



Short-Term Energy Outlook

May 1997 (Released May 6, 1997)

Energy Information Administration

What's New This Month - May 1997

Here are the highlights of the changes to the forecast that we have made for the month of May 1997 (all results refer to the mid world oil price case

Oil Prices:

Crude oil prices continued to weaken since our last report and are now expected to range below our April projections for this coming summer ([Figure U1](#)). Evidently, more than the originally expected impact on crude oil values from the warm winter just past was felt, and as yet no indication of support for prices is seen in the impending start of the heavy driving season in the United States. Imported crude oil prices to U.S. refiners for mid 1997 (April through September) are now expected to average about \$18.60 per barrel compared to \$19.70 projected in early April. At this point expectations concerning 1998 prices have not been revised, since the current projection of nearly \$1.00 per barrel higher prices next year fits within the likely range of increases given steady world oil demand growth and slower growth in world additions to supply ([Figure U2](#)). The annual average price for crude oil imported into the United States is now projected to be \$19.12 per barrel in 1997 and \$19.97 in 1998, compared to the \$20.60 average seen in 1996 ([Tables U1](#) and [U2](#)).

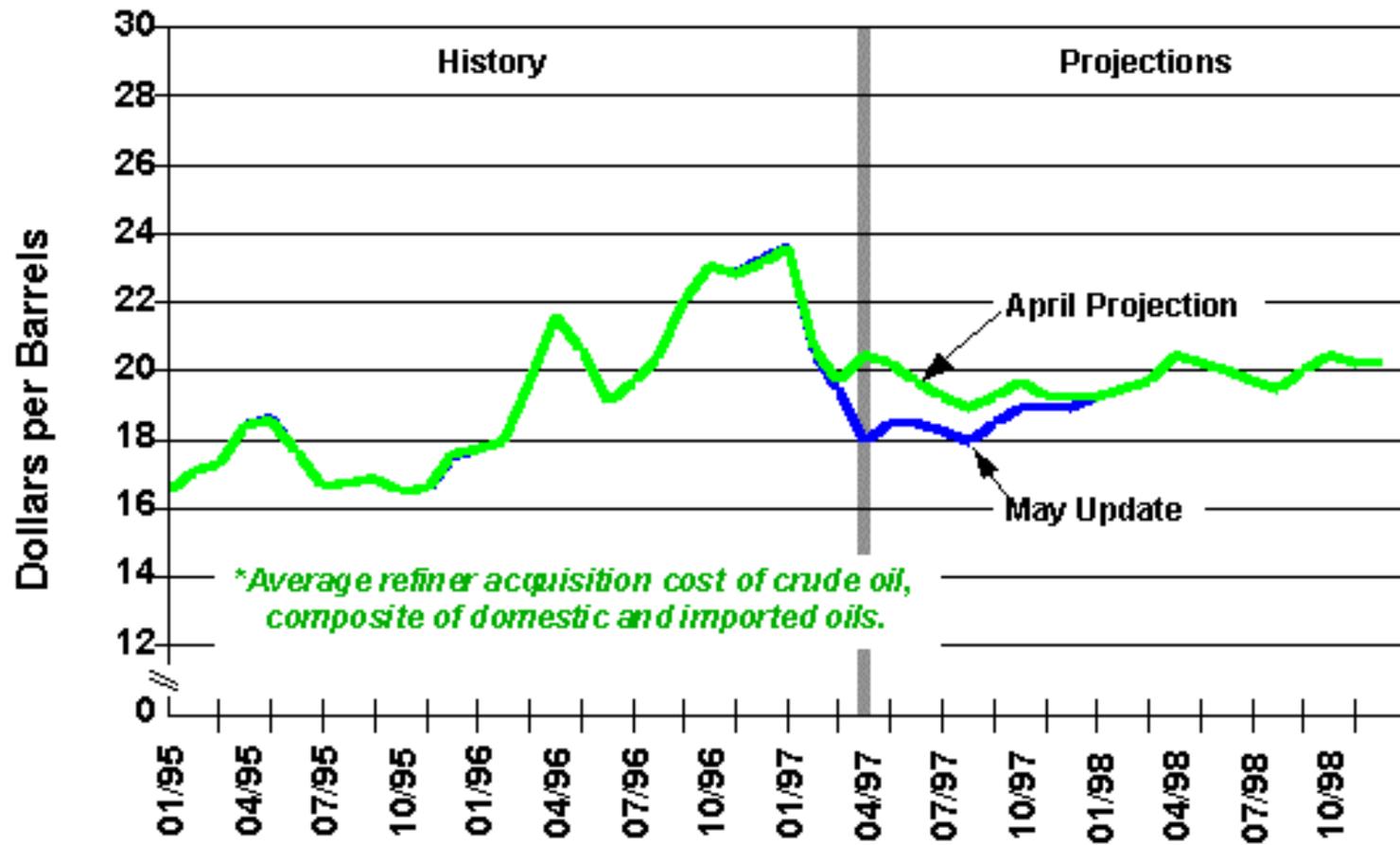
Gasoline:

Prices

Gasoline prices, which have been coming down (as expected) are now seen as reaching summer levels somewhat below our projections from a month ago, due to lower crude oil price projections ([Figure U3](#)). Thus, average summer retail gasoline prices are expected to be \$1.27 dollars per gallon, about 4 cents per gallon below last summer's average ([Table U3](#)). It should be noted that, at least in nominal terms, this summer's expected gasoline price level is still high by historical standards. For the six month period between April and September of this year, and leaving aside the 1996 experience, average nominal (current-dollar) retail gasoline prices, at \$1.27 per gallon, would be higher than any year since 1982 ([Figure U4](#)). The picture changes somewhat if one excludes taxes, in which case prices this summer looks similar to 1989. If one further makes a calculation to correct prices for inflation (in this case using the consumer price index) summer prices have only been lower than what is expected for this year once or twice in the last 20 years. In addition, the average U.S. prices in evidence at this time would be somewhat lower except for the situation in California (see below).

