

July 8, 1999

### Highlights

### World Oil Markets/Prices

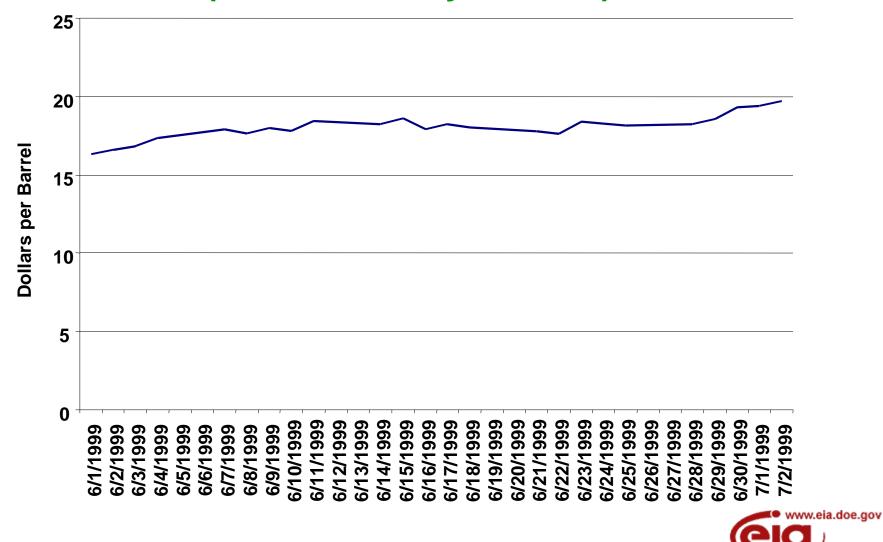
**Prices.** Despite a substantial increase in spot prices for crude oil at the very end of June (Figure 1), we have not significantly changed our crude price forecast for this update. We have raised our price forecast slightly for the next couple of months (Figure 2). However, the story is essentially the same: the combination of demand and supply changes will probably prevent even a normal seasonal increase in world oil inventories this year, resulting in a net inventory draw averaging over 800,000 barrels per day for all of 1999. Prices are expected to remain more or less flat until the end of the summer when world demand begins to exhibit some of the larger year-over-year increases expected for 1999. From that point, we see prices rising gradually through 2000 as world oil inventories continue to decline toward more "normal" levels. By the end of 2000, prices would be expected to be about \$17.25 per barrel (which would translate into a WTI crude price of about \$19.75 per barrel). Our normal uncertainty range for crude prices suggest that expected end-2000 prices would be within about \$3-\$4 of the \$17.25 level with a high degree of probability (Figure 3).

However, our price forecast is based on OPEC complying with about 80 percent of their pledged cuts for the second quarter of 1999, with compliance declining thereafter. Part of the reason prices have risen above what we were expecting before is that the market is expecting more oil demand growth from Asia than it had been earlier, and some analysts are estimating that OPEC compliance is above 90 percent in June. While EIA has long anticipated a return to growth in Asian oil demand in 1999 and 2000, we did not anticipate OPEC compliance rates of 90 percent or more. Although EIA's estimates for June OPEC production are not available at this time, we have not assumed an OPEC compliance rate of over 90 percent in any month. If OPEC compliance does top 90 percent and stays there over the summer, EIA would expect oil prices to be towards the higher side of our uncertainty range (Figure 3).

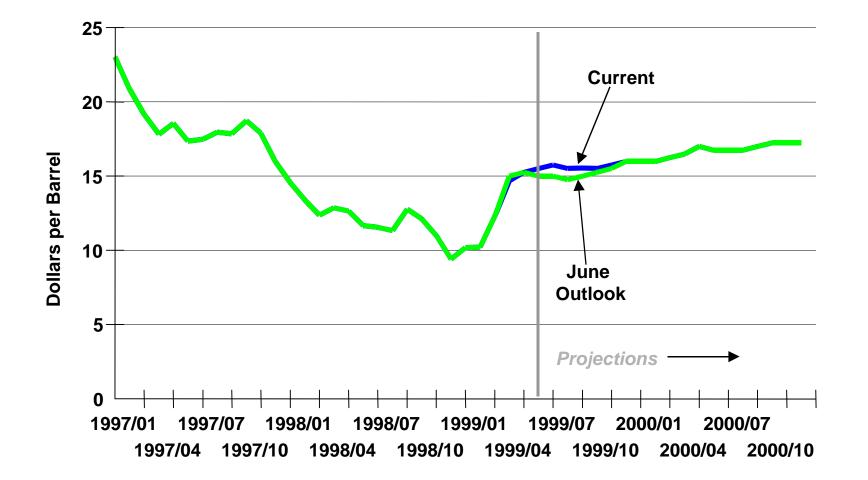
**Demand.** EIA estimates that world oil demand will grow by about 1.2 million barrels per day in 1999, and another 1.7 million barrels per day in 2000 (Figure 4). This is essentially the same as projected in last month's forecast, despite some revisions to our demand estimates for Russia and South Korea. The forecast assumes that overall, Asian oil demand begins recovering this year from the sharp slowdown seen in 1998, and the recovery continues through 2000. However, it is not expected that petroleum demand growth in Asia will return to rates seen prior to the recent regional economic crisis until sometime after 2000.

**Supply.** By our calculations, OPEC compliance with the previous 3 agreements (the one on March 23, 1999 and the 2 in 1998) will peak at about 80 percent of the total 4.3 million barrels per day of agreed OPEC cuts, before declining towards the later half of 1999 as higher prices increase the incentive for countries to increase production. Non-OPEC production is expected to remain relatively flat in 1999 as historically low oil prices in 1998 delayed the development of

### Figure 1. Daily Spot Crude (WTI) Prices (June 1 to July 2, 1999)



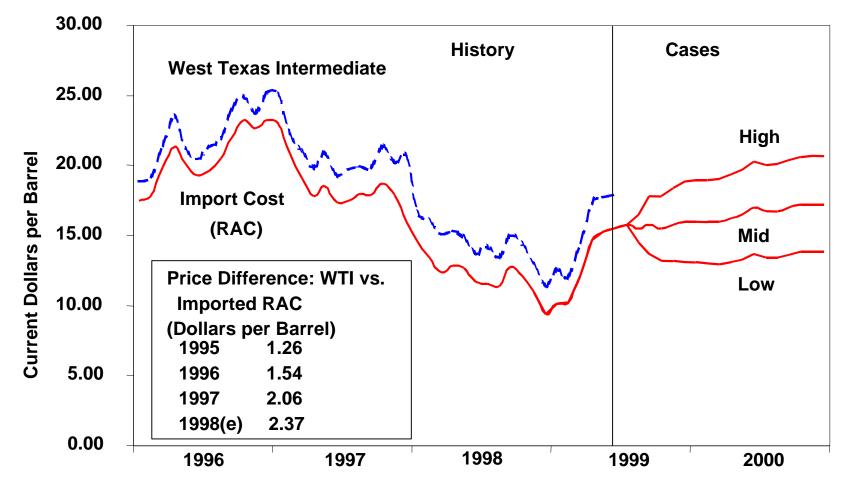
## Figure 2. Crude Oil Price\* Projections



\*Refiner cost of imported oil.

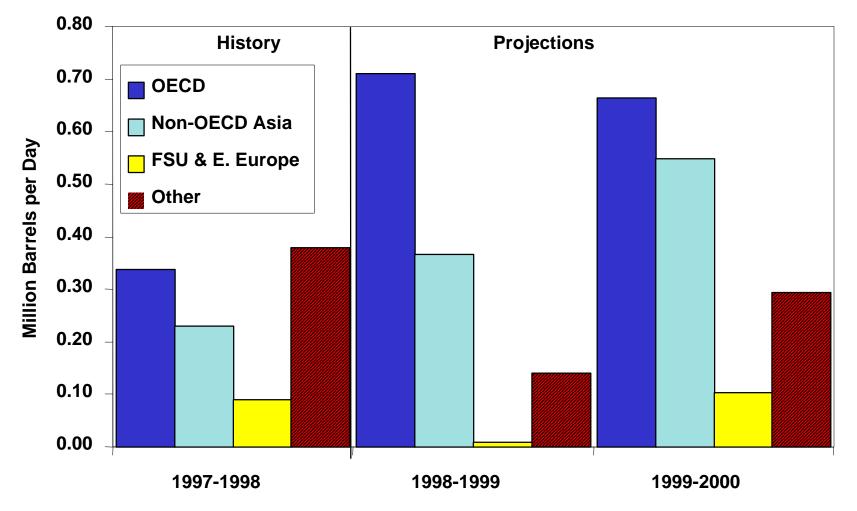
Cid www.eia.doe.gov

## Figure 3. Monthly Crude Oil Price Cases



eig www.eia.doe.gov

# Figure 4. World Oil Demand





Sources: History: EIA; Projections: Short-Term Energy Outlook, July 1999

some oil projects, while causing some oil production to be shut in. However, EIA is projecting that non-OPEC oil production will increase in 2000 as higher oil prices counteract some of the same forces that caused oil production to lag in 1999 (Figure 5).

### **U.S. Energy Prices**

**Gasoline.** Motor gasoline prices are poised to rise again this summer (albeit slightly) due largely to the tightening crude oil prices and very strong demand. In the last report we had projected that pump prices would have peaked in May. In this report, the gasoline price forecast has been adjusted upward from the June Outlook by about 2-3 cents per gallon for the third quarter of 1999 (Figure 6).

The August 1999 motor gasoline price is now expected to be the highest monthly gasoline price for the year, but barely, topping the May price by 0.1 cents per gallon. For the remainder of the driving season (July-September) retail gasoline is expected to cost about 10 cents per gallon more than during the same period last year (Figure 7).

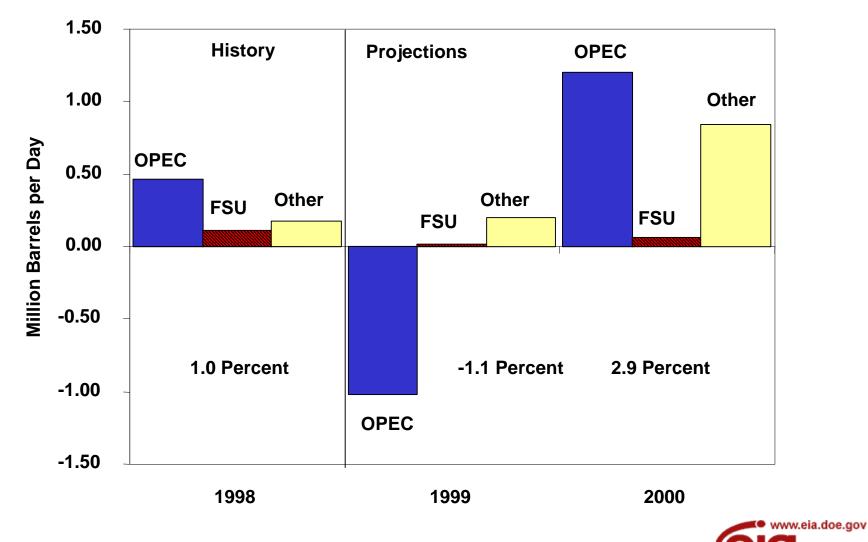
In 2000, prices at the pump are projected to rise by an average of about 8 cents per gallon. Rising crude oil costs should be responsible for 6 cents of the increase, and small increases in average margins are responsible for the remainder.

**Heating Oil.** With the exception of higher projected prices during this summer (the result of increasing crude prices), the projected heating oil price path in this report is largely unchanged from the previous report. In the winter of 1998-1999, the combination of unusually warm weather and falling crude oil prices led to residential heating oil prices averaging less than 80 cents per gallon. For the upcoming winter, assuming normal weather and higher projected crude oil prices, residential heating oil prices are expected to rebound by 11 cents per gallon. Residential heating oil consumers can expect to pay about 92 cents per gallon during the next heating season (Figure 8).

**Natural Gas.** Our natural gas wellhead price forecast remains fundamentally unchanged from the last report. Wellhead prices will stay above \$2.00 per thousand cubic feet (mcf.) throughout the entire forecast period (Figure 9). In 1998, these prices averaged below \$2.00 per mcf, on a quarterly basis, for most of the year as high underground storage levels kept a lid on prices. Assuming a normal winter and rising demand in the industrial sector, the average wellhead price is projected to average about 37 percent above the mild weather-induced low prices seen last winter (Figure 10).

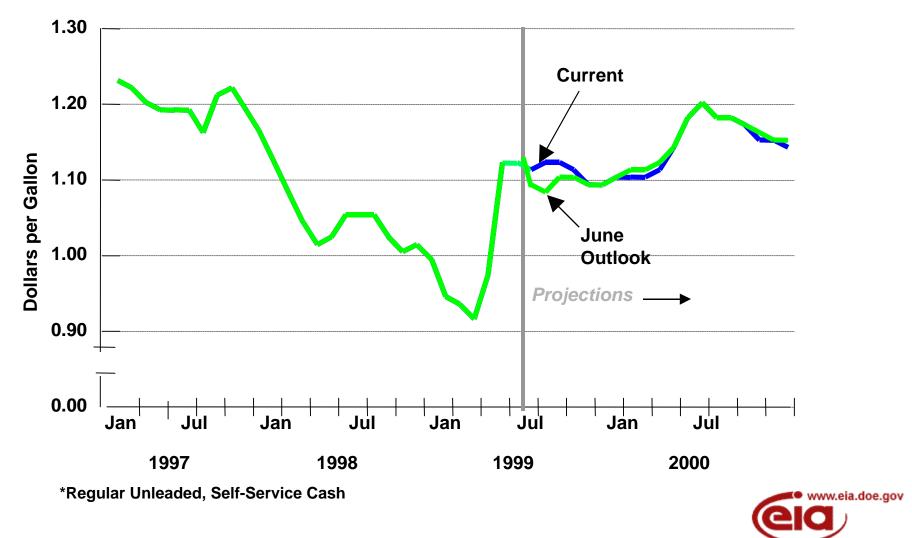
**Electric Utility Fuels.** As in the last Outlook, residual fuel prices to electric utilities are projected to maintain their price advantage over natural gas prices throughout the forecast period, though this difference should decrease next year. Historically, natural gas has been the cheaper of the two fuels. However, falling world oil prices in 1998 gave the advantage to oil, but much of that advantage will diminish with rising world oil prices. Coal is by far the cheapest of the fossil fuels. The price of coal is keeps declining as mining productivity keeps increasing.

