentage Change from Prior Year	2.3	2.2	2.4	1.9	1.2	1.3	1.2	1.9	2.5	2.4	2.5	2.6	2.2	1.4	2.5
Real Disposable Personal Income															
(billion chained 1996 Dollars - SAAR)	6679	6719	6918	6774	6944	7015	7039	7063	7109	7168	7212	7237	6772	7015	7182
Percentage Change from Prior Year	3.8	3.0	5.3	2.1	4.0	4.4	1.8	4.3	2.4	2.2	2.5	2.5	3.6	3.6	2.4
Manufacturing Production															
(Index, 1996=1.000)	1.221	1.202	1.187	1.167	1.177	1.192	1.208	1.222	1.239	1.260	1.281	1.296	1.194	1.200	1.269
Percentage Change from Prior Year	-1.1	-4.2	-5.5	-6.1	-3.6	-0.9	1.8	4.7	5.3	5.7	6.0	6.1	-4.2	0.5	5.8
OECD Economic Growth (percent) <sup>b</sup>													0.9	1.8	2.6
Weather <sup>c</sup>															
Heating Degree-Days															
110	2220	440	OF	4000	2007	<b>F10</b>	06	1622	0004	<b>E10</b>	96	1000	4000	1005	1156

U.S	2329	446	85	1363	2067	510	86	1622	2231	518	86	1622	4223	4285	4456
New England	3268	802	122	1867	2800	873	167	2237	3171	882	167	2237	6059	6077	6457
Middle Atlantic	2950	627	102	1618	2476	676	105	2002	2888	699	105	2001	5297	5259	5693
U.S. Gas-Weighted	2450	470	93	1438	2181	548	90	1714	2348	555	90	1713	4451	4533	4706
Cooling Degree-Days (U.S.)	26	371	779	80	30	373	782	76	33	347	783	76	1256	1261	1238

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

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

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

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419). Projections of OECD growth are based on DRI-WEFA, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI-WEFA Forecast CONTROL0602.

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

		2001				2002	ase.			2003				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Macroeconomic <sup>a</sup>															
Real Fixed Investment															
(billion chained 1996 dollars-SAAR)	1740	1696	1672	1622	1621	1622	1624	1633	1645	1672	1702	1734	1683	1625	1688
Real Exchange Rate															
(index)	1.113	1.147	1.140	1.160	1.190	1.167	1.163	1.147	1.120	1.090	1.070	1.057	1.140	1.167	1.084
Business Inventory Change															
(billion chained 1996 dollars-SAAR)	-15.0	-35.6	-47.0	-44.1	-29.7	-4.6	0.7	1.8	6.3	8.7	9.5	9.5	-35.4	-7.9	8.5
Producer Price Index															
(index, 1982=1.000)	1.385	1.363	1.329	1.292	1.297	1.319	1.328	1.337	1.348	1.349	1.359	1.366	1.342	1.320	1.356
Consumer Price Index															
(index, 1982-1984=1.000)	1.759	1.773	1.776	1.775	1.781	1.797	1.810	1.825	1.840	1.852	1.865	1.880	1.771	1.803	1.859
Petroleum Product Price Index															
(index, 1982=1.000)	0.892	0.968	0.875	0.675	0.655	0.780	0.788	0.855	0.889	0.919	0.878	0.906	0.852	0.770	0.898
Non-Farm Employment															
(millions)	132.6	132.5	132.4	131.5	131.2	131.3	131.4	131.9	132.5	133.0	133.6	134.4	132.2	131.5	133.4
Commercial Employment															
(millions)	93.2	93.3	93.3	92.8	92.7	92.8	92.9	93.2	93.7	94.0	94.6	95.2	93.1	92.9	94.4
Total Industrial Production															
(index, 1996=1.000)	1.199	1.181	1.167	1.147	1.154	1.170	1.186	1.201	1.217	1.236	1.255	1.270	1.173	1.178	1.245
Housing Stock															
(millions)	117.5	117.7	117.7	118.4	119.3	119.6	119.9	120.2	120.5	120.8	121.2	121.5	117.9	119.7	121.0
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1996=1.000)	1.081	1.073	1.069	1.060	1.070	1.074	1.082	1.089	1.097	1.106	1.117	1.126	1.071	1.079	1.111
Vehicle Miles Traveled <sup>b</sup>															
(million miles/day)	7103	7883	7877	7574	7235	7959	8034	7590	7360	8071	8228	7763	7611	7706	7858
Vehicle Fuel Efficiency															
(index, 1999=1.000)	0.990	1.000	0.988	1.009	0.986	0.991	1.004	0.998	0.987	0.978	1.000	0.993	0.997	0.995	0.990
Real Vehicle Fuel Cost															
(cents per mile)	4.12	4.33	3.97	3.32	3.31	3.71	3.71	3.83	3.88	4.06	3.86	3.85	3.93	3.64	3.91
Air Travel Capacity															
(mill. available ton-miles/day)	488.9	495.6	476.6	430.2	432.0	460.1	464.0	455.4	461.4	488.6	508.5	499.9	472.7	453.0	489.8
Aircraft Utilization															
(mill. revenue ton-miles/day)	263.7	282.8	265.9	225.3	235.7	266.9	283.8	270.4	267.1	288.2	303.7	289.8	259.4	264.3	287.3
Airline Ticket Price Index															
(index, 1982-1984=1.000)	2.399	2.408	2.452	2.318	2.317	2.387	2.450	2.495	2.554	2.585	2.605	2.627	2.394	2.412	2.593
Raw Steel Production															
(millions tons)	25.53	26.07	25.25	22.05	24.30	25.78	25.53	25.15	26.17	26.96	26.53	26.11	98.89	100.76	105.77

<sup>a</sup>Macroeconomic projections from DRFWEFA model forecasts are seasonally adjusted at annual rates and modified as appropriate to the mid world oil price case. <sup>b</sup>Includes all highway travel. SAAR: Seasonally -adjusted annualized rate.

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

#### Table 3. International Petroleum Supply and Demand: Base Case

(Million Barrels per Day, Except OECD Commercial Stocks)