Last May, retail motor gasoline prices (all grades-all services) peaked for the year at \$1.38 per gallon, then fell steadily through September. This year, motor gasoline prices may already have peaked at \$1.32 per gallon last January when crude oil prices were \$5 per barrel higher than their current price. The gasoline price in May this year will be almost 10 cents per gasoline lower than last year, mostly due to weaker crude oil prices.

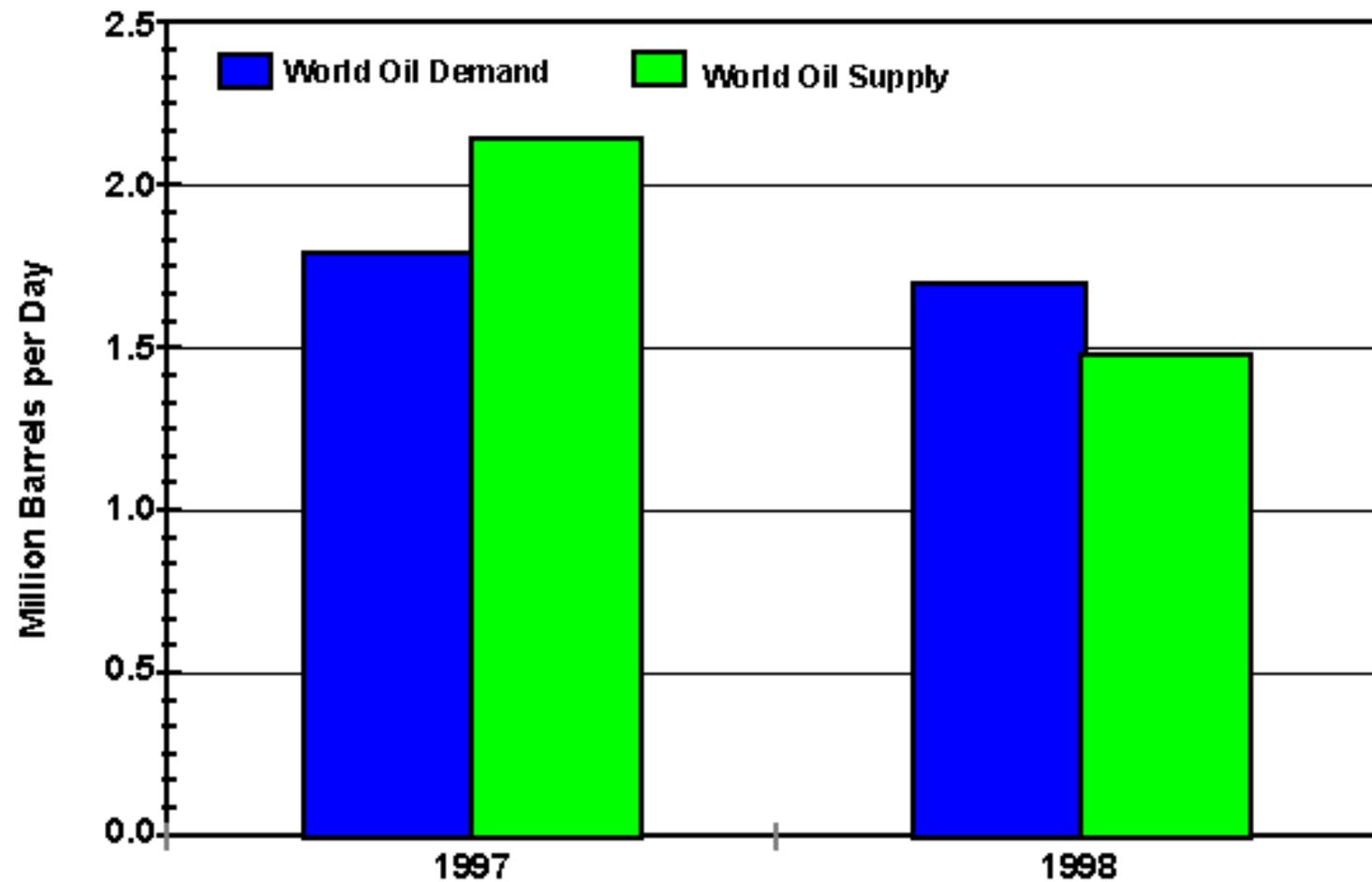
Figure U1. Monthly U.S. Crude Oil Costs*



*Average refiner acquisition cost of crude oil, composite of domestic and imported oils.

