

## Short-Term Energy Outlook

January 2004

This edition of the *Outlook* provides projections through 2005 for the first time ([details](#)).

### Winter Heating Fuel and Gasoline Costs (Figures 1 to 3)

The outlook for winter 2003-2004 [household heating bills](#) compared to winter 2002-2003 is as follows: natural gas-heated homes: up 8 percent; heating oil users: down 4 percent; propane-heated households: up 3 percent; and homes with electric heat: up about 2 percent. These projections are national average values - actual heating bill changes may vary widely by region due to differences in weather and fuel price developments.

The December 2003 average motor gasoline price (regular unleaded gasoline) is estimated to have fallen to \$1.48 per gallon from \$1.51 in November. Due to high crude oil costs and the tight inventory situation, [pump prices](#) may increase on a monthly basis through the rest of winter and into late spring. Current [gasoline inventories](#) appear to be about normal now. Nevertheless, relatively low total petroleum inventories are likely to keep product prices firm.

### Oil Market Outlook (Figures 4 to 7)

[Average crude oil prices](#) moved up again in December, with West Texas Intermediate (WTI) prices averaging an estimated \$32.10 per barrel compared to \$31.11 in November. Prices for this winter are expected to average \$31.35 per barrel (19 cents higher than last winter's average) as higher demand and [relatively low oil inventories](#) keep oil markets tight and vulnerable to surprises in supply or demand..

Our baseline projected track for WTI oil prices in 2004, while indicating a decline, remains in the \$28-\$30 per barrel range. Prices may decline even further in 2005 as well, but increasing world demand and assumed OPEC restraint is expected to keep oil inventories near the low end of the historical range and oil prices relatively high for the year. OPEC is scheduled to meet on February 10 to discuss market trends and production decisions. We estimate [OPEC crude oil production](#) is currently running about 1 million barrels per day above their current quota.

World oil demand is projected to grow by over 2 percent in 2004 and 2005, after posting an estimated 1.8 percent gain in 2003. The cumulative gain from 2003 to 2005 would be a little over 3 million barrels per day.

Non-OPEC oil supply gains during the 2003-2005 period are projected to total a little under 3 million barrels per day. Most of the increases are projected to come from Russia and the Caspian Sea Region, with smaller increases expected from Africa, Canada, and Mexico. With non-OPEC supply growing at roughly the same rate as world oil demand, total OPEC crude production (including Iraq) is expected to average about 27 million barrels per day in the 2003-2005 time period.

U.S petroleum demand in 2003 grew an estimated 1.4 percent to about 20 million barrels per day, partly on the strength of oil substitution for natural gas in electric power generation and in some industrial uses. In 2004, demand is expected to climb another 390,000 barrels per day, or 1.9 percent, to 20.4 million barrels per day as transportation- and industrial-related use offset some reversal in fuel switching. An additional 440,000 barrels per day of demand is anticipated for 2005, bringing the annual average consumption rate to 20.9 million barrels per day. This anticipated acceleration in growth is due to continued strong economic growth, high natural gas prices, and the continued use of fuel oil as a substitute in electricity production and industrial processes.

### Natural Gas Outlook (Figures 8 to 10)

Natural gas spot prices in the United States exhibited strong volatility in December, starting the month at around \$5.00 per million Btu, spiking to roughly \$7.00 per million Btu in the middle of the month, then falling to \$5.50 toward the month's end as warmer-than-normal weather eased demand. Spot prices well above \$5 per million Btu remain likely over the next few months if normal, or colder, weather prevails, especially with oil prices remaining at relatively high levels. Natural gas storage levels are now slightly above average and may move prices back down if warm temperatures and weak heating demand occur later this winter, just as rising prices are possible if the weather becomes colder. In 2004, natural gas prices are expected to average just under \$5 per million Btu, falling somewhat along with oil prices. In 2005, natural gas spot prices are projected to fall again to average \$4.83 per million Btu under the assumption that domestic and imported supply can continue to grow by about 1-1.5 percent per year.

Natural gas demand is estimated to have declined 2.6 percent in 2003 largely due to high prices discouraging demand in the industrial and electric power sectors.

However, expected growth in the economy, along with somewhat lower projected annual average natural gas prices, are expected to push 2004 demand up by about 1.2 percent. Demand in 2005 is expected to increase 1.8 percent as the economy continues to expand and prices ease slightly. Early estimates indicate that natural gas production increased approximately 2.0 percent in 2003. Natural gas production is expected to continue to expand modestly through 2005, as natural gas well completions, which totaled an estimated 20,000 in 2003, continue to grow to between 21,000 and 22,000 wells per year over the next 2 years.

### **Electricity and Coal Outlook (Figures 11 to 13)**

[Electricity demand](#) in 2003 remained near its 2002 level. In 2004 and 2005, annual electricity demand is projected to grow by 2.2 and 2.3 percent, respectively, as the economic expansion accelerates.

Electricity supply: Nuclear generation declined 2.9 percent in 2003 compared to a year earlier. However, nuclear generation is likely to increase 3.6 percent in 2004 over 2003 levels when nuclear plants that experienced extended service outages come back online. Nuclear generation is expected to continue to grow in 2005. Hydroelectric generation is also projected to continue to increase in 2004 and 2005 due to the assumption of normal levels of precipitation. Other renewable sources for generation, led principally by wind power, are expected to continue to expand through 2005.

[Electric sector coal consumption](#) is estimated to have grown by about 1.6 percent in 2003. Coal-fired generation is expected to continue growing in 2004 and 2005, with coal demand in the power sector growing by 1.0 and 2.6 percent, respectively. While total [U.S. coal production](#) is estimated to have declined by 1.2 percent in 2003, expected growth in electric sector coal demand in 2004 and 2005 is projected to lead to increases in total coal production of 1.5 to 2.5 percent over the period.

## Figure 1. Winter Heating Bills

Illustrative Consumer Prices and Expenditures for Heating Fuels During the Winter				
	2000-2001 Actual	2001-2002 Actual	2002-2003 Actual	2003-2004 Base Forecast
<b>Natural Gas (Midwest)</b>				
Consumption (mcf)	99.1	81.3	95.2	90.5
Avg. Price (\$/mcf)	9.53	7.38	8.39	9.57
Expenditures (\$)	944	600	799	866
<b>Heating Oil (Northeast)</b>				
Consumption (gals)	728	577	742	689
Avg. Price (\$/gal)	1.37	1.10	1.34	1.38
Expenditures (\$)	996	635	991	951
<b>Propane (Midwest)</b>				
Consumption (gals)	979	803	941	894
Avg. Price (\$/gal)	1.38	1.11	1.20	1.30
Expenditures (\$)	1349	888	1126	1163

Notes: Consumption based on typical per household use for regions noted.

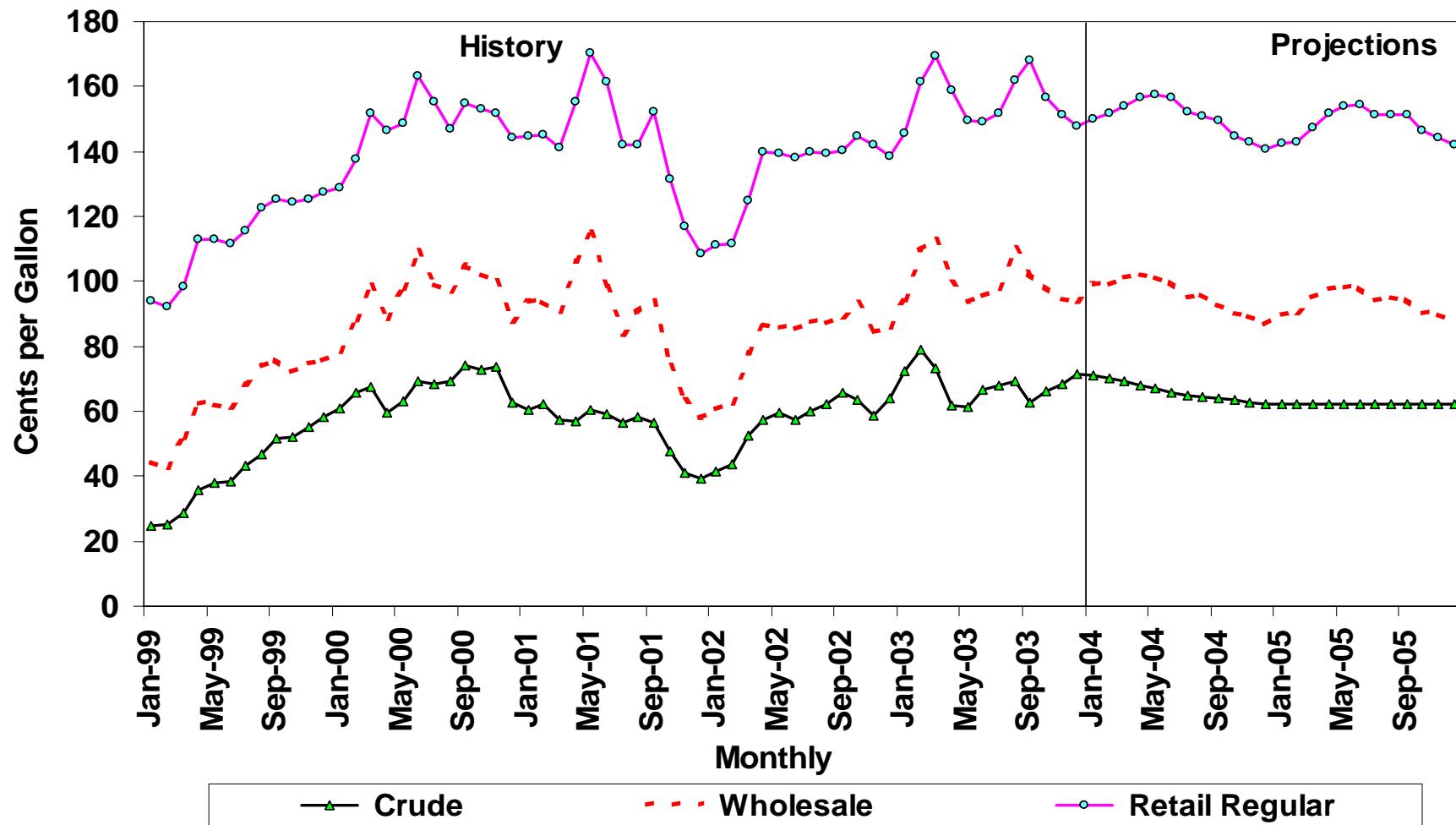
Prices shown are national average delivered-to-household prices.

mcf = thousand cubic feet.

gal = gallon.