(Million Barrels per Day,	Exce	2001			ercial	2002	.5)			2003				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Demand <sup>a</sup>	101	2.1.4	oru		101	2.1.4	ora		101		ora		2001		
OECD															
U.S. (50 States)	19.9	19.6	19.7	19.4	19.4	19.4	19.9	19.9	20.1	20.0	20.5	20.5	19.6	19.7	20.3
U.S. Territories		0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4
Canada		1.9	2.0	2.0	1.9	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.1
Europe	-	14.8	15.5	15.5	15.3	14.9	15.6	15.6	15.6	14.7	15.3	16.0	15.3	15.3	15.4
Japan	6.1	5.0	5.1	5.5	5.9	5.0	5.1	5.6	6.0	4.9	5.1	5.5	5.4	5.4	5.4
Other OECD		4.9	4.9	5.2	5.4	5.0	5.0	5.3	5.1	5.1	5.3	5.4	5.1	5.2	5.2
Total OECD	49.0	46.6	47.5	48.0	48.3	46.7	48.0	48.8	49.3	47.0	48.7	49.9	47.8	47.9	48.7
Non-OECD															
Former Soviet Union	3.7	3.6	3.6	3.6	3.8	3.6	3.6	3.6	3.8	3.7	3.7	3.7	3.6	3.7	3.7
Europe		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
China		4.9	4.8	4.8	5.1	5.0	5.0	5.0	5.3	5.3	5.2	5.3	4.9	5.0	5.3
Other Asia	7.4	7.4	7.1	7.4	7.4	7.4	7.1	7.5	7.5	7.5	7.2	7.6	7.3	7.4	7.4
Other Non-OECD	11.7	11.9	12.0	11.8	11.7	12.0	12.0	11.9	11.8	12.1	12.2	12.1	11.8	11.9	12.0
Total Non-OECD	28.4	28.4	28.1	28.3	28.6	28.7	28.4	28.7	29.1	29.1	28.9	29.2	28.3	28.6	29.1
Total World Demand	77.3	75.0	75.6	76.3	76.9	75.3	76.4	77.6	78.3	76.1	77.6	79.1	76.1	76.5	77.8
Supply <sup>b</sup>															
OECD															
U.S. (50 States)	8.7	9.0	9.0	9.1	9.1	9.1	9.1	9.2	9.2	9.1	9.1	9.2	8.9	9.1	9.2
Canada	2.8	2.8	2.7	2.9	2.9	3.0	3.1	3.1	3.0	3.0	3.1	3.2	2.8	3.0	3.1
Mexico	3.6	3.5	3.6	3.6	3.6	3.6	3.7	3.6	3.8	3.8	3.9	3.8	3.6	3.7	3.8
North Sea <sup>c</sup>	6.4	6.1	6.2	6.5	6.4	6.1	6.3	6.6	6.5	6.1	6.2	6.5	6.3	6.3	6.3
Other OECD	1.6	1.6	1.6	1.6	1.6	1.3	1.3	1.3	1.2	1.3	1.3	1.2	1.6	1.4	1.3
Total OECD	23.1	23.0	23.1	23.7	23.7	23.1	23.5	23.8	23.7	23.4	23.6	23.9	23.2	23.5	23.7
Non-OECD															
OPEC	31.1	29.9	30.1	29.2	27.8	27.4	28.1	28.4	29.4	29.1	30.2	29.7	30.1	27.9	29.6
Former Soviet Union	8.6	8.7	8.9	9.1	9.0	9.1	9.3	9.4	9.4	9.5	9.7	9.8	8.8	9.2	9.6
China	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.3	3.3	3.4	3.4	3.3	3.3	3.3
Other Non-OECD	11.2	11.1	11.3	11.3	11.5	11.4	11.7	11.8	11.6	11.7	11.9	12.1	11.2	11.6	11.8
Total Non-OECD	54.3	53.0	53.6	52.9	51.7	51.2	52.4	52.9	53.7	53.7	55.1	54.8	53.5	52.1	54.3
Total World Supply	77.4	76.0	76.7	76.6	75.3	74.4	75.9	76.8	77.4	77.0	78.7	78.8	76.7	75.6	78.0
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	-0.2	-0.9	-0.2	-0.1	0.2	-0.5	-0.1	0.4	0.2	-0.6	-0.2	0.4	-0.3	0.0	0.0
Other	0.1	-0.1	-0.9	-0.2	1.4	1.5	0.6	0.4	0.7	-0.4	-1.0	-0.1	-0.3	1.0	-0.2
Total Stock Withdrawals	-0.1	-1.0	-1.1	-0.3	1.6	1.0	0.5	0.8	0.9	-1.0	-1.2	0.3	-0.6	1.0	-0.2
OECD Comm. Stocks, End (bill. bbls.)	2.5	2.6	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.6	2.5	2.7	2.5	2.5
Non-OPEC Supply	46.3	46.0	46.6	47.4	47.5	47.0	47.8	48.4	48.0	47.9	48.6	49.1	46.6	47.7	48.4
Net Exports from Former Soviet Union	4.9	5.1	5.3	5.5	5.2	5.5	5.7	5.7	5.5	5.8	6.0	6.1	5.2	5.5	5.9
<sup>a</sup> Demand for petroleum by the OECD countries							and University			(h			Detrelev	0 /	

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

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

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

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

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

Notes: Minor discrepancies with other published EIA historical data are due to rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Energy Information Administration: latest data available from EIA databases supporting the following reports: International Petroleum Monthly, DOE/EIA-0520;

Organization for Economic Cooperation and Development, Annual and Monthly Oil Statistics Database.

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

(Nominal Dollars)

(Nominal Dollars)		2001				2002				2003				Year	
	1st	2001 2nd	3rd	4th	1st	2002 2nd	3rd	4th	1st	2003 2nd	3rd	4th	2001	2002	2003
	151	Znu	JIU	401	131	Zilu	JIU	401	131	Zilu	JIU	401	2001	2002	2003
Crude Oil Prices (dollars per barrel)															
Imported Average <sup>a</sup>	24.12	23.85	23.04	16.93	19.29	24.45	24.85	25.82	26.35	27.54	27.07	26.88	22.02	23.65	26.97
WTI <sup>b</sup> Spot Average															
Natural Cas Wallhard															
Natural Gas Wellhead (dollars per thousand cubic feet)	6 37	4 56	3.06	2.50	2 34	2.99	2 92	3.30	3.44	3.11	3.01	3.34	4.12	2.89	3.22
	0.07	4.00	0.00	2.00	2.07	2.00	2.02	0.00	0.11	0.11	0.01	0.07		2.00	0.22
Petroleum Products															
Gasoline Retail <sup>c</sup> (dollars per gallon)															
All Grades	1.47	1.66	1.49	1.23	1.20	1.43	1.44	1.44	1.45	1.59	1.54	1.49	1.47	1.38	1.52
Regular Unleaded	1.43	1.62	1.45	1.19	1.16	1.39	1.41	1.41	1.41	1.56	1.51	1.45	1.43	1.34	1.49
No. 2 Diesel Oil, Retail (dollars per gallon)	1 47	1 47	1 42	1.26	1.18	1.30	1.33	1.40	1.42	1.45	1.43	1.46	1.40	1.31	1.44
	1.47	1.47	1.42	1.20	1.10	1.50	1.55	1.40	1.42	1.40	1.43	1.40	1.40	1.51	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.83	0.80	0.76	0.62	0.60	0.69	0.75	0.82	0.85	0.86	0.84	0.88	0.76	0.71	0.86
No. O Handler O'll Data'l															
No. 2 Heating Oil, Retail (dollars per gallon)	1 35	1 25	1.15	1.10	1.09	1.11	1.11	1.25	1.34	1.29	1.23	1.32	1.24	1.15	1.30
	1.55	1.25	1.15	1.10	1.03	1.11	1.11	1.20	1.54	1.29	1.20	1.52	1.24	1.10	1.50
No. 6 Residual Fuel Oil, Retail <sup>d</sup>															
(dollars per barrel)	25.13	22.29	21.76	18.97	19.34	24.55	25.43	26.39	26.79	26.20	26.11	26.40	22.30	24.11	26.38
Electric Utility Fuels															
Coal															
(dollars per million Btu)	1.23	1.24	1.23	1.22	1.22	1.22	1.21	1.20	1.21	1.21	1.20	1.19	1.23	1.21	1.20
Heavy Fuel Oil <sup>e</sup> (dollars per million Btu)	4 22	3 82	3.50	2.89	2.96	4.03	4.20	<i>4</i> 17	4.20	4.31	4.31	4.17	3.72	3.90	4.26
	4.22	5.02	5.50	2.03	2.30	4.05	4.20	7.17	4.20	4.51	7.51	7.17	J.12	5.50	4.20
Natural Gas															
(dollars per million Btu)	7.26	4.96	3.47	2.97	3.04	3.37	3.25	3.72	3.99	3.51	3.38	3.80	4.43	3.34	3.61
Other Residential															
Natural Gas				<b>.</b>			o	_		a	o				<b>.</b>
(dollars per thousand cubic feet)	10.10	10.66	10.64	7.68	7.18	7.89	9.50	7.77	7.85	8.58	9.85	7.99	9.62	7.66	8.16
Electricity															
(cents per kilowatthour)	7.96	8.62	8.85	8.47	8.29	8.81	9.03	8.54	8.25	8.81	9.05	8.60	8.48	8.68	8.69
<sup>a</sup> Refiner acquisition cost (RAC) of imp													-		
<sup>b</sup> West Texas Intermediate.															

West Texas Intermediate.

<sup>c</sup>Average self-service cash prices.