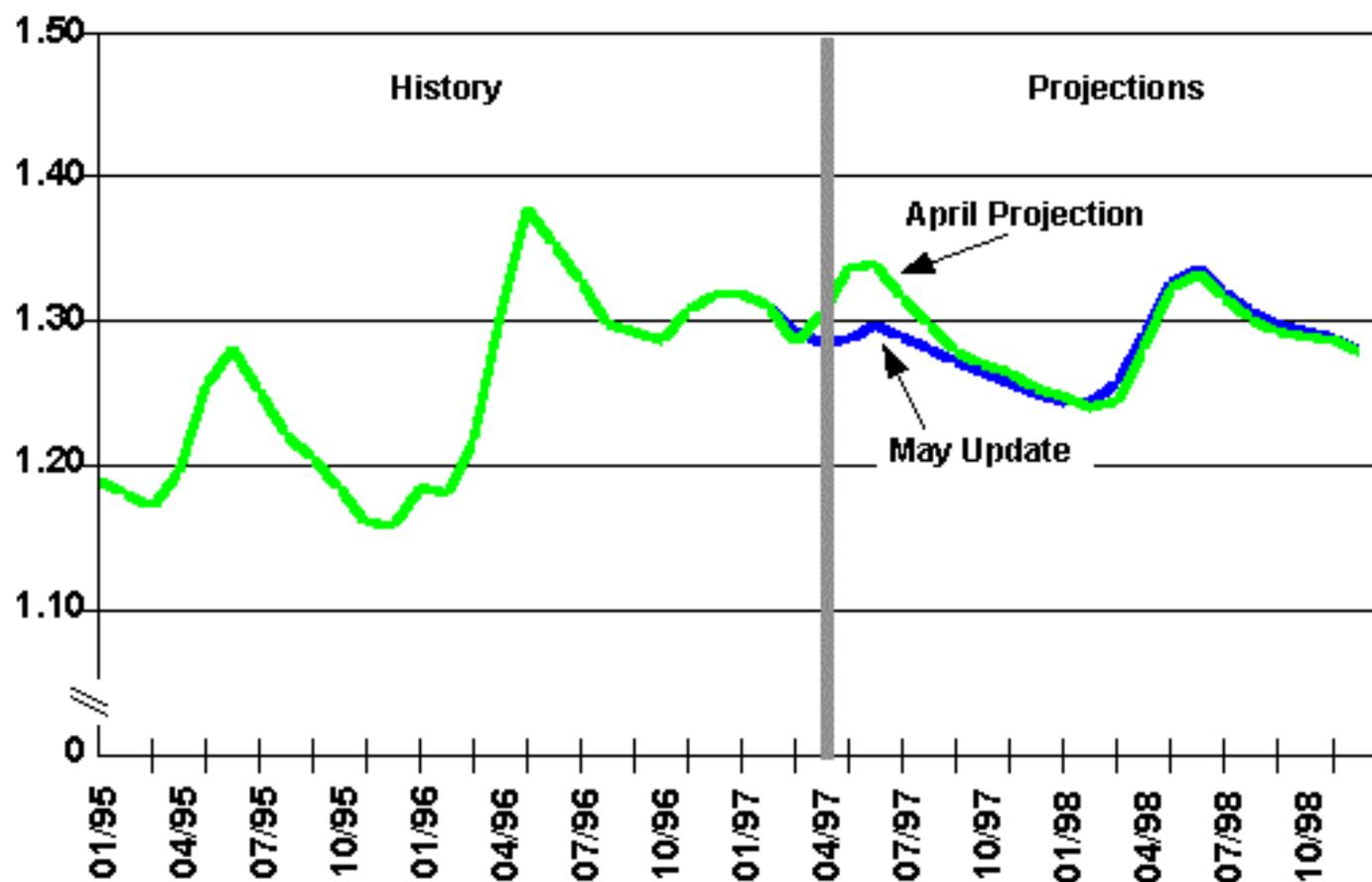
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U2. World Oil Demand and Supply Projections
(Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

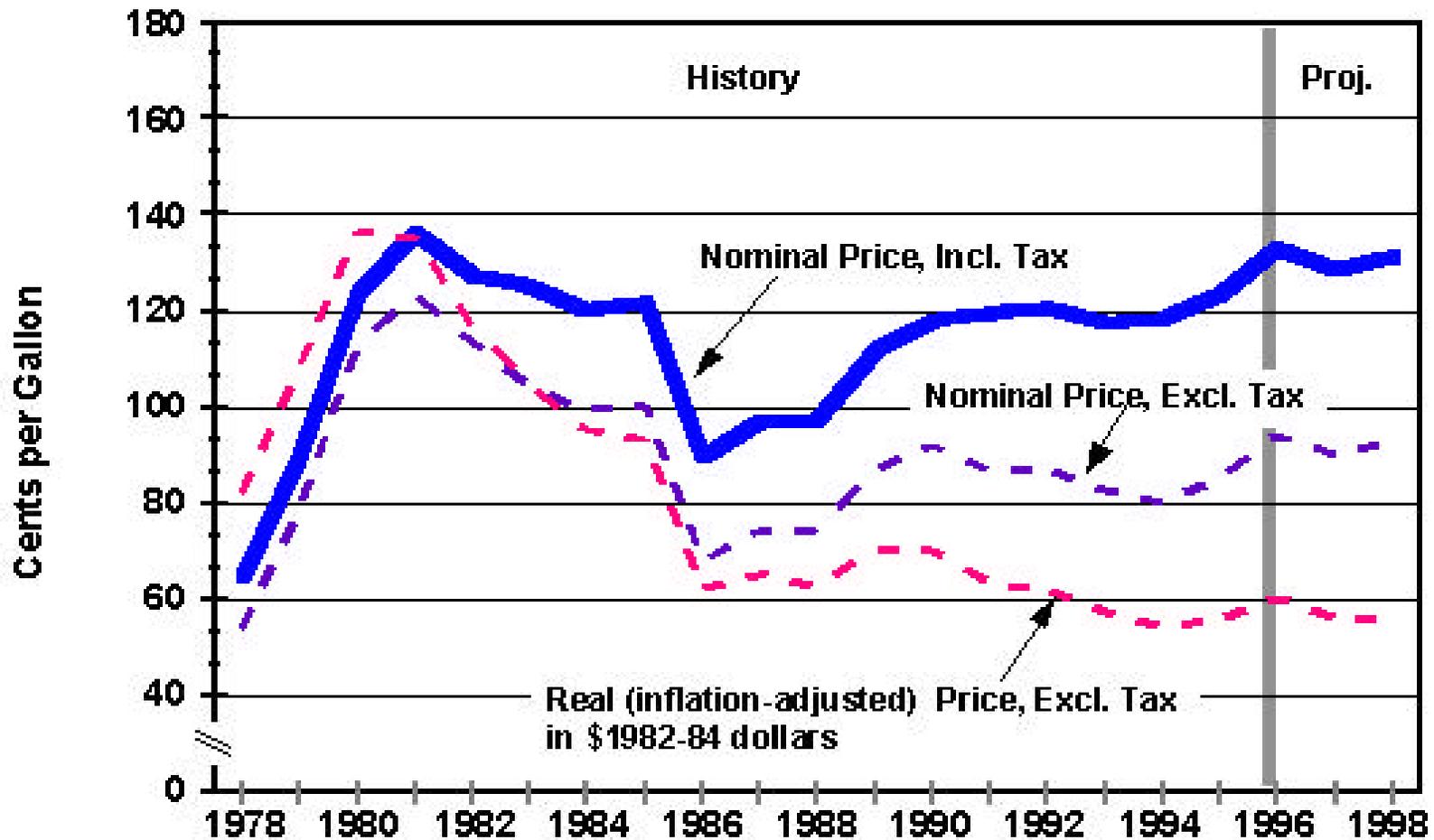
Figure U3. Monthly Average Gasoline Pump Prices*



* U.S. average, all grades, all service, including excise taxes

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U4. Summer* Average Motor Gasoline Prices