# **Figure 5. World Oil Production**



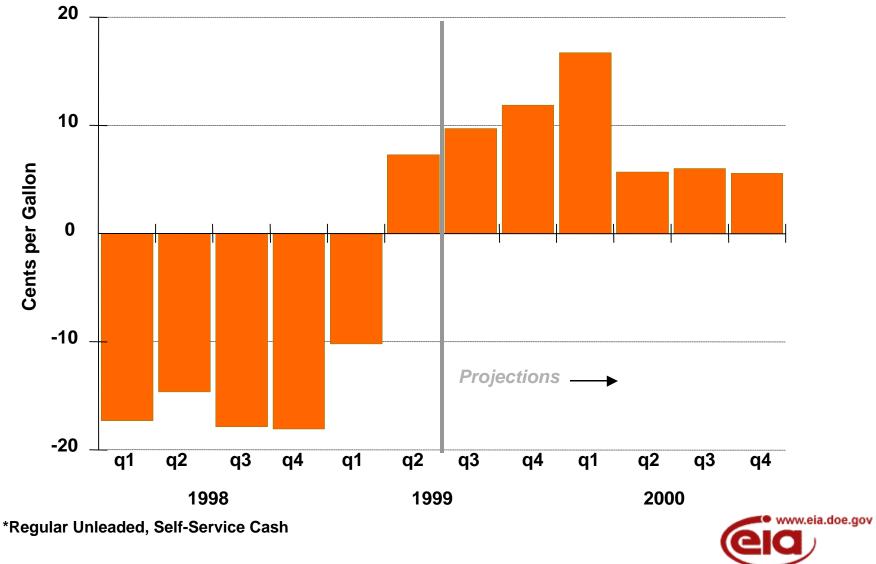
# Figure 6. Retail Motor Gasoline Prices\*

### (Current vs Previous Outlook)



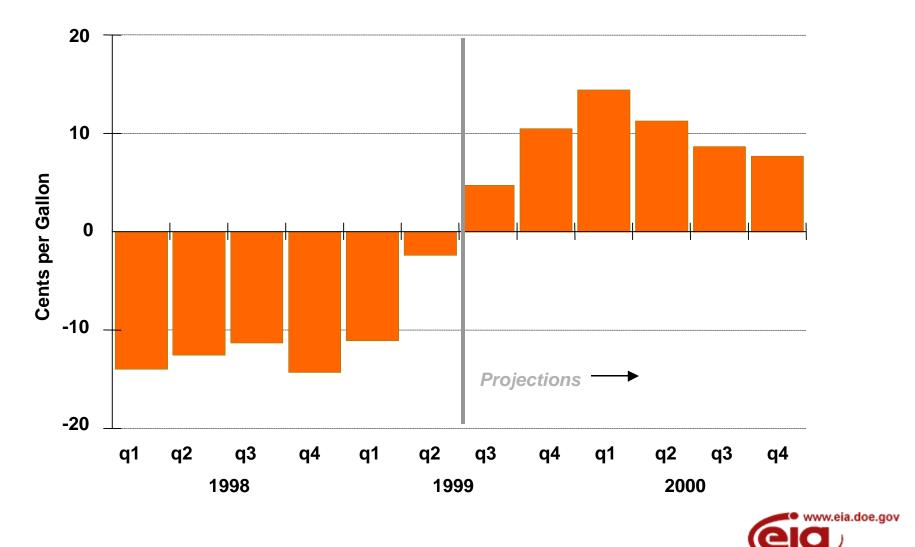
### Figure 7. Quarterly Retail Motor Gasoline Prices\*

### (Change from Year Ago)

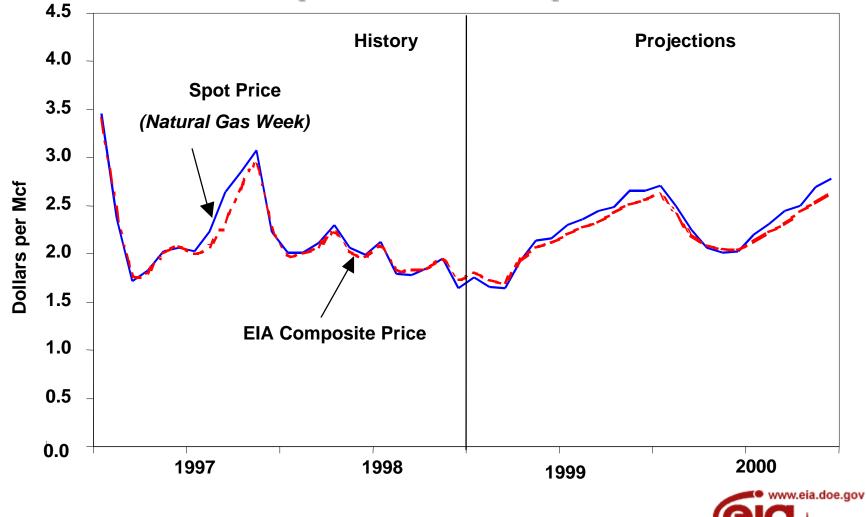


## Figure 8. Quarterly Retail Heating Oil Prices

(Change from Year Ago)



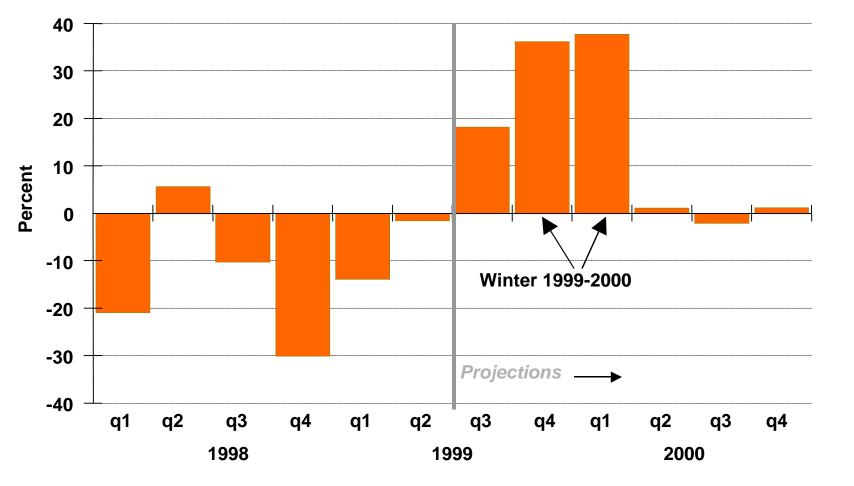
# Figure 9. Natural Gas Wellhead Prices: Composite and Spot



Sources: History: EIA and *Natural Gas Week;* Projections: Short-Term Energy Outlook, July 1999

### Figure 10. Quarterly Natural Gas Wellhead Prices

### (Percent Change from Year Ago)





Sources: History: EIA; Projections: Short-Term Energy Outlook, July 1999

### **U.S. Petroleum Demand**

Based on the final 1998 figures now reported for the United States (see <u>EIA's Petroleum Supply</u> <u>Annual, 1998 (Vol. I)</u>), domestic petroleum demand grew by 1.6 percent last year to a level of 18.92 million barrels per day. That's slightly higher than the interim estimate we reported last month, mainly due to more complete information on the level of residual fuel demand. We have raised the expected demand level for 1999 from 19.27 million barrels per day to 19.33 million. This is not so much because of the higher ultimate demand level for 1998 (which was no real surprise) but more because of higher-than-expected demands now apparent for the second quarter of this year (Figure 11). Also we have incorporated this month expectations of higher domestic economic growth than previously assumed (Figure 12). The slightly more robust petroleum demand growth picture extends into 2000, as we project a base case growth rate of 1.4 percent, to a level of 19.61 million barrels per day above last month's projection.

U.S. gasoline demand, which grew by 3.0 percent last year, is very likely to grow by well over 2 percent in 1999, especially under assumptions of continued strength in the U.S. economy (Figure 13). Even assuming some modest gains in average motor vehicle efficiency this year (tendencies not strongly in evidence in 1998), we see 2.3 percent growth in gasoline demand in 1999 and only slightly less growth in 2000.

Other transportation-related fuels are expected to gain some additional strength from higher economic growth assumptions. We see roughly an additional 10,000 to 20,000 barrels per day of extra demand each in distillate (diesel) and jet fuel demand over the next year and a half, compared to what we projected last month (Figure 14). Significantly higher demand levels for both fuels (particularly distillate) are evident in the new April monthly data compared to preliminary estimates based on weekly data.

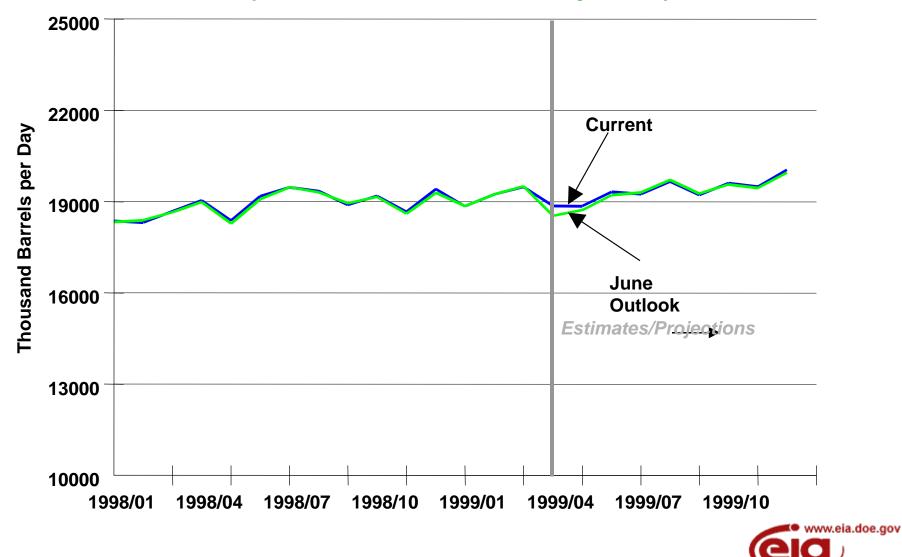
### Natural Gas Demand and Supply

**Demand.** First quarter 1999 gas demand estimates, with three full months of actual data now available, are slightly below the estimates reported last month, mostly because of low reported industrial sector demand (Figure 15). For the first three months of this year EIA reports that industrial gas demand (including gas delivered to industrial cogeneration facilities and independent power producers) was 2.20 trillion cubic feet, 70 billion cubic feet or 2.6 percent below the first-quarter 1998 level. This first-quarter figure for industrial gas demand is about 40 billion cubic feet below our estimate reported last month. Commercial and residential demand that was higher in March than estimated last month largely offset the downward adjustment to industrial demand.

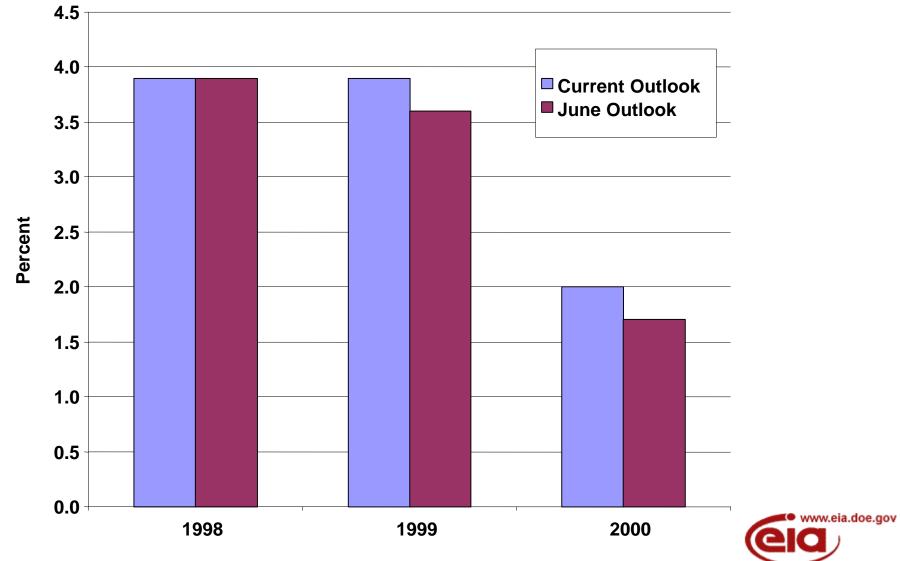
We now estimate that through the first six months of this year natural gas demand increased by 290 billion cubic feet, or 2.5 percent, from the same period in 1998 (Figure 16). Most if not all of that growth is related to weather factors causing higher heating demand. The same effect is expected for the fourth quarter of this year. Thus, most of the 520 billion cubic feet (2.4-percent) increase in natural gas demand now expected for all of 1999 is in the residential and commercial sectors. Increases in next winter's heating demand are expected to drive most of the increase in

# Figure 11. Total U.S. Petroleum Demand

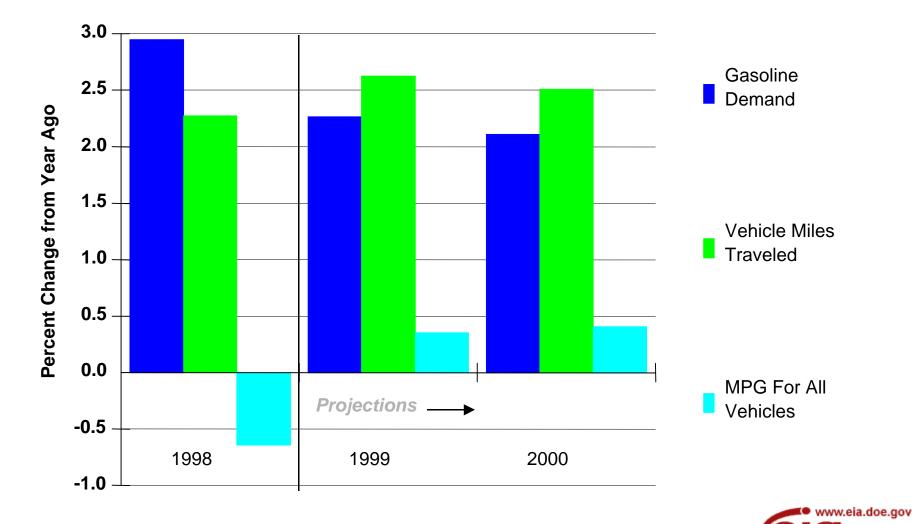
### (Current vs June 1999 Projection)