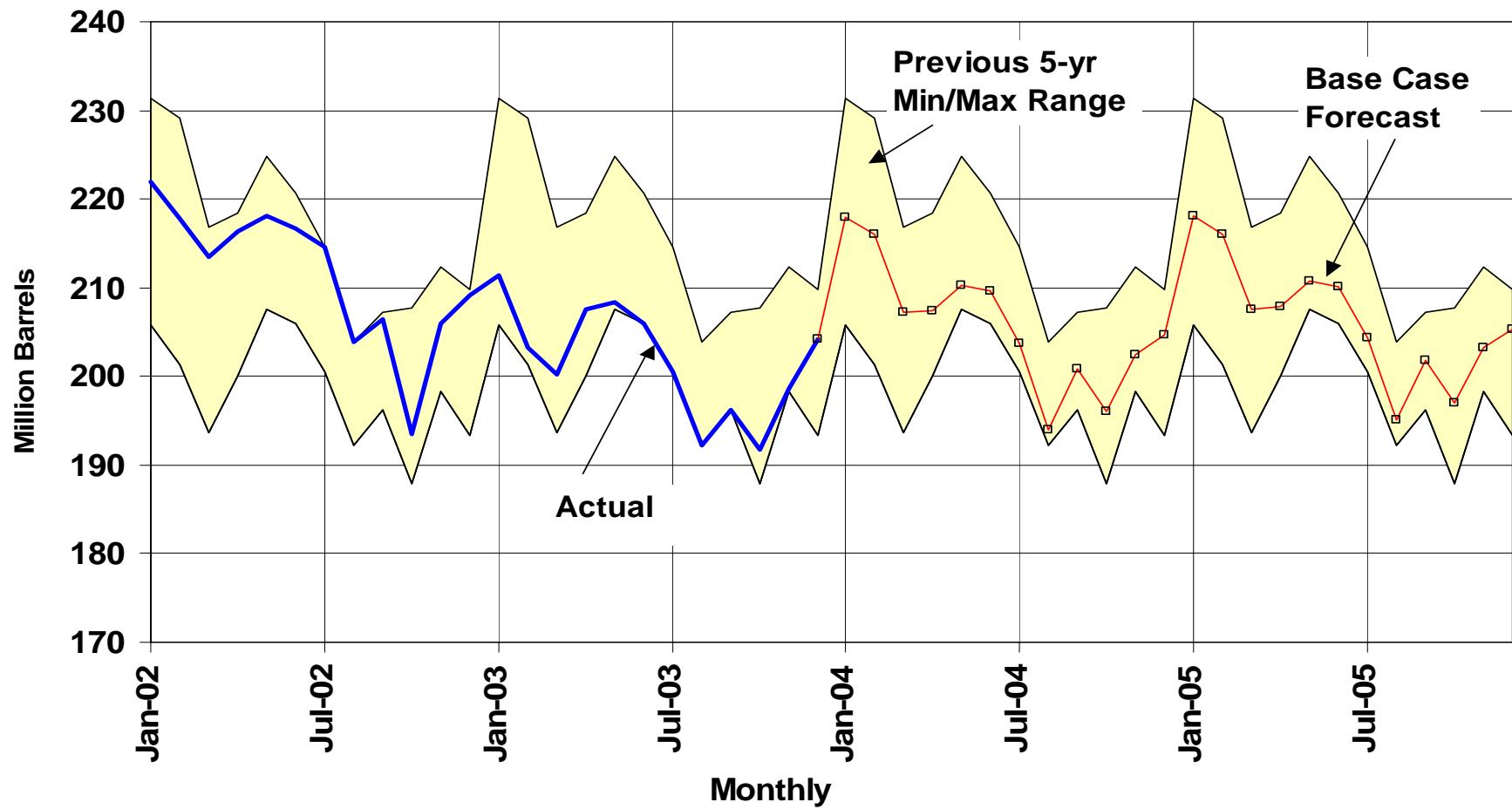


## Figure 2. Gasoline Prices and Crude Oil Costs



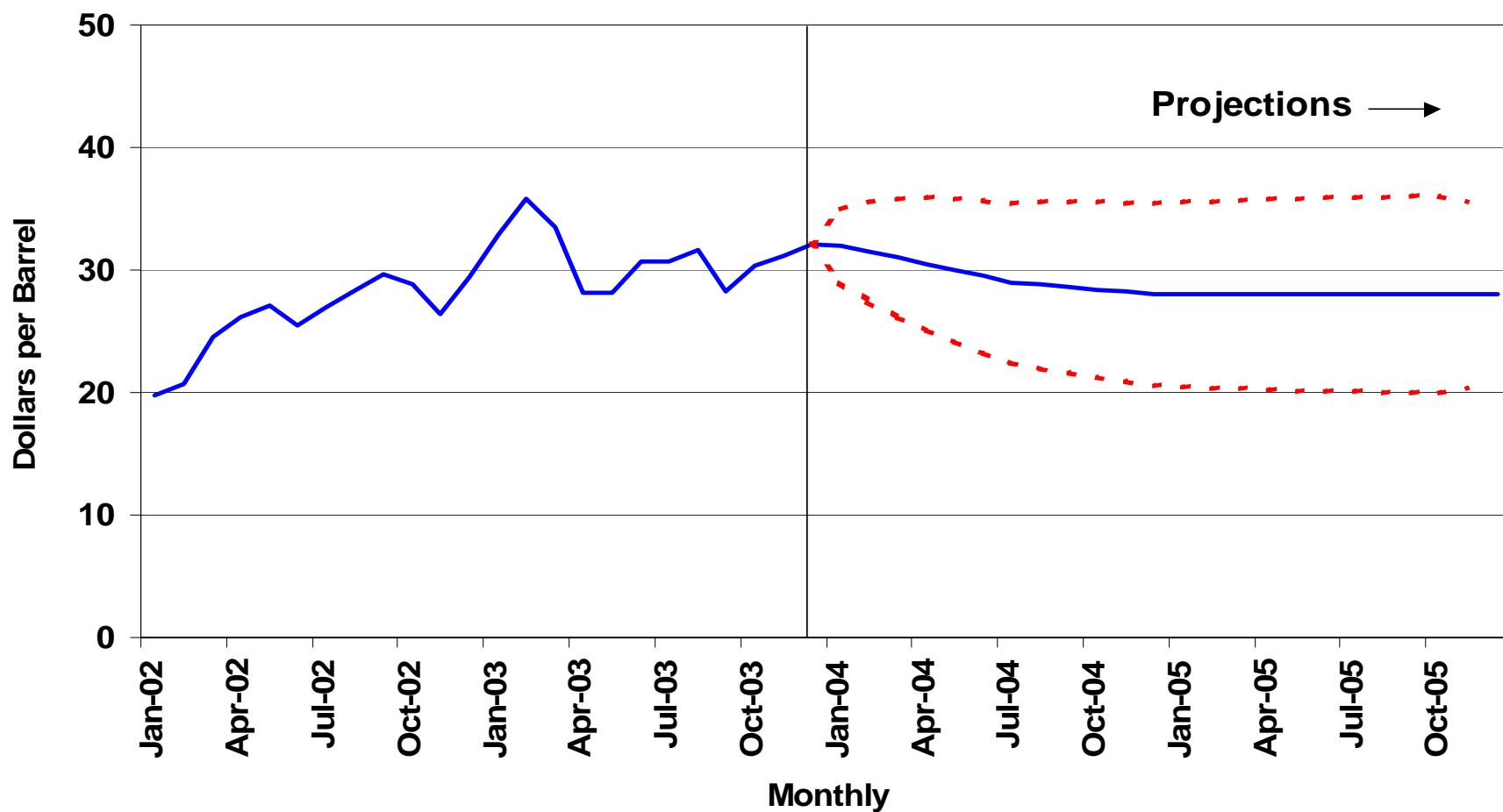
Short-Term Energy Outlook, January 2004

## Figure 3. U.S. Gasoline Inventories



Short-Term Energy Outlook, January 2004

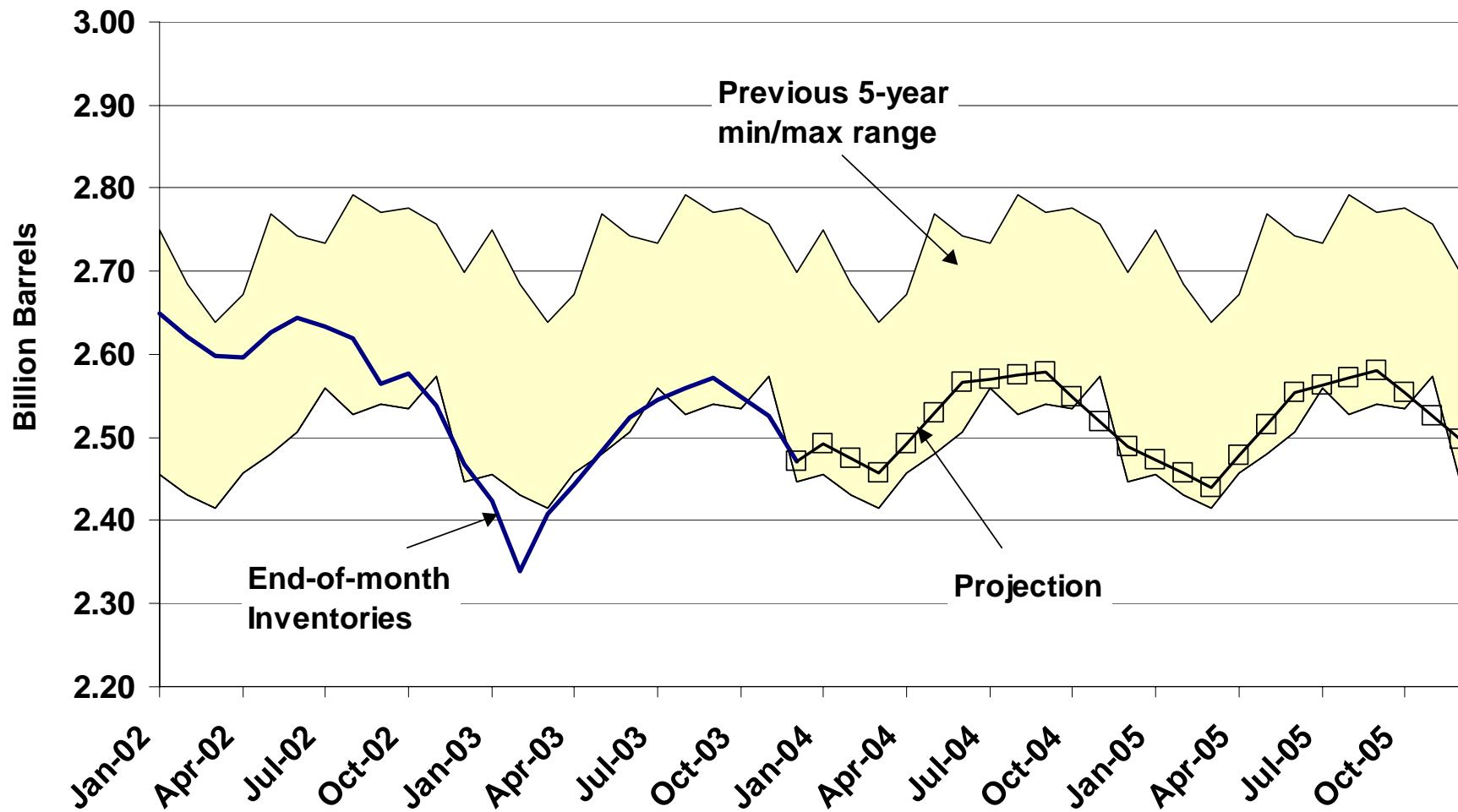
## Figure 4. West Texas Intermediate Crude Oil Price (Base Case and 95% Confidence Interval\*)



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

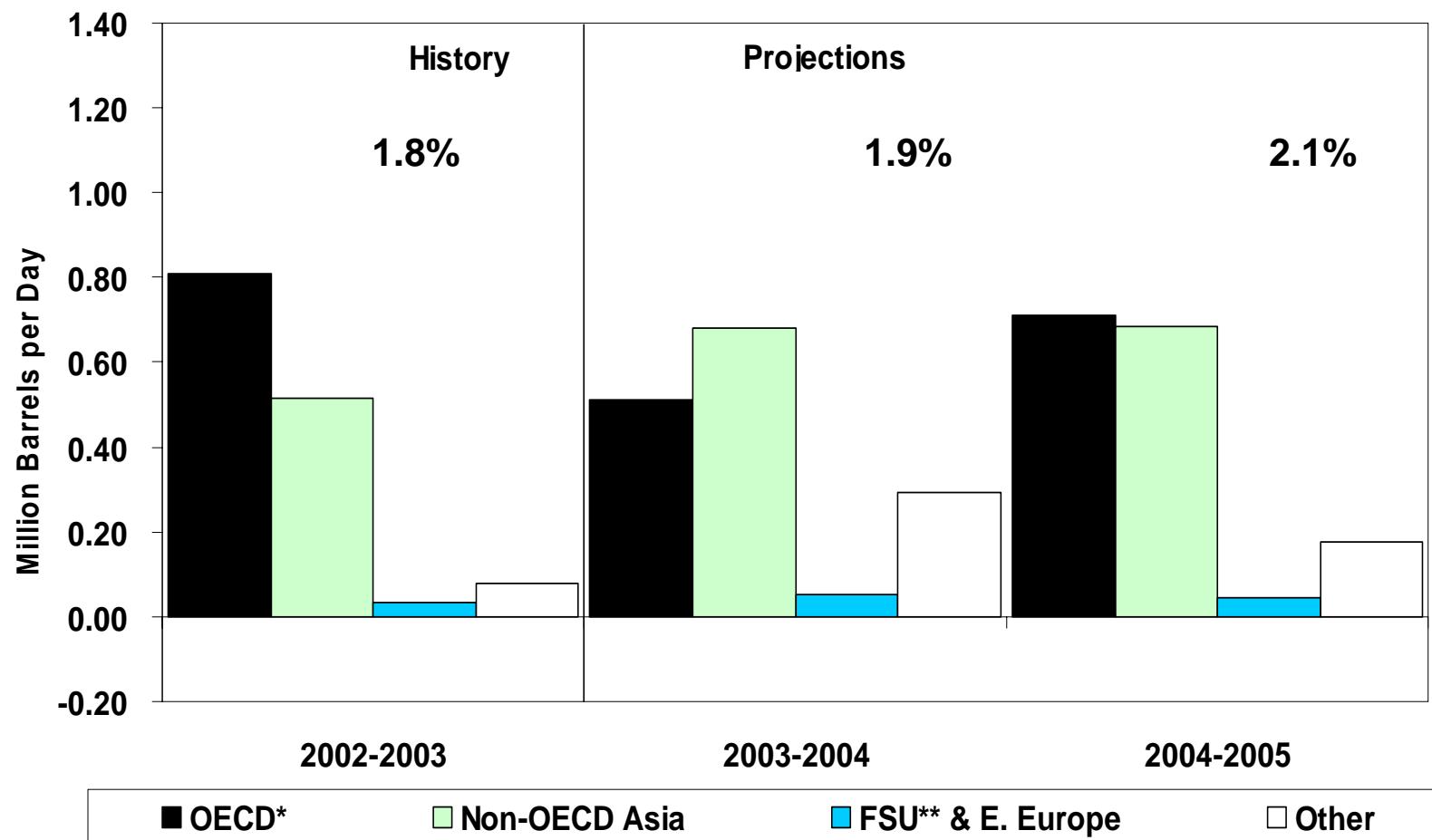
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## Figure 5. OECD Commercial Oil Stocks



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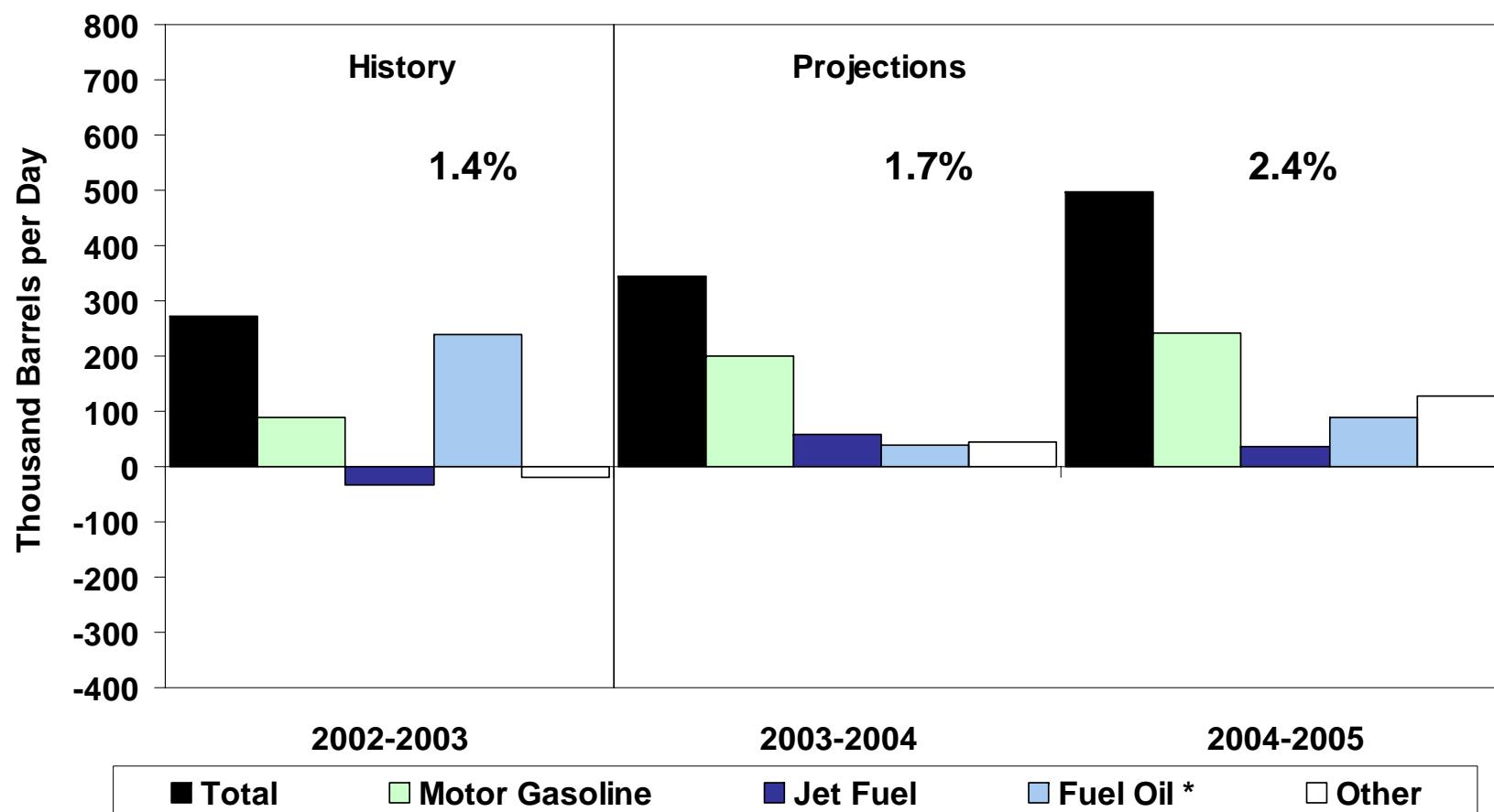
## Figure 6. World Oil Demand Growth (Change from Year Ago)



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

\*\* FSU = Former Soviet Union

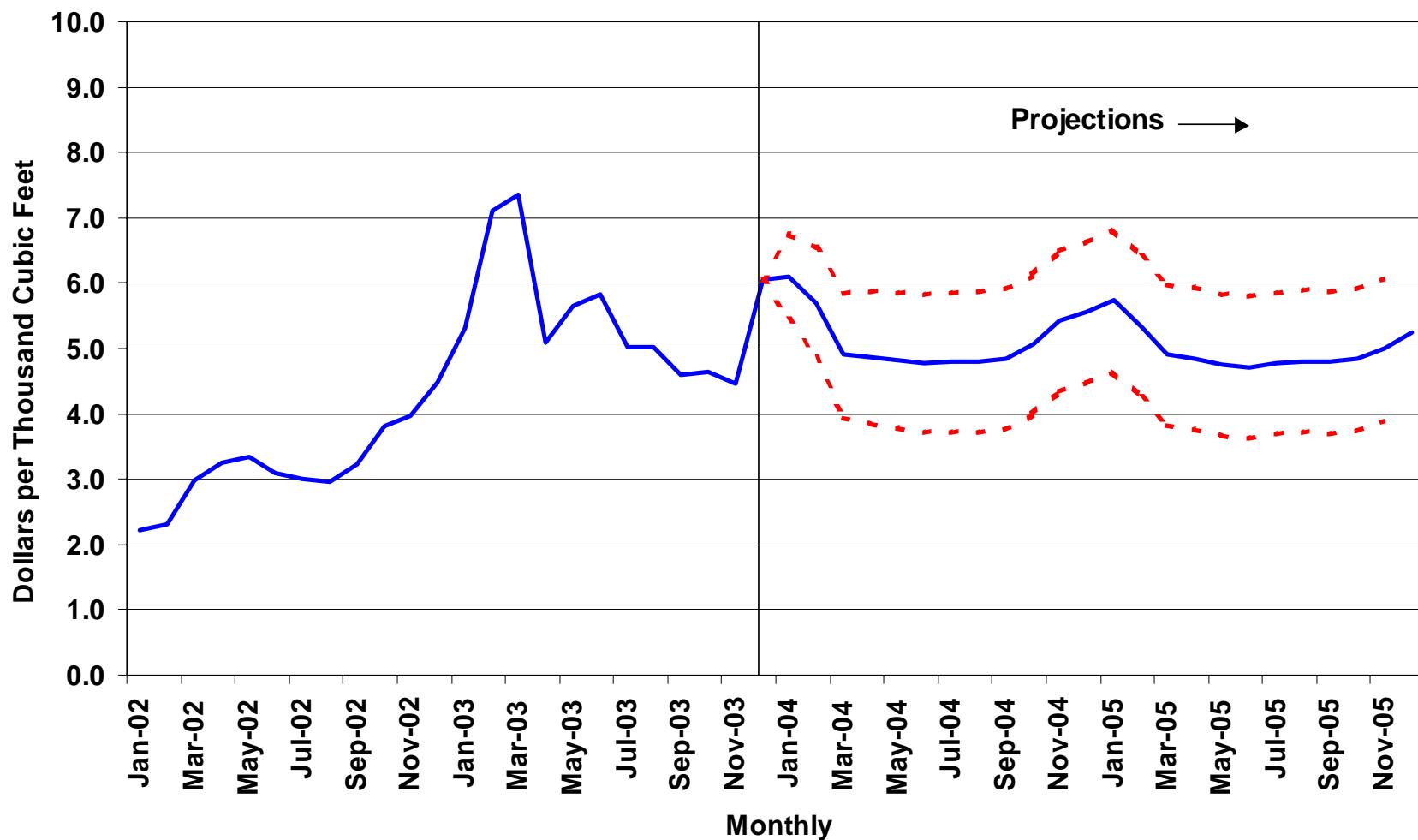
## Figure 7. U.S. Petroleum Products Demand Growth (Change from Year Ago)



\* Sum of distillate and residual fuel.



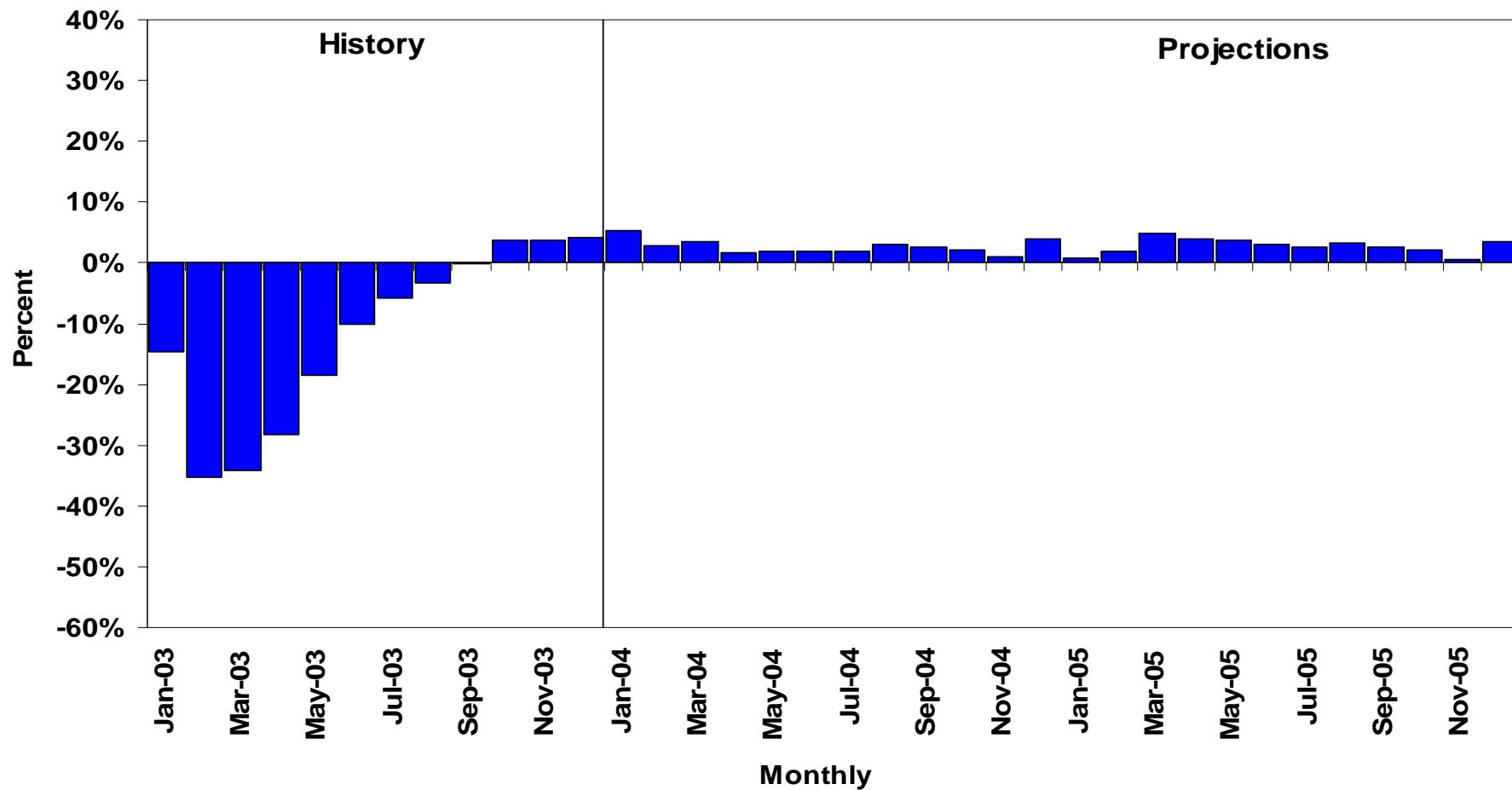
## Figure 8. U.S. Natural Gas Spot Prices (Base Case and 95% Confidence Interval\*)