* Refers to the April- to-September period

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Table U1. U.S. Macroeconomic and Weather Assumptions: Mid World Oil Price Case - May 1997

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Macroeconomic | | | | | | | | | | | | | | | |
| Real Gross Domestic Product (billion chained 1992 dollars - SAAR) .. | 6814 | 6893 | 6928 | 7009 | <i>7049</i> | <i>7090</i> | <i>7121</i> | <i>7161</i> | <i>7203</i> | <i>7236</i> | <i>7262</i> | <i>7295</i> | 6911 | <i>7106</i> | <i>7249</i> |
| GDP Implicit Price Deflator (Index, 1992=1.000) | 1.090 | 1.096 | 1.102 | 1.107 | <i>1.113</i> | <i>1.119</i> | <i>1.125</i> | <i>1.131</i> | <i>1.139</i> | <i>1.145</i> | <i>1.152</i> | <i>1.159</i> | 1.099 | <i>1.122</i> | <i>1.149</i> |
| Real Disposable Personal Income (billion chained 1992 Dollars - SAAR) . | 5038 | 5055 | 5114 | 5147 | <i>5218</i> | <i>5241</i> | <i>5288</i> | <i>5316</i> | <i>5356</i> | <i>5372</i> | <i>5393</i> | <i>5410</i> | 5089 | <i>5266</i> | <i>5383</i> |
| Manufacturing Production (Index, 1987=1.000) | 1.229 | 1.248 | 1.263 | 1.274 | <i>1.291</i> | <i>1.300</i> | <i>1.307</i> | <i>1.310</i> | <i>1.317</i> | <i>1.325</i> | <i>1.333</i> | <i>1.338</i> | 1.253 | <i>1.302</i> | <i>1.328</i> |
| Consumer Price Index (index, 1980-1984=1.000) | 1.551 | 1.564 | 1.575 | 1.588 | <i>1.597</i> | <i>1.606</i> | <i>1.617</i> | <i>1.629</i> | <i>1.641</i> | <i>1.653</i> | <i>1.665</i> | <i>1.678</i> | 1.570 | <i>1.612</i> | <i>1.660</i> |
| Producer Price Index (index, 1980-1984=1.000) | 1.263 | 1.275 | 1.282 | 1.287 | <i>1.289</i> | <i>1.285</i> | <i>1.287</i> | <i>1.291</i> | <i>1.294</i> | <i>1.300</i> | <i>1.306</i> | <i>1.312</i> | 1.277 | <i>1.288</i> | <i>1.303</i> |
| Commercial Employment (millions) | 80.2 | 81.0 | 81.6 | 82.2 | <i>82.8</i> | <i>83.4</i> | <i>83.9</i> | <i>84.4</i> | <i>84.8</i> | <i>85.2</i> | <i>85.5</i> | <i>85.9</i> | 81.2 | <i>83.6</i> | <i>85.4</i> |
| Housing Stock (millions) | 110.6 | 111.0 | 111.4 | 111.8 | <i>112.1</i> | <i>112.5</i> | <i>112.9</i> | <i>113.2</i> | <i>113.6</i> | <i>113.9</i> | <i>114.2</i> | <i>114.6</i> | 111.2 | <i>112.7</i> | <i>114.1</i> |
| Weather | | | | | | | | | | | | | | | |
| Heating Degree-Days | | | | | | | | | | | | | | | |
| Middle Atlantic | 3120 | 750 | 87 | 2015 | <i>2814</i> | <i>747</i> | <i>105</i> | <i>2026</i> | <i>2993</i> | <i>716</i> | <i>105</i> | <i>2026</i> | 5972 | <i>5692</i> | <i>5839</i> |
| New England | 3361 | 933 | 151 | 2243 | <i>3119</i> | <i>939</i> | <i>171</i> | <i>2269</i> | <i>3267</i> | <i>915</i> | <i>171</i> | <i>2269</i> | 6688 | <i>6498</i> | <i>6621</i> |
| U.S. | 2406 | 552 | 89 | 1656 | <i>2143</i> | <i>577</i> | <i>89</i> | <i>1636</i> | <i>2327</i> | <i>524</i> | <i>89</i> | <i>1636</i> | 4703 | <i>4444</i> | <i>4576</i> |
| U.S. Gas-Weighted | 2501 | 636 | 135 | 1768 | <i>2275</i> | <i>539</i> | <i>81</i> | <i>1686</i> | <i>2426</i> | <i>539</i> | <i>81</i> | <i>1686</i> | 5040 | <i>4581</i> | <i>4732</i> |
| Cooling Degree-Days (U.S.) | 21 | 368 | 725 | 60 | <i>29</i> | <i>324</i> | <i>758</i> | <i>72</i> | <i>30</i> | <i>334</i> | <i>758</i> | <i>72</i> | 1174 | <i>1182</i> | <i>1193</i> |
| Miscellaneous Indicators | | | | | | | | | | | | | | | |
| Gas Weighted Industrial Production (index, 1987=1.000)..... | 1.161 | 1.172 | 1.189 | 1.199 | <i>1.205</i> | <i>1.213</i> | <i>1.220</i> | <i>1.223</i> | <i>1.228</i> | <i>1.234</i> | <i>1.240</i> | <i>1.242</i> | 1.180 | <i>1.215</i> | <i>1.236</i> |
| Vehicle Miles Traveled (million miles/day) | 6181 | 7014 | 7134 | 6625 | <i>6432</i> | <i>7195</i> | <i>7332</i> | <i>6806</i> | <i>6591</i> | <i>7372</i> | <i>7479</i> | <i>6934</i> | 6739 | <i>6943</i> | <i>7096</i> |
| Vehicle Fuel Efficiency (miles per gallon) | 19.61 | 20.91 | 21.23 | 19.98 | <i>20.26</i> | <i>21.08</i> | <i>21.39</i> | <i>20.13</i> | <i>20.42</i> | <i>21.26</i> | <i>21.56</i> | <i>20.27</i> | 20.47 | <i>20.74</i> | <i>20.90</i> |
| Real Vehicle Fuel Cost (cents per mile)..... | 3.93 | 4.12 | 3.91 | 4.11 | <i>4.04</i> | <i>3.81</i> | <i>3.71</i> | <i>3.84</i> | <i>3.73</i> | <i>3.75</i> | <i>3.65</i> | <i>3.79</i> | 4.02 | <i>3.84</i> | <i>3.73</i> |

SAAR: Seasonally-adjusted annualized rate.