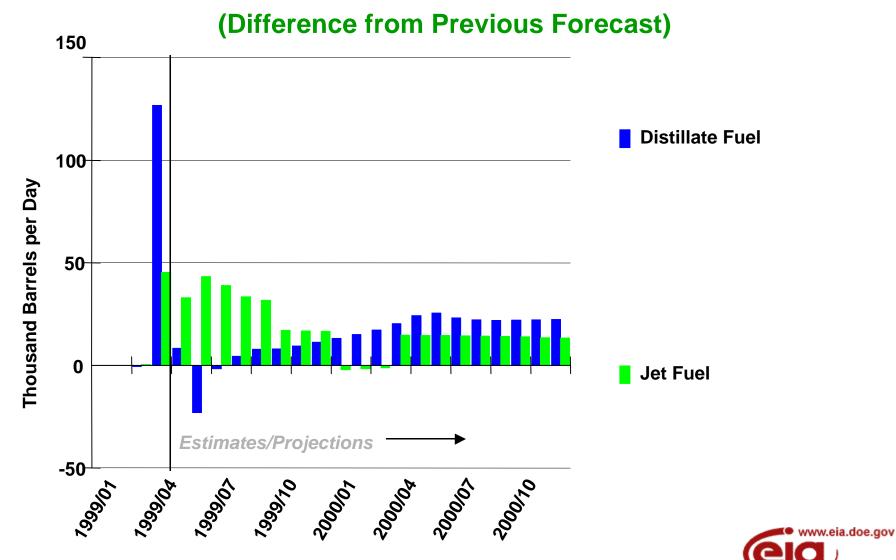
## Figure 12. Real GDP Growth Forecasts



### **Figure 13. Gasoline Market Indicators**

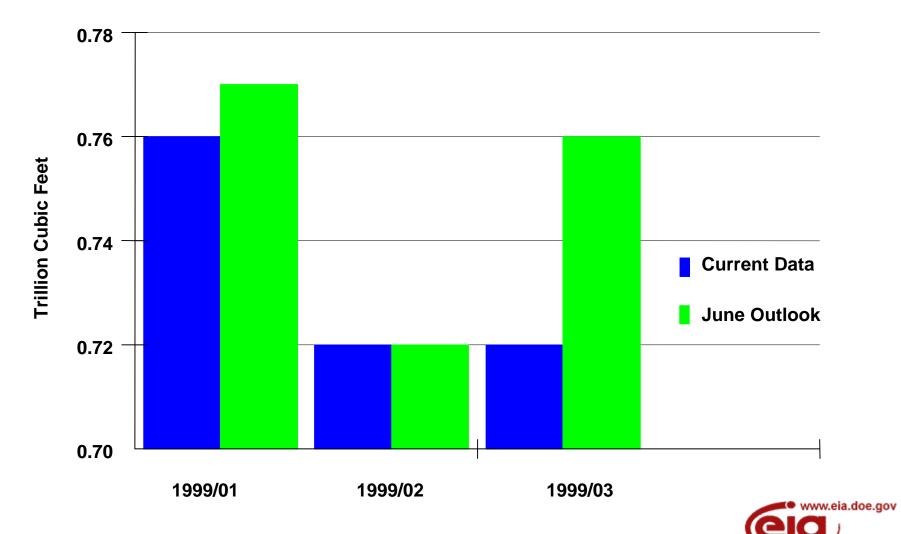


# Figure 14. Higher Jet and Distillate Forecasts

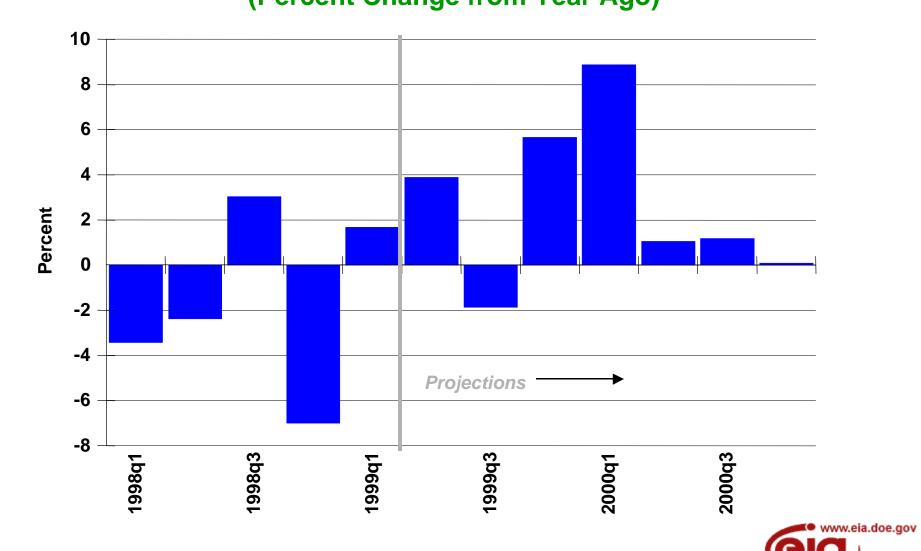


# Figure 15. Industrial Gas Demand Data

### (First Quarter - Current vs June Report)



### Figure 16. Quarterly Natural Gas Demand Growth (Percent Change from Year Ago)



gas demand in 2000. Electric utility demand should also play a role next year as overall electricity growth is likely to accelerate in 2000, mostly as a return to a more normal growth rate from the below-par rate expected for 1999. If industrial gas demand turns around next year (as expected), 2000 could bring the strongest year-to-year increase in total gas demand since 1995.

**Supply.** Dry gas production was down by 90 billion cubic feet (1.9 percent) in the first quarter, according to the latest EIA estimates (Figure 17). We expect it to take until the first quarter of 2000 before year-over-year increases in production materialize for the United States. On the other hand, gas net imports have been relatively strong. Overall net imports were 80 billion cubic feet (11 percent) above 1998 levels in the first quarter of this year (Figure 18). We have increased expected net imports for 1999 to 3.21 trillion cubic feet in 1999, with expected growth in 2000 resulting in a push to about 3.37 trillion cubic feet. As a result, we see the probability of a particularly tight gas market next winter as less likely than in previous reports. Still, gas demand growth and a decline in excess gas in storage should generate broadly higher gas prices through 2000.

### **Electricity Demand and Supply**

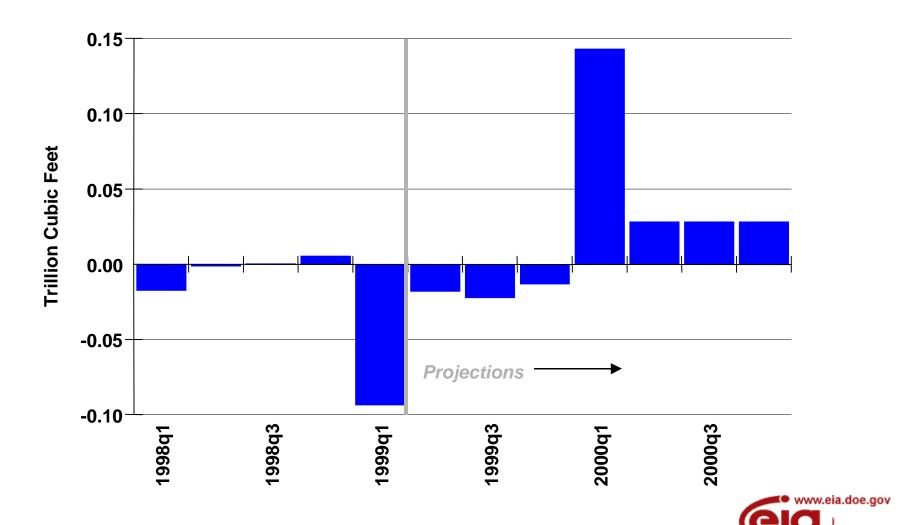
Demand. The most recent data plus our latest estimates suggest that electricity demand was up by about 1.8 percent through the first six months of this year compared to 1998 levels (Figure <u>19</u>). This actually represents a marginal reduction in the growth projection from last month. Higher economic growth assumptions will, we believe, improve the prospects for growth in the industrial and commercial sectors. However, our current analysis suggests that for the residential sector we have been overstating slightly the growth likely from here through 2000. As a result, we have lowered expected residential (and overall) demand slightly for this forecast (Figure 20). The record high temperatures of the first week in July may cause an upward blip in what otherwise is expected to be a down summer for electricity demand, at least in comparison to 1998. On average, the third quarter of 1998 exhibited cooling degree-days that were 25 percent above normal. These represented the kind of sustained, high summer temperatures that have not been seen in many decades, if ever (Figure 21). Thus, the essential elements of the forecast remain the same: despite the hot start for the Midwest and East in early July 1999, summer electricity demand is not likely to exceed or even match summer of 1998 levels; some additional heating demand growth is expected for this winter, which is likely to show up in some noticeably higher electricity demand figures for the first quarter of 2000; expected electricity demand growth in 1999 should be below average (our current base case estimate is 0.9 percent from 1998) while 2000 growth returns to a more normal rate (2.4 percent from 1999).

**Supply.** Revised estimates show much lower electricity imports in the first quarter of 1999 than originally estimated. Net imports, as a source of domestic supply of electricity, have been reduced throughout the forecast (Figure 22). Thus, although the demand forecast is somewhat lower this month, domestic generation requirements have not decreased as much and in some cases are actually higher.

Overall, aggregate output requirements for U.S. generating plants are about the same as in the

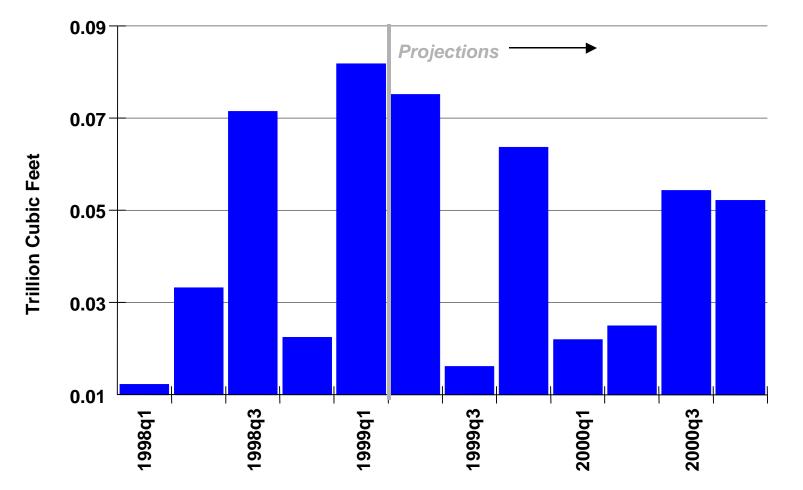
# Figure 17. Quarterly U.S. Dry Gas Production

### (Change from Year Ago)



# Figure 18. Quarterly U.S. Gas Net Imports

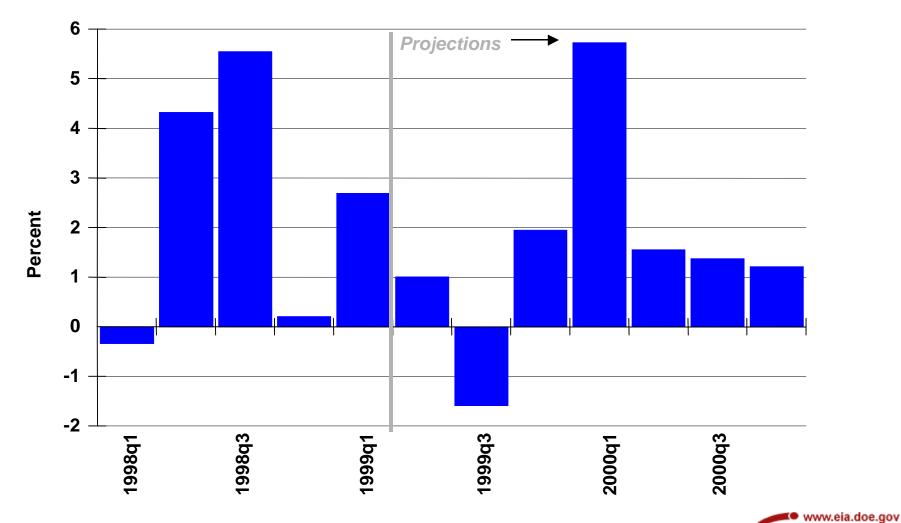
(Change from Year Ago)





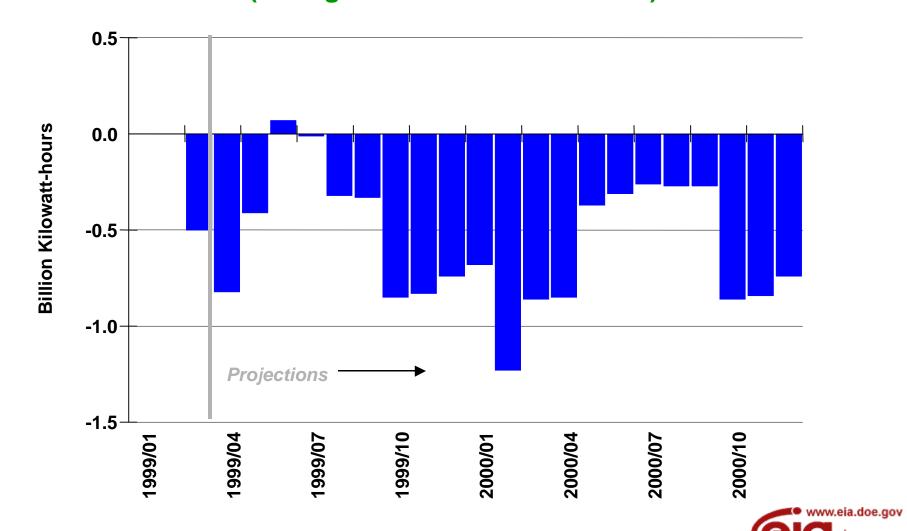
# Figure 19. Quarterly U.S. Electricity Demand

### (Percent Change from Year Ago)

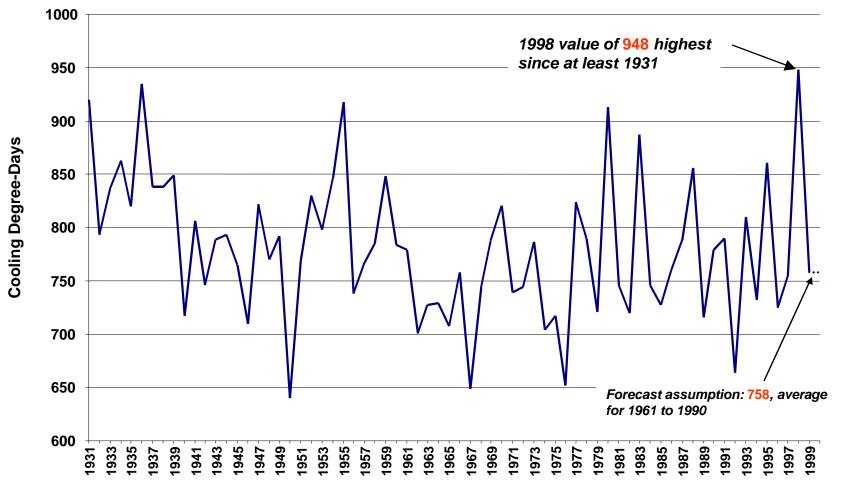




### Figure 20. Residential Electricity Demand (Change from Previous Outlook)



## Figure 21. Summer\* Cooling Degree-Days



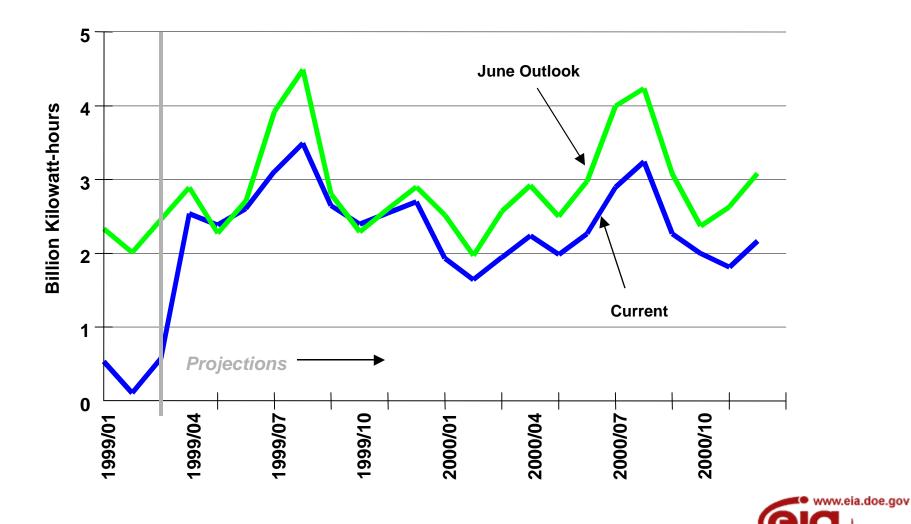
\* Third Quarter (July-September) only

Sources: History: NOAA; Forecast Assumptions: Short-Term Energy Outlook, July 1999



## Figure 22. Electricity Net Imports

### (Current vs Previous Outlook)



June Outlook. On the other hand, the fuel mix at electric utilities has been noticeably changed this month. In particular, expected nuclear power output has been revised upward to 705 billion kilowatt-hours for all of 1999 compared to 696 billion in last month's report. This would represent a significant continuation of the improvement in nuclear plant utilization seen last year, when plant utilization recovered sharply from the outage-plagued 1997 experience. The projected output level for 1997 would be the first time domestic nuclear plants have, in the aggregate, produced in excess of 700 billion kilowatt-hours of power (Figure 23). Strong utilization rates are expected this summer as well, although over the medium term these rates are probably not sustainable. Thus, output is likely to drop some in 2000 (probably to below 700 billion kilowatt-hours), although output next year is assumed to still be significantly higher than pre-1998 levels.