<sup>d</sup>Average for all sulfur contents. <sup>e</sup>Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices. Notes: Data are estimated for the fourth quarter of 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: Base Case

(Million Barrels per Day, Except Closing Stocks)

	2001 2002									2003				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Crude Oil Supply															
Domestic Production <sup>a</sup>	5.82	5.82	5.73	5.84	5.93	5.88	5.85	5.95	5.95	5.87	5.84	5.91	5.80	5.90	5.89
Alaska	0.99	0.96	0.92	0.99	1.03	1.00	0.96	1.04	1.07	1.04	1.03	1.10	0.96	1.01	1.06
Lower 48	4.83	4.86	4.81	4.85	4.89	4.88	4.89	4.90	4.88	4.83	4.81	4.81	4.84	4.89	4.83
Net Imports (including SPR) <sup>b</sup>	9.04	9.67	9.41	9.11	8.64	9.06	9.31	9.03	9.18	9.81	9.80	9.48	9.31	9.01	9.57
Other SPR Supply	0.00	0.00	0.01	0.05	0.10	0.09	0.13	0.14	0.15	0.11	0.11	0.11	0.02	0.12	0.12
SPR Stock Withdrawn or Added (-)	-0.02	-0.01	-0.02	-0.06	-0.12	-0.15	-0.13	-0.14	-0.15	-0.11	-0.11	-0.11	-0.03	-0.14	-0.12
Other Stock Withdrawn or Added (-)	-0.26	0.00	-0.01	-0.03	-0.22	0.12	0.22	0.05	-0.17	0.03	0.19	0.05	-0.07	0.04	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	0.16	0.16	0.10	0.04	0.13	0.46	0.15	0.15	0.14	0.15	0.15	0.15	0.12	0.22	0.15
Total Crude Oil Supply	14.75	15.65	15.21	14.90	14.40	15.36	15.40	15.03	14.96	15.75	15.87	15.48	15.13	15.05	15.52
Other Supply															
NGL Production	1.65	1.88	1.96	1.97	1.88	1.91	1.89	1.88	1.89	1.92	1.94	1.95	1.87	1.89	1.93
Other Hydrocarbon and Alcohol Inputs	0.30	0.36	0.39	0.39	0.37	0.41	0.41	0.41	0.39	0.39	0.41	0.41	0.36	0.40	0.40
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
Processing Gain		0.90	0.88	0.94	0.95	0.91	0.91	0.91	0.92	0.93	0.92	0.91	0.90	0.92	0.92
Net Product Imports <sup>c</sup>	2.13	1.64	1.40	1.21	1.32	1.34	1.45	1.16	1.47	1.47	1.54	1.27	1.59	1.32	1.44
Product Stock Withdrawn or Added (-)	0.09	-0.85	-0.15	0.01	0.52	-0.50	-0.19	0.50	0.49	-0.51	-0.24	0.46	-0.23	0.08	0.05
Total Supply	19.81	19.58	19.69	19.41	19.42	19.44	19.87	19.89	20.12	19.96	20.44	20.48	19.62	19.66	20.25
Demand															
Motor Gasoline	8.29	8.66	8.85	8.64	8.48	8.82	8.88	8.76	8.61	9.06	9.13	9.00	8.61	8.74	8.95
Jet Fuel	1.73	1.72	1.67	1.51	1.56	1.60	1.64	1.67	1.71	1.70	1.75	1.78	1.66	1.62	1.74
Distillate Fuel Oil	4.23	3.75	3.67	3.75	3.80	3.69	3.59	3.84	4.10	3.69	3.64	3.91	3.85	3.73	3.84
Residual Fuel Oil		0.88	0.77	0.66	0.68	0.65	0.89	0.76	0.84	0.68	0.87	0.76	0.81	0.75	0.79
Other Oils <sup>d</sup>	4.70	4.60	4.74	4.86	4.92	4.68	4.87	4.86	4.85	4.81	5.05	5.03	4.73	4.83	4.94
Total Demand	19.89	19.60	19.70	19.41	19.44	19.44	19.87	19.89	20.12	19.96	20.44	20.48	19.65	19.66	20.25
Total Petroleum Net Imports	11.16	11.31	10.81	10.32	9.96	10.40	10.76	10.19	10.64	11.28	11.34	10.75	10.90	10.33	11.01
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)		308	309	312	331	321	301	296	312	309	292	287	312	296	287
Total Motor Gasoline	-	221	206	210	213	216	206	208	211	213	203	206	210	208	206
Finished Motor Gasoline	145	169	158	161	160	168	161	164	162	167	159	162	161	164	162
Blending Components		51	48	48	53	49	45	44	49	46	44	44	48	44	44
Jet Fuel	41	43	43	42	42	40	42	42	39	40	41	42	42	42	42
Distillate Fuel Oil	105	114	127	145	123	128	142	138	105	116	134	132	145	138	132
Residual Fuel Oil		42	37	41	34	35	36	37	35	36	37	38	41	37	38
Other Oils <sup>e</sup>		291	312	287	265	303	315	270	261	293	304	259	287	270	259
Total Stocks (excluding SPR)		1019	1034	1036	1009	1044	1042	991	962	1006	1011	964	1036	991	964
Crude Oil in SPR	542	543	545	550	561	576	587	601	614	624	634	644	550	601	644
Heating Oil Reserve	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total Stocks (including SPR)	1484	1562	1579	1586	1571	1620	1629	1592	1576	1630	1645	1609	1586	1592	1609

<sup>a</sup>Includes lease condensate. <sup>b</sup>Net imports equals gross imports plus SPR imports minus exports.

<sup>c</sup>Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

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

<sup>e</sup>Includes stocks of all other oils, such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils. SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

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

### Table 6. Approximate Energy Demand Sensitivities<sup>a</sup> for the STIFS<sup>b</sup>

(Percent Deviation Base Case)

		+ 10	)% Prices	+ 10%	% Weather <sup>e</sup>
Demand Sector	+1% GDP	Crude Oil °	N.Gas Wellhead <sup>d</sup>	Fall/Winter <sup>f</sup>	Spring/Summer
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%

<sup>a</sup>Percent change in demand quantity resulting from specified percent changes in model inputs. <sup>b</sup>Short-Term Integrated Forecasting System.

°Refiner acquisitions cost of imported crude oil.

<sup>d</sup>Average unit value of marketed natural gas production reported by States. <sup>e</sup>Refers to percent changes in degree-days.

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

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

(Million Barrels per Dav)

	High	Low		Difference	
	Price Case	Price Case	Total	Uncertainty	Price Impact
United States	6.15	5.68	0.47	0.07	0.40
Lower 48 States	5.03	4.59	0.44	0.05	0.39
Alaska	1.12	1.09	0.03	0.02	0.02

Note: Components provided are for the fourth quarter 2003. Totals may not add to sum of components due to independent rounding. Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

### Table 8. U.S. Natural Gas Supply and Demand: Base Case

(Trillion Cubic Feet)

	2001				2002		[		2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Total Dry Gas Production	4.86	4.86	4.84	4.87	4.76	4.70	4.73	4.79	4.87	4.90	4.94	5.06	19.43	18.98	19.77
Net Imports	0.98	0.90	0.95	0.83	0.88	0.84	0.85	0.86	0.88	0.85	0.87	0.92	3.65	3.44	3.52
Supplemental Gaseous Fuels	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.08	0.07	0.07
Total New Supply	5.86	5.77	5.81	5.72	5.66	5.56	5.60	5.67	5.77	5.76	5.83	5.99	23.16	22.50	23.36
Working Gas in Storage															
Opening	1.72	0.74	1.88	2.94	2.90	1.52	2.28	3.08	2.60	1.37	2.14	3.00	1.72	2.90	2.60
Closing	0.74	1.88	2.94	2.90	1.52	2.28	3.08	2.60	1.37	2.14	3.00	2.55	2.90	2.60	2.55
Net Withdrawals	0.98	-1.14	-1.06	0.04	1.39	-0.77	-0.79	0.48	1.23	-0.77	-0.86	0.45	-1.18	0.30	0.05
Total Supply	6.84	4.63	4.74	5.76	7.05	4.80	4.81	6.15	7.00	5.00	4.97	6.44	21.97	22.80	23.41
Balancing Item <sup>a</sup>	0.26	0.00	-0.26	-0.54	-0.39	0.07	-0.22	-0.45	0.17	-0.04	-0.31	-0.65	-0.53	-0.99	-0.83
Total Primary Supply	7.10	4.63	4.49	5.23	6.66	4.86	4.59	5.70	7.17	4.95	4.67	5.80	21.44	21.81	22.58
Demand															
Lease and Plant Fuel	0.29	0.29	0.29	0.29	0.29	0.30	0.29	0.30	0.30	0.30	0.30	0.31	1.16	1.18	1.20
Pipeline Use	0.20	0.13	0.13	0.15	0.18	0.13	0.12	0.16	0.19	0.13	0.12	0.16	0.61	0.59	0.61
Residential	2.46	0.77	0.37	1.21	2.20	0.84	0.39	1.42	2.44	0.86	0.38	1.42	4.81	4.84	5.10
Commercial	1.34	0.62	0.46	0.78	1.20	0.63	0.48	0.88	1.30	0.65	0.49	0.89	3.20	3.20	3.33
Industrial (Incl. Nonutility Use)	2.33	2.11	2.27	2.26	2.28	2.25	2.34	2.42	2.45	2.29	2.39	2.47	8.98	9.29	9.60
Electric Utilities	0.47	0.71	<i>0.</i> 97	0.53	0.51	0.72	0.96	0.53	0.49	0.73	0.99	0.54	2.68	2.72	2.76
Total Demand	7.10	4.63	4.49	5.23	6.66	4.86	4.59	5.70	7.17	4.95	4.67	5.80	21.44	21.81	22.58