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 CONTROL0297.

Table U2. International Petroleum Supply and Demand: Mid World Oil Price Case - May 1997
(Million Barrels per Day, Except Closing Stocks)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Demand ^a | | | | | | | | | | | | | | | |
| OECD | | | | | | | | | | | | | | | |
| U.S. (50 States)..... | 18.3 | 17.9 | 18.1 | 18.6 | 18.3 | 18.0 | 18.3 | 18.6 | 18.5 | 18.2 | 18.4 | 18.7 | 18.2 | 18.3 | 18.5 |
| U.S. Territories..... | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Canada..... | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Europe..... | 14.5 | 13.8 | 14.3 | 14.7 | 14.8 | 14.1 | 14.6 | 15.0 | 14.9 | 14.2 | 14.7 | 15.1 | 14.4 | 14.6 | 14.8 |
| Japan..... | 6.4 | 5.2 | 5.4 | 6.0 | 6.5 | 5.3 | 5.5 | 6.1 | 6.7 | 5.4 | 5.6 | 6.2 | 5.7 | 5.8 | 6.0 |
| Australia and New Zealand..... | 1.0 | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 | 0.9 | 1.0 | 1.0 |
| Total OECD..... | 42.2 | 39.8 | 40.6 | 42.3 | 42.6 | 40.2 | 41.2 | 42.7 | 43.1 | 40.7 | 41.7 | 43.1 | 41.2 | 41.7 | 42.2 |
| Non-OECD | | | | | | | | | | | | | | | |
| Former Soviet Union..... | 4.8 | 4.3 | 4.3 | 4.7 | 4.8 | 4.3 | 4.3 | 4.7 | 4.7 | 4.4 | 4.4 | 4.7 | 4.5 | 4.5 | 4.5 |
| Europe..... | 1.4 | 1.3 | 1.3 | 1.4 | 1.5 | 1.3 | 1.3 | 1.4 | 1.5 | 1.3 | 1.3 | 1.4 | 1.3 | 1.4 | 1.4 |
| China..... | 3.5 | 3.6 | 3.6 | 3.7 | 3.7 | 3.8 | 3.8 | 3.9 | 3.9 | 4.0 | 4.0 | 4.1 | 3.6 | 3.8 | 4.0 |
| Other Asia..... | 8.6 | 8.3 | 7.9 | 9.1 | 9.2 | 8.9 | 8.5 | 9.7 | 9.8 | 9.5 | 9.1 | 10.4 | 8.5 | 9.1 | 9.7 |
| Other Non-OECD..... | 12.5 | 12.8 | 12.5 | 12.8 | 12.9 | 13.3 | 13.0 | 13.2 | 13.2 | 13.6 | 13.3 | 13.5 | 12.7 | 13.1 | 13.4 |
| Total Non-OECD..... | 30.7 | 30.3 | 29.6 | 31.5 | 32.1 | 31.6 | 30.9 | 32.9 | 33.2 | 32.8 | 32.1 | 34.2 | 30.5 | 31.9 | 33.1 |
| Total World Demand..... | 73.0 | 70.0 | 70.2 | 73.8 | 74.7 | 71.8 | 72.1 | 75.6 | 76.4 | 73.5 | 73.8 | 77.3 | 71.8 | 73.5 | 75.2 |
| Supply ^b | | | | | | | | | | | | | | | |
| OECD | | | | | | | | | | | | | | | |
| U.S. (50 States)..... | 9.4 | 9.4 | 9.4 | 9.6 | 9.3 | 9.3 | 9.3 | 9.3 | 9.2 | 9.2 | 9.2 | 9.2 | 9.4 | 9.3 | 9.2 |
| Canada..... | 2.4 | 2.4 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 2.5 | 2.6 | 2.7 |
| North Sea ^c | 6.2 | 6.1 | 6.1 | 6.5 | 6.5 | 6.4 | 6.7 | 6.9 | 6.9 | 6.7 | 7.0 | 7.2 | 6.2 | 6.6 | 6.9 |
| Other OECD..... | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 |
| Total OECD..... | 19.5 | 19.6 | 19.6 | 20.2 | 20.1 | 19.9 | 20.2 | 20.5 | 20.4 | 20.2 | 20.5 | 20.8 | 19.7 | 20.2 | 20.5 |
| Non-OECD | | | | | | | | | | | | | | | |
| OPEC..... | 28.1 | 28.1 | 28.3 | 28.7 | 29.4 | 29.3 | 29.3 | 29.5 | 29.4 | 29.5 | 29.7 | 29.9 | 28.3 | 29.4 | 29.6 |
| Former Soviet Union..... | 7.1 | 7.1 | 7.1 | 7.1 | 7.0 | 7.1 | 7.1 | 7.2 | 7.3 | 7.4 | 7.5 | 7.6 | 7.1 | 7.1 | 7.5 |
| China..... | 3.1 | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | 3.2 | 3.3 | 3.3 | 3.3 | 3.3 | 3.4 | 3.1 | 3.2 | 3.3 |
| Mexico..... | 3.3 | 3.4 | 3.3 | 3.3 | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.3 | 3.4 | 3.5 |
| Other Non-OECD..... | 10.1 | 10.2 | 10.2 | 10.4 | 10.6 | 10.6 | 10.7 | 10.8 | 10.9 | 11.0 | 11.1 | 11.2 | 10.2 | 10.7 | 11.1 |
| Total Non-OECD..... | 51.7 | 51.8 | 52.0 | 52.6 | 53.5 | 53.5 | 53.7 | 54.2 | 54.3 | 54.7 | 55.1 | 55.5 | 52.0 | 53.7 | 54.9 |
| Total World Supply..... | 71.2 | 71.4 | 71.6 | 72.8 | 73.6 | 73.4 | 73.9 | 74.6 | 74.8 | 74.9 | 75.6 | 76.3 | 71.8 | 73.9 | 75.4 |
| Stock Changes | | | | | | | | | | | | | | | |
| Net Stock Withdrawals or Additions (-) | | | | | | | | | | | | | | | |
| U.S. (50 States including SPR)..... | 0.9 | -0.7 | -0.1 | 0.5 | 0.3 | -0.7 | -0.5 | 0.4 | 0.4 | -0.6 | -0.3 | 0.4 | 0.1 | -0.1 | -0.0 |
| Other..... | 0.8 | -0.7 | -1.3 | 0.5 | 0.8 | -0.9 | -1.4 | 0.5 | 1.2 | -0.7 | -1.5 | 0.6 | -0.1 | -0.2 | -0.1 |
| Total Stock Withdrawals..... | 1.7 | -1.4 | -1.3 | 1.0 | 1.1 | -1.6 | -1.8 | 0.9 | 1.6 | -1.3 | -1.9 | 1.1 | 0.0 | -0.3 | -0.1 |
| Closing Stocks, OECD only (billion barrels).. | 2.6 | 2.6 | 2.7 | 2.7 | 2.5 | 2.6 | 2.7 | 2.7 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| Non-OPEC Supply..... | 43.1 | 43.3 | 43.3 | 44.1 | 44.2 | 44.1 | 44.6 | 45.2 | 45.3 | 45.3 | 45.9 | 46.4 | 43.5 | 44.5 | 45.7 |
| Net Exports from Former Soviet Union..... | 2.4 | 2.8 | 2.8 | 2.4 | 2.3 | 2.7 | 2.8 | 2.5 | 2.6 | 3.0 | 3.1 | 2.9 | 2.6 | 2.6 | 2.9 |