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

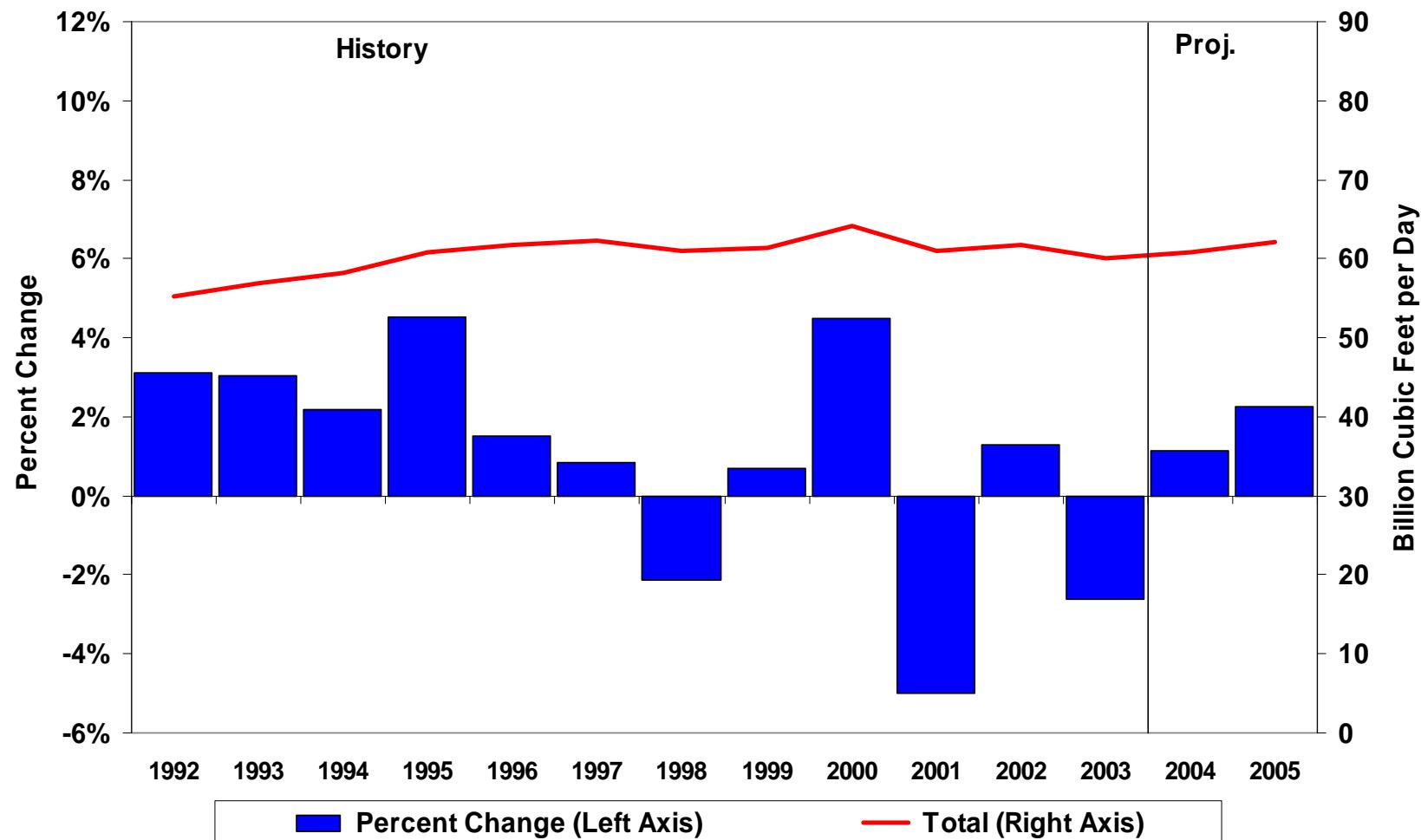
Sources: History: Natural Gas Week; Projections: Short-Term Energy Outlook, January 2004.

## Figure 9. U.S. Working Gas in Storage (Difference from Previous 5-Year Average)



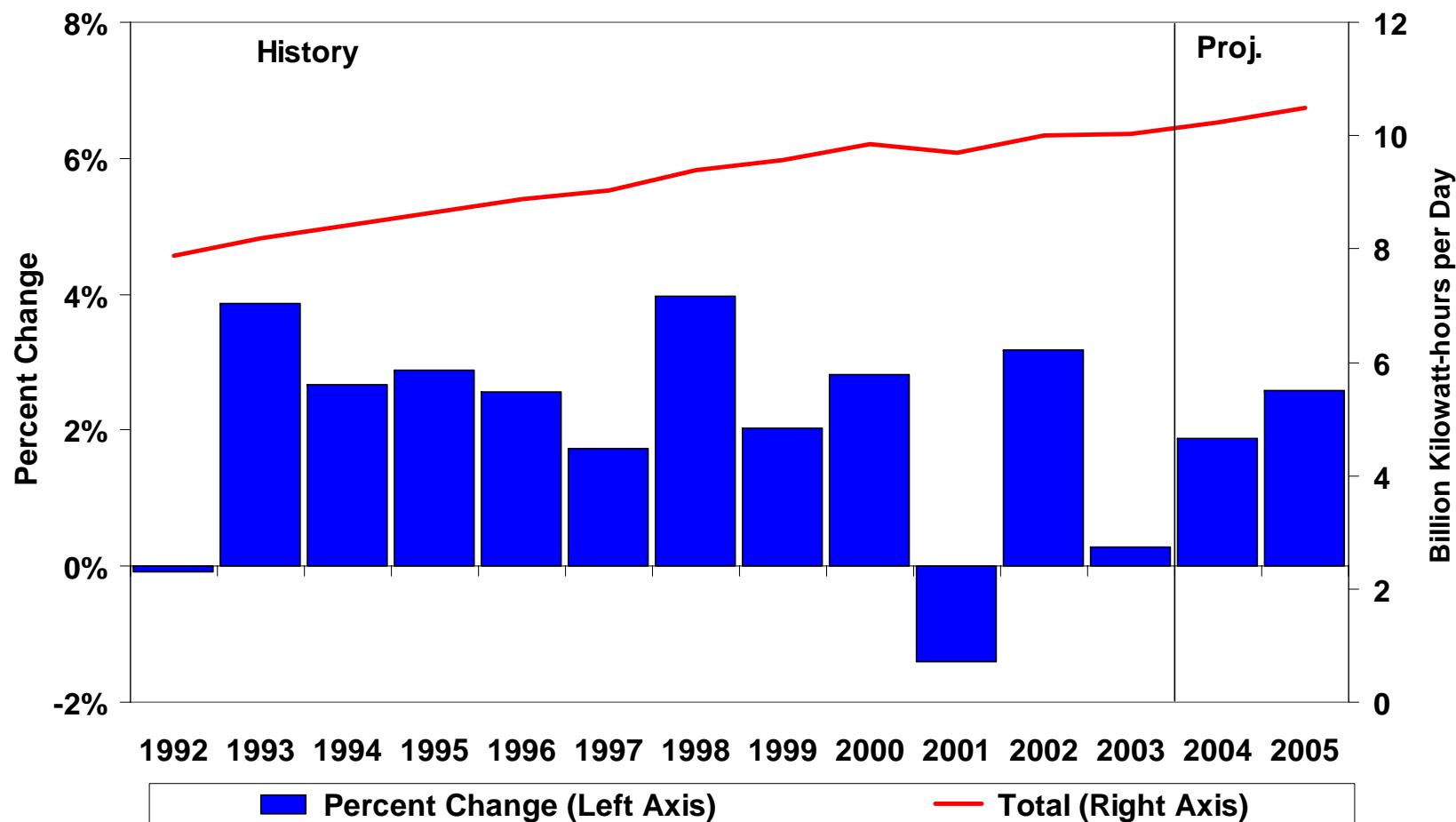
Short-Term Energy Outlook, January 2004

## Figure 10. Total U.S. Natural Gas Demand Growth Patterns



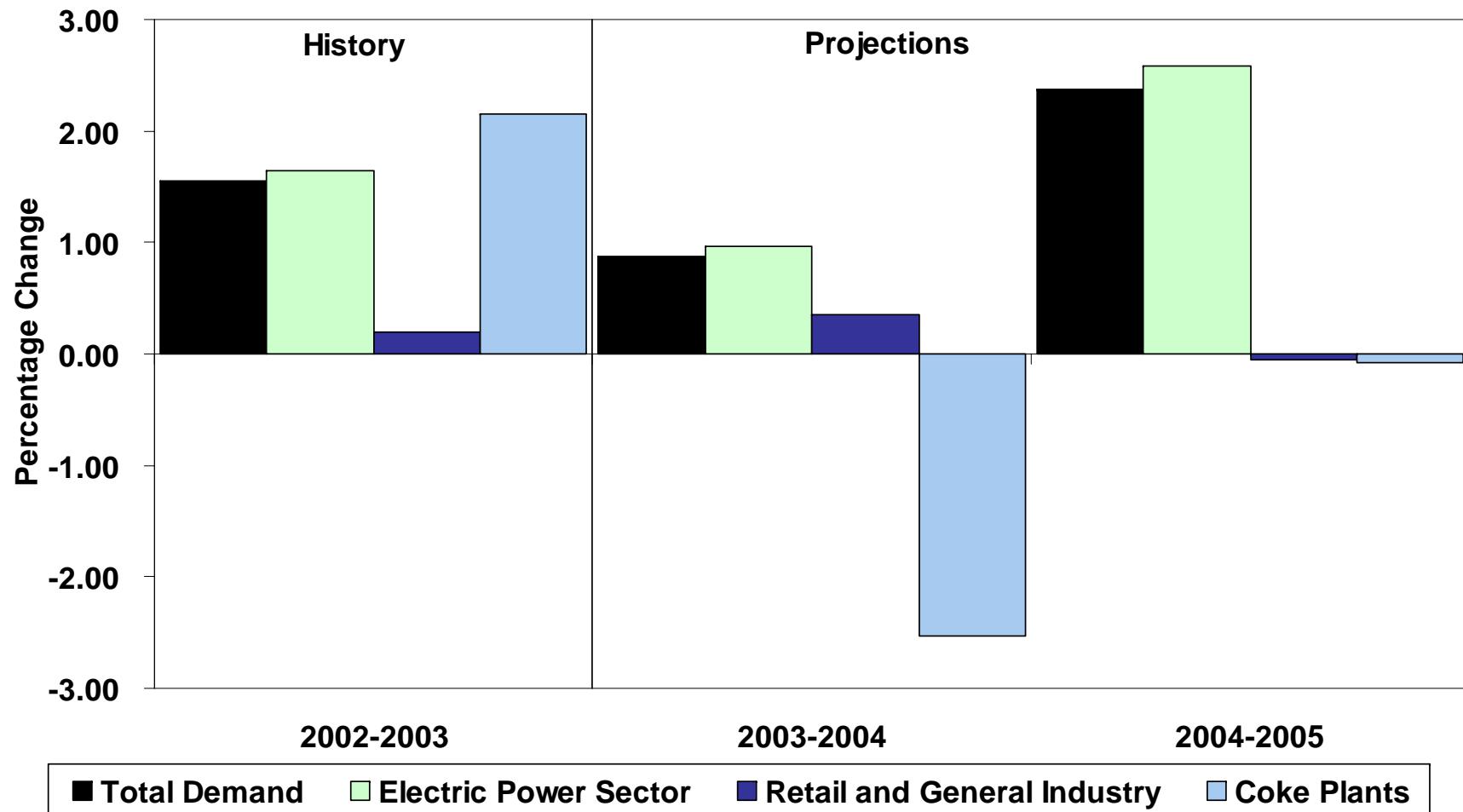
Short-Term Energy Outlook, January 2004

## Figure 11. Total U.S. Electricity Demand Growth Patterns



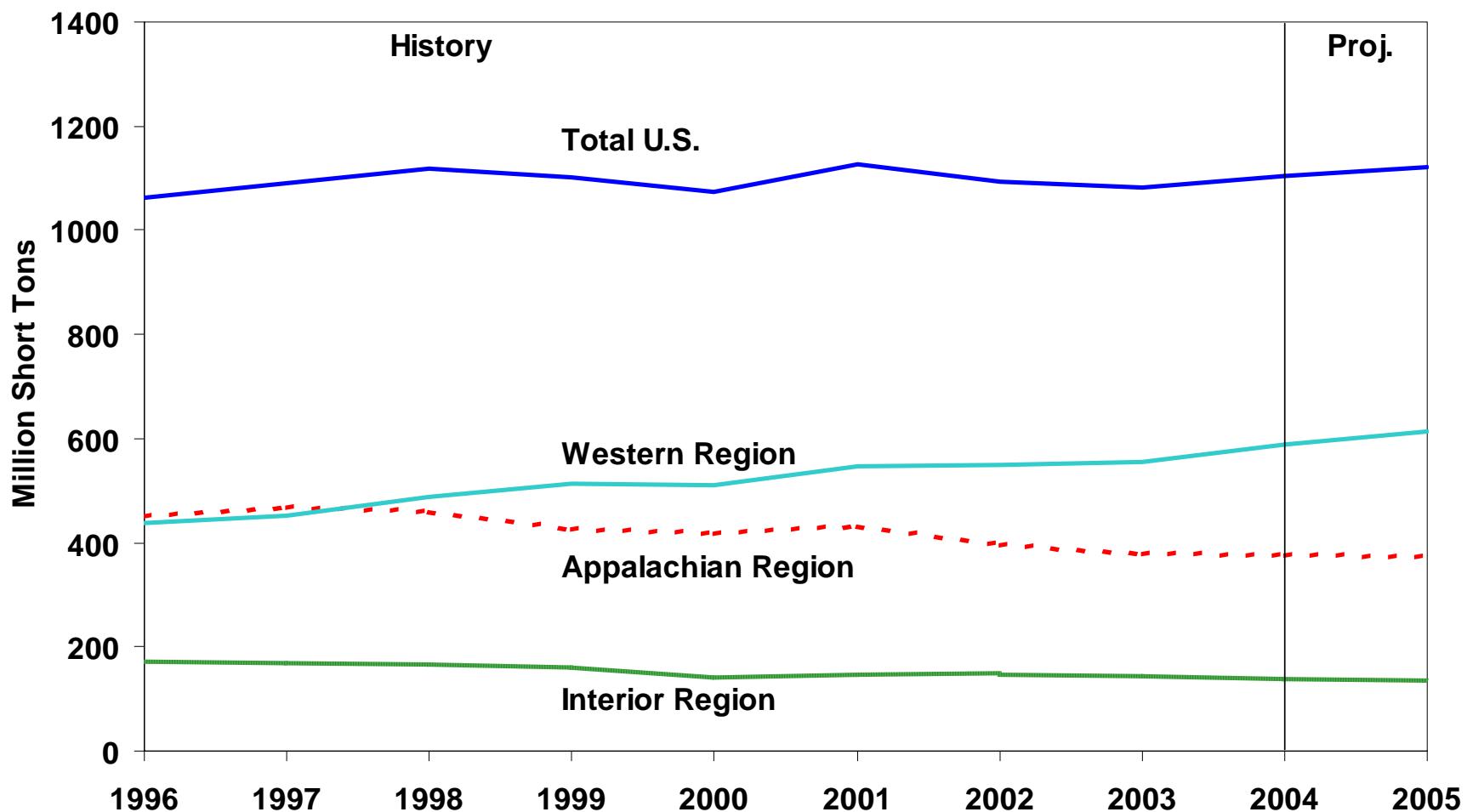
Short-Term Energy Outlook, January 2004

## Figure 12. U.S. Coal Demand



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## Figure 13. U.S. Coal Production