<sup>a</sup>The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

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

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

### Table 9. U.S. Coal Supply and Demand: Base Case

(Million Short Tons)

		2001				2002				2003				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Production	283.6	278.3	278.1	281.3	281.1	258.8	286.9	280.9	276.1	261.4	283.5	289.2	1121.3	1107.7	1110.3
Appalachia	110.8	109.0	104.1	105.1	107.1	99.1	104.9	102.6	104.0	98.3	101.2	103.3	428.9	413.7	406.8
Interior	37.5	37.0	37.9	35.2	36.6	32.9	37.3	33.3	33.1	31.7	35.1	32.4	147.7	140.1	132.3
Western	135.3	132.3	136.1	141.0	137.5	126.8	144.7	144.9	139.0	131.4	147.3	153.5	544.7	553.9	571.2
Primary Stock Levels a															
Opening	31.9	39.2	38.3	37.0	33.9	44.5	35.0	33.1	32.5	32.8	31.6	33.0	31.9	33.9	32.5
Closing		38.3	37.0	33.9	44.5	35.0	33.1	32.5	32.8	31.6	33.0	32.7	33.9	32.5	32.7
Net Withdrawals		0.9	1.2	3.1	-10.6	9.5	1.9	0.6	-0.2	1.1	-1.4	0.3	-2.0	1.4	-0.2
Imports	3.9	4.1	6.0	5.7	4.0	4.2	4.6	4.6	4.3	4.3	4.3	4.3	19.8	17.4	17.2
Exports		13.5	11.7	11.7	9.3	11.9	12.1	11.9	11.3	11.5	11.8	11.7	48.7	45.2	46.3
Total Net Domestic Supply		269.9	273.7	278.5	265.3	260.6	281.2	274.1	268.8	255.4	274.7	282.2	1090.4	1081.3	1081.1
Secondary Stock Levels b															
Opening	108.1	112.5	127.1	117.0	136.5	149.6	156.6	144.7	140.3	146.6	151.0	131.2	108.1	136.5	140.3
Closing					149.6	156.6		140.3			131.2	132.6	136.5	140.3	132.6
Net Withdrawals		-14.5	10.1	-19.5	-13.1	-7.0	11.9	4.3	-6.3	-4.3	19.8	-1.4	-28.4	-3.8	7.7
Waste Coal Supplied to IPPs <sup>c</sup>		2.6	2.6	2.6	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	10.6	11.1	11.6
Total Supply	266.6	258.0	286.4	261.6	255.0	256.4	295.9	281.2	265.5	253.9	297.3	283.7	1072.7	1088.5	1100.4
Demand															
Coke Plants	6.8	6.9	6.6	5.8	6.3	6.3	6.6	6.2	6.5	6.3	6.5	6.1	26.1	25.4	25.3
Electricity Production															
Electric Utilities	200.8	193.2	220.5	191.8	195.0	195.0	231.1	216.3	202.8	195.9	233.1	219.7	806.3	837.4	851.6
Nonutilities (Excl. Cogen.) <sup>d</sup>	36.7	34.7	40.8	38.5	37.7	35.7	41.5	39.2	38.5	36.4	42.5	40.1	150.6	154.1	157.5
Retail and General Industry		16.1	16.3	17.0	16.5	15.2	15.4	18.0	17.6	15.3	15.3	17.8	67.5	65.1	66.0
Total Demand <sup>e</sup>		-		253.0		-	-		-		297.3	-		1081.9	1100.4
Discrepancy <sup>f</sup>	4.3	7.0	2.2	8.6	-0.5	4.2	1.4	1.6	0.0	0.0	0.0	0.0	22.2	6.6	0.0

<sup>a</sup>Primary stocks are held at the mines, preparation plants, and distribution points. <sup>b</sup>Secondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.

<sup>c</sup>Estimated independent power producers' (IPPs) consumption of waste coal. This item includes waste coal and coal slurry reprocessed into briquettes.

<sup>4</sup>Estimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 2000 and projections for 2001 and 2002 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999 and 2000, and (2) annual coal-fired generation at nonutilities from Form EIA -867 (Annual Nonutility Power Producer Report).

<sup>e</sup>Total Demand includes estimated IPP consumption.

<sup>1</sup>The discrepancy reflects an unaccounted for shipper and receiver reporting difference, assumed to be zero in the forecast period.

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

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

### Table 10. U.S. Electricity Supply and Demand: Base Case

(Billion Kilowatt-hours)

	2001 1-1-1 - 2-1 - 2-1 - 41h				2002				2003				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2001	2002	2003
Supply															
Net Utility Generation															
Coal	391.8	376.1	423.9	368.4	372.6	369.9	438.7	412.9	385.2	371.6	443.1	420.4	1560.1	1594.0	1620.3
Petroleum	24.1	21.6	21.4	11.9	13.6	12.4	24.8	11.8	15.2	9.9	23.6	12.7	78.9	62.7	61.5
Natural Gas	46.2	69.6	95.7	53.0	47.7	70.9	94.6	52.0	48.3	72.0	97.2	53.5	264.4	265.2	270.9
Nuclear	135.9	130.2	140.6	127.5	128.4	121.6	129.9	126.0	128.9	126.5	136.1	126.4	534.2	505.9	517.8
Hydroelectric		49.8	45.6	44.5	66.7	71.6	59.4	60.7	70.1	75.2	62.8	61.8	190.1	258.4	269.9
Geothermal and Other <sup>a</sup>	0.5	0.6	0.6	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	2.2	2.6	3.3
Subtotal	648.6	647.8	727.7	605.8	629.7	647.0	748.1	664.1	648.5	655.9	763.6	675.6	2630.0	2688.9	2743.7
Nonutility Generation <sup>b</sup>															
Coal	90.5	79.2	93.2	80.3	87.5	74.9	86.8	57.4	87.8	75.0	87.6	58.5	343.1	306.5	308.9
Petroleum	17.6	12.1	11.8	7.4	7.4	5.3	11.2	5.4	8.7	4.0	10.7	6.1	48.9	29.2	29.4
Natural Gas		85.8	112.2	88.8	82.6	86.9	108.3	88.0	85.2	88.1	111.2	90.6	366.2	365.8	375.1
Other Gaseous Fuels <sup>c</sup>	4.1	4.4	5.8	4.6	4.3	4.8	6.1	4.8	4.3	4.8	6.2	4.9	18.9	20.0	20.2
Nuclear	56.2	55.3	60.4	62.7	66.5	64.4	68.7	65.8	67.4	66.0	71.0	66.1	234.6	265.4	270.4
Hydroelectric		6.2	3.4	3.4	6.4	9.0	4.5	6.0	7.0	9.5	4.7	6.1	18.2	25.8	27.3
Geothermal and Other <sup>d</sup>	22.0	21.4	21.8	20.9	20.9	18.9	20.3	19.2	19.0	19.2	20.6	19.5	86.1	79.3	78.3
Subtotal	275.0	264.5	308.6	267.9	275.5	264.0	305.8	246.7	279.3	266.6	312.0	251.8	1116.0	1092.0	1109.7
Total Generation	923.6	912.3	1036.3	873.7	905.2	910.9	1053.9	910.8	927.8	922.5	1075.6	927.4	3746.0	3780.8	3853.3
Net Imports <sup>e</sup>	3.6	7.2	5.1	4.4	5.9	6.7	9.9	4.2	6.2	7.6	10.9	6.7	20.3	26.7	31.5
Total Supply	927.2	919.6	1041.4	878.1	911.1	917.6	1063.8	915.0	934.0	930.2	1086.5	934.1	3766.3	3807.6	3884.8
Losses and Unaccounted for <sup>f</sup>	18.7	56.3	36.4	34.1	39.5	54.4	47.3	40.8	30.9	57.4	48.5	42.1	145.6	182.0	178.8
Demand															
Retail Sales <sup>g</sup>															
Residential	322.8	263.2	353.8	262.8	302.1	265.0	361.4	284.2	322.3	268.5	371.4	289.5	1202.5	1212.7	1251.6
Commercial	256.9	264.8	305.6	258.4	254.7	267.3	303.8	257.4	254.4	266.3	310.1	265.2	1085.7	1083.2	1096.1
Industrial	248.3	253.3	253.1	241.3	232.3	247.0	258.9	248.0	240.0	251.8	262.1	251.2	996.0	986.2	1005.1
Other	27.3	28.5	33.8	28.3	29.0	29.8	33.1	30.2	30.0	30.3	33.8	30.8	117.9	122.1	124.8
Subtotal	855.3	809.8	946.3	790.7	817.9	809.1	957.2	819.9	846.6	816.9	977.4	836.6	3402.1	3404.1	3477.5
Nonutility Use/Sales <sup>h</sup>	53.2	53.4	58.7	53.2	53.7	54.1	59.3	54.3	56.5	55.9	60.6	55.4	218.6	221.5	228.4
Total Demand		863.2	1005.0	844.0	871.6	863.2	1016.5	874.2	903.1	872.8	1038.0	892.1	3620.7	3625.6	3705.9
Memo:															
Nonutility Sales to															
Electric Utilities <sup>b</sup>	221.7	211.1	249.9	214.7	221.8	209.8	246.4	192.4	222.8	210.7	251.4	196.3	897.4	870.5	881.2