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

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

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

OECD: Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Mexico is also a member, but is not yet included in OECD data.

OPEC: Organization of Petroleum Exporting Countries: Algeria, Gabon, 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, Kazakstan, 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 italic. 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 U3. U.S. Energy Prices - May 1997
(Nominal Dollars)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Imported Crude Oil ^a | | | | | | | | | | | | | | | |
| (dollars per barrel)..... | 18.39 | 20.11 | 20.69 | 23.06 | 21.04 | 18.34 | 18.25 | 19.00 | 19.50 | 20.25 | 19.74 | 20.34 | 20.60 | 19.12 | 19.97 |
| Natural Gas Wellhead | | | | | | | | | | | | | | | |
| (dollars per thousand cubic feet)..... | 2.01 | 2.10 | 2.13 | 2.74 | 2.91 | 2.12 | 2.15 | 2.32 | 2.34 | 2.05 | 2.05 | 2.33 | 2.25 | 2.38 | 2.19 |
| Petroleum Products (dollars per gallon) | | | | | | | | | | | | | | | |
| Gasoline Retail ^b | 1.20 | 1.35 | 1.31 | 1.30 | 1.31 | 1.29 | 1.28 | 1.26 | 1.25 | 1.32 | 1.31 | 1.29 | 1.29 | 1.28 | 1.29 |
| No. 2 Diesel Oil, Retail | 1.16 | 1.23 | 1.21 | 1.30 | 1.25 | 1.19 | 1.16 | 1.22 | 1.21 | 1.21 | 1.19 | 1.24 | 1.23 | 1.20 | 1.21 |
| No. 2 Heating Oil, Wholesale | 0.59 | 0.61 | 0.62 | 0.72 | 0.65 | 0.56 | 0.55 | 0.60 | 0.60 | 0.57 | 0.56 | 0.61 | 0.64 | 0.59 | 0.59 |
| No. 2 Heating Oil, Retail..... | 0.96 | 0.97 | 0.90 | 1.05 | 1.05 | 0.94 | 0.88 | 0.95 | 1.00 | 0.95 | 0.90 | 0.97 | 0.97 | 0.97 | 0.96 |
| No. 6 Residual Fuel Oil, Retail ^c | 0.46 | 0.43 | 0.42 | 0.49 | 0.45 | 0.41 | 0.40 | 0.42 | 0.45 | 0.44 | 0.42 | 0.46 | 0.45 | 0.42 | 0.44 |
| Electric Utility Fuels (dollars per million Btu) | | | | | | | | | | | | | | | |
| Coal..... | 1.29 | 1.30 | 1.28 | 1.28 | 1.29 | 1.30 | 1.27 | 1.26 | 1.26 | 1.27 | 1.25 | 1.24 | 1.29 | 1.28 | 1.25 |
| Heavy Fuel Oil ^d | 3.01 | 2.93 | 2.83 | 3.35 | 3.04 | 2.79 | 2.71 | 2.91 | 3.02 | 2.97 | 2.86 | 3.12 | 3.01 | 2.86 | 2.99 |
| Natural Gas..... | 2.79 | 2.55 | 2.47 | 2.95 | 3.23 | 2.54 | 2.54 | 2.77 | 2.76 | 2.41 | 2.37 | 2.70 | 2.64 | 2.69 | 2.51 |
| Other Residential | | | | | | | | | | | | | | | |
| Natural Gas | | | | | | | | | | | | | | | |
| (dollars per thousand cubic feet)..... | 5.74 | 6.67 | 8.33 | 6.47 | 6.69 | 6.91 | 7.90 | 6.34 | 6.23 | 6.75 | 7.83 | 6.36 | 6.30 | 6.72 | 6.47 |
| Electricity | | | | | | | | | | | | | | | |
| (cents per Kilowatthour)..... | 7.90 | 8.52 | 8.83 | 8.31 | 7.94 | 8.49 | 8.79 | 8.32 | 7.86 | 8.46 | 8.74 | 8.26 | 8.39 | 8.39 | 8.33 |

^aRefiner acquisition cost (RAC) of imported crude oil.

^bAverage for all grades and services.

^cAverage for all sulfur contents.

^dIncludes 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.

The expected gasoline price path would not be typical of the normal spring driving season price run up. In the previous report, it had been expected that gasoline prices this spring would increase by at least a few cents per gallon from the first quarter prices, compared to the 15 cents per gallon first-to-second quarter jump in 1996. Now, it is expected that these prices may actually fall by a few cents per gallon. These prices should continue to decline through the end of the year if crude oil prices are more or less level. In 1998, a return to more typical pump price seasonality than in 1997 is projected. On balance, the annual average retail price is expected to increase by about a penny per gallon in 1998.