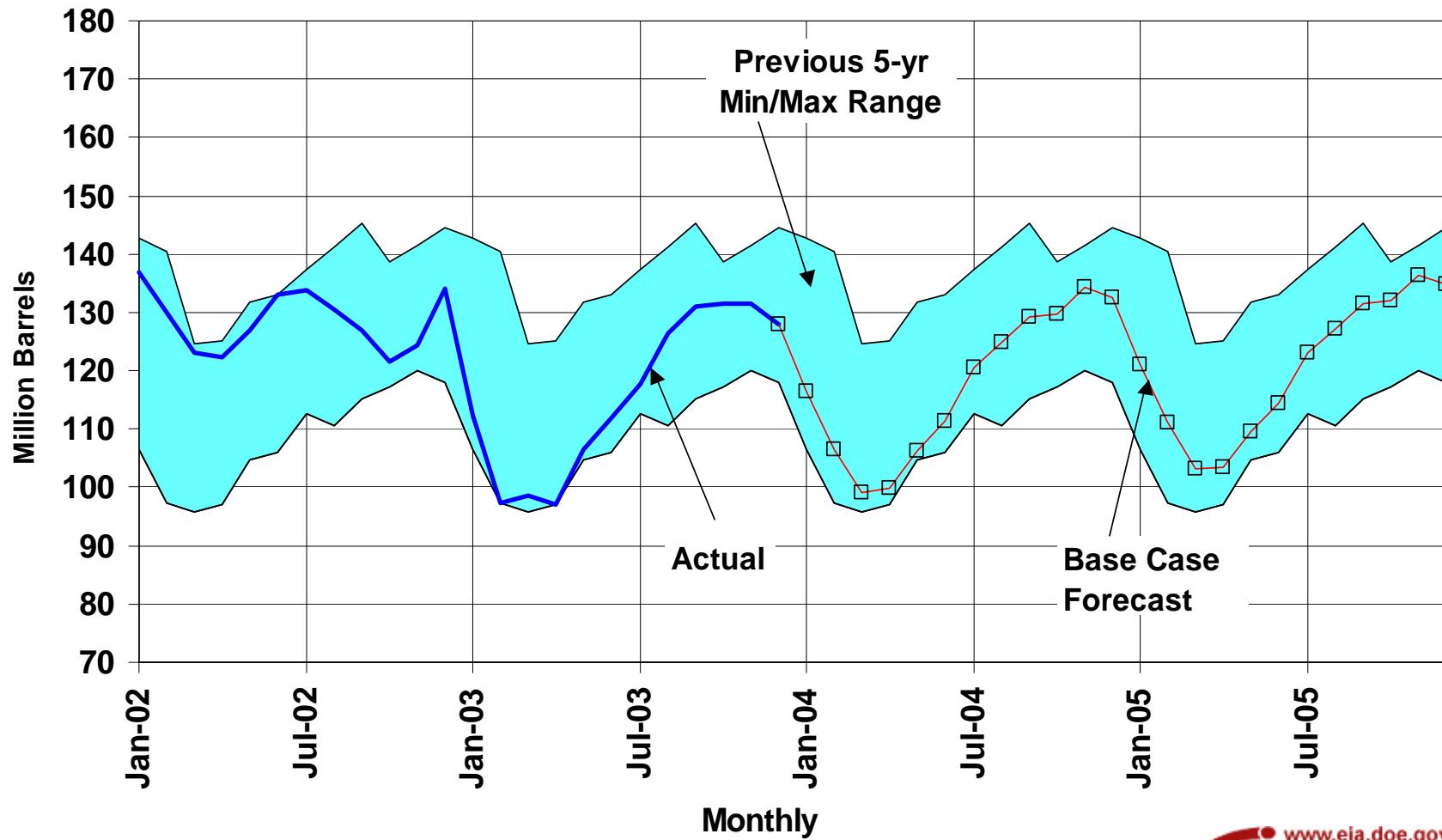


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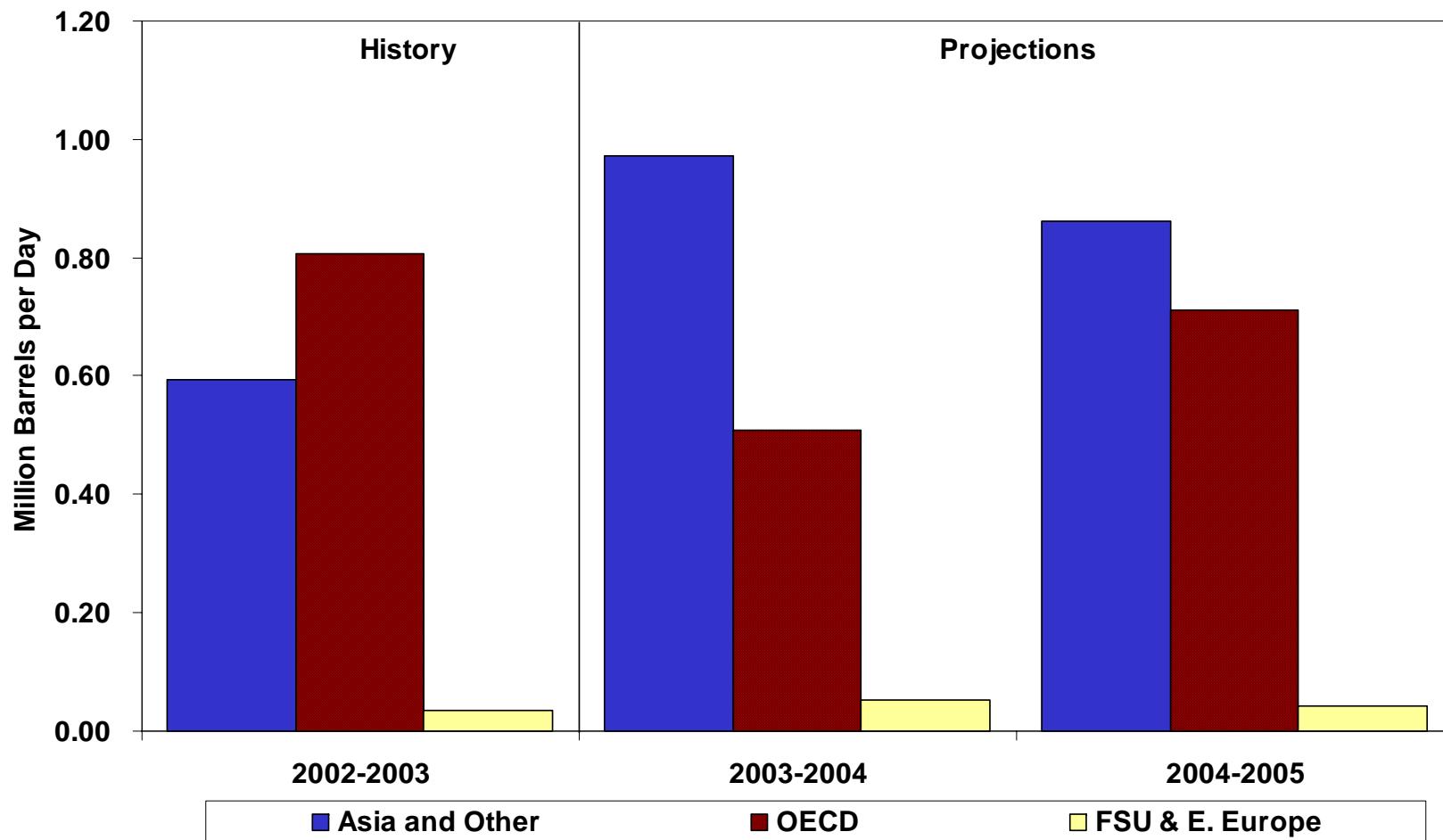
# **Additional Charts**

## Figure 14. U.S. Distillate Fuel Oil Inventories



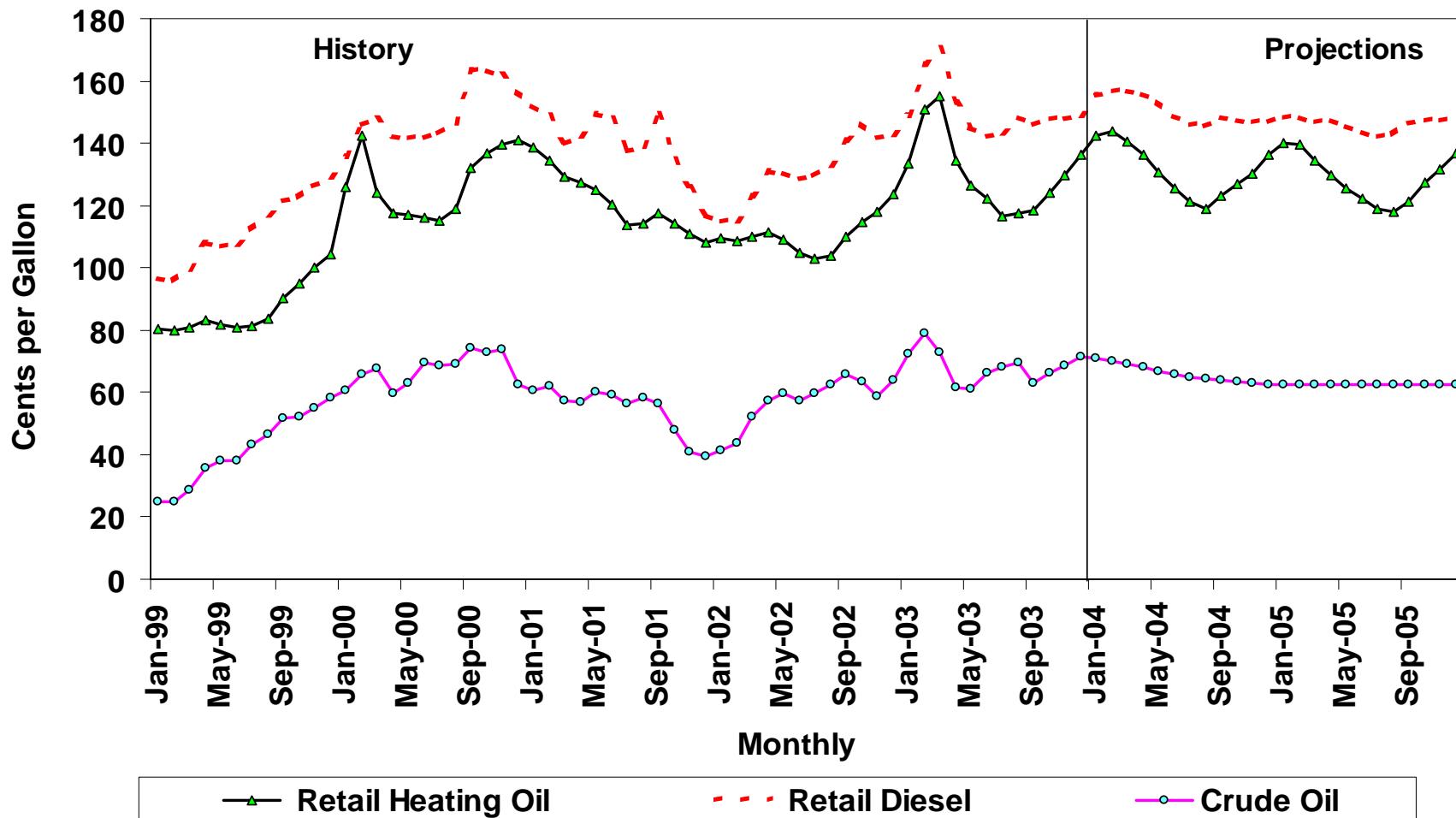
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## Figure 15. World Petroleum Production (Changes from Previous Year)



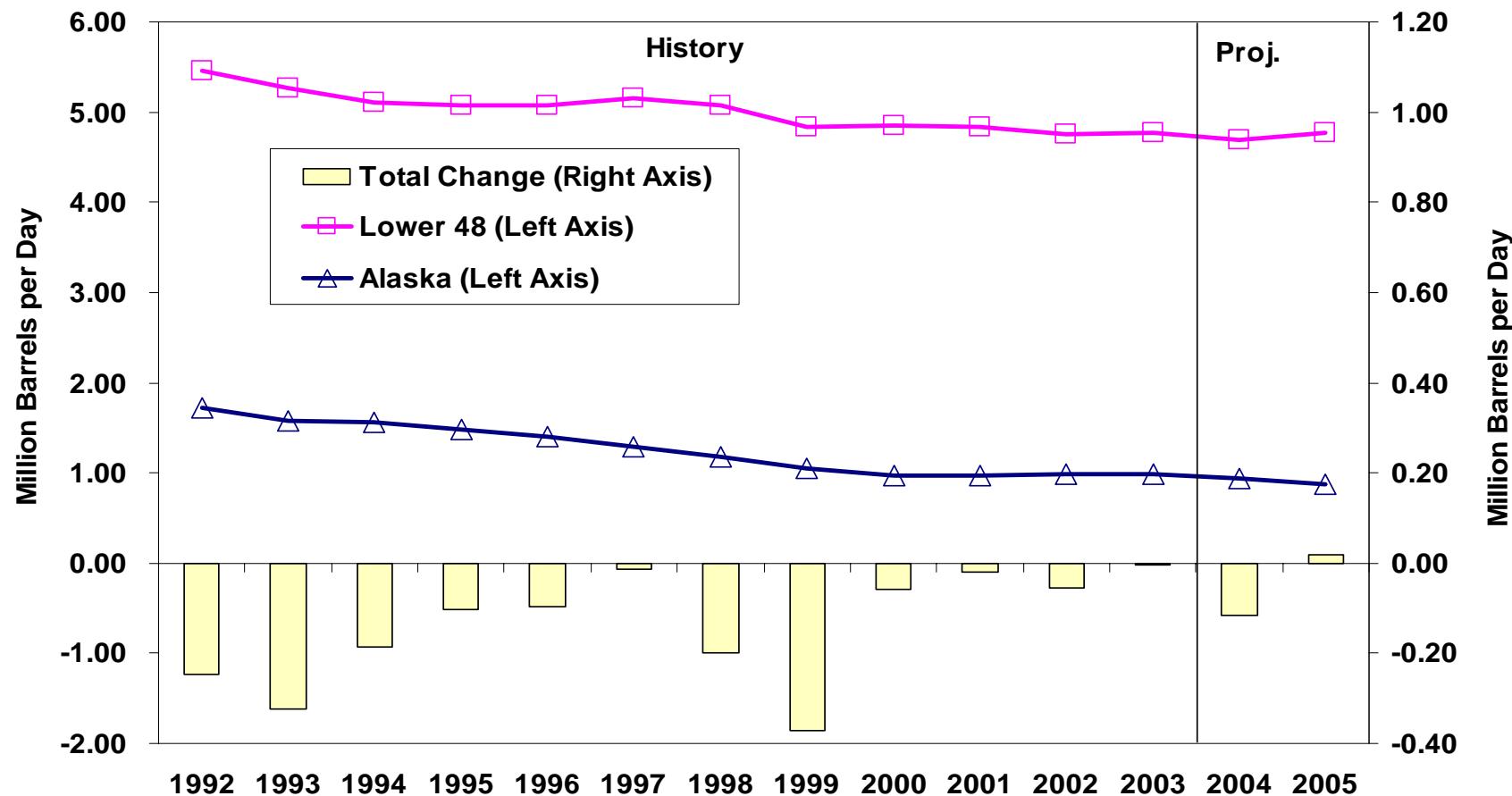
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## Figure 16. U.S. Distillate Fuel Prices



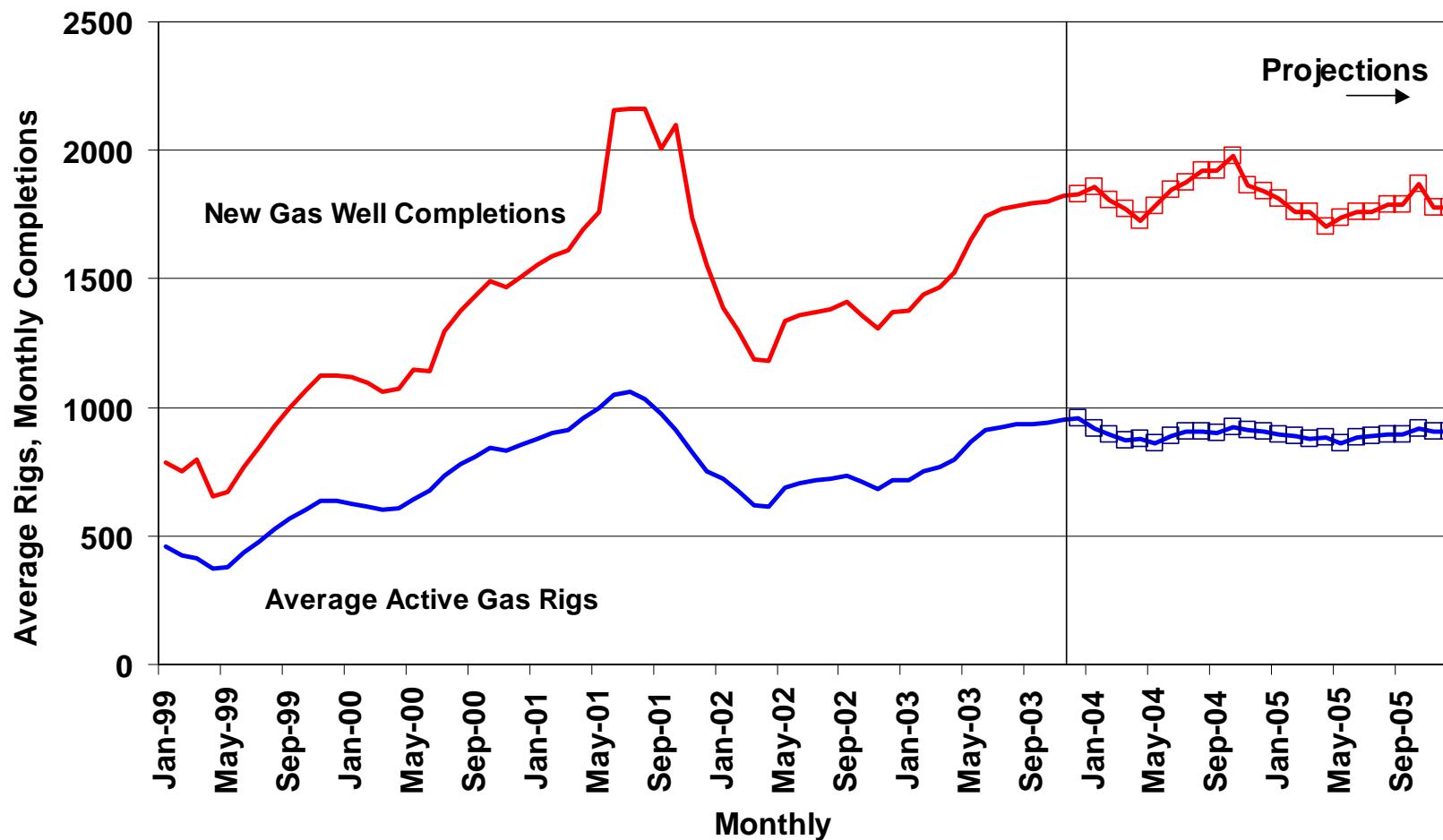
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## Figure 17. U.S. Crude Oil Production Trends



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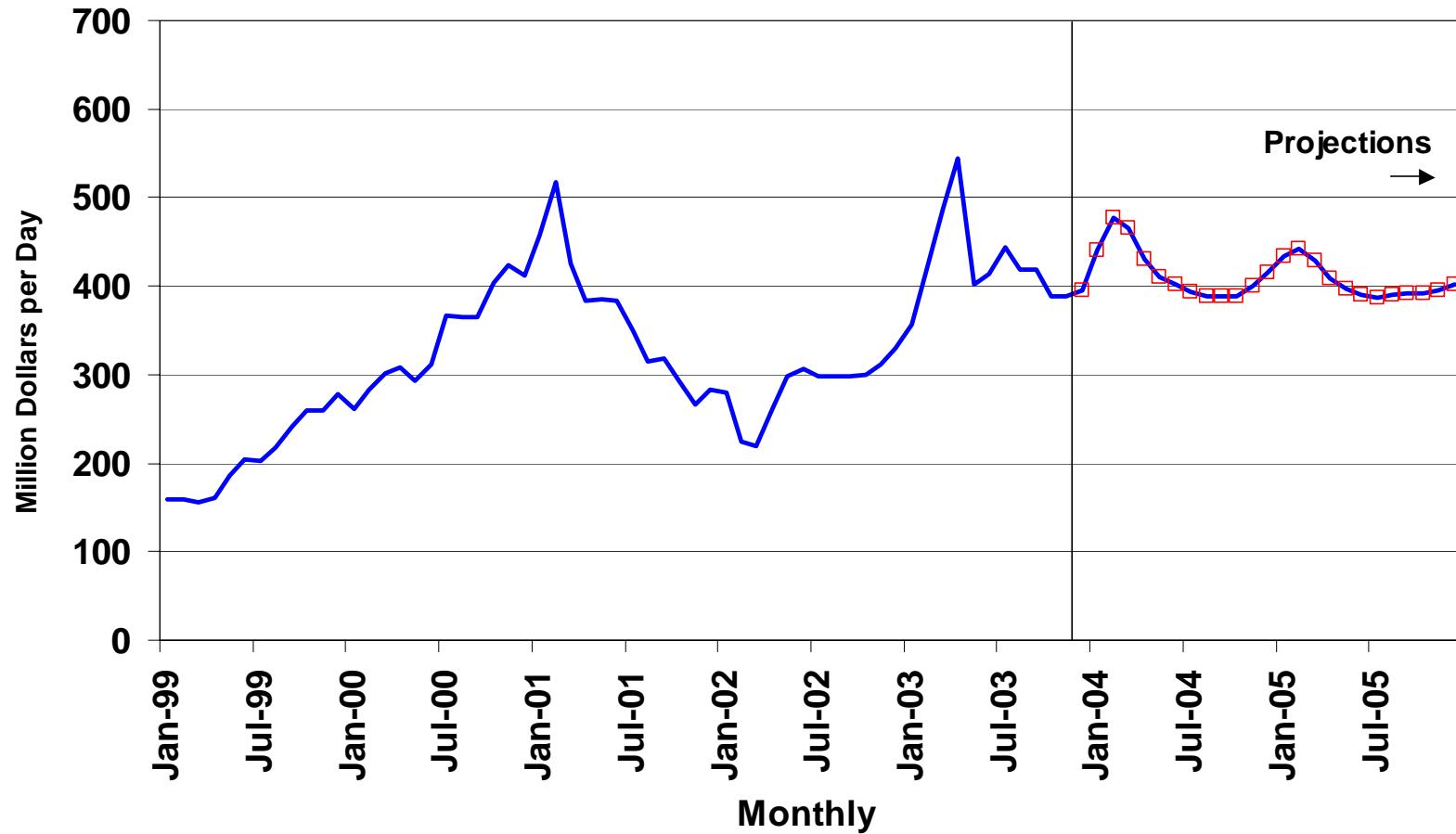
## Figure 18. U.S. Natural Gas-Directed Drilling Activity