We have also raised the hydroelectric power forecast from last month, particularly for 1999 (Figure 24). Based on the most current precipitation data, we expect hydroelectric output to reach 302 billion kilowatt-hours in 1999, about 2.8 percent above our June forecast. We still expect to see output down compared to 1998 for the first six months of this year, but we now see hydropower increasing on a year-over year basis in both the third and fourth quarters of 1999.

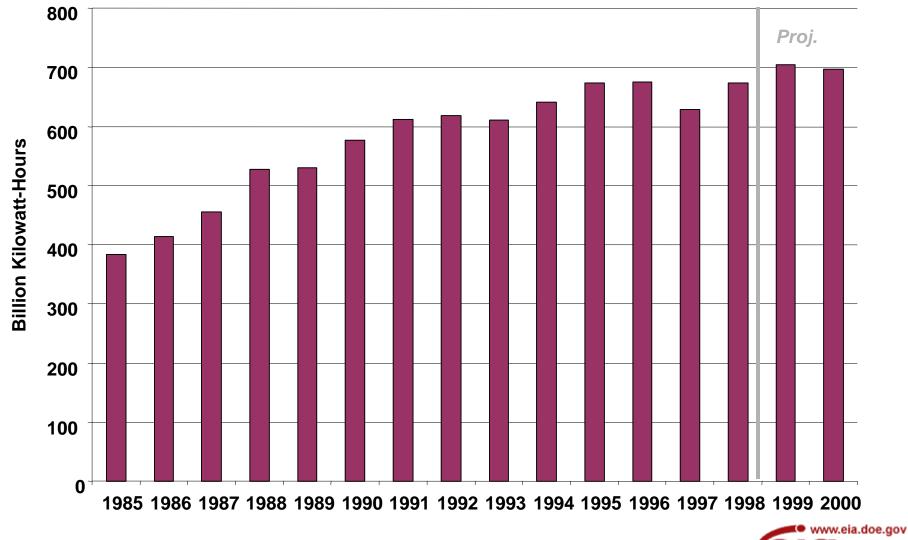
### **Coal Demand and Supply**

**Demand.** Total coal demand is expected to increase 1.7 percent in 1999 and 5.0 percent in 2000, compared to 1.5-percent growth in 1998 (Figure 25). Coal demand by the electricity sector (including independent power producers) grew 1.8 percent (to 940 million short tons) in 1998. Growth in electricity demand (0.9 percent in 1999 and 2.5 percent in 2000), coupled with declines in other forms of generation (hydroelectric in 1999 and 2000, nuclear in 2000), will provide the impetus for continued growth in coal demand by the electricity sector. This sector currently consumes 90 percent of all coal used in the United States.

**Supply.** A record 1,118.1 million short tons of coal was produced in 1998. Production is expected to decline slightly in 1999. The 0.2 percent decline, the first since 1995, will lower coal production to 1,116.2 million short tons (Figure 26). Mild weather over much of the country during the fall, and winter, reduced coal use at electric utilities and led to a large buildup in coal stocks. Production will grow 1.8 percent in 2000 (to 1,136.2 million short tons) as demand grows and stock levels are reduced. Production in the Western region should continue to rise significantly over the forecast period (1.1 percent in 1999 and 4.8 percent in 2000). The Western region became the nation's largest coal producer in 1998, surpassing the Appalachian region. Production in the Appalachian region is expected to grow slowly in the forecast period (0.2 percent in 1999 and 0.1 percent in 2000). Interior region production is projected to exhibit an average decline of nearly 4.8 percent over the forecast period.

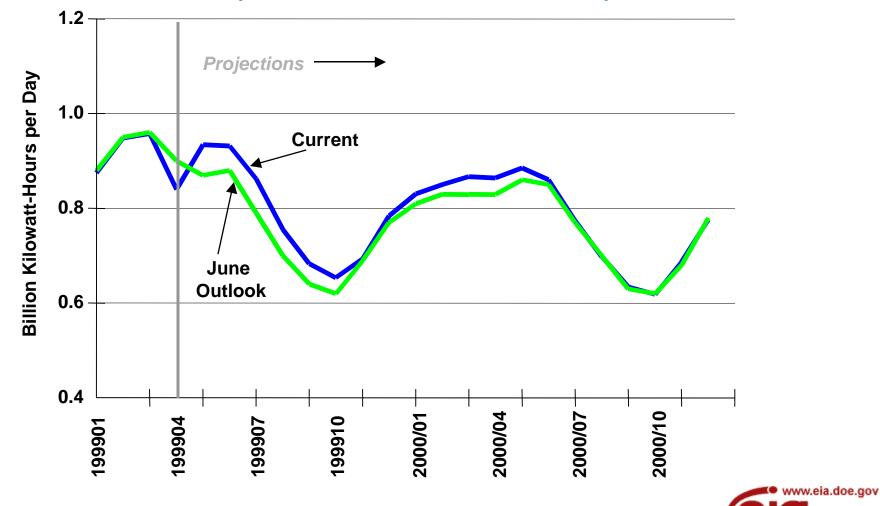
**Stocks.** Total coal stocks (producers and consumers) were 163.6 million short tons at the end of 1998, a 16.5 percent increase from the previous year. Producer stocks remained virtually unchanged in 1998, and they are expected to increase 7.2 percent in 1999. Increased demand will see producer stocks fall by 3 million short tons in 2000. Consumer stocks increased by 23.1 million short tons in 1998, primarily in the electric utility sector. Consumer stocks will increase by an additional 7.0 million short tons in 1999, before being drawn down by 13.5 million short tons in 2000.

## Figure 23. Nuclear Plant Net Electricity Generation

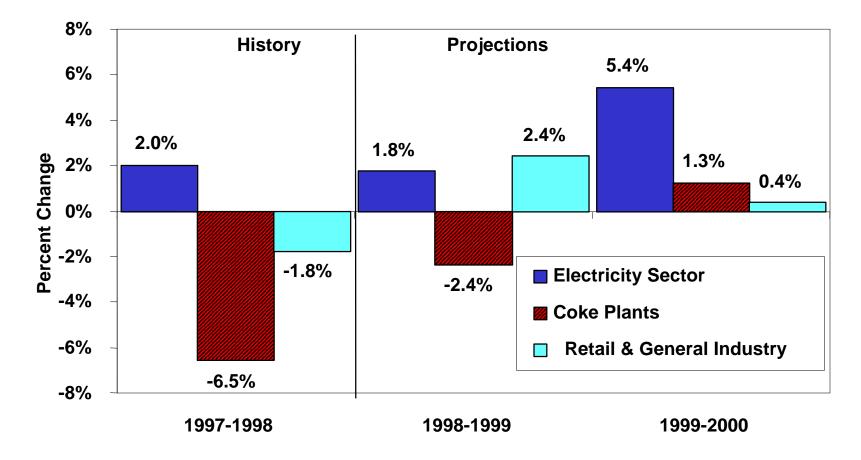


### Figure 24. U.S. Monthly Hydroelectric Net Generation

### (Current vs Previous Outlook)

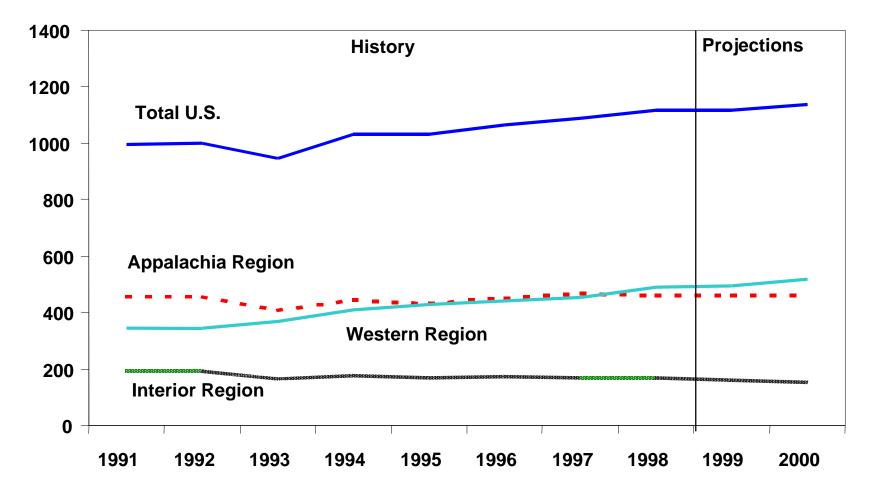


# Figure 25. Coal Demand





## **Figure 26. Coal Production**





**Exports.** U.S. coal exports are expected to continue to weaken as the lower-priced coals from Australia and South Africa, as well as the growing coal export industries of Indonesia, Venezuela, and Colombia, grab a larger share of the market. Exports are projected to be 65.0 million short tons in 1999 (a 16.7 percent decrease) and 62.7 million short tons in 2000.

### Table HL1. U.S. Energy Supply and Demand

		Year		Annual Percentage Change						
	1997	1998	1999	2000	1997-1998	1998-1999	1999-2000			
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	7270	7552	7849	8004	3.9	3.9	2.0			
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel)	18.50	12.12	14.40	16.74	-34.5	18.8	16.3			
<b>Petroleum Supply</b> (million barrels per day) Crude Oil Production <sup>b</sup>	6.45	6.25	5.99	5.89	-3.1	-4.2	-1.7			
Total Petroleum Net Imports (including SPR)	9.16	9.76	10.04	10.42	6.6	2.9	3.8			
Energy Demand										
World Petroleum (million barrels per day)	73.0	73.8	74.9	76.6	1.1	1.5	2.3			
Petroleum (million barrels per day)	18.62	18.92	19.33	19.61	1.6	2.2	1.4			
Natural Gas (trillion cubic feet)	21.97	21.35	21.87	22.57	-2.8	2.4	3.2			
Coal (million short tons)	1029	1044	1062	1115	1.5	1.7	5.0			
Electricity (billion kilowatthours) Utility Sales <sup>c</sup> Nonutility Own Use <sup>d</sup> Total	3140 161 3301	3220 164 3384	3248 166 3414	3329 168 3497	2.5 1.9 2.5	0.9 1.2 0.9	2.5 1.2 2.4			
Total Energy Demand <sup>e</sup> (quadrillion Btu)	94.3	94.7	96.6	98.9	0.5	2.0	2.3			
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	12.97	12.54	12.31	12.35	-3.3	-1.8	0.3			
Renewable Energy as Percent of Total f	7.5	7.1	7.0	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 annual electric utility sales for historical periods are derived from the sum of monthly sales figures based on submissions by electric utilities of Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions." These historical values differ from annual sales totals based on Form EIA-861, "Annual Electric Utility Report," reported in several EIA publications, but match alternate annual totals reported in EIA's *Electric Power Monthly*, DOE/EIA-0226.

<sup>d</sup>Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1998 are estimates.

<sup>e</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>1</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 Statistics Report* DOE/EIA-0520; *Weekly Petroleum Status Report*, DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

	1998					1999				2000			Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic <sup>a</sup>															
Real Gross Domestic Product (billion chained 1992 dollars - SAAR)	7465	7499	7566	7678	7755	7820	7890	7932	7952	7990	8020	8054	7552	7849	8004
Percentage Change from Prior Year	4.2	3.6	3.5	4.3	3.9	4.3	4.3	3.3	2.5	2.2	1.6	1.5	3.9	3.9	2.0
Annualized Percent Change from Prior Quarter	5.4	1.8	3.6	5.9	4.0	3.4	3.6	2.1	1.0	1.9	1.5	1.7			
GDP Implicit Price Deflator (Index, 1992=1.000)	1.123	1.126	1.129	1.131	1.135	1.138	1.141	1.145	1.151	1.154	1.158	1.162	1.127	1.140	1.156
Percentage Change from Prior Year	1.2	1.0	1.0	0.9	1.0	1.1	1.1	1.3	1.4	1.4	1.4	1.5	1.0	1.1	1.4
Real Disposable Personal Income billion chained 1992 Dollars - SAAR)	5287	5322	5364	5421	5479	5515	5558	5608	5666	5705	5729	5746	5348	5540	5712
Percentage Change from Prior Year	3.0	3.0	3.2	3.5	3.6	3.6	3.6	3.4	3.4	3.4	3.1	2.5	3.2	3.6	3.1
/lanufacturing Production Index, 1992=1.000)	1.338	1.347	1.348	1.364	1.370	1.390	1.401	1.407	1.407	1.418	1.430	1.443	1.349	1.392	1.423
Percentage Change from Prior Year	6.0	5.0	3.1	2.5	2.3	3.2	4.0	3.2	2.8	2.0	2.0	2.5	4.1	3.2	2.3
DECD Economic Growth (percent) <sup>b</sup>													3.0	2.6	2.4
Weather <sup>c</sup>															
Heating Degree-Days						505		(000	0054	50.4	~~~	(000			1000
U.S	1984	481	42	1444	2144	535	89	1636	2354	524	89	1636	3951	4403	4603
New England	2768	770	104	2038	3064	884	171	2269	3306	915	171	2269	5680	6388	6660
Middle Atlantic	2406	570	57	1779	2823	709	105	2026	3028	716	105	2026	4812	5663	5875
U.S. Gas-Weighted	2078	548	66	1555	2267	534	81	1686	2454	539	81	1686	4247	4568	4760
Cooling Degree-Days (U.S.)	29	386	948	93	18	339	758	72	30	334	758	72	1456	1186	119

#### Table 1. U.S. Macroeconomic and Weather Assumptions

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

<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. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

SAAR: Seasonally-adjusted annualized rate.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, *Statistical Release G.17(419)*. Projections of OECD growth are based on WEFA Group, "World Economic Outlook," Volume 1. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

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

	1998				1999				2000			Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Macroeconomic <sup>a</sup>															
Real Fixed Investment															
(billion chained 1992 dollars-SAAR)	1225	1264	1271	1311	1343	1365	1384	1400	1412	1414	1411	1413	1268	1373	1412
Real Exchange Rate															
(index)	1.142	1.161	1.182	1.120	1.134	1.164	1.179	1.182	1.164	1.151	1.139	1.129	1.151	1.165	1.146
Business Inventory Change															
(billion chained 1992 dollars-SAAR)	30.1	23.9	19.2	6.2	-4.9	2.5	15.3	19.4	4.0	-0.6	-3.0	-3.2	19.9	8.1	-0.7
Producer Price Index															
(index, 1982=1.000)	1.252	1.250	1.243	1.233	1.230	1.243	1.251	1.257	1.264	1.266	1.269	1.276	1.244	1.245	1.269
Consumer Price Index															
(index, 1982-1984=1.000)	1.621	1.628	1.635	1.642	1.648	1.663	1.669	1.678	1.689	1.698	1.707	1.719	1.631	1.664	1.703
Petroleum Product Price Index															
(index, 1982=1.000)	0.541	0.536	0.503	0.473	0.444	0.600	0.608	0.582	0.605	0.621	0.621	0.609	0.513	0.558	0.614
Non-Farm Employment															
(millions)	124.8	125.5	126.1	126.8	127.6	128.2	128.8	129.6	130.1	130.4	130.7	131.1	125.8	128.6	130.6
Commercial Employment															
(millions)	85.7	86.3	87.0	87.7	88.5	89.2	89.7	90.4	90.7	91.0	91.3	91.8	86.7	89.4	91.2
Total Industrial Production															
(index, 1992=1.000)	1.303	1.312	1.316	1.323	1.327	1.345	1.357	1.363	1.365	1.375	1.386	1.397	1.314	1.348	1.381
Housing Stock															
(millions)	113.7	114.0	114.4	115.0	115.5	115.9	116.2	116.6	116.9	117.2	117.5	117.8	114.3	116.0	117.4
Miscellaneous															
Gas Weighted Industrial Production															
(index, 1992=1.000)	1.175	1.171	1.158	1.156	1.170	1.178	1.185	1.184	1.180	1.187	1.194	1.202	1.165	1.179	1.191
Vehicle Miles Traveled b															
(million miles/day)	6629	7424	7602	7032	6790	7590	7766	7295	7063	7757	7928	7440	7174	7363	7548
Vehicle Fuel Efficiency															
(index, 1997=1.0)	0.993	0.999	0.991	0.991	0.998	1.008	0.985	0.998	1.004	1.012	0.991	0.998	0.994	0.997	1.001
Real Vehicle Fuel Cost															
(cents per mile)	3.34	3.18	3.08	3.11	2.95	3.29	3.31	3.37	3.34	3.35	3.37	3.44	3.18	3.23	3.37
Air Travel Capacity															
(mill. available ton-miles/day)	423.5	439.1	443.0	439.5	428.8	445.8	465.7	468.2	463.7	466.2	483.6	472.1	436.3	452.3	471.4
Aircraft Utilization															
(mill. revenue ton-miles/day)	237.7	259.0	260.5	247.1	240.8	263.9	278.7	262.0	256.1	274.4	289.4	274.1	251.1	261.5	273.5
Airline Ticket Price Index															
(index, 1982-1984=1.000)	2.058	2.053	2.070	2.029	2.130	2.219	2.202	2.222	2.259	2.272	2.278	2.303	2.053	2.193	2.278
Raw Steel Production															
(millions tons)	28.75	27.87	26.57	24.40	25.11	26.30	26.32	26.84	26.64	26.47	26.19	26.69	107.28	104.56	105.99

<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>Includes all highway travel.