California Situation:

Gasoline Prices in the Golden State Trend Up Despite Declining Prices Elsewhere: But Some Relief Appears to be on the Way

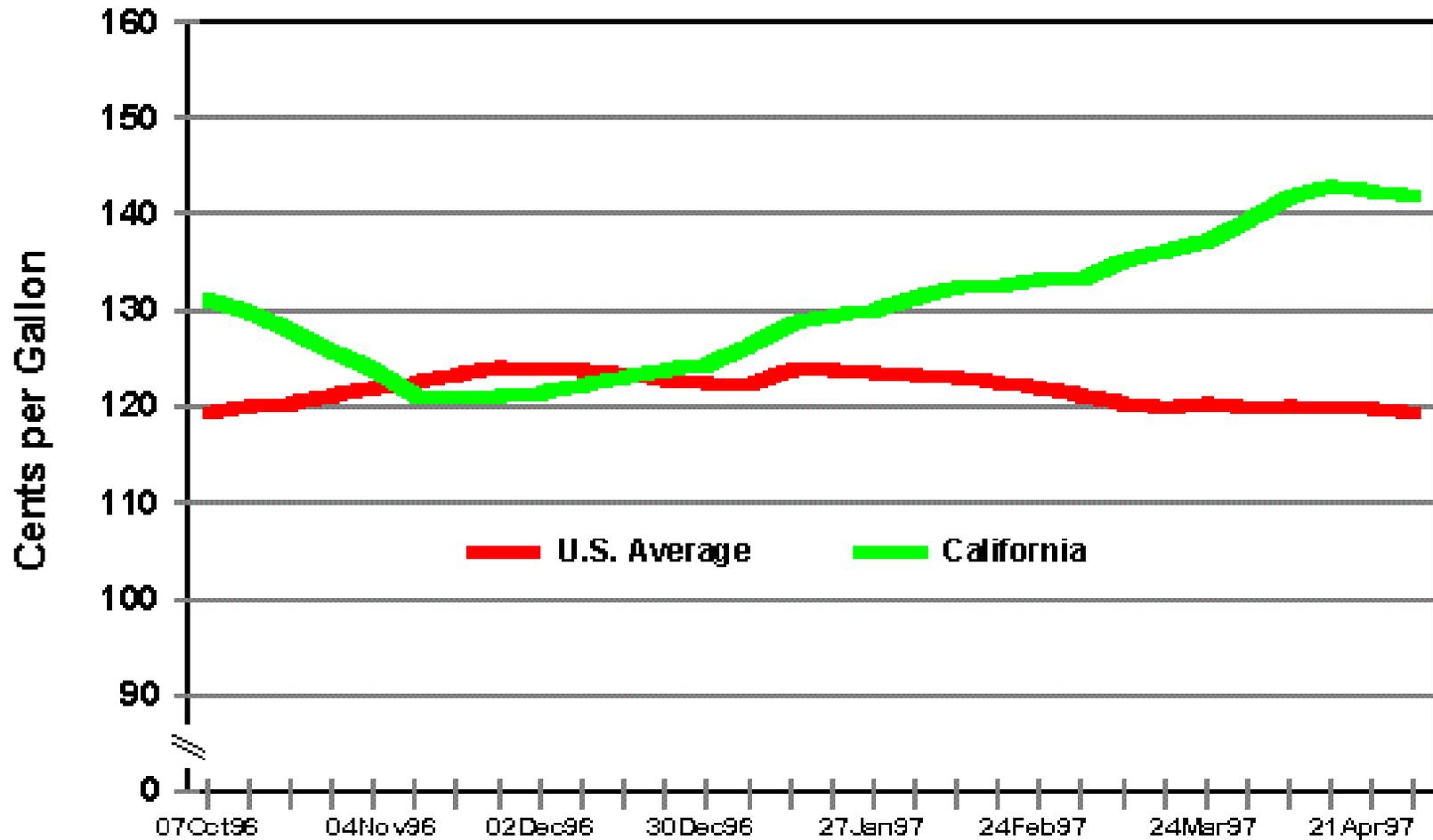
During the past few months, California retail motor gasoline prices have risen substantially. From the recent low of \$1.21 per gallon last November, California regular gasoline prices reached a high of \$1.42 in mid-April. During the same period, average U.S. regular motor gasoline prices declined from \$1.24 to \$1.20. [Figure U5](#) summarizes national and California retail gasoline prices since October.

[Figure U6](#) shows crude oil, wholesale and retail gasoline prices since October. The rise in California motor gasoline prices since November results mainly from three developments. The first is a stabilization of supply and demand (and, therefore, prices) in November and December. This trend was underpinned by a firming of crude oil prices, as shown in [Figure U6](#). The previous fall had witnessed gas wars resulting from ample supplies, driving down prices below the national average. Second, the gasoline price spike between mid-January and end of February stemmed from several refinery outages. Although maintenance in anticipation of the upcoming summer driving season typically occurs during this period, prices rose sharply in the wake of the January 21 fire at Tosco's refinery, which temporarily removed 120,000 barrels per day--or 15 percent--of California's motor gasoline production. But increases in output from other California refineries helped prices level off by late February. (In contrast, the Martinez refinery explosion last spring occurred when RFG production capability was less able to respond to such a disruption--hence the substantial price hikes at that time). Finally, the threat of a walkout by Unocal refinery workers bolstered prices once again from March to mid-April. Although that dispute was resolved before disruptions occurred, that uncertainty lifted wholesale product prices even though crude oil prices fell slightly.

Since the resolution of the Unocal dispute, California wholesale gasoline prices have tumbled sharply from 81 cents per gallon to 65 cents per gallon and are approaching the recent low of 60 cents per gallon observed last November. But retail prices usually respond gradually to shifts in wholesale prices. These prices continued to rise slightly through the second week of April, reaching a peak of \$1.42 per gallon. They have, however, fallen approximately 3 cents per gallon in the last 2 weeks in response to the earlier drop in wholesale gasoline costs. (See [California Gasoline Prices](#) for a table of weekly California retail gasoline prices). Over time it is expected that the reduced pressure on the spot market will more fully work its way into retail prices.