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## Figure 19. U.S. Oil and Gas Production Revenues



Short-Term Energy Outlook, January 2004



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

	Year				Annual Percentage Change		
	2002	2003	2004	2005	2002-2003	2003-2004	2004-2005
<b>Real Gross Domestic Product (GDP)</b> (billion chained 1996 dollars) .....	<b>9440</b>	9727	10166	10539	3.0	4.5	3.7
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel) .....	<b>23.71</b>	27.86	27.02	25.50	17.5	-3.0	-5.6
<b>Petroleum Supply</b> (million barrels per day) Crude Oil Production <sup>b</sup> .....	<b>5.75</b>	5.74	5.63	5.65	-0.1	-2.0	0.3
Total Petroleum Net Imports (including SPR).....	<b>10.54</b>	11.30	11.64	11.95	7.2	3.1	2.6
<b>Energy Demand</b>							
World Petroleum (million barrels per day).....	<b>77.7</b>	79.1	80.7	82.3	1.8	2.0	2.0
Petroleum (million barrels per day).....	<b>19.76</b>	20.04	20.43	20.87	1.4	1.9	2.2
Natural Gas (trillion cubic feet) .....	<b>22.52</b>	21.93	22.19	22.60	-2.6	1.2	1.8
Coal <sup>c</sup> (million short tons) .....	<b>1065</b>	1081	1091	1117	1.6	0.9	2.4
Electricity (billion kilowatthours) Retail Sales <sup>d</sup> .....	<b>3475</b>	3493	3565	3646	0.5	2.1	2.3
Other Use/Sales <sup>e</sup> .....	<b>180</b>	172	179	185	-4.4	4.1	3.0
Total .....	<b>3655</b>	3665	3745	3831	0.3	2.2	2.3
Total Energy Demand <sup>f</sup> (quadrillion Btu) .....	<b>97.4</b>	97.3	99.6	101.6	0.0	2.3	2.0
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar) .....	<b>10.31</b>	10.01	9.80	9.64	-3.0	-2.1	-1.6
Renewable Energy as Percent of Total <sup>g</sup> .....	<b>6.2%</b>	6.4%	6.6%	6.7%			

<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 Energy Information Administration (EIA) *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 2003 are estimates.

<sup>e</sup>Defined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the *Monthly Energy Review (MER)*. Data for 2003 are estimates.

<sup>f</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 EIA's *MER*. Consequently, the historical data may not precisely match those published in the *MER* or the *Annual Energy Review (AER)*.

<sup>g</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. EIA 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; estimates and forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: Latest data available from Bureau of Economic Analysis and Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Monthly* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL1203.

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

	2003				2004				2005				Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005	
<b>Macroeconomic<sup>a</sup></b>																
Real Gross Domestic Product (billion chained 1996 dollars - SAAR)...	9552	9629	9821		9904	10005	10107	10223	10328	10422	10505	10579	10650	9727	10166	10539
Percentage Change from Prior Year ....	2.0	2.5	3.5		4.1	4.7	5.0	4.1	4.3	4.2	3.9	3.5	3.1	3.0	4.5	3.7
Annualized Percent Change from Prior Quarter .....	1.4	3.2	8.0		3.4	4.0	4.1	4.6	4.1	3.6	3.2	2.8	2.7			
GDP Implicit Price Deflator (Index, 1996=1.000) .....	1.119	1.122	1.126		1.131	1.138	1.142	1.147	1.153	1.159	1.165	1.171	1.178	1.125	1.145	1.168
Percentage Change from Prior Year ....	1.6	1.5	1.7		1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.1	1.6	1.8	2.0
Real Disposable Personal Income (billion chained 1996 Dollars - SAAR) ..	7110	7155	7284		7281	7389	7431	7500	7567	7623	7680	7726	7775	7207	7472	7701
Percentage Change from Prior Year ....	2.1	1.8	3.2		2.8	3.9	3.9	3.0	3.9	3.2	3.3	3.0	2.8	2.5	3.7	3.1
Manufacturing Production (Index, 1997=100.0) .....	112.3	111.3	112.5		113.7	115.1	116.6	118.3	120.6	122.6	124.3	126.0	127.5	112.4	117.7	125.1
Percentage Change from Prior Year ....	0.6	-1.3	-0.7		1.2	2.5	4.8	5.2	6.1	6.5	6.6	6.5	5.7	0.0	4.6	6.3
OECD Economic Growth (percent) <sup>b</sup> ...														1.8	2.8	2.7
<b>Weather<sup>c</sup></b>																
Heating Degree-Days																
U.S. ....	2297	607	63		1490	2290	541	109	1632	2240	534	99	1623	4457	4572	4496
New England .....	3504	1144	100		2172	3276	930	195	2275	3219	915	190	2259	6920	6876	6584
Middle Atlantic .....	3207	896	43		1973	3015	743	124	2045	2933	739	126	2050	6119	5927	5848
U.S. Gas-Weighted .....	2464	598	75		1614	2413	590	110	1758	2383	589	110	1758	4751	4871	4840
Cooling Degree-Days (U.S.) ....	28	335	821		93	31	351	781	77	34	348	784	76	1277	1240	1243

<sup>a</sup>Macroeconomic projections from Global Insight model forecasts are seasonally adjusted at annual rates and modified as appropriate to the base 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 2000 population.

SAAR: Seasonally-adjusted annualized rate.

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

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. Projections of OECD growth are based on Global Insight, "World Economic Outlook," Volume 1. Macroeconomic projections are based on Global Insight Forecast CONTROL1203.

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

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Macroeconomic<sup>a</sup></b>															
Real Fixed Investment (billion chained 1996 dollars-SAAR) ...	1588	1615	1679	1717	1741	1761	1788	1813	1832	1852	1865	1877	1650	1776	1857
Real Exchange Rate (index) .....	1.056	1.008	1.007	0.958	0.946	0.936	0.924	0.910	0.900	0.893	0.889	0.886	1.007	0.929	0.892
Business Inventory Change (billion chained 1996 dollars-SAAR) ...	-6.1	-14.3	-19.6	-7.1	5.8	8.4	14.8	20.7	21.701	20.936	18.622	16.784	-11.8	12.4	19.5
Producer Price Index (index, 1982=1.000) .....	1.383	1.369	1.378	1.392	1.398	1.394	1.398	1.406	1.413	1.419	1.431	1.440	1.380	1.399	1.426
Consumer Price Index (index, 1982-1984=1.000) .....	1.831	1.834	1.845	1.853	1.862	1.867	1.874	1.885	1.894	1.903	1.912	1.923	1.841	1.872	1.908
Petroleum Product Price Index (index, 1982=1.000) .....	1.074	0.918	0.975	0.900	0.985	0.967	0.914	0.888	0.903	0.919	0.899	0.890	0.967	0.938	0.902
Non-Farm Employment (millions) .....	130.2	130.0	129.9	130.3	130.7	131.6	132.5	133.3	134.1	134.9	135.4	135.9	130.1	132.1	135.1
Commercial Employment (millions) .....	91.5	91.5	91.7	92.0	92.5	93.3	94.2	94.9	95.6	96.3	96.9	97.2	91.7	93.7	96.5
Total Industrial Production (index, 1997=100.0) .....	111.2	110.0	111.1	112.2	113.5	114.8	116.3	118.2	119.9	121.4	122.7	124.0	111.1	115.7	122.0
Housing Stock (millions) .....	116.6	116.9	117.0	117.2	117.6	117.9	118.2	118.5	118.9	119.2	119.5	119.8	116.9	118.0	119.3
<b>Miscellaneous</b>															
Gas Weighted Industrial Production (index, 1997=100.0) .....	100.0	99.0	99.6	100.1	100.7	101.1	101.9	103.0	104.2	105.1	105.9	106.6	99.7	101.7	105.5
Vehicle Miles Traveled <sup>b</sup> (million miles/day) .....	7217	8084	8153	7745	7380	8162	8334	7925	7598	8399	8518	8076	7802	7951	8150
Vehicle Fuel Efficiency (index, 1999=1.000) .....	0.993	1.046	1.037	1.003	0.984	1.035	1.041	1.005	0.963	1.065	1.080	1.024	1.020	1.017	1.033
Real Vehicle Fuel Cost (cents per mile) .....	4.39	4.01	4.22	4.09	4.19	4.08	3.89	3.82	3.91	3.90	3.86	3.78	4.17	3.99	3.86
Air Travel Capacity (mill. available ton-miles/day) .....	454.8	486.5	494.8	492.7	485.8	503.6	517.0	520.0	512.0	524.2	534.3	536.9	482.3	506.7	526.9
Aircraft Utilization (mill. revenue ton-miles/day) .....	244.1	270.8	281.2	267.3	260.4	282.9	294.6	282.9	275.3	296.5	307.2	294.3	266.0	280.2	293.4
Airline Ticket Price Index (index, 1982-1984=1.000) .....	2.252	2.341	2.378	2.292	2.241	2.231	2.233	2.237	2.280	2.297	2.308	2.316	2.316	2.236	2.300
Raw Steel Production (million tons) .....	25.61	25.52	24.29	23.07	23.32	25.49	25.71	24.39	26.73	27.66	27.51	26.58	98.48	98.91	108.48

<sup>a</sup>Macroeconomic projections from Global Insight model forecasts are seasonally adjusted at annual rates and modified as appropriate to the base world oil price case.

<sup>b</sup>Includes all highway travel.

SAAR: Seasonally-adjusted annualized rate.

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



**Table 3a. OPEC Oil Production**  
(Thousand Barrels per Day)

	11/01/2003 OPEC 10 Quota	December 2003		
		Production	Capacity	Surplus Capacity
Algeria.....	782	1,200	1,200	0
Indonesia .....	1,270	985	985	0
Iran .....	3,597	3,800	3,800	0
Kuwait .....	1,966	2,200	2,200	0
Libya.....	1,312	1,420	1,420	0
Nigeria.....	2,018	2,275	2,275	0
Qatar.....	635	725	850	125
Saudi Arabia .....	7,963	8,600	10,000 - 10,500	1,400 - 1,900
UAE .....	2,138	2,250	2,500	250
Venezuela .....	2,819	2,500	2,500	0
OPEC 10.....	24,500	25,955	27,730 - 28,230	1,775 - 2,275
Iraq .....		1,950	1,950	0
<b>Crude Oil Total</b> .....		<b>27,905</b>	<b>29,680 - 30,180</b>	<b>1,775 - 2,275</b>
Other Liquids.....		3,655		
<b>Total OPEC Supply</b> .....		<b>31,560</b>		

Notes: Crude oil does not include lease condensate or natural gas liquids. Quotas are based on crude oil production only. "Capacity" refers to maximum sustainable production capacity, defined as the maximum amount of production that: 1) could be brought online within a period of 30 days; and 2) sustained for at least 90 days. Kuwaiti and Saudi Arabian figures each include half of the production from the Neutral Zone between the two countries. Saudi Arabian production also includes oil produced from its offshore Abu Safa field on behalf of Bahrain. The amount of Saudi Arabian spare capacity that can be brought online is shown as a range, because a short delay may be needed to achieve the higher level. The UAE is a federation of seven emirates. The quota applies only to the emirate of Abu Dhabi, which controls the vast majority of the UAE's economic and resource wealth. Venezuelan capacity and production numbers exclude extra heavy crude oil used to make Orimulsion. Iraqi production and exports have not been a part of any recent OPEC agreements. Iraq's current production number in this table is net of re-injection and water cut. Latest estimated gross production is about 2.2-2.3 million barrels per day, based on a 3-day moving average. Other liquids include lease condensate, natural gas liquids, and other liquids including volume gains from refinery processing.

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

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Crude Oil Prices</b> (dollars per barrel)															
Imported Average <sup>a</sup> .....	<b>30.58</b>	<b>25.58</b>	<b>27.37</b>	28.29	28.75	27.40	26.30	25.70	25.50	25.50	25.50	25.50	27.86	27.02	25.50
WTI <sup>b</sup> Spot Average .....	<b>34.10</b>	<b>28.98</b>	<b>30.21</b>	31.19	31.50	30.00	28.80	28.20	28.00	28.00	28.00	28.00	31.12	29.63	28.00
<b>Natural Gas</b> (dollars per thousand cubic feet)															
Average Wellhead.....	<b>5.54</b>	<b>5.01</b>	<b>4.74</b>	4.63	5.39	4.55	4.51	4.96	5.12	4.52	4.49	4.68	4.98	4.85	4.70
Composite Spot .....	<b>6.58</b>	<b>5.52</b>	<b>4.88</b>	5.06	5.57	4.82	4.81	5.35	5.32	4.78	4.79	5.03	5.51	5.14	4.98
<b>Petroleum Products</b>															
Gasoline Retail <sup>c</sup> (dollars per gallon)															
All Grades .....	<b>1.63</b>	<b>1.57</b>	<b>1.64</b>	1.56	1.57	1.61	1.55	1.47	1.49	1.57	1.55	1.48	1.60	1.55	1.52
Regular Unleaded .....	<b>1.59</b>	<b>1.52</b>	<b>1.60</b>	1.52	1.52	1.57	1.51	1.43	1.44	1.53	1.51	1.44	1.56	1.51	1.48
No. 2 Diesel Oil, Retail (dollars per gallon) .....	<b>1.62</b>	<b>1.47</b>	<b>1.46</b>	1.48	1.57	1.53	1.47	1.47	1.48	1.46	1.44	1.48	1.51	1.51	1.46
No. 2 Heating Oil, Wholesale (dollars per gallon) .....	<b>1.00</b>	<b>0.78</b>	<b>0.80</b>	0.88	0.94	0.86	0.81	0.83	0.85	0.79	0.79	0.84	0.88	0.87	0.82
No. 2 Heating Oil, Retail (dollars per gallon) .....	<b>1.45</b>	<b>1.28</b>	<b>1.17</b>	1.32	1.42	1.33	1.21	1.33	1.38	1.27	1.20	1.33	1.33	1.36	1.33
No. 6 Residual Fuel Oil, Retail <sup>d</sup> (dollars per barrel).....	<b>33.71</b>	<b>26.66</b>	<b>28.76</b>	28.49	30.88	27.21	26.36	26.74	26.42	24.66	25.09	26.11	29.58	27.89	25.63
<b>Electric Power Sector</b> (dollars per million Btu)															
Coal.....	<b>1.27</b>	<b>1.29</b>	<b>1.27</b>	1.24	1.26	1.27	1.24	1.23	1.25	1.26	1.23	1.23	1.27	1.25	1.24
Heavy Fuel Oil <sup>e</sup> .....	<b>5.05</b>	<b>4.67</b>	<b>4.01</b>	4.56	5.21	4.66	3.86	4.32	4.48	4.26	3.71	4.24	4.57	4.48	4.13
Natural Gas.....	<b>6.13</b>	<b>5.52</b>	<b>5.06</b>	4.86	6.05	4.84	4.87	5.50	5.56	4.94	4.97	5.26	5.33	5.22	5.13
<b>Other Residential</b>															
Natural Gas															
(dollars per thousand cubic feet).....	<b>8.63</b>	<b>10.52</b>	<b>12.52</b>	9.36	9.69	10.52	11.79	9.76	9.76	10.54	11.81	9.63	9.42	10.01	10.00
Electricity (cents per kilowatthour).....	<b>8.08</b>	<b>9.02</b>	<b>9.12</b>	8.51	8.39	9.00	9.16	8.72	8.43	9.01	9.17	8.74	8.69	8.82	8.84

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

Sources: Historical data: EIA: 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 6. Approximate Energy Demand Sensitivities<sup>a</sup> for the STIFS<sup>b</sup>**  
 (Percent Deviation Base Case)

Demand Sector	+1% GDP	+ 10% Prices		+ 10% Weather <sup>e</sup>	
		Crude Oil <sup>c</sup>	N.Gas Wellhead <sup>d</sup>	Fall/Winter <sup>f</sup>	Spring/Summer <sup>f</sup>
<b>Petroleum</b>					
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%
<b>Natural Gas</b>					
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 Power.....	1.8%	1.6%	-1.5%	1.0%	4.0%
<b>Coal</b>					
Total.....	0.7%	0.0%	0.0%	1.7%	1.7%
Electric Power.....	0.6%	0.0%	0.0%	1.9%	1.9%
<b>Electricity</b>					
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.

<sup>c</sup>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 Day)

	High Price Case	Low Price Case	Difference		
			Total	Uncertainty	Price Impact
United States .....	5.976	5.229	0.748	0.064	0.684
Lower 48 States.....	5.021	4.355	0.666	0.044	0.622
Alaska.....	0.955	0.873	0.081	0.020	0.061

Note: Components provided are for the fourth quarter 2004. Totals may not add to sum of components due to independent rounding.

Source: EIA, Office of Oil and Gas, Reserves and Production Division.