SAAR: Seasonally-adjusted annualized rate. Note: Historical data are printed in bold; forecasts are in italics.

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

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

(Million Barrels per Day, Except OECD Commercial Stocks)

		1998				1999			2000					Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000	
Demand <sup>a</sup>																
OECD																
U.S. (50 States)	18.5	18.9	19.2	19.1	19.2	19.0	19.4	19.7	19.6	19.2	19.7	20.0	18.9	19.3	19.6	
U.S. Territories		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Canada		1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	1.9	1.9	2.0	
Europe	14.9	14.2	14.6	15.1	15.1	14.4	14.8	15.3	15.3	14.5	15.1	15.5	14.7	14.9	15.1	
Japan		5.0	5.2	5.7	6.2	5.0	5.2	5.7	6.3	5.1	5.3	5.9	5.5	5.5	5.6	
Australia and New Zealand		1.0	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	
Total OECD	42.6	41.0	42.2	43.1	43.6	41.5	42.6	44.0	44.5	42.0	43.3	44.7	42.2	42.9	43.6	
Non-OECD	-	-		-		-	-		-					-		
Former Soviet Union	4.5	4.0	4.0	4.4	4.4	4.0	4.0	4.3	4.5	4.1	4.1	4.4	4.2	4.2	4.3	
Europe		1.4	1.4	1.5	1.7	1.5	1.5	1.6	1.8	1.5	1.5	1.7	1.5	1.6	1.6	
China		3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.3	4.3	4.4	3.9	4.1	4.3	
Other Asia		8.4	8.2	9.4	8.8	8.6	8.4	9.5	9.1	8.9	8.7	9.8	8.7	8.8	9.1	
Other Non-OECD		13.3	13.1	13.4	13.2	13.5	13.3	13.5	13.5	13.8	13.6	13.8	13.2	13.4	13.7	
Total Non-OECD		31.1	30.7	32.7	32.1	31.6	31.2	33.2	33.1	32.6	32.2	34.1	31.5	32.0	33.0	
Total World Demand		72.2	72.9	75.8	75.7	73.1	73.8	77.2	77.6	74.6	75.5	78.8	73.8	74.9	76.6	
Supply <sup>b</sup>									-	-				-		
OECD																
U.S. (50 States)	9.5	9.4	9.0	9.1	9.0	8.9	9.0	9.1	9.0	8.9	8.9	8.9	9.3	9.0	8.9	
Canada		2.6	2.8	2.7	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.6	2.7	
North Sea <sup>c</sup>		6.2	5.9	6.3	6.3	6.1	6.1	6.6	6.8	6.5	6.7	7.0	6.2	6.3	6.7	
Other OECD		1.6	1.6	1.4	1.5	1.5	1.6	0.0 1.6	1.6	0.0 1.6	1.7	1.7	1.6	0.5 1.5	1.6	
Total OECD		19.9	19.2	19.6	19.3	19.1	19.2	19.9	20.0	19.8	19.9	20.3	19.7	19.4	20.0	
Non-OECD	20.2	19.9	19.2	19.0	19.5	19.1	19.2	19.9	20.0	19.0	19.9	20.3	19.7	19.4	20.0	
OPEC	20.0	30.8	20.4	20.0	20.2	20.0	20.2	20.7	20.0	20.4	20.0	21.2	20.4	20.6	20.6	
		30.8 7.2	30.1 7.2	30.0 7.3	30.3 7.2	29.0 7.2	29.3 7.3	29.7 7.4	30.0	30.4 7.3	30.8 7.3	31.2 7.4	30.4 7.2	29.6 7.3	30.6 7.3	
Former Soviet Union	-	3.2	3.2	-		7.2 3.2	7.3 3.2		7.4	-	7.3 3.3				7.3 3.3	
China		-	-	3.2	3.2			3.3	3.3	3.3		3.3	3.2	3.2		
		3.6	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.6	
Other Non-OECD	-	10.8	10.8	11.0	11.1	11.0 54.0	11.1 54.4	11.3 55.1	11.3 55.5	11.3 55.8	11.4 56.3	11.4	10.8	11.1	11.4 56.1	
Total Non-OECD		55.5	54.7	54.9	55.4		-					56.9	55.2	54.7		
Total World Supply	75.9	75.3	74.0	74.5	74.7	73.0	73.6	75.0	75.5	75.6	76.2	77.2	74.9	74.1	76.1	
Stock Changes																
Net Stock Withdrawals or Additions (-)	• •		~ ~		~ ~	0.4	0.4	0.5	07	05	0.0	0.5	• •	0.4	0.4	
U.S. (50 States including SPR)		-0.7	0.0	0.1	0.4	-0.4	-0.4	0.5	0.7	-0.5	-0.3	0.5	-0.2	0.1	0.1	
Other		-2.5	-1.1	1.2	0.6	0.4	0.5	1.6	1.4	-0.5	-0.4	1.2	-0.9	0.8	0.4	
Total Stock Withdrawals		-3.2	-1.1	1.3	1.0	0.0	0.2	2.1	2.1	-1.0	-0.7	1.7	-1.2	0.8	0.5	
OECD Comm. Stocks, End (bill. bbls.)		2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.6	2.7	2.7	2.6	2.8	2.7	2.6	
Non-OPEC Supply		44.6	43.9	44.5	44.4	44.0	44.3	45.3	45.5	45.2	45.5	46.0	44.5	44.5	45.5	
Net Exports from Former Soviet Union	2.8	3.1	3.2	2.9	2.8	3.2	3.3	3.0	2.8	3.2	3.2	3.0	3.0	3.1	3.0	

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

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

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

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

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

# Table 4. U. S. Energy Prices (Nominal Dollars)

		1998				1999				2000				Year	1
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Imported Crude Oil <sup>a</sup> (dollars per barrel)	13.44	12.40	11.87	10.86	10.92	15.15	15.60	15.75	16.08	16.75	16.83	17.25	12.12	14.40	16.74
Natural Gas Wellhead	0.00	0.07	4 00	4.04	4 74	0.04	0.00	0.50	0.40	0.00	0.00	0.50	4.00	0.44	0.00
(dollars per thousand cubic feet)	2.02	2.07	1.92	1.84	1.74	2.04	2.26	2.50	2.40	2.06	2.22	2.53	1.96	2.14	2.30
Petroleum Products															
Gasoline Retail <sup>b</sup> (dollars per gallon) All Grades Regular Unleaded	-	1.10 1.05	1.07 1.03	1.03 0.99	0.99 0.95	1.17 1.13	1.17 1.13	1.14 1.11	1.16 1.12	1.22 1.18	1.22 1.19	1.20 1.16	1.07 1.03	1.12 1.08	1.20 1.16
No. 2 Diesel Oil, Retail (dollars per gallon)	1.08	1.05	1.02	1.00	0.97	1.07	1.08	1.11	1.12	1.13	1.13	1.17	1.04	1.06	1.14
No. 2 Heating Oil, Wholesale (dollars per gallon)	0.47	0.43	0.39	0.38	0.36	0.43	0.45	0.50	0.52	0.54	0.54	0.57	0.42	0.43	0.54
No. 2 Heating Oil, Retail (dollars per gallon)	0.91	0.85	0.77	0.79	0.80	0.83	0.82	0.90	0.95	0.94	0.90	0.97	0.85	0.83	0.95
No. 6 Residual Fuel Oil, Retail <sup>c</sup> (dollars per barrel)	13.58	13.27	12.32	11.77	11.35	14.81	14.44	15.76	16.33	15.42	14.95	16.51	12.73	14.03	15.87
Electric Utility Fuels															
Coal (dollars per million Btu)	1.26	1.26	1.25	1.23	1.24	1.26	1.24	1.23	1.24	1.25	1.23	1.22	1.25	1.24	1.23
Heavy Fuel Oil <sup>d</sup> (dollars per million Btu)	2.12	2.17	2.07	1.93	1.77	2.38	2.38	2.59	2.57	2.52	2.46	2.71	2.07	2.25	2.57
Natural Gas (dollars per million Btu)	2.61	2.46	2.26	2.31	2.20	2.47	2.67	2.99	3.02	2.59	2.70	3.07	2.38	2.60	2.79
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	6.39	7.33	8.90	6.64	6.15	6.70	8.74	6.89	7.08	7.73	9.03	7.40	6.82	6.63	7.40
Electricity (cents per kilowatthour) <sup>a</sup> Refiner acquisition cost (RAC) of imported of		8.43	8.55	8.09	7.79	8.22	8.52	8.08	7.52	8.14	8.40	7.94	8.28	8.16	8.00

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

<sup>c</sup>Average for all sulfur contents.

<sup>d</sup>Includes fuel oils No. 4, No. 5, and No. 6 and topped crude fuel oil prices. Notes: Data are estimated for the first quarter of 1999. Prices exclude taxes, except prices for gasoline, residential natural gas, and diesel. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System. Sources: Historical data: Energy Information Administration: latest data available from EIA databases supporting the following reports: *Petroleum Marketing Monthly*, DOE/EIA-0380; *Natural Gas Monthly*, DOE/EIA-0130; *Monthly Energy Review*, DOE/EIA-0035; *Electric Power Monthly*, DOE/EIA-0226.

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

(Million Barrels per Day, Except Closing Stocks)

(Willion Barreis per	⊔ay, ∟ 	1998	01031	ng Ot		1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2000 2nd	3rd	4th	1998	1999	2000
Supply	151	Znu	JIU	401	151	ZIIU	JIU	401	151	Znu	JIU	401	1990	1999	2000
Crude Oil Supply															
a	6.47	6.37	6.07	6.11	6.00	5.94	5.99	6.05	5.99	5.91	5.83	5.82	6.25	5.99	5.89
Domestic Production						1.03	1.05	1.07	1.02	0.96	0.92	0.95		1.07	0.96
Lower 48	1.23 5.25	1.17 5.20	1.13 4.94	1.17 4.93	1.13 4.86	1.03 4.90	4.94	4.98	4.97	0.90 4.95	0.92 4.91	0.95 4.87	1.17 5.08	4.92	0.90 4.93
Net Imports (including SPR) <sup>b</sup>	5.25 8.00	5.20 8.80	4.94 9.00	4.93 8.57	4.00 8.38	4.90 8.78	4.94 9.26	4.90 8.64	4.97 8.51	4.95 9.31	4.91 9.61	4.07 9.09	5.08 8.60	4.92 8.77	4.93 9.13
Net Imports (including SPR)	0.00	0.00	9.00	0.57	0.30	0.70	9.20	0.04	0.01	9.51	9.01	9.09	0.00	0.77	9.15
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.05	0.00
SPR Stock Withdrawn or Added (-)	0.00	0.00	0.00	-0.09	-0.01	-0.02	-0.08	0.02	0.00	0.00	0.00	0.00	-0.02	-0.02	0.00
Other Stock Withdrawn or Added (-)	-0.33	0.02	0.24	-0.15	-0.14	0.06	0.06	0.01	0.03	-0.04	0.05	0.05	-0.05	0.00	0.02
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	0.20	0.11	0.07	0.09	0.25	0.36	0.22	0.21	0.21	0.22	0.22	0.21	0.11	0.26	0.21
Total Crude Oil Supply	14.34	15.30	15.38	14.53	14.47	15.11	15.45	14.93	14.73	15.40	15.71	15.18	14.89	14.99	15.25
Other Supply															
NGL Production	1.84	1.82	1.67	1.71	1.72	1.77	1.76	1.76	1.78	1.78	1.77	1.77	1.76	1.75	1.77
Other Hydrocarbon and Alcohol Inputs	0.38	0.37	0.37	0.39	0.38	0.33	0.34	0.37	0.36	0.34	0.36	0.38	0.38	0.36	0.36
Crude Oil Product Supplied	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Processing Gain	0.84	0.88	0.89	0.93	0.86	0.86	0.89	0.88	0.85	0.90	0.92	0.89	0.89	0.87	0.89
Net Product Imports <sup>c</sup>	1.03	1.22	1.18	1.24	1.18	1.37	1.28	1.27	1.21	1.26	1.31	1.37	1.17	1.28	1.29
Product Stock Withdrawn or Added (-) <sup>d</sup> .	0.03	-0.72	-0.26	0.29	0.58	-0.43	-0.35	0.50	0.63	-0.50	-0.36	0.44	-0.17	0.07	0.05
Total Supply	18.46	-	19.24		19.18	19.02	19.38	19.72				20.02	-		19.61
Demand															
Motor Gasoline	7.78	8.37	8.52	8.33	7.93	8.48	8.75	8.59	8.19	8.63	8.88	8.76	8.25	8.44	8.62
Jet Fuel	1.58	1.61	1.61	1.68	1.70	1.63	1.65	1.71	1.70	1.64	1.70	1.73	1.62	1.67	1.70
Distillate Fuel Oil	3.59	3.43	3.37	3.45	3.70	3.41	3.41	3.66	3.90	3.51	3.46	3.71	3.46	3.54	3.65
Residual Fuel Oil	0.85	0.88	0.99	0.83	0.92	0.79	0.71	0.86	0.94	0.71	0.70	0.81	0.89	0.82	0.79
Other Oils <sup>e</sup>	4.65	4.57	4.75	4.80	4.95	4.69	4.85	4.91	4.81	4.68	4.93	5.01	4.69	4.85	4.86
Total Demand	18.46	18.86	19.24	19.10	19.19	19.01	19.38	19.72	19.55	19.18	19.69	20.02	18.92	19.33	19.61
Total Petroleum Net Imports	9.02	10.02	10.19	9.82	9.56	10.15	10.54	9.91	9.72	10.57	10.91	10.46	9.76	10.04	10.42
Classing Stacks (million horrole)															
Closing Stocks (million barrels) Crude Oil (excluding SPR)	224	222	240	204	220	224	225	20.4	222	226	201	216	204	22.4	216
Total Motor Gasoline	334	332	310	324	336	331	325	324	322	326	321	316	324	324	316
	216	222	207	216	216	219	212	214	214	213	209	210	216	214	210
Finished Motor Gasoline	167	177	164	172	168	174	167	169	169	171	166	168	172	169	168
Blending Components	49	45	43	44	48	45 42	45 40	45 42	45 40	42	43	42	44	45 42	42
Jet Fuel	43	44	46	45	41	43	46	43	40	41	45	46	45	43	46
Distillate Fuel Oil	125	136	153	156	126	131	147	148	110	118	137	142	156	148	142
Residual Fuel Oil	41	40	40	45	40	41	43	44	35	39	40	42	45	44	42
Other Oils <sup>e</sup>	265	313	334	291	279	304	323	277	269	302	316	267	291	277	267
Total Stocks (excluding SPR)	1023	1087	1089	1076	1036	1070	1096	1049	990	1039	1068	1022	1076	1049	1022
Crude Oil in SPR	563	563	563	571	572	574	581	579	579	579	579	579	571	579	579
Total Stocks (including SPR)	1587	1650	1652	1647	1608	1643	1677	1629	1569	1618	1647	1601	1647	1629	1601

<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. 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.