<sup>a</sup>"Other" includes generation from wind, wood, waste, and solar sources.

<sup>b</sup>Electricity(net Generation) from nonutility sources, including cogenerators and small power producers.

<sup>c</sup>Includes refinery still gas and other process or waste gases and liquefied petroleum gases.

<sup>d</sup>Includes geothermal, solar, wind, wood, waste, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.

<sup>e</sup>Data for 2000 are estimates.

<sup>f</sup>Balancing item, mainly transmission and distribution losses.

<sup>9</sup>Total of retail electricity sales by electric utilities and power marketers. Utility sales for historical periods are reported in EIA'S Electric Power Monthly and Electric Power Annual. Power marketers' sales are reported annually in Appendix C of EIA's Electric Sales and Revenue. Quarterly data for power marketers ( and thus retail sales totals) are imputed. Data for 2000 are estimated.

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

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: Base Case

(Quadrillion Btu)

		Ye	ear		Annu	al Percentage	Change
F	2000	2001	2002	2003	2000-2001	2001-2002	2002-2003
Electric Utilities			1 1				
Hydroelectric Power <sup>a</sup>	2.600	1.991	2.707	2.828	-23.4	36.0	4.5
Geothermal, Solar and Wind Energy <sup>b</sup>	0.004	0.005	0.008	0.014	25.0	60.0	75.0
Biofuels <sup>c</sup>	0.021	0.019	0.021	0.021	-9.5	10.5	0.0
Total	2.625	2.015	2.736	2.863	-23.2	35.8	4.6
Nonutility Power Generators							
Hydroelectric Power <sup>a</sup>	0.257	0.189	0.267	0.282	-26.5	41.3	5.6
Geothermal, Solar and Wind Energy <sup>b</sup>	0.355	0.357	0.337	0.348	0.6	-5.6	3.3
Biofuels <sup>c</sup>	0.642	0.587	0.621	0.609	-8.6	5.8	-1.9
Total	1.254	1.133	1.225	1.239	-9.6	8.1	1.1
Total Power Generation	3.879	3.149	3.961	4.102	-18.8	25.8	3.6
Other Sectors <sup>d</sup>							
Residential and Commercial <sup>e</sup>	0.570	0.560	0.560	0.590	-1.8	0.0	5.4
Industrial <sup>f</sup>	2.410	2.410	2.470	2.540	0.0	2.5	2.8
Transportation <sup>g</sup>	0.114	0.120	0.126	0.143	5.3	5.0	13.5
Total	3.094	3.090	3.156	3.273	-0.1	2.1	3.7
Net Imported Electricity h	0.244	0.146	0.192	0.225	-40.2	31.5	17.2
Total Renewable Energy Demand	7.217	6.384	7.309	7.601	-11.5	14.5	4.0

<sup>a</sup>Conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

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

<sup>c</sup>Biofuels are fuelwood, wood byproducts, waste wood, municipal solid waste, manufacturing process waste, and alcohol fuels.

<sup>d</sup>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.

<sup>e</sup>Includes biofuels and solar energy consumed in the residential and commercial sectors.

<sup>f</sup>consists primarily of biofuels for use other than in electricity cogeneration.

<sup>g</sup>Ethanol blended into gasoline.

<sup>h</sup>Represents 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: Base Case

								Year							
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Real Gross Domestic Product (GDP) (billion chained 1996 dollars)	6592	6708	6676	6880	7063	7348	7544	7813	8159	8509	8857	9224	9334	9557	9855
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel)	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	27.72	22.02	23.65	26.97
Petroleum Supply															
Crude Oil Production <sup>b</sup> (million barrels per day) Total Petroleum Net Imports (including SPR) (million barrels per day)		7.36 7.16	7.42 6.63	7.17 6.94	6.85 7.62	6.66 8.05	6.56 7.89	6.46 8.50	6.45 9.16	6.25 9.76	5.88 9.91	5.82 10.42	5.80 10.90	5.90 10.33	5.89 11.01
Energy Demand															
World Petroleum															
(million barrels per day)	65.9	66.0	66.6	66.8	67.0	68.3	69.9	71.4	72.9	73.6	75.0	76.0	76.1	76.5	77.8
(million barrels per day) Natural Gas	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.66	20.25
(trillion cubic feet) Coal	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.61	22.54	21.44	21.81	22.58
(million short tons) Electricity (billion kilowatthours)	889	896	893	901	943	950	962	1006	1030	1038	1045	1081	1050	1082	1100
Retail Sales <sup>c</sup>	2647	2713	2762	2763	2861	2935	3013	3101	3146	3264	3312	3421	3402	3404	3478
Nonutility Own Use <sup>d</sup>		104	111	122	127	141	149	149	149	160	189	199	219	221	228
Total Total Energy Demand <sup>e</sup>	2747	2817	2873	2885	2988	3075	3162	3250	3295	3424	3501	3620	3621	3626	3706
(quadrillion Btu) Total Energy Demand per Dollar of GDP	84.2	84.2	84.5	85.6	87.4	89.2	90.9	93.9	94.2	95.2	97.1	99.6	97.0	98.9	101.7
(thousand Btu per 1996 Dollar)	NA	12.55	12.66	12.44	12.37	12.14	12.05	12.04	11.54	11.19	10.96	10.80	10.40	10.34	10.32

<sup>a</sup>Refers to the imported cost of crude oil to U.S. refiners.

<sup>b</sup>Includes lease condensate.

<sup>c</sup>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.

<sup>d</sup>Defined as the sum of nonutility facility use of onsite net electricity generation plus direct sales of power by nonutility generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2000 are estimates. <sup>e</sup> "Total Energy Demand" refers to the aggregate energy concept presented in Energy Information Administration, Annual Energy Review, 1999, DOE/EIA0384(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 compenensive 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 to see using the the MER or the AER.