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

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Supply</b>															
Total Dry Gas Production.....	<b>4.86</b>	<b>4.84</b>	4.85	4.88	4.89	4.86	4.88	4.95	4.90	4.94	4.97	5.02	19.44	19.58	19.83
Gross Imports .....	<b>0.96</b>	<b>0.88</b>	1.00	1.09	1.03	1.00	0.97	1.08	1.07	1.05	1.01	1.10	3.93	4.08	4.23
Pipeline .....	<b>0.88</b>	<b>0.76</b>	0.84	0.91	0.89	0.83	0.81	0.90	0.92	0.86	0.81	0.89	3.39	3.43	3.47
LNG.....	<b>0.08</b>	<b>0.13</b>	0.16	0.18	0.14	0.17	0.17	0.18	0.16	0.19	0.20	0.21	0.54	0.65	0.75
Gross Exports .....	<b>0.16</b>	<b>0.15</b>	0.18	0.18	0.18	0.18	0.20	0.21	0.17	0.17	0.19	0.21	0.67	0.77	0.73
Net Imports .....	<b>0.79</b>	<b>0.74</b>	0.83	0.91	0.85	0.82	0.78	0.86	0.90	0.88	0.82	0.89	3.26	3.31	3.49
Supplemental Gaseous Fuels.....	<b>0.02</b>	<b>0.02</b>	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.08	0.08	0.08
Total New Supply.....	<b>5.68</b>	<b>5.59</b>	5.70	5.81	5.76	5.70	5.67	5.83	5.83	5.83	5.81	5.93	22.77	22.97	23.40
Working Gas in Storage															
Opening .....	<b>2.38</b>	<b>0.73</b>	1.77	2.84	2.51	1.15	2.00	2.92	2.50	1.16	2.02	2.92	2.38	2.51	2.50
Closing.....	<b>0.73</b>	<b>1.77</b>	2.84	2.51	1.15	2.00	2.92	2.50	1.16	2.02	2.92	2.49	2.51	2.50	2.49
Net Withdrawals.....	<b>1.65</b>	<b>-1.04</b>	-1.07	0.34	1.36	-0.85	-0.92	0.42	1.34	-0.86	-0.90	0.43	-0.13	0.00	0.02
Total Supply.....	<b>7.32</b>	<b>4.55</b>	4.62	6.15	7.12	4.84	4.75	6.25	7.17	4.97	4.92	6.37	22.64	22.97	23.42
Balancing Item <sup>a</sup> .....	<b>-0.07</b>	<b>-0.06</b>	0.00	-0.59	-0.05	-0.02	-0.09	-0.61	-0.05	-0.03	-0.11	-0.62	-0.71	-0.78	-0.82
Total Primary Supply.....	<b>7.25</b>	<b>4.49</b>	4.63	5.56	7.07	4.82	4.66	5.64	7.11	4.94	4.80	5.75	21.93	22.19	22.60
<b>Demand</b>															
Residential .....	<b>2.52</b>	<b>0.83</b>	0.38	1.33	2.38	0.83	0.38	1.44	2.40	0.83	0.38	1.43	5.05	5.03	5.04
Commercial.....	<b>1.34</b>	<b>0.57</b>	0.40	0.83	1.32	0.61	0.43	0.91	1.34	0.63	0.44	0.93	3.14	3.28	3.34
Industrial .....	<b>2.14</b>	<b>1.85</b>	1.91	2.06	2.12	1.92	1.92	2.07	2.18	2.00	1.98	2.12	7.96	8.03	8.28
Lease and Plant Fuel.....	<b>0.27</b>	<b>0.27</b>	0.27	0.27	0.27	0.27	0.27	0.28	0.27	0.27	0.27	0.28	1.08	1.08	1.09
Other Industrial .....	<b>1.87</b>	<b>1.58</b>	1.64	1.79	1.86	1.65	1.65	1.80	1.91	1.73	1.71	1.84	6.88	6.95	7.19
CHP <sup>b</sup> .....	<b>0.30</b>	<b>0.26</b>	0.30	0.27	0.30	0.29	0.31	0.28	0.31	0.31	0.32	0.30	1.13	1.19	1.24
Non-CHP .....	<b>1.57</b>	<b>1.31</b>	1.34	1.52	1.55	1.36	1.34	1.51	1.60	1.42	1.39	1.54	5.75	5.76	5.95
Transportation <sup>c</sup> .....	<b>0.20</b>	<b>0.13</b>	0.13	0.17	0.22	0.14	0.13	0.16	0.21	0.14	0.13	0.16	0.63	0.64	0.64
Electric Power <sup>d</sup> .....	<b>1.05</b>	<b>1.13</b>	1.82	1.16	1.02	1.33	1.81	1.06	0.98	1.35	1.87	1.11	5.15	5.22	5.31
Total Demand .....	<b>7.25</b>	<b>4.49</b>	4.63	5.56	7.07	4.82	4.66	5.64	7.11	4.94	4.80	5.75	21.93	22.19	22.60

<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.

<sup>b</sup>Natural gas used for electricity generation and production of useful thermal output by combined heat and power (CHP) plants at industrial facilities. Includes a small amount of natural gas consumption at electricity-only plants in the industrial sector.

<sup>c</sup>Pipeline fuel use plus natural gas used as vehicle fuel.

<sup>d</sup>Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

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

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

**Table 9. U.S. Coal Supply and Demand: Base Case**  
(Million Short Tons)

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Supply</b>															
Production.....	<b>264.1</b>	<b>267.2</b>	267.9	281.6	281.5	264.4	275.9	284.3	279.2	268.9	283.7	290.6	1080.8	1106.0	1122.5
Appalachia.....	<b>95.4</b>	<b>95.5</b>	92.2	97.0	99.7	92.2	91.7	93.8	96.8	91.6	91.8	93.3	380.0	377.3	373.5
Interior.....	<b>36.1</b>	<b>37.0</b>	36.1	36.6	36.9	35.2	34.2	33.7	35.0	34.4	33.4	32.6	145.8	139.9	135.4
Western.....	<b>132.5</b>	<b>134.7</b>	139.7	148.0	145.0	136.9	150.1	156.8	147.4	142.9	158.5	164.6	555.0	588.8	613.6
Primary Stock Levels <sup>a</sup>															
Opening .....	<b>43.3</b>	<b>39.0</b>	37.7	35.0	36.8	35.4	35.0	33.4	34.7	35.1	35.3	33.2	43.3	36.8	34.7
Closing.....	<b>39.0</b>	<b>37.7</b>	35.0	36.8	35.4	35.0	33.4	34.7	35.1	35.3	33.2	35.1	36.8	34.7	35.1
Net Withdrawals.....	<b>4.3</b>	<b>1.3</b>	2.7	-1.8	1.4	0.3	1.7	-1.4	-0.4	-0.2	2.1	-1.9	6.5	2.1	-0.3
Imports.....	<b>5.0</b>	<b>6.4</b>	7.1	5.8	6.2	6.6	6.1	5.7	6.5	6.8	6.2	5.9	24.2	24.6	25.4
Exports.....	<b>8.5</b>	<b>11.4</b>	12.1	10.6	10.7	11.4	11.2	10.9	10.9	11.5	11.2	11.1	42.7	44.1	44.7
Total Net Domestic Supply .....	<b>264.8</b>	<b>263.5</b>	265.6	275.0	278.4	259.9	272.5	277.7	274.4	264.0	280.9	283.6	1068.8	1088.5	1102.9
Secondary Stock Levels <sup>b</sup>															
Opening .....	<b>149.2</b>	<b>136.8</b>	148.8	133.6	153.4	161.1	171.2	156.9	162.3	161.4	169.0	154.9	149.2	153.4	162.3
Closing.....	<b>136.8</b>	<b>148.8</b>	133.6	153.4	161.1	171.2	156.9	162.3	161.4	169.0	154.9	159.3	153.4	162.3	159.3
Net Withdrawals.....	<b>12.3</b>	<b>-11.9</b>	15.2	-19.8	-7.7	-10.1	14.3	-5.4	0.9	-7.6	14.1	-4.4	-4.2	-8.9	3.0
Waste Coal Supplied to IPPs <sup>c</sup> .....	<b>2.9</b>	<b>2.9</b>	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.9	11.6	11.6	11.6
Total Supply .....	<b>280.0</b>	<b>254.4</b>	283.7	258.1	273.6	252.8	289.7	275.2	278.3	259.3	297.8	282.1	1076.2	1091.3	1117.4
<b>Demand</b>															
Coke Plants.....	<b>6.0</b>	<b>6.1</b>	6.1	6.0	6.1	6.0	6.1	5.5	6.0	5.9	6.1	5.5	24.2	23.6	23.5
Electric Power Sector <sup>d</sup> .....	<b>248.7</b>	<b>231.4</b>	270.1	241.8	250.1	231.8	268.1	252.1	254.8	238.4	276.2	259.0	991.9	1002.2	1028.4
Retail and General Industry .....	<b>16.9</b>	<b>15.6</b>	15.8	17.1	17.4	15.0	15.5	17.6	17.4	14.9	15.5	17.7	65.3	65.5	65.5
Total Demand <sup>e</sup> .....	<b>271.6</b>	<b>253.0</b>	292.0	264.8	273.6	252.8	289.7	275.2	278.3	259.3	297.8	282.1	1081.4	1091.3	1117.4
Discrepancy <sup>f</sup> .....	<b>8.4</b>	<b>1.4</b>	-8.3	-6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-5.2	0.0	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>d</sup>Coal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

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

<sup>f</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. Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold; estimates and forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

**Table 10a. U.S. Electricity Supply and Demand: Base Case**  
(Billion Kilowatt-hours)

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Net Electricity Generation</b>															
Electric Power Sector <sup>a</sup>															
Coal .....	<b>485.6</b>	<b>446.7</b>	523.7	468.9	<b>484.2</b>	<b>448.0</b>	518.7	<b>487.1</b>	491.4	<b>459.4</b>	532.1	498.1	1925.0	1938.0	1980.9
Petroleum .....	<b>31.5</b>	<b>25.8</b>	30.9	20.5	28.6	16.4	26.9	25.2	27.5	18.9	29.9	25.1	108.7	97.1	101.4
Natural Gas .....	<b>116.9</b>	<b>124.6</b>	203.4	133.7	121.1	149.9	202.9	<b>124.7</b>	117.5	<b>154.4</b>	212.6	132.4	578.6	598.6	616.9
Nuclear .....	<b>190.1</b>	<b>183.2</b>	201.6	182.5	<b>195.1</b>	<b>191.4</b>	206.3	<b>191.5</b>	197.0	<b>193.3</b>	208.1	193.2	757.4	784.3	791.6
Hydroelectric.....	<b>60.0</b>	<b>80.0</b>	62.6	60.9	73.5	81.3	66.3	67.5	80.2	<b>85.5</b>	68.0	70.2	263.5	288.6	303.9
Other <sup>b</sup> .....	<b>13.0</b>	<b>13.8</b>	14.0	14.1	14.3	14.8	15.4	15.1	15.0	15.6	16.2	15.9	54.9	59.7	62.7
Subtotal .....	<b>897.1</b>	<b>874.0</b>	1036.3	880.7	916.8	901.8	1036.3	911.3	928.7	927.1	1066.8	934.8	3688.1	3766.3	3857.4
Other Sectors <sup>c</sup> .....	<b>40.2</b>	<b>37.3</b>	39.9	38.5	39.8	39.4	42.6	40.5	40.6	40.8	44.1	41.8	155.9	162.3	167.2
Total Generation.....	<b>937.3</b>	<b>911.3</b>	1076.2	919.2	956.7	941.2	1078.9	951.8	969.3	967.9	1110.9	976.6	3844.0	3928.6	4024.6
Net Imports .....	<b>2.4</b>	<b>1.5</b>	6.3	2.9	2.3	2.3	5.0	2.1	1.0	1.1	3.9	0.8	13.1	11.7	6.8
Total Supply.....	<b>939.8</b>	<b>912.8</b>	1082.5	922.1	959.0	943.5	1083.9	953.9	970.2	969.0	1114.8	977.5	3857.2	3940.3	4031.5
Losses and Unaccounted for <sup>d</sup> .....	<b>30.3</b>	<b>57.3</b>	55.0	49.3	30.7	59.2	54.9	51.0	31.4	60.8	56.4	52.3	191.8	195.8	200.8
<b>Demand</b>															
Retail Sales <sup>e</sup>															
Residential.....	<b>337.5</b>	<b>273.4</b>	378.2	287.8	341.2	287.4	374.8	303.2	346.1	293.9	384.2	310.8	1276.8	1306.5	1334.9
Commercial .....	<b>265.1</b>	<b>267.8</b>	314.3	265.8	267.7	271.5	312.6	272.7	272.5	281.1	323.5	280.0	1113.0	1124.5	1157.1
Industrial.....	<b>237.2</b>	<b>247.4</b>	260.3	251.0	249.9	256.1	265.3	255.5	249.1	261.5	272.2	261.0	995.8	1026.9	1043.8
Other.....	<b>25.3</b>	<b>25.9</b>	30.8	25.7	25.4	25.9	29.3	26.7	26.4	26.7	29.9	27.2	107.6	107.4	110.2
Subtotal .....	<b>865.1</b>	<b>814.3</b>	983.5	830.2	884.3	840.9	982.0	858.1	894.1	863.2	1009.7	879.0	3493.2	3565.3	3646.0
Other Use/Sales <sup>f</sup> .....	<b>44.4</b>	<b>41.2</b>	44.0	42.5	44.0	43.4	47.0	44.8	44.8	45.0	48.6	46.2	172.2	179.2	184.6
Total Demand.....	<b>909.5</b>	<b>855.5</b>	1027.6	872.8	928.2	884.4	1029.0	902.9	938.9	908.2	1058.4	925.2	3665.3	3744.5	3830.6

<sup>a</sup>Electric Utilities and independent power producers.

<sup>b</sup>"Other" includes generation from other gaseous fuels, geothermal, wind, wood, waste, and solar sources.

<sup>c</sup>Electricity generation from combined heat and power (CHP) facilities and electricity-only plants in the industrial and commercial sectors.

<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 are reported annually in Appendix C of EIA's *Electric Sales and Revenue*. Quarterly data for power marketers (thus retail sales totals) are imputed.

<sup>f</sup>Defined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the *Monthly Energy Review (MER)*. Data for 2003 are estimates.

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

Sources: Historical data: EIA: latest data available from EIA databases supporting the following report: *Electric Power Monthly*, DOE/EIA-0226.

Projections: EIA, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels (hydroelectric and nuclear).

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

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Electricity Generation by Sector</b>															
Electric Power <sup>a</sup>															
Coal	<b>485.6</b>	<b>446.7</b>	523.7	468.9	<b>484.2</b>	<b>448.0</b>	518.7	<b>487.1</b>	<b>491.4</b>	<b>459.4</b>	<b>532.1</b>	<b>498.1</b>	1925.0	1938.0	1980.9
Petroleum	31.5	<b>25.8</b>	30.9	20.5	28.6	16.4	26.9	25.2	27.5	18.9	29.9	25.1	108.7	97.1	101.4
Natural Gas	<b>116.9</b>	<b>124.6</b>	203.4	133.7	121.1	<b>149.9</b>	202.9	124.7	117.5	<b>154.4</b>	212.6	132.4	578.6	598.6	616.9
Other <sup>b</sup>	<b>263.1</b>	<b>276.9</b>	278.2	257.5	282.9	<b>287.5</b>	287.9	274.2	292.3	<b>294.4</b>	292.3	279.2	1075.8	1132.6	1158.2
Subtotal	<b>897.1</b>	<b>874.0</b>	1036.3	880.7	916.8	901.8	1036.3	911.3	928.7	927.1	1066.8	934.8	3688.1	3766.3	3857.4
Commercial															
Coal	0.3	<b>0.2</b>	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.4	0.3	1.0	1.1	1.2	
Petroleum	0.2	<b>0.1</b>	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.5	0.5	0.5
Natural Gas	1.0	<b>1.2</b>	1.2	0.8	1.0	1.2	1.7	1.1	1.1	1.2	1.8	1.1	4.3	5.0	5.2
Other <sup>b</sup>	0.4	<b>0.5</b>	0.5	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.6	1.9	2.1	2.3
Subtotal	1.9	<b>2.1</b>	2.0	1.6	2.0	1.9	2.8	2.0	2.1	2.1	2.9	2.1	7.7	8.7	9.2
Industrial															
Coal	5.5	<b>5.0</b>	5.4	5.2	5.3	5.2	5.6	5.4	5.4	5.4	5.7	5.6	21.1	21.6	22.2
Petroleum	1.5	<b>1.2</b>	1.2	1.3	1.3	0.8	1.1	1.6	1.3	0.9	1.2	1.6	5.3	4.9	5.1
Natural Gas	19.9	<b>17.3</b>	19.3	17.8	19.9	19.1	20.2	18.5	20.4	20.0	21.1	19.4	74.3	77.8	80.8
Other <sup>b</sup>	11.3	<b>11.7</b>	12.0	12.6	11.3	12.3	13.0	12.9	11.4	12.5	13.1	13.1	47.6	49.4	50.0
Subtotal	<b>38.3</b>	<b>35.2</b>	37.8	36.9	37.9	37.4	39.8	38.5	38.5	38.7	41.2	39.7	148.3	153.6	158.1
Total	<b>937.3</b>	<b>911.3</b>	1076.2	919.2	956.7	941.2	1078.9	951.8	969.3	967.9	1110.9	976.6	3844.0	3928.6	4024.6

<sup>a</sup>Electric utilities and independent power producers.

<sup>b</sup>"Other" includes nuclear, hydroelectric, geothermal, wood, waste, wind and solar power sources.

Note: Commercial and industrial categories include electricity output from combined heat and power (CHP) facilities and some electric-only plants.

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

Sources: Historical data: EIA: latest data available from EIA databases supporting the following report: *Electric Power Monthly*, DOE/EIA-0226.

Projections: EIA, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels (hydroelectric and nuclear).