		+ 10	0% Prices	+ 10%	% Weather <sup>e</sup>
Demand Sector	+1% GDP	Crude Oil $^{\circ}$	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%

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

(Percent Deviation Base Case)

<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.

eRefers 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 refers to change in cooling degree-days.

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

(Million Barrels per Day)

				Difference	
	High Price Case	Low Price Case	Total	Uncertainty	Price Impact
United States	6.19	5.45	0.74	0.09	0.66
Lower 48 States	5.17	4.45	0.72	0.07	0.64
Alaska	1.02	1.00	0.03	0.01	0.01

Note: Components provided are for the fourth quarter 2000. Totals may not add to sum of components due to independent rounding. Source: Energy Information Administration, Office of Oil and Gas, Reserves and Natural Gas Division.

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

(Trillion cubic Feet)

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Total Dry Gas Production	4.72	4.71	4.74	4.72	4.63	4.69	4.71	4.71	4.77	4.72	4.74	4.74	18.89	18.74	18.97
Net Imports	0.75	0.71	0.75	0.77	0.83	0.79	0.77	0.83	0.85	0.81	0.82	0.88	2.98	3.21	3.37
Supplemental Gaseous Fuels	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.12	0.12	0.13
Total New Supply	5.50	5.45	5.51	5.52	5.49	5.51	5.51	5.58	5.66	5.56	5.59	5.66	21.98	22.08	22.47
Underground Working Gas Storage															
Opening	6.52	5.52	6.44	7.28	7.04	5.79	6.52	7.31	6.80	5.35	6.18	7.10	6.52	7.04	6.80
Closing	5.52	6.44	7.28	7.04	5.79	6.52	7.31	6.80	5.35	6.18	7.10	6.68	7.04	6.80	6.68
Net Withdrawals	1.00	-0.92	-0.84	0.24	1.25	-0.73	-0.78	0.50	1.45	-0.83	-0.92	0.42	-0.52	0.24	0.12
Total Supply	6.50	4.53	4.67	5.76	6.74	4.77	4.73	6.08	7.11	4.73	4.67	6.08	21.46	22.32	22.59
Balancing Item <sup>a</sup>	0.16	0.19	-0.04	-0.42	0.03	0.13	-0.18	-0.43	0.26	0.23	-0.07	-0.43	-0.11	-0.46	-0.01
Total Primary Supply	6.66	4.72	4.63	5.34	6.77	4.90	4.55	5.65	7.37	4.95	4.60	5.65	21.35	21.87	22.57
Demand															
Lease and Plant Fuel	0.31	0.31	0.31	0.31	0.30	0.31	0.31	0.32	0.31	0.31	0.31	0.31	1.24	1.24	1.25
Pipeline Use	0.23	0.16	0.16	0.18	0.23	0.16	0.15	0.19	0.23	0.16	0.15	0.19	0.73	0.74	0.74
Residential	-	0.78	0.37	1.20	2.24	0.79	0.31	1.36	2.49	0.81	0.31	1.38	4.48	4.70	4.98
Commercial	1.21	0.58	0.45	0.81	1.25	0.64	0.45	0.89	1.43	0.64	0.46	0.91	3.04	3.24	3.45
Industrial (Incl. Cogenerators)	2.23	1.99	2.02	2.18	2.16	2.00	2.01	2.20	2.28	2.03	1.98	2.16	8.42	8.36	8.46
Cogenerators	0.51	0.49	0.54	0.60	0.53	0.50	0.55	0.61	0.54	0.51	0.56	0.63	2.14	2.19	2.23
Electricity Production															
Electric Utilities		0.86	1.29	0.61	0.54	0.96	1.27	0.63	0.57	0.96	1.34	0.65	3.26	3.40	3.51
Nonutilities (Excl. Cogen.) <sup>b</sup>	0.04	0.04	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.04	0.05	0.05	0.18	0.18	0.19
Total Demand	6.66	4.72	4.63	5.34	6.77	4.90	4.55	5.65	7.37	4.95	4.60	5.65	21.35	21.87	22.57

<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>Quarterly estimates and projections for gas consumption by nonutility generators are based on estimates for quarterly gas-fired generation at nonutilities, supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels (CNEAF), Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867 (Annual Nonutility Power Producer Report). Annual projections for nonutility gas consumption, as well as the detail on independent power producers' share of gas consumption, are provided by CNEAF.

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

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

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

(Million Short Tons)

· · · ·		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Production	281.6	275.4	278.6	282.6	283.7	269.6	275.9	287.0	286.7	280.2	280.0	289.4	1118.1	1116.2	1136.2
Appalachia	119.5	114.0	113.2	113.6	118.7	114.5	109.9	118.1	118.3	117.0	109.3	117.2	460.4	461.3	461.8
Interior	43.1	42.4	41.5	41.4	41.7	37.6	39.3	41.5	40.4	37.3	38.0	40.0	168.4	160.1	155.7
Western	119.0	119.0	123.8	127.6	123.3	117.5	126.7	127.3	128.0	125.8	132.7	132.1	489.4	494.8	518.7
Primary Stock Levels <sup>a</sup>															
Opening	34.0	41.0	38.3	34.2	34.1	42.4	41.4	39.0	36.6	42.7	43.0	34.6	34.0	34.1	36.6
Closing	41.0	38.3	34.2	34.1	42.4	41.4	39.0	36.6	42.7	43.0	34.6	33.6	34.1	36.6	33.6
Net Withdrawals		2.7	4.2	(S)	-8.2	1.0	2.4	2.4	-6.0	-0.3	8.4	1.0	-0.2	-2.5	3.1
Imports	1.8	2.2	2.1	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	8.7	8.9	9.0
Exports		20.7	19.9	18.8	13.0	16.5	17.8	17.8	15.4	15.6	15.9	15.8	78.0	65.0	62.7
Total Net Domestic Supply	257.8	259.5	265.0	266.3	264.8	256.3	262.7	273.8	267.5	266.5	274.7	276.9	1048.6	1057.6	1085.6
Secondary Stock Levels b															
Opening	106.4	115.0	125.0	113.5	129.5	143.5	152.7	132.9	136.5	127.1	135.2	120.7	106.4	129.5	136.5
Closing						152.7	132.9	136.5	127.1	135.2	120.7	123.0	129.5	136.5	123.0
Net Withdrawals	-8.6	-10.0	11.5	-16.0	-14.1	-9.2	19.8	-3.6	9.4	-8.1	14.5	-2.3	-23.1	-7.0	13.5
Waste Coal Supplied to IPPs $^{\circ}$		2.4	2.4	2.4	2.3	2.5	3.2	3.6	4.0	4.0	4.0	4.0	9.6	11.6	15.8
Total Supply	251.6	251.9	278.9	252.7	252.9	249.7	285.7	273.8	280.9	262.3	293.2	278.6	1035.2	1062.1	1114.9
Demand															
Coke Plants	6.7	7.2	7.3	7.0	6.8	6.8	6.9	7.1	7.2	6.9	6.8	7.0	28.2	27.6	27.9
Electricity Production															
Electric Utilities		218.4	252.3	219.7	217.2	214.0	248.0	233.3	240.3	224.9	255.2	237.6	910.9	912.5	958.0
Nonutilities (Excl. Cogen.) <sup>d</sup>	6.4	6.5	7.8	8.8	8.8	10.7	12.6	12.5	12.6	12.4	13.1	13.1	29.5	44.5	51.2
Retail and General Industry e	20.1	18.3	17.8	19.5	20.3	18.2	18.2	20.9	20.8	18.1	18.1	20.8	75.7	77.6	77.8
Total Demand		250.4	285.2	255.1	253.0	249.7	285.7	273.8	280.9	262.3	293.2	278.6	1044.3	1062.2	1114.9
Discrepancy <sup>f</sup>	-2.0	1.5	-6.3	-2.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-9.1	-0.1	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.

<sup>C</sup>Estimated independent power producers (IPPs) consumption of waste coal for 1994 is 7.9 million tons, 8.5 million tons in 1995, and 8.8 million tons in 1996. 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, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1998 and projections for 1999 and 2000 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1998 and 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

<sup>e</sup>Synfuels plant demand in 1993 was 1.7 million tons per quarter and is assumed to remain at that level in 1994, 1995, 1996, 1997 and 1998.

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

(S) indicates amounts of less than 50,000 tons in absolute value.

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

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

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

(Billion Kilowatt-hours)

		1998				1999				2000				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1998	1999	2000
Supply															
Net Utility Generation															
Coal	437.6	435.0	500.3	434.5	431.6	425.8	490.4	461.8	480.9	449.4	506.4	472.1		1809.6	
Petroleum	20.8	28.5	37.2	23.7	26.9	19.7	23.6	23.7	28.0	20.5	24.1	23.6	110.2	93.9	96.3
Natural Gas		80.8	121.1	59.3	52.0	92.2	121.1	60.3	54.5	91.3	127.6	62.0	309.2	325.6	335.5
Nuclear		154.7	179.1	177.3	181.1	165.5	190.8	167.1	177.1	160.8	188.8	169.5	673.7	704.5	696.1
Hydroelectric		88.1	69.6	60.2	83.4	82.1	70.7	65.4	77.3	79.2	64.6	63.8	304.4	301.6	284.9
Geothermal and Other <sup>a</sup>	1.9	1.4	1.9	2.0	1.6	1.6	2.0	2.1	1.7	1.5	2.0	2.1	7.2	7.3	7.2
Subtotal	757.3	788.6	909.3	757.0	776.5	787.0	898.4	780.4	819.5	802.6	913.5	793.2	3212.2	3242.3	3328.8
Nonutility Generation <sup>b</sup>															
Coal	14.9	14.3	15.5	17.4	15.1	14.4	15.7	17.6	15.3	14.6	15.9	17.8	62.0	62.8	63.7
Petroleum	3.9	3.8	4.1	4.6	4.0	3.9	4.2	4.7	4.1	4.0	4.3	4.8	16.4	16.8	17.2
Natural Gas		47.7	51.9	58.1	50.9	48.7	53.0	59.4	51.9	49.8	54.1	60.6	207.6	212.0	216.5
Other Gaseous Fuels <sup>c</sup>	3.0	2.9	3.1	3.5	2.9	2.8	3.1	3.4	2.9	2.7	3.0	3.3	12.5	12.2	11.9
Hydroelectric	4.2	4.0	4.3	4.9	4.3	4.1	4.5	5.0	4.5	4.3	4.7	5.2	17.4	18.0	18.7
Geothermal and Other <sup>d</sup>	17.9	17.1	18.6	20.8	17.8	17.0	18.5	20.8	17.7	17.0	18.5	20.7	74.4	74.1	73.9
Subtotal		89.7	97.6	109.3	95.0	91.0	99.1	110.9	96.4	92.4	100.5	112.6	390.3	396.0	401.9
Total Generation	851.0	878.3	1006.9	866.3	871.5	878.1	997.5	891.3	915.9	895.0	1014.1	905.7	3602.5	3638.3	3730.7
Net Imports <sup>e</sup>	5.8	6.9	10.9	5.2	1.2	7.5	9.3	7.6	5.5	6.5	8.4	6.0	28.8	25.6	26.4
Total Supply	856.8	885.2	1017.8	871.5	872.7	885.6	1006.7	898.9	921.4	901.4	1022.5	911.7	3631.3	3664.0	3757.1
Losses and Unaccounted for <sup>f</sup>	54.1	80.8	59.8	52.9	48.5	73.0	63.9	64.4	49.9	76.2	66.7	67.0	247.6	249.8	259.9
Demand															
Electric Utility Sales															
Residential	273.5	248.9	346.6	255.0	286.0	251.4	327.5	262.9	308.9	257.9	334.9	268.4	1124.0	1127.8	1170.1
Commercial	216.5	230.2	271.9	230.2	226.0	233.7	271.1	235.1	238.2	237.3	274.5	237.2	948.9	965.9	987.1
Industrial	249.7	263.6	271.6	262.4	248.5	264.6	275.2	264.4	257.9	266.0	276.2	265.9	1047.3	1052.8	1066.0
Other	23.6	24.1	27.0	25.1	23.9	24.8	27.5	25.6	26.1	25.3	28.0	26.0	99.9	101.9	105.5
Subtotal		766.9	917.1	772.7	784.4	774.4	901.3	788.1	831.1	786.5	913.7	797.5	3220.1	3248.3	3328.7
Nonutility Gener. for Own Use <sup>b</sup>	39.2	37.6	40.9	45.8	39.8	38.1	41.5	46.5	40.4	38.7	42.1	47.2	163.6	166.0	168.5
Total Demand		804.5	958.0	818.6	824.3	812.6	942.8	834.5	871.5	825.2	955.8	844.7	3383.7	3414.2	3497.2
Memo:															
Nonutility Sales to															
Electric Utilities <sup>b</sup>	54.4	52.1	56.7	63.5	55.2	52.9	57.5	64.4	56.0	53.7	58.4	65.4	226.7	230.1	233.4

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

<sup>b</sup>Electricity from nonutility sources, including cogenerators and small power producers. Quarterly estimates and projections for nonutility net sales, own use, and

generation by fuel source supplied by the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration (EIA), based on annual data reported to EIA on Form EIA-867, "Annual Nonutility Power Producer Report."

<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, nuclear, hydrogen, sulfur, batteries, chemicals and spent sulfite liquor.

<sup>e</sup>Data for 1998 are estimates.

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

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: *Electric Power Monthly*, DOE/EIA-0226. Projections: Energy Information Administration, Short-Term Integrated Forecasting System database, and Office of Coal, Nuclear, Electric and Alternate Fuels.