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109; Petroleum Supply Annual, DOE/EIA-0340/2; Natural Gas Monthly, DOE/EIA-0130; Electric Power Monthly, DOE/EIA-0226; Quarterly Coal Report, DOE/EIA-0121; International Petroleum Monthly DOE/EIA-520, and Weekly Petroleum Status Report DOE/EIA-0208. Macroeconomic projections are based on DRI-WEFA Forecast CONTROL0602.

	Year														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Macroeconomic															
Real Gross Domestic Product															
(billion chained 1996 dollars)	6592	6708	6676	6880	7063	7348	7544	7813	8159	8509	8857	9224	9334	9557	9855
GDP Implicit Price Deflator															
•	0.833	0.865	0.897	0.919	0.941	0.960	0.981	1.000	1.019	1.032	1.047	1.070	1.094	1.109	1.137
Real Disposable Personal Income															
(billion chained 1996 Dollars)	4907	5014	5033	5189	5261	5397	5539	5678	5854	6169	6320	6539	6772	7015	7182
Manufacturing Production															
(Index, 1996=1.000)	0.816	0.812	0.792	0.824	0.853	0.905	0.953	1.000	1.079	1.142	1.191	1.247	1.194	1.200	1.269
Real Fixed Investment															
(billion chained 1996 dollars)	911	895	833	886	958	1046	1109	1213	1329	1480	1595	1716	1683	1625	1688
Real Exchange Rate															
(Index, 1996=1.000)	NA	0.913	0.915	0.923	0.958	0.938	0.875	0.919	0.990	1.041	1.047	1.083	1.140	1.167	1.084
Business Inventory Change															
(billion chained 1996 dollars)	14.2	8.9	-6.8	-4.7	3.6	12.1	14.1	10.1	14.8	27.2	13.3	13.1	-35.4	-7.9	8.5
Producer Price Index															
(index, 1982=1.000)	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.255	1.328	1.342	1.320	1.356
Consumer Price Index															
(index, 1982-1984=1.000)	1.240	1.308	1.363	1.404	1.445	1.482	1.524	1.569	1.605	1.630	1.666	1.722	1.771	1.803	1.859
Petroleum Product Price Index															
(index, 1982=1.000)	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	0.913	0.852	0.770	0.898
Non-Farm Employment															
(millions)	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.8	128.9	131.8	132.2	131.5	133.4
Commercial Employment															
(millions)	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.6	89.6	92.1	93.1	92.9	94.4
Total Industrial Production															
(index, 1996=1.000)	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2
Housing Stock															
(millions)	102.8	103.4	104.4	105.4	106.7	108.0	109.6	110.9	112.3	114.1	115.7	116.2	117.9	119.7	121.0
Weather <sup>a</sup>															
Heating Degree-Days															
U.S	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4169	4460	4223	4285	4456
		5848	5960	6844	6728	6672	6559	6679	6662	5680	5952	6489	6059	6077	6457
Middle Atlantic		4998	5177	5964	5948	5934	5831	5986	5809	4812	5351	5774	5297	5259	5693
U.S. Gas-Weighted		4139	4337	4458	4754	4659	4707	4980	4802	4183	4399	4680	4451	4533	4706
Cooling Degree-Days (U.S.)		1260.0	1331.0	1040.0	1218.0	1220.0	1293.0	1180.0	1156.0	1410.0	1297.0	1229.0	1256.0	1260.7	1238.3

### Table A2. Annual U.S. Macroeconomic and Weather Indicators: Base Case

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

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI-WEFA Forecast CONTROL0602.

#### Table A3. Annual International Petroleum Supply and Demand Balance: Base Case

(Millions Barrels per Day, Except OECD Commercial Stocks)

		•			,			Year							
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Demand <sup>a</sup> OECD						11				11					
U.S. (50 States)	17.3	17.0	16.7	17.0	17.2	17.7	17.7	18.3	18.6	18.9	19.5	19.7	19.6	19.7	20.3
Europe <sup>b</sup>	13.2	13.3	13.3	14.0	14.2	14.1	14.2	14.8	15.0	15.3	15.2	15.1	15.3	15.3	15.4
Japan	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.6	5.5	5.4	5.4	5.4
Other OECD Total OECD	5.2 40.8	5.4 40.8	5.6 41.6	5.9 42.6	6.2 43.0	6.6 44.2	6.8 45.0	6.9 46.1	7.3 46.6	7.1 46.9	7.4 47.7	7.6 47.9	7.4 47.8	7.5 47.9	7.7 48.7
Non-OECD	40.0	40.0	41.0	42.0	40.0	77.6	40.0	40.1	40.0	40.5	47.7	47.5	47.0	47.5	40.7
Former Soviet Union	8.7	8.4	8.4	6.8	5.6	4.8	4.6	4.0	3.9	3.8	3.7	3.7	3.6	3.7	3.7
Europe	1.3	1.0	0.8	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
China	2.4 4.0	2.3 4.3	2.5 4.5	2.7 4.7	3.0 5.1	3.2 5.5	3.4 5.9	3.6 6.3	3.9 6.6	4.1 6.7	4.3 6.9	4.8 7.3	4.9 7.3	5.0 7.4	5.3 7.4
Other Asia Other Non-OECD	4.0 8.6	4.3 8.9	4.5 8.9	4.7 9.3	9.7	5.5 10.0	5.9 10.4	0.3 10.7	0.0 11.1	0.7 11.4	0.9 11.6	7.3 11.7	11.8	7.4 11.9	7.4 12.0
Total Non-OECD	25.1	24.9	25.0	24.2	24.0	24.1	24.9	25.3	26.2	26.7	27.3	28.1	28.3	28.6	29.1
Total World Demand	65.9	65.7	66.6	66.8	67.0	68.3	69.9	71.4	72.9	73.6	75.0	76.0	76.1	76.5	77.8
Supply <sup>c</sup>															
OECD															
U.S. (50 States)	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.3	9.0	9.1	8.9	9.1	9.2
Canada	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	3.0	3.1
Mexico	2.9 3.7	3.0 3.9	3.2 4.1	3.2 4.5	3.2 4.8	3.2 5.5	3.1 5.9	3.3 6.3	3.4 5.9	3.5 5.8	3.4 6.0	3.5 6.0	3.6 6.3	3.7 6.3	3.8 6.3
North Sea <sup>a</sup> Other OECD		3.9 1.5	1.5	4.5	4.0 1.4	1.5	1.5	1.5	1.8	2.1	1.9	2.1	1.6	0.3 1.4	0.3 1.3
Total OECD	20.0	20.2	20.8	21.1	21.2	21.9	22.4	22.7	23.1	23.6	22.9	23.4	23.2	23.5	23.7
Non-OECD															
OPEC	23.3	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	29.3	30.9	30.1	27.9	29.6
Former Soviet Union China	12.1 2.8	11.4 2.8	10.4 2.8	8.9 2.8	8.0 2.9	7.3 2.9	7.1 3.0	7.1 3.1	7.1 3.2	7.2 3.2	7.6 3.2	8.1 3.2	8.8 3.3	9.2 3.3	9.6 3.3
Other Non-OECD	7.7	7.9	2.0 8.1	8.3	8.7	2.5 9.1	9.8	10.2	10.4	10.7	11.2	11.2	11.2	11.6	11.8
Total Non-OECD	45.9	46.6	45.9	45.9	46.2	46.3	47.5	48.7	50.6	51.6	51.3	53.4	53.5	52.1	54.3
Total World Supply		66.8	66.7	67.0	67.4	68.2	69.9	71.4	73.7	75.2	74.2	76.8	76.7	75.6	78.0
Total Stock Withdrawals	0.0	-0.8	-0.1	-0.3	-0.4	0.0	0.0	-0.4	-1.2	-1.3	0.8	-0.8	-0.6	1.0	-0.2
OECD Comm. Stocks, End (bill. bbls.)	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.4	2.5	2.7	2.5	2.5
Net Exports from Former Soviet Union	3.4	3.0	2.1	2.1	2.3	2.4	2.6	3.0	3.3	3.5	3.9	4.5	5.2	5.5	5.9

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

<sup>b</sup>OECD Europe includes the former East Germany.