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

	2003				2004				2005				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2003	2004	2005
<b>Fuel Consumption for Electricity Generation by Sector</b>															(Quadrillion Btu)
Electric Power <sup>a</sup>															
Coal .....	<b>5.103</b>	<b>4.748</b>	5.544	4.961	5.133	4.756	5.504	5.174	5.228	4.893	5.669	5.314	20.4	20.6	21.1
Petroleum .....	<b>0.340</b>	<b>0.277</b>	0.332	0.221	0.309	0.176	0.289	0.272	0.297	0.203	0.320	0.270	1.2	1.0	1.1
Natural Gas.....	<b>1.008</b>	<b>1.098</b>	1.795	1.131	1.001	1.302	1.777	1.033	0.962	1.327	1.835	1.084	5.0	5.1	5.2
Other <sup>b</sup> .....	<b>2.888</b>	<b>3.012</b>	2.809	2.746	3.009	3.054	3.065	2.921	3.107	3.126	3.111	2.974	11.5	12.0	12.3
Subtotal .....	<b>9.340</b>	<b>9.135</b>	10.479	9.060	9.452	9.288	10.634	9.400	9.594	9.548	10.936	9.642	38.0	38.8	39.7
Commercial															
Coal .....	<b>0.003</b>	<b>0.003</b>	0.003	0.003	0.003	0.003	0.004	0.003	0.003	0.003	0.004	0.004	0.012	0.013	0.014
Petroleum .....	<b>0.003</b>	<b>0.001</b>	0.001	0.001	0.003	0.001	0.002	0.002	0.003	0.001	0.002	0.002	0.007	0.007	0.007
Natural Gas.....	<b>0.009</b>	<b>0.010</b>	0.010	0.007	0.009	0.010	0.014	0.009	0.010	0.010	0.015	0.009	0.036	0.042	0.044
Other <sup>b</sup> .....	<b>0.007</b>	<b>0.008</b>	0.011	0.007	0.007	0.008	0.010	0.009	0.008	0.009	0.010	0.010	0.033	0.035	0.037
Subtotal .....	<b>0.021</b>	<b>0.022</b>	0.026	0.018	0.022	0.021	0.030	0.023	0.024	0.023	0.032	0.024	0.088	0.097	0.102
Industrial															
Coal .....	<b>0.070</b>	<b>0.065</b>	0.068	0.067	0.068	0.067	0.071	0.070	0.070	0.069	0.074	0.072	0.270	0.276	0.284
Petroleum .....	<b>0.018</b>	<b>0.017</b>	0.015	0.017	0.017	0.010	0.014	0.021	0.017	0.012	0.016	0.021	0.068	0.063	0.066
Natural Gas.....	<b>0.176</b>	<b>0.157</b>	0.171	0.158	0.178	0.171	0.180	0.165	0.182	0.178	0.188	0.173	0.662	0.693	0.720
Other <sup>b</sup> .....	<b>0.139</b>	<b>0.152</b>	0.161	0.160	0.144	0.158	0.163	0.162	0.146	0.160	0.165	0.163	0.612	0.627	0.635
Subtotal .....	<b>0.404</b>	<b>0.391</b>	0.416	0.401	0.408	0.406	0.429	0.418	0.414	0.419	0.442	0.429	1.612	1.660	1.704
Total .....	<b>9.765</b>	<b>9.548</b>	10.921	9.480	9.881	9.715	11.093	9.842	10.032	9.990	11.410	10.096	39.714	40.531	41.528
															(Physical Units)
Electric Power <sup>a</sup>															
Coal (million short tons) .....	<b>248.1</b>	<b>230.8</b>	269.6	241.2	249.6	231.3	267.6	251.6	254.2	237.9	275.7	258.4	989.8	1000.0	1026.2
Petroleum (million barrels per day) .....	<b>0.614</b>	<b>0.494</b>	0.582	0.391	0.552	0.313	0.505	0.479	0.535	0.361	0.560	0.476	0.520	0.462	0.483
Natural Gas (trillion cubic feet).....	<b>0.983</b>	<b>1.071</b>	1.751	1.104	0.977	1.270	1.733	1.008	0.939	1.294	1.791	1.058	4.909	4.988	5.082
Commercial															
Coal (million short tons) .....	<b>0.1</b>	<b>0.1</b>	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.5	0.5	0.6
Petroleum (million barrels per day) .....	<b>0.006</b>	<b>0.002</b>	0.003	0.002	0.005	0.001	0.003	0.003	0.005	0.001	0.003	0.004	0.003	0.003	0.003
Natural Gas (trillion cubic feet).....	<b>0.008</b>	<b>0.010</b>	0.010	0.007	0.009	0.010	0.014	0.009	0.009	0.010	0.014	0.009	0.035	0.041	0.043
Industrial															
Coal (million short tons) .....	<b>3.0</b>	<b>2.8</b>	2.9	2.8	2.9	2.9	3.1	3.0	3.0	2.9	3.1	3.1	11.6	11.8	12.1
Petroleum (million barrels per day) .....	<b>0.034</b>	<b>0.032</b>	0.028	0.030	0.032	0.019	0.026	0.038	0.031	0.022	0.029	0.038	0.031	0.029	0.030
Natural Gas (trillion cubic feet).....	<b>0.172</b>	<b>0.153</b>	0.167	0.154	0.173	0.167	0.175	0.161	0.177	0.173	0.183	0.169	0.645	0.676	0.702

<sup>a</sup>Electric utilities and independent power producers.

<sup>b</sup>"Other" includes other gaseous fuels, nuclear, hydroelectric, geothermal, wood, waste, wind and solar power sources.

Note: Commercial and industrial categories include electricity output from combined heat and power (CHP) facilities and some electric-only plants.

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

Sources: Historical data: EIA: latest data available from EIA databases supporting the following report: *Electric Power Monthly*, DOE/EIA-0226.

Projections: EIA, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels (hydroelectric and nuclear).

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

	Year				Annual Percentage Change		
	2002	2003	2004	2005	2002-2003	2003-2004	2004-2005
<b>Electricity Sector</b>							
Hydroelectric Power <sup>a</sup> .....	<b>2.623</b>	2.754	3.018	3.177	5.0	9.6	5.3
Geothermal, Solar and Wind Energy <sup>b</sup> .....	<b>0.392</b>	0.391	0.436	0.456	-0.3	11.5	4.6
Biofuels <sup>c</sup> .....	<b>0.466</b>	0.495	0.511	0.528	6.2	3.2	3.3
Total .....	<b>3.481</b>	3.641	3.964	4.161	4.6	8.9	5.0
<b>Other Sectors <sup>d</sup></b>							
Residential and Commercial <sup>e</sup> .....	<b>0.513</b>	0.526	0.554	0.578	2.5	5.3	4.3
Residential .....	<b>0.418</b>	0.436	0.455	0.474	4.3	4.4	4.2
Commercial .....	<b>0.095</b>	0.091	0.100	0.104	-4.2	9.9	4.0
Industrial <sup>f</sup> .....	<b>1.734</b>	1.721	1.727	1.745	-0.7	0.3	1.0
Transportation <sup>g</sup> .....	<b>0.175</b>	0.232	0.266	0.275	32.6	14.7	3.4
Total .....	<b>2.422</b>	2.480	2.547	2.598	2.4	2.7	2.0
Total Renewable Energy Demand.....	<b>5.903</b>	6.121	6.511	6.759	3.7	6.4	3.8

<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. EIA 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.

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

Sources: Historical data: EIA: latest data available from EIA databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226, and *Renewable Energy Annual*, DOE/EIA – 0603. Projections: EIA, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

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

	Year														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Real Gross Domestic Product (GDP)</b> (billion chained 1996 dollars) .....	6676	6880	7063	7348	7544	7813	8159	8509	8859	9191	9215	9440	9727	10166	10539
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel) .....	18.74	18.20	16.13	15.53	17.14	20.62	18.49	12.07	17.26	27.72	22.00	23.71	27.86	27.02	25.50
<b>Petroleum Supply</b>															
Crude Oil Production <sup>b</sup> (million barrels per day) .....	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.75	5.74	5.63	5.65
Total Petroleum Net Imports (including SPR) (million barrels per day) .....	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.54	11.30	11.64	11.95
<b>Energy Demand</b>															
U.S. Petroleum (million barrels per day) .....	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	20.04	20.43	20.87
Natural Gas (trillion cubic feet) .....	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	21.93	22.19	22.60
Coal (million short tons) .....	899	908	944	951	962	1006	1030	1037	1039	1084	1060	1065	1081	1091	1117
Electricity (billion kilowatthours)															
Retail Sales <sup>c</sup> .....	2762	2763	2861	2935	3013	3101	3146	3264	3312	3421	3370	3475	3493	3565	3646
Other Use/Sales <sup>d</sup> .....	118	122	128	134	144	146	148	161	183	181	173	180	172	179	185
Total .....	2880	2886	2989	3069	3157	3247	3294	3425	3495	3603	3543	3655	3665	3745	3831
Total Energy Demand <sup>e</sup> (quadrillion Btu) .....	84.5	85.9	87.6	89.2	91.2	94.2	94.7	95.1	96.8	98.9	96.3	97.4	97.3	99.6	101.6
Total Energy Demand per Dollar of GDP (thousand Btu per 1996 Dollar) .....	12.66	12.48	12.40	12.15	12.09	12.06	11.61	11.20	10.92	10.76	10.45	10.31	10.01	9.80	9.64

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

<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 Energy Information Administration (EIA) *Electric Power Monthly* and *Electric Power Annual*. Power marketers' sales for historical periods are reported in EIA's *Electric Sales and Revenue*, Appendix C.

<sup>d</sup>Defined as the sum of facility use of onsite net electricity generation plus direct sales of power by industrial- or commercial-sector generators to third parties, reported annually in Table 7.5 of the *Monthly Energy Review (MER)*. Data for 2003 are estimates.

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

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; EIA; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Monthly*, DOE/EIA-520, and *Weekly Petroleum Status Report* DOE/EIA-0208. Macroeconomic projections are based on Global Insight Forecast CONTROL1203.

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

	Year														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 1996 dollars).....	6676	6880	7063	7348	7544	7813	8159	8509	8859	9191	9215	9440	9727	10166	10539
GDP Implicit Price Deflator (Index, 1996=1.000) .....	0.897	0.918	0.941	0.960	0.981	1.000	1.019	1.032	1.047	1.069	1.094	1.107	1.125	1.145	1.168
Real Disposable Personal Income (billion chained 1996 Dollars) .....	5033	5189	5261	5397	5539	5678	5854	6169	6328	6630	6748	7032	7207	7472	7701
Manufacturing Production (Index, 1997=100) .....	72.7	75.5	78.1	83.1	87.8	92.1	100.0	106.8	112.3	117.7	113.1	112.5	112.5	117.7	125.1
Real Fixed Investment (billion chained 1996 dollars).....	833	886	958	1046	1109	1213	1329	1480	1595	1692	1627	1577	1650	1776	1857
Real Exchange Rate (Index, 1996=1.000) .....	0.920	0.926	0.956	0.933	0.869	0.918	0.992	1.044	1.047	1.083	1.141	1.143	1.007	0.929	0.892
Business Inventory Change (billion chained 1996 dollars).....	-6.6	-4.7	3.6	11.9	13.8	9.9	14.8	27.1	14.4	17.5	-36.2	-11.5	-11.8	12.4	19.5
Producer Price Index (index, 1982=1.000).....	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.255	1.328	1.342	1.311	1.380	1.399	1.426
Consumer Price Index (index, 1982-1984=1.000) .....	1.362	1.403	1.445	1.482	1.524	1.569	1.605	1.630	1.666	1.722	1.771	1.799	1.841	1.872	1.908
Petroleum Product Price Index (index, 1982=1.000).....	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.609	0.913	0.853	0.795	0.967	0.938	0.902
Non-Farm Employment (millions) .....	108.4	108.7	110.8	114.3	117.3	119.7	122.8	125.9	129.0	131.8	131.8	130.4	130.1	132.1	135.1
Commercial Employment (millions) .....	70.5	70.9	72.9	75.7	78.4	80.7	83.4	86.1	89.1	91.4	92.0	91.4	91.7	93.7	96.5
Total Industrial Production (index, 1997=100.0).....	76.3	78.3	80.8	85.2	89.3	93.1	100.0	105.9	110.6	115.4	111.5	110.9	111.1	115.7	122.0
Housing Stock (millions) .....	101.8	102.6	103.8	105.1	106.7	108.0	109.4	111.1	112.7	113.3	114.7	115.7	116.9	118.0	119.3
<b>Weather <sup>a</sup></b>															
Heating Degree-Days															
U.S. ....	4200	4431	4672	4472	4516	4690	4523	3946	4153	4447	4191	4284	4457	4572	4496
New England .....	6042	6018	5904	6748	6631	5850	6725	5742	6014	6585	6110	6099	6920	6676	6584
Middle Atlantic .....	5317	6108	6040	6083	5966	6118	5940	4923	5493	5944	5424	5372	6119	5927	5848
U.S. Gas-Weighted.....	4337	4458	4754	4659	4707	4980	4802	4183	4399	4680	4451	4560	4751	4871	4840
Cooling Degree-Days (U.S.).....	1331	1051	1222	1228	1293	1186	1167	1414	1301	1240	1256	1393	1277	1240	1243

<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 2000 population.

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: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA); Federal Reserve System, Statistical Release G.17; U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on Global Insight Forecast CONTROL1203. Degree-day projections are from NOAA's Climate Prediction Center.

**Table A3. U.S. Energy Supply and Demand: Base Case**

(Quadrillion Btu except where noted)

	Year														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Production</b>															
Coal .....	21.59	21.63	20.25	22.11	22.03	22.68	23.21	23.94	23.19	22.62	23.05	22.56	22.29	22.81	23.15
Natural Gas.....	18.23	18.38	18.58	19.35	19.08	19.27	19.32	19.61	19.34	19.66	20.23	19.58	19.98	20.13	20.39
Crude Oil.....	15.70	15.22	14.49	14.10	13.89	13.72	13.66	13.24	12.45	12.36	12.28	12.16	12.15	11.95	11.95
Natural Gas Liquids.....	2.31	2.36	2.41	2.39	2.44	2.53	2.50	2.42	2.53	2.61	2.55	2.56	2.35	2.51	2.59
Nuclear .....	6.42	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03	8.15	7.91	8.19	8.27
Hydroelectric.....	2.99	2.60	2.87	2.67	3.20	3.58	3.62	3.27	3.23	2.78	2.12	2.59	2.74	3.00	3.16
Other Renewables.....	3.14	3.29	3.27	3.38	3.46	3.55	3.43	3.26	3.33	3.35	3.12	3.22	3.29	3.41	3.49
Total.....	70.38	69.96	68.29	70.70	71.17	72.42	72.34	72.80	71.67	71.24	71.38	70.83	70.71	71.99	72.99
<b>Net Imports</b>															
Coal .....	-2.77	-2.59	-1.78	-1.69	-2.14	-2.19	-2.01	-1.87	-1.30	-1.21	-0.77	-0.61	-0.51	-0.54	-0.53
Natural Gas.....	1.67	1.94	2.25	2.52	2.74	2.85	2.90	3.06	3.50	3.62	3.69	3.58	3.34	3.39	3.58
Crude Oil.....	13.14	12.36	13.16	14.32	15.69	15.02	16.59	17.79	18.84	18.87	19.77	19.38	20.55	20.92	21.50
Petroleum Products .....	2.15	1.86	1.80	2.08	1.56	1.87	1.64	1.85	2.10	2.31	2.61	2.40	2.73	3.07	3.09
Electricity .....	0.07	0.09	0.09	0.15	0.13	0.14	0.12	0.09	0.10	0.12	0.08	0.08	0.04	0.04	0.02
Coal Coke .....	0.01	0.03	0.03	0.06	0.06	0.02	0.05	0.07	0.06	0.07	0.03	0.06	0.05	0.05	0.06
Total.....	14.27	13.70	15.56	17.44	18.06	17.71	19.29	20.99	23.29	23.77	25.40	24.88	26.22	26.94	27.73
<b>Adjustments <sup>a</sup></b> .....	-0.13	2.21	3.74	1.12	1.99	4.10	3.10	1.36	1.81	3.94	-0.46	1.64	0.43	0.70	0.90
<b>Demand</b>															
Coal .....	18.99	19.12	19.84	19.91	20.09	21.00	21.45	21.66	21.62	22.58	21.66	21.96	22.30	22.50	23.03
Natural Gas.....	19.72	20.15	20.83	21.35	21.84	22.78	23.20	23.33	22.93	23.01	24.04	24.35	23.72	24.00	24.44
Petroleum .....	32.85	33.53	33.84	34.67	34.55	35.76	36.27	36.93	37.96	38.40	38.33	38.30	38.92	39.78	40.51
Nuclear .....	6.42	6.48	6.41	6.69	7.08	7.09	6.60	7.07	7.61	7.86	8.03	8.15	7.91	8.19	8.27
Other.....	6.54	6.59	6.66	6.62	7.66	7.59	7.22	6.16	6.65	7.09	4.26	4.59	4.51	5.16	5.37
Total.....	84.52	85.87	87.58	89.25	91.22	94.22	94.73	95.15	96.77	98.94	96.32	97.35	97.35	99.63	101.62

<sup>a</sup>Balancing item. Includes stock changes, losses, gains, miscellaneous blending components, and unaccounted-for supply.

Sources: Historical data: Annual Energy Review, DOE/EIA-0384; projections generated by simulation of the Short-Term Integrated Forecasting System.