# Table 11. U.S. Renewable Energy Use by Sector : Mid World Oil Price Case

(Quadrillion Btu)

		Year			Annua	l Percentage (	Change
Γ	1997	1998	1999	2000	1997-1998	1998-1999	1999-2000
Electric Utilities							
Hydroelectric Power <sup>a</sup>	3.530	3.186	3.156	2.982	-9.7	-0.9	-5.5
Geothermal, Solar and Wind Energy <sup>b</sup>	0.115	0.109	0.111	0.109	-5.2	1.8	-1.8
Biofuels <sup>c</sup>	0.021	0.021	0.021	0.021	0.0	0.0	0.0
Total	3.665	3.316	3.288	3.112	-9.5	-0.8	-5.4
Ionutility Power Generators							
Hydroelectric Power <sup>a</sup>	0.185	0.179	0.186	0.193	-3.2	3.9	3.8
Geothermal, Solar and Wind Energy <sup>b</sup>	0.235	0.253	0.254	0.255	7.7	0.4	0.4
Biofuels <sup>c</sup>	0.578	0.585	0.582	0.579	1.2	-0.5	-0.5
Total	0.998	1.018	1.022	1.027	2.0	0.4	0.5
Total Power Generation	4.663	4.334	4.310	4.140	-7.1	-0.6	-3.9
Other Sectors <sup>d</sup>							
Residential and Commercial <sup>e</sup>	0.553	0.568	0.574	0.583	2.7	1.1	1.6
Industrial <sup>f</sup>	1.498	1.515	1.542	1.569	1.1	1.8	1.8
Transportation <sup>g</sup>	0.087	0.094	0.094	0.095	8.0	0.0	1.1
Total	2.138	2.178	2.211	2.247	1.9	1.5	1.6
Net Imported Electricity <sup>h</sup>	0.297	0.234	0.208	0.214	-21.2	-11.1	2.9
Fotal Renewable Energy Demand	7.098	6.745	6.729	6.602	-5.0	-0.2	-1.9

<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.

<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. SPR: Strategic Petroleum Reserve. <sup>e</sup>Includes biofuels and solar energy consumed in the residential and commercial sectors.

fonsists primarily of biofuels for use other than in electricity cogeneration.

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

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

(S) Less than 500 billion Btu.

NM indicates percent change calculations are not meaningful or undefined at the precision level of this table.

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

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

	-							Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Real Gross Domestic Product (GDP) (billion chained 1992 dollars)	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	7552	7849	8004
Imported Crude Oil Price <sup>a</sup> (nominal dollars per barrel)	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.12	14.40	16.74
Petroleum Supply															
Crude Oil Production <sup>b</sup> (million barrels per day) Total Petroleum Net Imports (including SPR)	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.99	5.89
(million barrels per day)	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	10.04	10.42
Energy Demand															
World Petroleum (million barrels per day) U.S. Petroleum	61.8	63.1	64.9	65.9	66.0	66.6	66.8	67.0	68.3	69.9	71.3	73.0	73.8	74.9	76.6
(million barrels per day) Natural Gas	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.33	19.61
(trillion cubic feet)	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.35	21.87	22.57
(million short tons) Electricity (billion kilowatthours)	797	830	877	891	897	898	907	943	950	962	1006	1029	1044	1062	1115
Utility Sales <sup>c</sup>	2369	2457	2578	2647	2713	2762	2763	2861	2935	3013	3098	3140	3220	3248	3329
Nonutility Own Use <sup>d</sup>	NA	NA	NA	97	113	122	137	138	150	158	158	161	164	166	168
Total	2369	2457	2578	2744	2826	2884	2901	2999	3085	3171	3256	3301	3384	3414	3497
Total Energy Demand <sup>e</sup>															
(quadrillion Btu)	NA	NA	NA	NA	84.2	84.3	85.6	87.4	89.2	90.9	93.9	94.3	94.7	96.6	98.9
Total Energy Demand per Dollar of GDP (thousand Btu per 1992 Dollar)	NA	NA	NA	NA	13.72	13.86	13.71	13.68	13.50	13.45	13.43	12.97	12.54	12.31	12.35

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

<sup>d</sup> Defined as the difference between total nonutility electricity generation and sales to electric utilities by nonutility generators, reported on Form EIA-867, "Annual Nonutility Power Producer Report." Data for 1998 are estimates.

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

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

Sources: Historical data: Latest data available from Bureau of Economic Analysis; Energy Information Administration; latest data available from EIA databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Quarterly Coal Report*, DOE/EIA-0121; *International Petroleum Statistics Report* DOE/EIA-520; Weekly Petroleum Status Report DOE/EIA-0208. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

_								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Macroeconomic															
Real Gross Domestic Product															
(billion chained 1992 dollars)	5488	5649	5865	6062	6136	6079	6244	6390	6611	6762	6995	7270	7552	7849	8004
GDP Implicit Price Deflator															
(Index, 1992=1.000)	0.806	0.831	0.861	0.897	0.936	0.973	1.000	1.026	1.051	1.075	1.095	1.116	1.127	1.140	1.156
Real Disposable Personal Income															
(billion chained 1992 Dollars)	4077	4155	4325	4412	4490	4484	4605	4667	4773	4906	5043	5183	5348	5540	5712
Manufacturing Production															
(Index, 1987=1.000)	0.881	0.928	0.971	0.990	0.985	0.962	1.000	1.037	1.099	1.159	1.214	1.296	1.349	1.392	1.425
Real Fixed Investment															
(billion chained 1992 dollars)	805	799	818	832	806	741	783	843	916	966	1051	1138	1268	1373	1412
Real Exchange Rate															
(Index, 1990=1.000)	NA	NA	NA	NA	0.999	1.006	1.013	1.057	1.033	0.961	1.016	1.104	1.151	1.165	1.146
Business Inventory Change															
(billion chained 1992 dollars)	-4.2	5.1	9.5	19.2	6.6	-6.1	-9.2	6.1	11.1	11.2	12.0	20.1	19.9	8.1	-0.7
Producer Price Index															
(index, 1982=1.000)	1.002	1.028	1.069	1.122	1.163	1.165	1.172	1.189	1.205	1.248	1.277	1.276	1.244	1.245	1.269
Consumer Price Index															
(index, 1982-1984=1.000)	1.097	1.137	1.184	1.240	1.308	1.363	1.404	1.446	1.483	1.525	1.570	1.606	1.631	1.664	1.703
Petroleum Product Price Index															
(index, 1982=1.000)	0.532	0.568	0.539	0.612	0.748	0.671	0.647	0.620	0.591	0.608	0.701	0.680	0.513	0.558	0.614
Non-Farm Employment															
(millions)	99.3	102.0	105.2	107.9	109.4	108.3	108.6	110.7	114.1	117.2	119.6	122.7	125.8	128.6	130.6
Commercial Employment															
(millions)	62.9	65.2	67.8	70.0	71.3	70.8	71.2	73.2	76.1	78.8	81.1	83.9	86.7	89.4	91.2
Total Industrial Production															
(index, 1987=1.000)	0.890	0.931	0.974	0.991	0.990	0.970	1.000	1.034	1.091	1.144	1.196	1.267	1.314	1.348	1.381
Housing Stock															
(millions)	98.0	99.8	101.6	102.9	103.5	104.5	105.5	106.8	108.2	109.6	111.0	112.5	114.3	116.0	117.4
Weather <sup>a</sup>															
Heating Degree-Days															
U.S.	4295	4334	4653	4726	4016	4200	4441	4700	4483	4531	4713	4542	3951	4403	4603
New England	6517	6546	6715	6887	5848	5960	6844	6728	6672	6559	6679	6662	5680	6388	6660
Middle Atlantic	5665	5699	6088	6134	4998	5177	5964	5948	5934	5831	5986	5809	4812	5663	5875
U.S. Gas-Weighted.	4442	4391	4804	4856	4139	4337	4458	4754	4659	4707	5040	4886	4247	4568	4760
Cooling Degree-Days (U.S.)	1249	1269	1283	1156	1260	1331	1040	1218	1220	1293	1180	1156	1456	1186	1193

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

<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. Normal is used for the forecast period and is defined as the average number of degree days between 1961 and 1990 for a given period.

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

Sources: Historical data: latest data available from: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; Federal Reserve System, Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL0299.

#### Table A3. Annual International Petroleum Supply and Demand Balance

(Millions Barrels per Day, Except OECD Commercial Stocks)

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Demand <sup>a</sup>															
OECD															
U.S. (50 States)	16.3	16.7	17.3	17.4	17.0	16.8	17.1	17.2	17.7	17.7	18.3	18.6	18.9	19.3	19.6
Europe <sup>b</sup>	12.1	12.3	12.4	12.5	12.6	13.4	13.6	13.5	13.6	14.1	14.3	14.4	14.7	14.9	15.1
Japan	4.4	4.5	4.8	5.0	5.1	5.3	5.4	5.4	5.7	5.7	5.9	5.7	5.5	5.5	5.6
Other OECD	2.5	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.0	3.1	3.1	3.2	3.3
Total OECD	35.3	36.0	37.1	37.6	37.5	38.1	38.8	39.0	39.9	40.6	41.4	41.8	42.2	42.9	43.6
Non-OECD															
Former Soviet Union	9.0	9.0	8.9	8.7	8.4	8.3	6.8	5.6	4.8	4.6	4.0	4.3	4.2	4.2	4.3
Europe	2.2	2.2	2.2	2.1	1.9	1.4	1.3	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6
China	2.0	2.1	2.3	2.4	2.3	2.5	2.7	3.0	3.1	3.3	3.5	3.8	3.9	4.1	4.3
Other Asia	3.8	4.1	4.4	4.9	5.3	5.7	6.2	6.8	7.9	7.9	8.5	8.8	8.7	8.8	9.1
Other Non-OECD	9.5	9.7	10.0	10.3	10.5	10.6	11.0	11.4	11.8	12.1	12.4	12.8	13.2	13.4	13.7
Total Non-OECD	26.5	27.1	27.7	28.3	28.5	28.5	28.0	28.1	29.0	29.3	29.9	31.2	31.5	32.0	33.0
Total World Demand	61.8	63.1	64.9	66.0	66.0	66.6	66.8	67.0	68.9	69.9	71.3	73.0	73.8	74.9	76.6
Supply <sup>c</sup>															
OECD															
U.S. (50 States)	11.0	10.7	10.5	9.9	9.7	9.9	9.8	9.6	9.4	9.4	9.4	9.5	9.3	9.0	8.9
Canada	1.8	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.6	2.7
North Sea <sup>d</sup>	3.8	3.8	3.8	3.7	3.9	4.1	4.5	4.8	5.5	5.9	6.3	6.2	6.2	6.3	6.7
Other OECD	1.4	1.4	1.5	1.4	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.5	1.6
Total OECD	17.9	17.9	17.8	17.1	17.1	17.5	17.9	18.0	18.7	19.2	19.7	19.9	19.7	19.4	20.0
Non-OECD															2010
OPEC	19.3	19.6	21.5	23.3	24.5	24.6	25.8	26.6	27.0	27.6	28.3	29.9	30.4	29.6	30.6
Former Soviet Union	12.3	12.5	12.5	12.1	11.4	10.4	8.9	8.0	7.3	7.1	7.1	7.1	7.2	7.3	7.3
China	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.1	3.2	3.2	3.2	3.3
Mexico	2.8	2.9	2.9	2.9	3.0	3.2	3.2	3.2	3.2	3.1	3.3	3.4	3.5	3.6	3.6
Other Non-OECD	6.8	11.3	7.3	7.7	8.0	8.1	8.4	8.7	9.2	9.9	10.2	10.5	10.8	11.1	11.4
Total Non-OECD	43.9	44.6	47.0	48.9	49.7	49.1	49.1	49.4	49.6	50.7	52.0	54.2	55.2	54.7	56.1
Total World Supply	61.8	62.5	64.8	65.9	66.8	66.7	67.0	67.4	68.3	69.9	71.8	74.1	74.9	74.1	76.1
Total Stock Withdrawals	0.0	0.6	0.1	0.0	-0.8	-0.1	-0.2	-0.3	0.1	0.0	-0.4	-1.1	-1.2	0.8	0.5
DECD Comm. Stocks, End (bill. bbls.)	2.7	2.7	2.6	2.6	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.7	2.6
Net Exports from Former Soviet Union	3.4	3.5	3.6	3.4	3.0	2.1	2.1	2.3	2.4	2.5	3.0	2.9	3.0	3.1	3.0

<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>OECD Europe includes the former East Germany.

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

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

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

SPR: Strategic Petroleum Reserve

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

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

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

# Table A4. Annual Average U. S. Energy Prices

(Nominal Dollars)

								Year							
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Imported Crude Oil <sup>a</sup>															
(dollars per barrel)	14.00	18.13	14.57	18.08	21.75	18.70	18.20	16.14	15.52	17.14	20.61	18.50	12.12	14.40	16.74
Natural Gas Wellhead															
(dollars per thousand cubic feet)	1.94	1.66	1.69	1.69	1.71	1.64	1.74	2.04	1.85	1.55	2.16	2.32	1.96	2.14	2.30
Petroleum Products															
Gasoline Retail <sup>b</sup> (dollars per gallon)															
All Grades	0.88	0.91	0.92	1.02	1.17	1.15	1.14	1.13	1.13	1.16	1.25	1.24	1.07	1.12	1.20
Regular Unleaded	0.88	0.91	0.91	0.99	1.13	1.10	1.09	1.07	1.08	1.11	1.20	1.20	1.03	1.08	1.16
No. 2 Diesel Oil, Retail															
(dollars per gallon)	0.88	0.93	0.91	0.99	1.16	1.12	1.10	1.11	1.11	1.10	1.22	1.19	1.04	1.06	1.14
No. 2 Heating Oil, Wholesale															
(dollars per gallon)	0.49	0.53	0.47	0.56	0.70	0.62	0.58	0.54	0.51	0.51	0.64	0.59	0.42	0.43	0.54
No. 2 Heating Oil, Retail															
(dollars per gallon)	0.84	0.80	0.81	0.90	1.06	1.02	0.93	0.91	0.89	0.87	0.99	0.99	0.85	0.83	0.95
No. 6 Residual Fuel Oil, Retail <sup>c</sup>															
(dollars per barrel)	14.46	17.76	14.04	16.20	18.66	14.32	14.21	14.00	14.79	16.49	19.01	17.82	12.73	14.03	15.87
Electric Utility Fuels															
Coal	4 50												4		
(dollars per million Btu)	1.58	1.51	1.47	1.44	1.45	1.45	1.41	1.38	1.36	1.32	1.29	1.27	1.25	1.24	1.23
Heavy Fuel Oil <sup>d</sup>															
(dollars per million Btu)	2.40	2.98	2.41	2.85	3.22	2.49	2.46	2.36	2.40	2.60	3.01	2.79	2.07	2.25	2.57
Natural Gas															
(dollars per million Btu)	2.35	2.24	2.26	2.36	2.32	2.15	2.33	2.56	2.23	1.98	2.64	2.76	2.38	2.60	2.79
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	5.83	5.55	5.47	5.64	5.80	5.82	5.89	6.17	6.41	6.06	6.35	6.95	6.82	6.63	7.40
(cents per kilowatthour)	7.4	7.4	7.5	7.6	7.8	8.1	8.2	8.3	8.4	8.4	8.4	8.4	8.3	8.2	8.0

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

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

<sup>c</sup>Average for all sulfur contents. <sup>d</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