<sup>C</sup>Includes production of crude oil (including lease condensates), natural gas plant liquids, other hydrogen and hydrocarbons for refinery feedstocks, refinery gains, alcohol, and liquids produced from coal and other sources. <sup>d</sup>Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Čanada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan,

Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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

SPR: Strategic Petroleum Reserve

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

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

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

### Table A4. Annual Average U.S. Energy Prices: Base Case

(Nominal Dollars)

(Horninal Donald	Year														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Crude Oil Prices (dollars per barrel)															
Imported Average <sup>a</sup>	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.08	17.22	27.72	22.02	23.65	26.97
WTI <sup>b</sup> Spot Average	19.78	24.48	21.60	20.54	18.49	17.16	18.41	22.11	20.61	14.45	19.25	30.29	25.95	25.89	29.46
Natural Gas Wellhead															
(dollars per thousand cubic feet)	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.17	2.32	1.96	2.19	3.69	4.12	2.89	3.22
Petroleum Products															
Gasoline Retail <sup>b</sup> (dollars per gallon)															
All Grades	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.18	1.53	1.47	1.38	1.52
Regular Unleaded	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.14	1.49	1.43	1.34	1.49
No. 2 Diesel Oil, Retail															
(dollars per gallon)	0.99	1.16	1.13	1.11	1.11	1.11	1.11	1.24	1.20	1.04	1.12	1.49	1.40	1.31	1.44
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.51	0.89	0.76	0.71	0.86
No. 2 Heating Oil, Retail															
(dollars per gallon)	0.90	1.06	1.02	0.93	0.91	0.88	0.87	0.99	0.99	0.85	0.88	1.31	1.24	1.15	1.30
No. 6 Residual Fuel Oil, Retail <sup>c</sup>															
(dollars per barrel)	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.83	16.02	25.34	22.30	24.11	26.38
Electric Utility Fuels															
Coal															
(dollars per million Btu) Heavy Fuel Oil <sup>d</sup>	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.22	1.20	1.23	1.21	1.20
(dollars per million Btu) Natural Gas	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.38	4.26	3.72	3.90	4.26
(dollars per million Btu)	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.57	4.33	4.43	3.34	3.61
Other Residential															
Natural Gas															
(dollars per thousand cubic feet) Electricity	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.83	6.69	7.77	9.62	7.66	8.16
(cents per kilowatthour)	7.64	7.85	8.05	8.23	8.34	8.40	8.40	8.36	8.43	8.26	8.16	8.24	8.48	8.68	8.69

<sup>a</sup>Refiner acquisition cost (RAC) of imported crude oil.

<sup>b</sup>West Texas Intermediate.

<sup>c</sup>Average self -service cash prices.

<sup>d</sup>Average for all sulfur contents.<sup>e</sup>Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices.

Notes: Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: Petroleum Marketing Monthly, DOE/EIA-0380; Natural Gas Monthly, DOE/EIA-0130; Monthly Energy Review, DOE/EIA-0035; Electric Power Monthly, DOE/EIA-0226.

### Table A5. Annual U.S. Petroleum Supply and Demand: Base Case

(Million Barrels per Day, Except Closing Stocks)

								Year							
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Supply								1							
Crude Oil Supply															
Domestic Production <sup>a</sup>	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.90	5.89
Alaska		1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.05	0.97	0.96	1.01	1.06
Lower 48	-	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.85	4.84	4.89	4.83
Net Imports (including SPR) <sup>b</sup>	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.60	8.61	9.02	9.31	9.01	9.57
Other SPR Supply	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.02	0.12	0.12
Stock Draw (Including SPR)	-0.09	0.02	-0.01	0.00	-0.08	-0.02	0.09	0.05	-0.06	-0.07	0.09	-0.01	-0.07	0.04	0.03
Product Supplied and Losses		-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil		0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.15	0.12	0.22	0.15
	0.20	0.20	0.20	0.20	0.11	0.21	0.10	0.22	0.14	0.11	0.10	0.10	0.12	0.22	0.70
Total Crude Oil Supply	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.80	15.07	15.13	15.05	15.52
Other Supply															
NGL Production	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.85	1.91	1.87	1.89	1.93
Other Hydrocarbon and Alcohol Inputs	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.36	0.40	0.40
Crude Oil Product Supplied	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	0.00
Processing Gain	0.66	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.90	0.92	0.92
Net Product Imports <sup>c</sup>	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.40	1.59	1.32	1.44
Product Stock Withdrawn		-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	0.00	-0.23	0.08	0.05
Total Supply	17.37	17.04	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.62	19.66	20.25
Demand															
Motor Gasoline <sup>d</sup>	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.47	8.61	8.74	8.95
Jet Fuel	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.73	1.66	1.62	1.74
Distillate Fuel Oil		3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.72	3.85	3.73	3.84
Residual Fuel Oil		1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.83	0.91	0.81	0.75	0.79
Other Oils <sup>e</sup>	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.73	4.83	4.94
Total Demand	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.66	20.25
Total Petroleum Net Imports	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.33	11.01
· · · · · · · · · · · · · · · · · · ·															
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)		323	325	318	335	337	303	284	305	324	284	286	312	296	287
Total Motor Gasoline		220	219	216	226	215	202	195	210	216	193	196	210	208	206
Jet Fuel		52	49	43	40	47	40	40	44	45	41	45	42	42	42
Distillate Fuel Oil		132	144	141	141	145	130	127	138	156	125	118	145	138	132
Residual Fuel Oil	44	49	50	43	44	42	37	46	40	45	36	36	41	37	38
Other Oils <sup>f</sup>	257	261	267	263	273	275	258	250	259	291	246	247	287	270	259

<sup>a</sup>Includes lease condensate.

<sup>b</sup>Net imports equals gross imports plus SPR imports minus exports.

<sup>c</sup>Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing. <sup>d</sup>For years prior to 1993, motor gasoline includes an estimate of fuel ethanol blended into gasoline and certain product reclassifications, not reported elsewhere in EIA. See Appendix B in Energy Information Administration, Short-Term Energy Outlook, EIA/DOE-0202(93/3Q), for details on this adjustment.

\*Includes crude oil product supplied, natural gas liquids, liquefied refinery gas, other liquids, and all finished petroleum products except motor gasoline, jet fuel, distillate, and residual fuel oil. Includes stocks of all other oils, such as aviation gasoline, kerosene, natural gas liquids (including ethane), aviation gasoline blending components, naphtha and other oils for petrochemical feedstock use, special naphthas, lube oils, wax, coke, asphalt, road oil, and miscellaneous oils.

SPR: Strategic Petroleum Reserve. NGL: Natural Gas Liquids

Notes: Winor discrepancies with other EIA published historical data are due to rounding, with the following exception: recent petroleum demand and supply data displayed here reflect the incorporation of resubmissions of the data as reported in EIA's Petroleum Supply Monthly, TableC1. Historical data are printed in bold forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: Petroleum Supply Monthly, DOE/EIA-0109, and Weekly Petroleum Status Report, DOE/EIA-0208.