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

	Year														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Crude Oil Prices</b> (dollars per barrel)															
Imported Average <sup>a</sup> .....	<b>18.74</b>	<b>18.20</b>	<b>16.13</b>	<b>15.53</b>	<b>17.14</b>	<b>20.62</b>	<b>18.49</b>	<b>12.07</b>	<b>17.26</b>	<b>27.72</b>	<b>22.00</b>	<b>23.71</b>	<b>27.86</b>	<b>27.02</b>	<b>25.50</b>
WTI <sup>b</sup> Spot Average.....	<b>21.60</b>	<b>20.54</b>	<b>18.49</b>	<b>17.16</b>	<b>18.41</b>	<b>22.11</b>	<b>20.61</b>	<b>14.45</b>	<b>19.25</b>	<b>30.29</b>	<b>25.95</b>	<b>26.12</b>	<b>31.12</b>	<b>29.63</b>	<b>28.00</b>
<b>Natural Gas</b> (dollars per thousand cubic feet)															
Average Wellhead.....	<b>1.64</b>	<b>1.74</b>	<b>2.04</b>	<b>1.85</b>	<b>1.55</b>	<b>2.17</b>	<b>2.32</b>	<b>1.96</b>	<b>2.19</b>	<b>3.70</b>	<b>4.02</b>	<b>2.96</b>	<b>4.98</b>	<b>4.85</b>	<b>4.70</b>
Composite Spot .....	<b>1.41</b>	<b>1.67</b>	<b>2.03</b>	<b>1.77</b>	<b>1.53</b>	<b>2.48</b>	<b>2.45</b>	<b>2.03</b>	<b>2.20</b>	<b>4.21</b>	<b>4.01</b>	<b>3.23</b>	<b>5.51</b>	<b>5.14</b>	<b>4.98</b>
<b>Petroleum Products</b>															
Gasoline Retail <sup>c</sup> (dollars per gallon)															
All Grades .....	<b>1.15</b>	<b>1.14</b>	<b>1.13</b>	<b>1.13</b>	<b>1.16</b>	<b>1.25</b>	<b>1.24</b>	<b>1.07</b>	<b>1.18</b>	<b>1.53</b>	<b>1.47</b>	<b>1.39</b>	<b>1.60</b>	<b>1.55</b>	<b>1.52</b>
Regular Unleaded .....	<b>1.10</b>	<b>1.09</b>	<b>1.07</b>	<b>1.08</b>	<b>1.11</b>	<b>1.20</b>	<b>1.20</b>	<b>1.03</b>	<b>1.14</b>	<b>1.49</b>	<b>1.43</b>	<b>1.34</b>	<b>1.56</b>	<b>1.51</b>	<b>1.48</b>
No. 2 Diesel Oil, Retail (dollars per gallon) .....	<b>1.13</b>	<b>1.11</b>	<b>1.11</b>	<b>1.11</b>	<b>1.11</b>	<b>1.24</b>	<b>1.19</b>	<b>1.04</b>	<b>1.12</b>	<b>1.49</b>	<b>1.40</b>	<b>1.32</b>	<b>1.51</b>	<b>1.51</b>	<b>1.46</b>
No. 2 Heating Oil, Wholesale (dollars per gallon) .....	<b>0.62</b>	<b>0.58</b>	<b>0.54</b>	<b>0.51</b>	<b>0.51</b>	<b>0.64</b>	<b>0.59</b>	<b>0.42</b>	<b>0.49</b>	<b>0.89</b>	<b>0.76</b>	<b>0.69</b>	<b>0.88</b>	<b>0.87</b>	<b>0.82</b>
No. 2 Heating Oil, Retail (dollars per gallon) .....	<b>0.98</b>	<b>0.93</b>	<b>0.90</b>	<b>0.87</b>	<b>0.86</b>	<b>0.98</b>	<b>0.97</b>	<b>0.84</b>	<b>0.87</b>	<b>1.29</b>	<b>1.23</b>	<b>1.11</b>	<b>1.33</b>	<b>1.36</b>	<b>1.33</b>
No. 6 Residual Fuel Oil, Retail <sup>d</sup> (dollars per barrel).....	<b>14.32</b>	<b>14.21</b>	<b>14.00</b>	<b>14.79</b>	<b>16.49</b>	<b>19.01</b>	<b>17.82</b>	<b>12.83</b>	<b>16.02</b>	<b>25.34</b>	<b>22.24</b>	<b>23.81</b>	<b>29.58</b>	<b>27.89</b>	<b>25.63</b>
<b>Electric Power Sector</b> (dollars per million Btu)															
Coal.....	<b>1.45</b>	<b>1.41</b>	<b>1.38</b>	<b>1.36</b>	<b>1.32</b>	<b>1.29</b>	<b>1.27</b>	<b>1.25</b>	<b>1.22</b>	<b>1.20</b>	<b>1.23</b>	<b>1.25</b>	<b>1.27</b>	<b>1.25</b>	<b>1.24</b>
Heavy Fuel Oil <sup>e</sup> .....	<b>2.48</b>	<b>2.46</b>	<b>2.36</b>	<b>2.40</b>	<b>2.60</b>	<b>3.01</b>	<b>2.79</b>	<b>2.07</b>	<b>2.38</b>	<b>4.27</b>	<b>3.73</b>	<b>3.68</b>	<b>4.57</b>	<b>4.48</b>	<b>4.13</b>
Natural Gas.....	<b>2.15</b>	<b>2.33</b>	<b>2.56</b>	<b>2.23</b>	<b>1.98</b>	<b>2.64</b>	<b>2.76</b>	<b>2.38</b>	<b>2.57</b>	<b>4.34</b>	<b>4.44</b>	<b>3.54</b>	<b>5.33</b>	<b>5.22</b>	<b>5.13</b>
<b>Other Residential</b>															
Natural Gas (dollars per thousand cubic feet).....															
Electricity (cents per kilowatthour).....	<b>8.05</b>	<b>8.23</b>	<b>8.34</b>	<b>8.40</b>	<b>8.40</b>	<b>8.36</b>	<b>8.43</b>	<b>8.26</b>	<b>8.16</b>	<b>8.24</b>	<b>8.62</b>	<b>8.45</b>	<b>8.69</b>	<b>8.82</b>	<b>8.84</b>

<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. 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: EIA: 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														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Supply</b>															
Crude Oil Supply															
Domestic Production <sup>a</sup>	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.88	5.82	5.80	5.75	5.74	5.63	5.65
Alaska	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.05	0.97	0.96	0.98	0.98	0.94	0.87
Lower 48	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.83	4.85	4.84	4.76	4.76	4.69	4.77
Net Commercial Imports <sup>b</sup>	5.67	5.98	6.67	6.95	7.14	7.40	8.12	8.60	8.60	9.01	9.30	9.12	9.68	9.82	10.12
Net SPR Withdrawals	0.04	-0.01	-0.02	0.00	0.00	0.07	0.01	-0.02	0.02	0.08	-0.02	-0.12	-0.15	-0.12	-0.12
Net Commercial Withdrawals	0.00	0.02	-0.05	-0.01	0.09	0.05	-0.06	-0.05	0.11	0.00	-0.07	0.09	0.02	-0.02	-0.02
Product Supplied and Losses	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.19	0.15	0.12	0.11	-0.01	0.16	0.16
Total Crude Oil Supply	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.80	15.07	15.13	14.95	15.28	15.47	15.79
Other Supply															
NGL Production	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.85	1.91	1.87	1.88	1.72	1.84	1.90
Other Hydrocarbon and Alcohol Inputs	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.38	0.38	0.38	0.42	0.42	0.41	0.42
Crude Oil Product Supplied	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.89	0.95	0.90	0.96	0.95	0.94	0.95
Net Product Imports <sup>c</sup>	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.30	1.40	1.59	1.42	1.62	1.82	1.82
Product Stock Withdrawn	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.30	0.00	-0.23	0.15	0.04	-0.04	-0.01
Total Supply	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	20.04	20.43	20.88
<b>Demand</b>															
Motor Gasoline <sup>d</sup>	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.43	8.47	8.61	8.85	8.94	9.14	9.38
Jet Fuel	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.73	1.66	1.61	1.58	1.64	1.68
Distillate Fuel Oil	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.57	3.72	3.85	3.78	3.95	4.07	4.14
Residual Fuel Oil	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.83	0.91	0.81	0.70	0.76	0.71	0.72
Other Oils <sup>e</sup>	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	5.01	4.87	4.73	4.82	4.81	4.87	4.95
Total Demand	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.52	19.70	19.65	19.76	20.04	20.43	20.87
Total Petroleum Net Imports	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	9.91	10.42	10.90	10.54	11.30	11.64	11.95
<b>Closing Stocks (million barrels)</b>															
Crude Oil (excluding SPR)	325	318	335	337	303	284	305	324	284	286	312	278	271	278	284
Total Motor Gasoline	219	216	226	215	202	195	210	216	193	196	210	209	204	205	205
Jet Fuel	49	43	40	47	40	40	44	45	41	45	42	39	37	41	42
Distillate Fuel Oil	144	141	141	145	130	127	138	156	125	118	145	134	128	133	135
Residual Fuel Oil	50	43	44	42	37	46	40	45	36	36	41	31	36	38	37
Other Oils <sup>f</sup>	267	263	273	275	258	250	259	291	246	247	287	258	252	257	258

<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 EIA, *Short-Term Energy Outlook*, EIA/DOE-0202(93/3Q), for details on this adjustment.

<sup>e</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>f</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: EIA: 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														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Supply</b>															
Total Dry Gas Production .....	17.70	17.84	18.10	18.82	18.60	18.78	18.83	19.02	18.83	19.18	19.68	19.05	19.44	19.58	19.83
Gross Imports .....	1.77	2.14	2.35	2.62	2.84	2.94	2.99	3.15	3.59	3.78	3.98	4.01	3.93	4.08	4.23
Gross Exports .....	0.13	0.22	0.14	0.16	0.15	0.15	0.16	0.16	0.16	0.24	0.37	0.52	0.67	0.77	0.73
Net Imports .....	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.99	3.42	3.54	3.60	3.49	3.26	3.31	3.49
Supplemental Gaseous Fuels.....	0.11	0.12	0.12	0.11	0.11	0.11	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.08
Total New Supply.....	19.45	19.88	20.42	21.39	21.40	21.68	21.74	22.10	22.34	22.81	23.37	22.62	22.77	22.97	23.40
Working Gas in Storage															
Opening .....	2.85	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	2.38	2.51	2.50
Closing.....	2.82	2.60	2.32	2.61	2.15	2.17	2.17	2.73	2.52	1.72	2.90	2.38	2.51	2.50	2.49
Net Withdrawals.....	0.03	0.23	0.28	-0.28	0.45	-0.02	0.00	-0.56	0.21	0.80	-1.18	0.53	-0.13	0.00	0.02
Total Supply.....	19.48	20.11	20.70	21.11	21.85	21.66	21.74	21.54	22.54	23.61	22.18	23.15	22.64	22.97	23.42
Balancing Item <sup>a</sup> .....	0.08	0.12	0.09	0.13	0.35	0.94	0.98	0.70	-0.15	-0.15	0.05	-0.63	-0.71	-0.78	-0.82
Total Primary Supply .....	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	21.93	22.19	22.60
<b>Demand</b>															
Residential .....	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.52	4.73	4.99	4.78	4.91	5.05	5.03	5.04
Commercial.....	2.73	2.80	2.86	2.90	3.03	3.16	3.21	3.00	3.04	3.22	3.04	3.17	3.14	3.28	3.34
Industrial .....	8.36	8.70	8.87	8.91	9.38	9.68	9.71	9.49	9.16	9.40	8.45	8.26	7.96	8.03	8.28
Lease and Plant Fuel.....	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.17	1.08	1.15	1.09	1.05	1.08	1.08	1.09
Other Industrial .....	7.23	7.53	7.70	7.79	8.16	8.44	8.51	8.32	8.08	8.25	7.36	7.20	6.88	6.95	7.19
CHP <sup>b</sup> .....	1.06	1.11	1.12	1.18	1.26	1.29	1.28	1.35	1.40	1.39	1.31	1.28	1.13	1.19	1.24
Non-CHP .....	6.17	6.42	6.58	6.61	6.90	7.15	7.23	6.97	6.68	6.87	6.05	5.92	5.75	5.76	5.95
Transportation <sup>c</sup> .....	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.64	0.65	0.64	0.62	0.64	0.63	0.64	0.64
Electric Power <sup>d</sup> .....	3.32	3.45	3.47	3.90	4.24	3.81	4.06	4.59	4.82	5.21	5.34	5.55	5.15	5.22	5.31
Total Demand .....	19.56	20.23	20.79	21.24	22.20	22.60	22.72	22.24	22.39	23.47	22.23	22.52	21.93	22.19	22.60

<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.

<sup>b</sup>Natural gas used for electricity generation and production of useful thermal output by combined heat and power plants at industrial facilities. Includes a small amount of natural gas consumption at electricity-only plants in the industrial sector.

<sup>c</sup>Pipeline fuel use plus natural gas used as vehicle fuel.

<sup>d</sup>Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

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

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

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

	Year														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Supply</b>															
Production.....	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1117.5	1100.4	1073.6	1127.7	1094.3	1080.8	1106.0	1122.5
Appalachia.....	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	425.6	419.4	432.8	397.0	380.0	377.3	373.5
Interior.....	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	162.5	143.5	147.0	146.9	145.8	139.9	135.4
Western .....	342.8	345.3	368.5	408.3	429.6	439.1	451.3	488.8	512.3	510.7	547.9	550.4	555.0	588.8	613.6
Primary Stock Levels <sup>a</sup>															
Opening .....	29.0	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	35.9	43.3	36.8	34.7
Closing.....	33.0	34.0	25.3	33.2	34.4	28.6	34.0	36.5	39.5	31.9	35.9	43.3	36.8	34.7	35.1
Net Withdrawals.....	-4.0	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-2.6	-2.9	7.6	-4.0	-7.4	6.5	2.1	-0.3
Imports.....	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	9.1	12.5	19.8	16.9	24.2	24.6	25.4
Exports.....	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	58.5	58.5	48.7	39.6	42.7	44.1	44.7
Total Net Domestic Supply .....	886.4	897.8	886.9	961.8	950.4	986.3	1008.5	1045.7	1048.1	1035.2	1094.8	1064.2	1068.8	1088.5	1102.9
Secondary Stock Levels <sup>b</sup>															
Opening .....	147.1	170.2	166.8	123.1	139.6	138.0	126.0	108.8	131.6	149.1	108.5	146.0	149.2	153.4	162.3
Closing.....	170.2	166.8	123.1	139.6	138.0	126.0	108.8	131.6	149.1	108.5	146.0	149.2	153.4	162.3	159.3
Net Withdrawals.....	-23.1	3.3	43.8	-16.5	1.5	12.0	17.2	-22.8	-17.5	40.7	-37.6	-3.2	-4.2	-8.9	3.0
Waste Coal Supplied to IPPs <sup>c</sup> .....	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	11.6	11.6
Total Supply.....	863.3	907.2	937.1	953.2	960.4	1007.1	1033.9	1031.8	1040.2	1086.0	1067.9	1072.1	1076.2	1091.3	1117.4
<b>Demand</b>															
Coke Plants .....	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	28.1	28.9	26.1	23.7	24.2	23.6	23.5
Electric Power Sector <sup>d</sup> .....	783.9	795.1	831.6	838.4	850.2	896.9	921.4	936.6	940.9	985.8	964.4	975.9	991.9	1002.2	1028.4
Retail and General Industry.....	81.5	80.2	81.1	81.2	78.9	77.7	78.0	72.3	69.6	69.3	69.6	65.2	65.3	65.5	65.5
Residential and Commercial .....	6.1	6.2	6.2	6.0	5.8	6.0	6.5	4.9	4.9	4.1	4.4	4.4	4.4	4.5	4.4
Industrial .....	75.4	74.0	74.9	75.2	73.1	71.7	71.5	67.4	64.7	65.2	65.3	60.7	60.9	61.0	61.1
CHP <sup>e</sup> .....	27.0	28.2	28.9	29.7	29.4	29.4	29.9	28.6	27.8	28.0	25.8	26.1	26.3	26.9	27.7
Non-CHP .....	48.4	45.8	46.0	45.5	43.7	42.3	41.7	38.9	37.0	37.2	39.5	34.7	34.5	34.1	33.5
Total Demand <sup>f</sup> .....	899.2	907.7	944.1	951.3	962.1	1006.3	1029.5	1037.1	1038.6	1084.1	1060.1	1064.7	1081.4	1091.3	1117.4
Discrepancy <sup>g</sup> .....	-35.9	-0.5	-7.0	1.9	-1.7	0.8	4.3	-5.3	1.6	1.9	7.7	7.4	-5.2	0.0	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>d</sup>Estimates of coal consumption by IPPs, supplied by the Office of Coal, Nuclear, Electric, and Alternate Fuels, EIA.

<sup>e</sup>Coal used for electricity generation and production of useful thermal output by combined heat and power plants at industrial facilities. Includes a small amount of coal consumption at electricity-only plants in the industrial sector.

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

<sup>g</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. 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 or by EIA's office of Coal, Nuclear, Electric and Alternate Fuels (coal production).

Sources: Historical data: EIA: latest data available from EIA databases supporting the following reports: *Quarterly Coal Report*, DOE/EIA-0121, and *Electric Power Monthly*, DOE/EIA-0226. Projections: EIA, 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														
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Net Electricity Generation</b>															
Electric Power Sector <sup>a</sup>															
Coal.....	1568.8	1597.7	1665.5	1666.3	1686.1	1772.0	1820.8	1850.2	1858.6	1943.1	1882.8	1904.7	1925.0	1938.0	1980.9
Petroleum.....	112.8	92.2	105.4	98.7	68.1	74.8	86.5	122.2	111.5	105.2	119.1	84.6	108.7	97.1	101.4
Natural Gas.....	317.8	334.3	342.2	385.7	419.2	378.8	399.6	449.3	473.0	518.0	554.9	600.5	578.6	598.6	616.9
Nuclear.....	612.6	618.8	610.3	640.4	673.4	674.7	628.6	673.7	728.3	753.9	768.8	780.1	757.4	784.3	791.6
Hydroelectric.....	281.5	245.8	273.5	250.6	302.7	338.1	346.6	313.4	308.6	265.8	204.9	250.8	263.5	288.6	303.9
Other <sup>b</sup> .....	40.8	44.3	45.9	45.8	43.7	44.7	46.0	47.3	48.7	50.2	49.4	54.7	54.9	59.7	62.7
Subtotal.....	2934.2	2933.1	3042.8	3087.5	3193.2	3283.0	3328.1	3456.1	3528.7	3636.2	3580.1	3675.4	3688.1	3766.3	3857.4
Other Sectors <sup>c</sup> .....	138.2	149.5	153.3	158.8	159.3	160.0	162.8	162.9	164.8	164.6	156.6	163.1	155.9	162.3	167.2
Total .....	3072.5	3082.6	3196.1	3246.3	3352.5	3443.0	3490.9	3619.0	3693.5	3800.8	3736.6	3838.6	3844.0	3928.6	4024.6
Net Imports.....	19.6	25.4	27.8	44.8	39.2	40.2	34.1	25.8	29.0	34.0	22.0	22.9	13.1	11.7	6.8
Total Supply .....	3092.1	3108.0	3223.9	3291.1	3391.7	3483.2	3525.0	3644.8	3722.5	3834.8	3758.7	3861.4	3857.2	3940.3	4031.5
Losses and Unaccounted for <sup>d</sup> .....	212.0	222.4	234.9	222.4	234.4	236.2	230.9	219.7	227.9	231.9	216.1	206.1	191.8	195.8	200.8
<b>Demand</b>															
Retail Sales <sup>f</sup>															
Residential.....	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.9	1130.1	1144.9	1192.4	1202.6	1268.2	1276.8	1306.5	1334.9
Commercial.....	765.7	761.3	794.6	820.3	862.7	887.4	928.6	979.4	1002.0	1055.2	1089.2	1108.1	1113.0	1124.5	1157.1
Industrial.....	946.6	972.7	977.2	1008.0	1012.7	1033.6	1038.2	1051.2	1058.2	1064.2	964.2	993.8	995.8	1026.9	1043.8
Other .....	94.3	93.4	94.9	97.8	95.4	97.5	102.9	103.5	107.0	109.5	113.8	105.2	107.6	107.4	110.2
Subtotal.....	2762.0	2763.4	2861.5	2934.6	3013.3	3101.1	3145.6	3264.2	3312.1	3421.4	3369.8	3475.2	3493.2	3565.3	3646.0
Other Use/Sales <sup>f</sup> .....	118.1	122.3	127.5	134.1	144.1	145.9	148.4	160.9	182.5	181.5	172.8	180.1	172.2	179.2	184.6
Total Demand.....	2880.1	2885.6	2989.0	3068.7	3157.3	3247.0	3294.0	3425.1	3494.6	3602.9	3542.6	3655.3	3665.3	3744.5	3830.6

<sup>a</sup>Electric Utilities and independent power producers.

<sup>b</sup>"Other" includes generation from other gaseous fuels, geothermal, wind, wood, waste, and solar sources.

<sup>c</sup>Electricity generation from combined heat and power facilities and electricity-only plants in the industrial and commercial sectors.

<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 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 2003 are estimated.

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

Notes: Minor discrepancies with other EIA published historical data are due to rounding. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System and by EIA's office of Coal, Nuclear, Electric and Alternate Fuels (hydroelectric and nuclear).

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