(Million Barrels per Day, Except Closing Stocks)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Crude Oil Supply															
Domestic Production <sup>a</sup>	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56	6.46	6.45	6.25	5.99	5.89
Alaska	1.87	1.96	2.02	1.87	1.77	1.80	1.71	1.58	1.56	1.48	1.39	1.30	1.17	1.07	0.96
Lower 48	6.81	6.39	6.12	5.74	5.58	5.62	5.46	5.26	5.10	5.08	5.07	5.16	5.08	4.92	4.93
Net Imports (including SPR) <sup>b</sup>	4.02	4.52	4.95	5.70	5.79	5.67	5.99	6.69	6.96	7.14	7.40	8.12	8.60	8.77	9.13
Other SPR Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
Stock Draw (Including SPR)	-0.08	-0.12	0.00	-0.09	0.02	-0.01	0.01	-0.06	-0.02	0.09	0.05	-0.06	-0.05	0.00	0.02
Product Supplied and Losses	-0.05	-0.03	-0.04	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00
Unaccounted-for Crude Oil	0.14	0.14	0.20	0.20	0.26	0.20	0.26	0.17	0.27	0.19	0.22	0.14	0.11	0.26	0.21
Total Crude Oil Supply	12.72	12.85	13.25	13.40	13.41	13.30	13.41	13.61	13.87	13.97	14.19	14.66	14.89	14.99	15.25
Other Supply															
NGL Production	1.55	1.59	1.62	1.55	1.56	1.66	1.70	1.74	1.73	1.76	1.83	1.82	1.76	1.75	1.77
Other Hydrocarbon and Alcohol Inputs	0.11	0.12	0.11	0.11	0.13	0.15	0.20	0.25	0.26	0.30	0.31	0.34	0.38	0.36	0.36
Crude Oil Product Supplied	0.05	0.03	0.04	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Processing Gain	0.62	0.64	0.66	0.66	0.68	0.71	0.77	0.77	0.77	0.77	0.84	0.85	0.89	0.87	0.89
Net Product Imports <sup>c</sup>	1.41	1.39	1.63	1.50	1.38	0.96	0.94	0.93	1.09	0.75	1.10	1.04	1.17	1.28	1.29
Product Stock Withdrawn	-0.12	0.09	0.03	0.13	-0.14	-0.04	0.06	-0.05	0.00	0.15	0.03	-0.09	-0.17	0.07	0.05
Total Supply	16.33	16.72	17.33	17.37	17.04	16.76	17.10	17.26	17.72	17.72	18.31	18.62	18.92	19.33	19.61
Demand															
Motor Gasoline <sup>d</sup>	6.94	7.19	7.36	7.40	7.31	7.23	7.38	7.48	7.60	7.79	7.89	8.02	8.25	8.44	8.62
Jet Fuel	1.31	1.38	1.45	1.49	1.52	1.47	1.45	1.47	1.53	1.51	1.58	1.60	1.62	1.67	1.70
Distillate Fuel Oil	2.91	2.98	3.12	3.16	3.02	2.92	2.98	3.04	3.16	3.21	3.37	3.44	3.46	3.54	3.65
Residual Fuel Oil	1.42	1.26	1.38	1.37	1.23	1.16	1.09	1.08	1.02	0.85	0.85	0.80	0.89	0.82	0.79
Other Oils <sup>e</sup>	3.75	3.90	4.03	3.95	3.95	3.99	4.20	4.17	4.41	4.36	4.63	4.77	4.69	4.85	4.86
Total Demand	16.33	16.72	17.34	17.37	17.04	16.77	17.10	17.24	17.72	17.72	18.31	18.62	18.92	19.33	19.61
Total Petroleum Net Imports	5.44	5.91	6.59	7.20	7.16	6.63	6.94	7.62	8.05	7.89	8.50	9.16	9.76	10.04	10.42
Closing Stocks (million barrels)															
Crude Oil (excluding SPR)	331	349	330	341	323	325	318	335	337	303	284	305	324	324	316
Total Motor Gasoline	233	226	228	213	220	219	216	226	215	202	195	210	216	214	210
Jet Fuel	50	50	44	41	52	49	43	40	47	40	40	44	45	43	46
Distillate Fuel Oil	155	134	124	106	132	144	141	141	145	130	127	138	156	148	142
Residual Fuel Oil	47	47	45	44	49	50	43	44	42	37	46	40	45	44	42
Other Oils <sup>†</sup>	265	260	267	257	261	267	263	273	275	258	250	259	291	277	267

<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>c</sup>Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing. <sup>c</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 <sup>c</sup>Administration, *Short-Term Energy Outlook*, EIA/DOE-0202(93/3Q), for details on this adjustment.

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. Historical data are printed in bold; forecasts are in italics. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

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

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

(Trillion Cubic Feet)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Total Dry Gas Production	16.06	16.62	17.10	17.31	17.81	17.70	17.84	18.10	18.82	18.60	18.79	18.90	18.89	18.74	18.97
Net Imports	0.69	0.94	1.22	1.27	1.45	1.64	1.92	2.21	2.46	2.69	2.78	2.84	2.98	3.21	3.37
Supplemental Gaseous Fuels	0.11	0.10	0.10	0.11	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.10	0.12	0.12	0.13
Total New Supply	16.86	17.66	18.42	18.69	19.38	19.45	19.88	20.42	21.39	21.40	21.69	21.84	21.98	22.08	22.47
Total Underground Storage															
Opening	6.45	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	7.04	6.80
Closing	6.57	6.55	6.65	6.33	6.94	6.78	6.64	6.65	6.97	6.50	6.51	6.52	7.04	6.80	6.68
Net Withdrawals	-0.12	0.02	-0.10	0.33	-0.61	0.16	0.14	-0.01	-0.32	0.46	-0.01	-0.01	-0.52	0.24	0.12
Total Supply	16.74	17.68	18.32	19.02	18.77	19.61	20.02	20.42	21.08	21.86	21.68	21.84	21.46	22.32	22.59
Balancing Item <sup>a</sup>	-0.52	-0.47	-0.29	-0.22	-0.05	-0.58	-0.47	-0.14	-0.37	-0.28	0.29	0.13	-0.11	-0.46	-0.01
Total Primary Supply	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.35	21.87	22.57
Demand															
Lease and Plant Fuel	0.92	1.15	1.10	1.07	1.24	1.13	1.17	1.17	1.12	1.22	1.25	1.20	1.24	1.24	1.25
Pipeline Use	0.49	0.52	0.61	0.63	0.66	0.60	0.59	0.62	0.69	0.70	0.71	0.75	0.73	0.74	0.74
Residential	4.31	4.31	4.63	4.78	4.39	4.56	4.69	4.96	4.85	4.85	5.24	4.98	4.48	4.70	4.98
Commercial	2.32	2.43	2.67	2.72	2.62	2.73	2.80	2.86	2.90	3.03	3.16	3.22	3.04	3.24	3.45
Industrial (Incl. Nonutilities)	5.58	5.95	6.38	6.82	7.02	7.23	7.53	7.98	8.17	8.58	8.87	8.84	8.60	8.55	8.65
Cogenerators <sup>b</sup>	NA	NA	NA	NA	1.30	1.41	1.70	1.80	1.98	2.18	2.30	2.16	2.14	2.19	2.23
Other Nonutil. Gen. <sup>b</sup>	NA	NA	NA	NA	0.09	0.16	0.18	0.22	0.16	0.17	0.16	0.18	0.18	0.18	0.19
Electric Utilities	2.60	2.84	2.64	2.79	2.79	2.79	2.77	2.68	2.99	3.20	2.73	2.97	3.26	3.40	3.51
Total Demand	16.22	17.21	18.03	18.80	18.72	19.03	19.54	20.28	20.71	21.58	21.96	21.97	21.35	21.87	22.57

<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>Annual projections for nonutility gas consumption, as well as the detail on independent power producers' share of gas consumption, are provided by the office of Coal, Nuclear, Electric and Alternative Fuels, Energy Information Administration.

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

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

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

(Million Short Tons)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Production	890.3	918.8	950.3	980.7	1029.1	996.0	997.5	945.4	1033.5	1033.0	1063.9	1089.9	1118.1	1116.2	1136.2
Appalachia	NA	NA	NA	464.8	489.0	457.8	456.6	409.7	445.4	434.9	451.9	467.8	460.4	461.3	461.8
Interior	NA	NA	NA	198.1	205.8	195.4	195.7	167.2	179.9	168.5	172.8	170.9	168.4	160.1	155.7
Western	NA	NA	NA	317.9	334.3	342.8	345.3	368.5	408.3	429.6	439.1	451.3	489.4	494.8	518.7
Primary Stock Levels <sup>a</sup>															
Opening	33.1	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	34.1	36.6
Closing	32.1	28.3	30.4	29.0	33.4	33.0	34.0	25.3	33.2	34.4	28.6	34.0	34.1	36.6	33.6
Net Withdrawals	1.0	3.8	-2.1	1.4	-4.4	0.4	-1.0	8.7	-7.9	-1.2	5.8	-5.3	-0.2	-2.5	3.1
Imports	2.2	1.7	2.1	2.9	2.7	3.4	3.8	7.3	7.6	7.2	7.1	7.5	8.7	8.9	9.0
Exports	85.5	79.6	95.0	100.8	105.8	109.0	102.5	74.5	71.4	88.5	90.5	83.5	78.0	65.0	62.7
Total Net Domestic Supply	808.0	844.7	855.3	884.2	921.6	890.9	897.8	886.9	961.8	950.4	986.3	1008.5	1048.6	1057.6	1085.6
Secondary Stock Levels b															
Opening	170.2	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.5	136.5
Closing	175.2	185.5	158.4	146.1	168.2	167.7	163.7	120.5	136.1	134.6	123.0	106.4	129.5	136.5	123.0
Net Withdrawals	-5.0	-10.2	27.0	12.3	-22.1	0.5	4.0	43.2	-15.7	1.5	11.7	16.6	-23.1	-7.0	13.5
Waste Coal Supplied to IPPs $^{\rm c}$	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.4	7.9	8.5	8.8	8.1	9.6	11.6	15.8
Total Supply	803.1	834.4	882.3	896.5	899.4	891.4	907.8	936.5	954.0	960.4	1006.7	1033.2	1035.2	1062.1	1114.9
Demand															
Coke Plants	35.9	37.0	41.9	40.5	38.9	33.9	32.4	31.3	31.7	33.0	31.7	30.2	28.2	27.6	27.9
Electricity Production															
Electric Utilities	685.1	717.9	758.4	766.9	773.5	772.3	779.9	813.5	817.3	829.0	874.7	900.4	910.9	912.5	958.0
Nonutilities (Excl. Cogen.) <sup>d</sup>	NA	NA	NA	0.9	1.6	10.2	14.6	17.1	19.5	20.8	22.2	21.6	29.5	44.5	51.2
Retail and General Industry <sup>e</sup>	75.6	75.2	76.3	82.3	83.1	81.5	80.2	81.1	81.2	78.9	76.9	77.1	75.7	77.6	77.8
Total Demand	796.6	830.0	876.5	890.6	897.1	897.8	907.0	943.1	949.7	961.7	1005.6	1029.2	1044.3	1062.2	1114.9
Discrepancy <sup>f</sup>	6.5	4.4	5.8	5.9	2.4	-6.4	0.8	-6.6	4.3	-1.3	1.2	4.0	-9.1	-0.1	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.

<sup>C</sup>Estimated independent power producers (IPPs) consumption of waste coal for 1994 is 7.9 million tons, 8.5 million tons in 1995, and 8.8 million tons in 1996. 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, Energy Information Administration (EIA). Quarterly coal consumption estimates for 1998 and projections for 1999 and 2000 are based on (1) estimated consumption by utility power plants sold to nonutility generators during 1998 and 1999, and (2) annual coal-fired generation at nonutilities from Form EIA-867 (Annual Nonutility Power Producer Report).

eSynfuels plant demand in 1993 was 1.7 million tons per quarter and is assumed to remain at that level in 1994, 1995, 1996, 1997 and 1998.

<sup>f</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.

(S) indicates amounts of less than 50,000 tons in absolute value.

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

#### Table A8. Annual U.S. Electricity Supply and Demand

(Billion Kilowatt-hours)

	Year														
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply															
Net Utility Generation															
Coal	1385.8	1463.8	1540.7	1553.7	1559.6	1551.2	1575.9	1639.2	1635.5	1652.9	1737.5	1787.8	1807.5	1809.6	1908.7
Petroleum	136.6	118.5	148.9	158.3	117.0	111.5	88.9	99.5	91.0	60.8	67.3	77.8	110.2	93.9	96.3
Natural Gas	248.5	272.6	252.8	266.6	264.1	264.2	263.9	258.9	291.1	307.3	262.7	283.6	309.2	325.6	335.5
Nuclear	414.0	455.3	527.0	529.4	576.9	612.6	618.8	610.3	640.4	673.4	674.7	628.6	673.7	704.5	696.1
Hydroelectric	290.8	249.7	222.9	265.1	279.9	275.5	239.6	265.1	243.7	293.7	328.0	337.2	304.4	301.6	284.9
Geothermal and Other <sup>a</sup>	11.5	12.3	12.0	11.3	10.7	10.1	10.2	9.6	8.9	6.4	7.2	7.5	7.2	7.3	7.2
Subtotal	2487.3	2572.1	2704.3	2784.3	2808.2	2825.0	2797.2	2882.5	2910.7	2994.5	3077.4	3122.5	3212.2	3242.3	3328.8
Nonutility Generation <sup>b</sup>	NA	NA	NA	187.0	221.5	253.3	301.8	325.2	354.9	375.9	382.4	384.7	390.3	396.0	401.9
Total Generation	NA	NA	NA	2971.3	3029.6	3078.3	3099.0	3207.8	3265.6	3370.4	3459.9	3507.2	3602.5	3638.3	3730.7
Net Imports	35.9	46.3	31.8	11.0	2.0	22.3	28.3	28.4	44.6	37.6	38.0	36.6	28.8	25.6	26.4
Total Supply	NA	NA	NA	2982.3	3031.6	3100.6	3127.3	3236.2	3310.3	3408.0	3497.9	3543.8	3631.3	3664.0	3757.1
Losses and Unaccounted for <sup>c</sup>	NA	NA	NA	238.3	205.8	216.9	226.6	237.0	225.5	236.8	242.3	242.8	247.6	249.8	259.9
Demand															
Electric Utility Sales															
Residential	819.1	850.4	892.9	905.5	924.0	955.4	935.9	994.8	1008.5	1042.5	1082.5	1075.8	1124.0	1127.8	1170.1
Commercial	630.5	660.4	699.1	725.9	751.0	765.7	761.3	794.6	820.3	862.7	887.4	928.4	948.9	965.9	987.1
Industrial	830.5	858.2	896.5	925.7	945.5	946.6	972.7	977.2	1008.0	1012.7	1030.4	1032.7	1047.3	1052.8	1066.0
Other	88.6	88.2	89.6	89.8	92.0	94.3	93.4	94.9	97.8	95.4	97.5	102.9	99.9	101.9	105.5
Subtotal	2368.8	2457.3	2578.1	2646.8	2712.6	2762.0	2763.4	2861.5	2934.6	3013.3	3097.8	3139.8	3220.1	3248.3	3328.7
Nonutility Own Use <sup>b</sup>	NA	NA	NA	97.2	113.2	121.7	137.3	137.8	150.2	158.0	157.8	161.2	163.6	166.0	168.5
			N1.A			0000 7	0000 7	0000 0	2004.0	0474.0	2055 0	0004.0	2202 7	2414.2	2407.2
Total Demand	NA	NA	NA	2744.0	2825.8	2883.7	2900.7	2999.2	3084.8	3171.3	3255.6	3301.0	3383.7	3414.2	3497.2
Memo:															
Nonutility Sales															
to Electric Utilities <sup>d</sup>	39.9	50.0	68.0	89.8	108.2	131.6	164.4	187.5	204.7	217.9	224.6	223.5	226.7	230.1	233.4

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

<sup>b</sup>For 1989 to 1991, estimates for nonutility generation are estimates made by the Energy Markets and Contingency Information Division, based on Form EIA-867 (Annual Nonutility Power Producer Report ) data. Historical data and Projections for the same items are from the Office of Coal, Nuclear, Electric and Alternate Fuels, Energy Information Administration, based on Form EIA-867.

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

<sup>d</sup>Historical data for nonutility sales to electric utilities are from the Energy Information Administration, *Annual Energy Review*, DOE/EIA-0389, Table 8.1, for 1982 to 1988; from Form EIA-867 (Annual Nonutility Power Producer Report) for 1989 to 1996.

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.