### Table A6. Annual U.S. Natural Gas Supply and Demand: Base Case

(Trillion Cubic Feet)

								Year							
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Supply															
Total Dry Gas Production	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.85	18.90	18.71	18.83	18.99	19.43	18.98	19.77
Net Imports	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	3.54	3.65	3.44	3.52
Supplemental Gaseous Fuels	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.10	0.09	0.08	0.07	0.07
Total New Supply	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.75	21.84	21.80	22.35	22.61	23.16	22.50	23.36
Working Gas in Storage															
Opening	2.85	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	2.60
Closing	2.51	3.07	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	2.60	2.55
Net Withdrawals	0.34	-0.56	0.24	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.21	0.80	-1.18	0.30	0.05
Total Supply	19.03	18.82	19.70	20.11	20.70	21.11	21.85	21.73	21.84	21.25	22.56	23.41	21.97	22.80	23.41
Balancing Item <sup>a</sup>	-0.23	-0.11	-0.66	-0.56	-0.42	-0.40	-0.27	0.24	0.11	0.01	-0.95	-0.88	-0.53	-0.99	-0.83
Total Primary Supply	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.61	22.54	21.44	21.81	22.58
Demand															
Lease and Plant Fuel	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.16	1.08	1.13	1.16	1.18	1.20
Pipeline Use	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.64	0.65	0.64	0.61	0.59	0.61
Residential	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	4.99	4.81	4.84	5.10
Commercial	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	3.22	3.20	3.20	3.33
Industrial (Incl. Nonutilities)	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.83	8.69	9.01	9.51	8.98	9.29	9.60
Electric Utilities	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.26	3.11	3.04	2.68	2.72	2.76
Total Demand	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.95	21.26	21.61	22.54	21.44	21.81	22.58

<sup>a</sup>The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

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

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

### Table A7. Annual U.S. Coal Supply and Demand: Base Case

(Million Short Tons)

`							Year								
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Supply															
Production	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.4	1073.6	1121.3	1107.7	1110.3
Appalachia	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	425.6	419.4	428.9	413.7	406.8
Interior	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	143.5	147.7	140.1	132.3
Western	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	488.8	512.3	510.7	544.7	553.9	571.2
Primary Stock Levels <sup>a</sup>															
Opening	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	33.9	32.5
Closing	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	33.9	32.5	32.7
Net Withdrawals	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-2.6	-2.9	7.6	-2.0	1.4	-0.2
Imports	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	9.1	12.5	19.8	17.4	17.2
Exports	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	58.5	48.7	45.2	46.3
Total Net Domestic Supply	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1045.7	1048.1	1035.2	1090.4	1081.3	1081.1
Secondary Stock Levels <sup>b</sup>															
Opening	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	144.0	108.1	136.5	140.3
Closing	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.4	144.0	108.1	136.5	140.3	132.6
Net Withdrawals	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.6	-23.0	-14.6	35.9	-28.4	-3.8	7.7
Waste Coal Supplied to IPPs $^{\circ}$	0.0	0.0	0.0	6.0	6.4	7.9	8.5	8.8	8.1	9.0	9.6	10.1	10.6	11.1	11.6
Total Supply	896.5	899.4	891.4	907.8	936.5	954.0	960.4	1006.7	1033.2	1031.6	1043.1	1081.2	1072.7	1088.5	1100.4
Demand															
Coke Plants	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	28.9	26.1	25.4	25.3
Electricity Production															
Electric Utilities	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	910.9	894.1	859.3	806.3	837.4	851.6
Nonutilities (Excl. Cogen.) <sup>d</sup>	5.7	7.4	11.4	15.0	17.5	19.9	21.2	22.2	21.6	26.9	52.7	123.3	150.6	154.1	157.5
Retail and General Industry	76.1	76.3	75.4	74.1	81.1	81.2	78.9	77.7	78.0	72.3	69.6	69.3	67.5	65.1	66.0
Total Demand <sup>e</sup>	889.2	896.2	893.0	901.2	943.5	950.1	962.0	1006.3	1030.1	1038.3	1044.5	1080.9	1050.5	1081.9	1100.4
Discrepancy <sup>f</sup>	7.3	3.3	-1.6	6.6	-7.0	3.9	-1.6	0.4	3.1	-6.7	-1.5	0.4	22.2	6.6	0.0

<sup>a</sup>Primary stocks are held at the mines, preparation plants, and distribution points.

<sup>b</sup>Secondary stocks are held by users. It includes an estimate of stocks held at utility plants sold to nonutility generators.

<sup>c</sup>Estimated independent power producers (IPPs) consumption of waste coal. This item includes was te coal and coal slurry reprocessed into briquettes.

<sup>d</sup>Estimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, Energy Information Administration (EIA). Quarterly coal consumption estimates for 2000 and projections for 2001 and 2002 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

<sup>e</sup>Total Demand includes estimated IPP consumption.

<sup>1</sup>The discrepancy reflects an unaccounted for shipper and receiver reporting difference, assumed to be zero in the forecast period. Prior to 1994, discrepancy may include some waste coal supplied to IPPs that has not been specifically identified.

Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: Quarterly Coal Report, DOE/EIA-0121, and Electric Power Monthly, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

### Table A8. Annual U.S. Electricity Supply and Demand: Base Case

(Billion Kilowatt-hours)

	Year 1989   1990   1991   1992   1993   1994   1995   1996   1997   1998   1999   2000   2001   2002   20														
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Supply									•			•			
Total Utility and Nonutility Net Generatior	า														
Coal	1583.8	1590.3	1589.9	1621.1	1685.7	1691.7	1710.2	1795.7	1844.1	1873.9	1884.3	1967.7	1903.3	1900.5	1929.2
Petroleum	163.9	124.0	119.0	99.4	111.3	105.5	75.3	81.7	93.0	126.9	123.6	108.8	127.8	91.9	90.9
Natural Gas	363.9	378.3	392.6	418.3	428.4	465.9	498.5	455.8	485.4	540.6	556.6	596.6	630.6	631.0	646.0
Nuclear	529.4	577.0	612.6	618.8	610.4	640.5	673.4	674.7	628.6	673.7	728.3	753.9	768.8	771.3	788.2
Hydroelectric	273.7	289.5	285.0	248.9	275.5	256.8	308.3	344.4	354.9	318.9	313.4	273.1	208.3	284.2	297.2
Geothermal and Other <sup>a</sup>	57.2	65.7	72.2	76.8	85.7	93.4	92.2	94.7	88.1	83.8	98.5	99.8	107.1	101.9	101.9
Total Generation	2971.9	3024.9	3071.3	3083.4	3196.9	3253.8	3357.8	3447.0	3494.2	3617.9	3704.5	3799.9	3746.0	3780.8	3853.3
Net Imports <sup>c</sup>	11.0	2.3	19.6	25.4	27.8	44.8	39.2	38.0	36.6	27.6	30.6	34.0	20.3	26.7	31.5
Total Supply	2982.8	3027.2	3091.0	3108.8	3224.7	3298.6	3397.1	3485.0	3530.8	3645.5	3735.1	3834.0	3766.3	3807.6	3884.8
Losses and Unaccounted for <sup>d</sup>	235.6	210.4	217.9	223.6	236.4	223.2	234.6	234.9	236.2	221.4	234.2	214.0	145.6	182.0	178.8
Demand															
Retail Sales <sup>e</sup>															
Residential	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.9	1130.1	1144.9	1192.4	1202.5	1212.7	1251.6
Commercial	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1055.2	1085.7	1083.2	1096.1
Industrial	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1033.6	1038.2	1051.2	1058.2	1064.2	996.0	986.2	1005.1
Other	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	109.5	117.9	122.1	124.8
Subtotal	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3421.4	3402.1	3404.1	3477.5
Nonutility Use/Sales <sup>f</sup>	100.4	104.2	111.0	121.8	126.9	140.9	149.2	148.9	149.0	159.8	188.8	198.6	218.6	221.5	228.4
Total Demand	2747.2	2816.7	2873.0	2885.1	2988.4	3075.5	3162.4	3250.1	3294.6	3424.0	3500.9	3620.0	3620.7	3625.6	3705.9
Memos:															
Nonutility Sales															
to Electric Utilities	87.1	112.5	135.3	164.4	187.5	202.2	214.2	220.6	222.7	245.9	342.0	586.0	897.4	870.5	881.2
Electric Utility Generation	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	3212.2	3173.7	3015.4	2630.0	2688.9	2743.7
Nonutility Generation	187.6	216.7	246.3	286.1	314.4	343.1	363.3	369.6	371.7	405.7	530.9	784.6	1116.0	1092.0	1109.7

<sup>a</sup>Other includes generation from wind, wood, waste, and solar sources.

<sup>b</sup>Net generation.

Data for 2000 are estimates.

<sup>d</sup>Balancing item, mainly transmission and distribution losses.

<sup>e</sup>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.

<sup>1</sup>Defined as the sum of nonutility facility use of onsite net electricity generation plus direct sales of power by nonutility generators to third parties, reported annually in Table 7.5 of the Monthly Energy Review (MER). Data for 2000 are estimates.

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.