Figure U5. Regional Retail Gasoline Prices

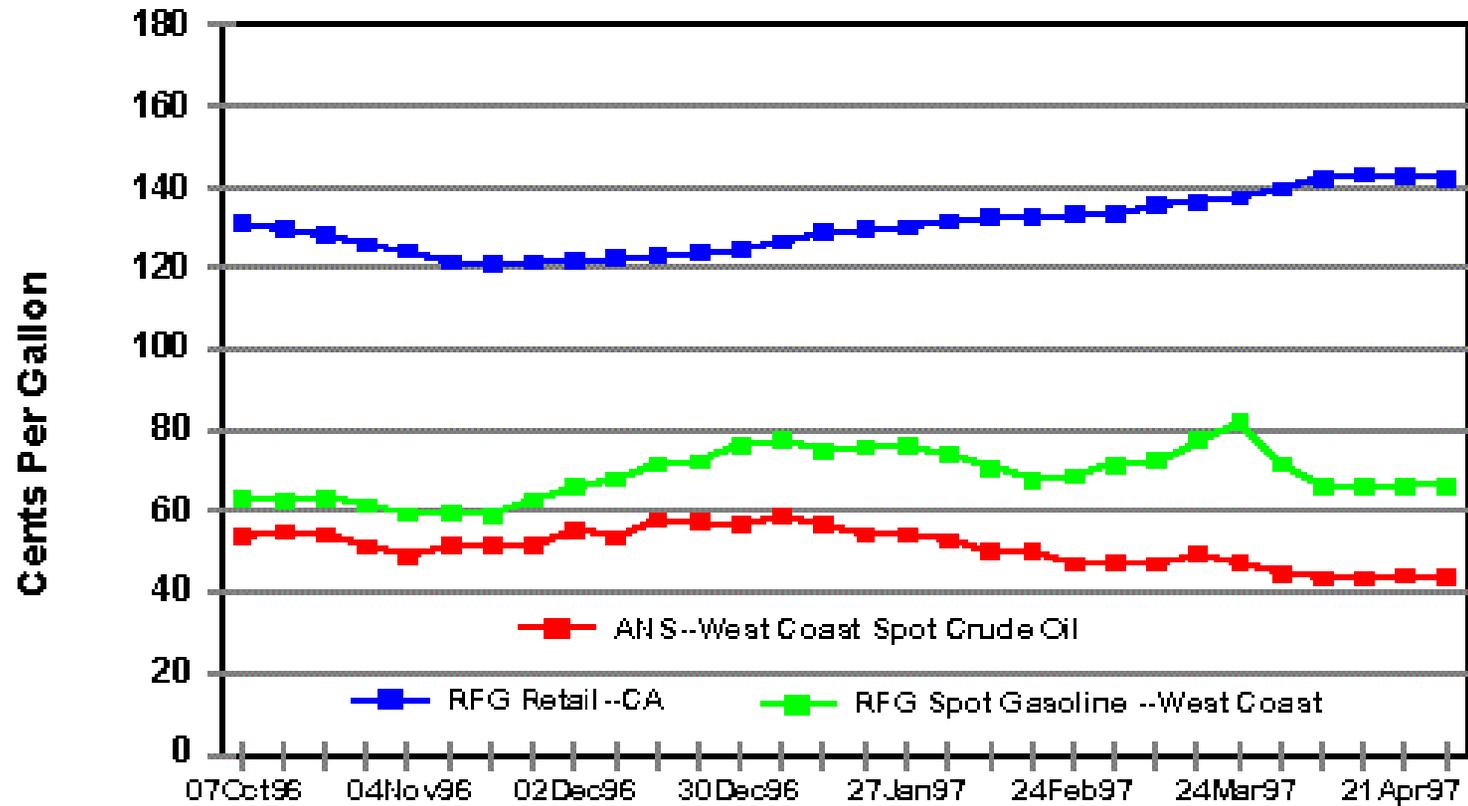
(Regular Grade, Weekly Averages)



(Note: RFG in California)

Source: Energy Information Administration, Petroleum Marketing Division

Figure U6. CRUDE OIL & MOTOR GASOLINE* PRICES
 (Weekly Averages)



*Product Prices Are Regular Grade

Source: Energy Information Administration, Petroleum Marketing Division

Demand

Gasoline demand, estimated last month as having risen only 0.5 percent in the first quarter of 1997 compared to year-earlier levels, has been revised upward slightly, so that first quarter 1997 growth is estimated at 0.7 percent over first quarter 1996 ([Figure U7](#)). Despite the revision, demand so far this year has been relatively sluggish. High retail gasoline prices (up 9.4 percent from 1996 levels for the first quarter 1997 - [Figure U8](#)) have played a role in keeping demand growth on the low side. However, the economy certainly can't be blamed for weak gasoline growth: expansion during the first quarter was evidently at a ten-year high (see the April 30 news release from the [Bureau of Economic Analysis](#)). In the current outlook, retail prices are expected to swing from strong positive growth seen over the past two quarters to negative growth territory for the rest of 1997. This development, along with growing confidence in strong economic growth this year reinforces the expectation that gasoline demand growth will exhibit solid growth this summer, probably averaging 1.9 percent above 1996 levels for the driving season. (See also: [Table U4](#)).

Stocks

Gasoline stocks are still below the normal level at this time and are expected to remain below historical average levels at least through the end of this summer ([Figure U9](#)). While this situation is expected to keep short-term gasoline supply tight (refiner margins are expected to increase from year-ago levels - [Figure U10](#)) the expectation of a marked improvement in the availability of fuel ethanol and other oxygenates this year should help minimize additional pressure on the gasoline market ([Figure U11](#)). Also, in this update to the short-term outlook, we have incorporated a higher estimate for operable refinery capacity (based on upward revisions reported since early April). The increase has reduced expected increases in refinery utilization for the summer to the point where little or no change in utilization is expected for the driving season compared to 1996 levels ([Figures U12](#) and [U13](#)).

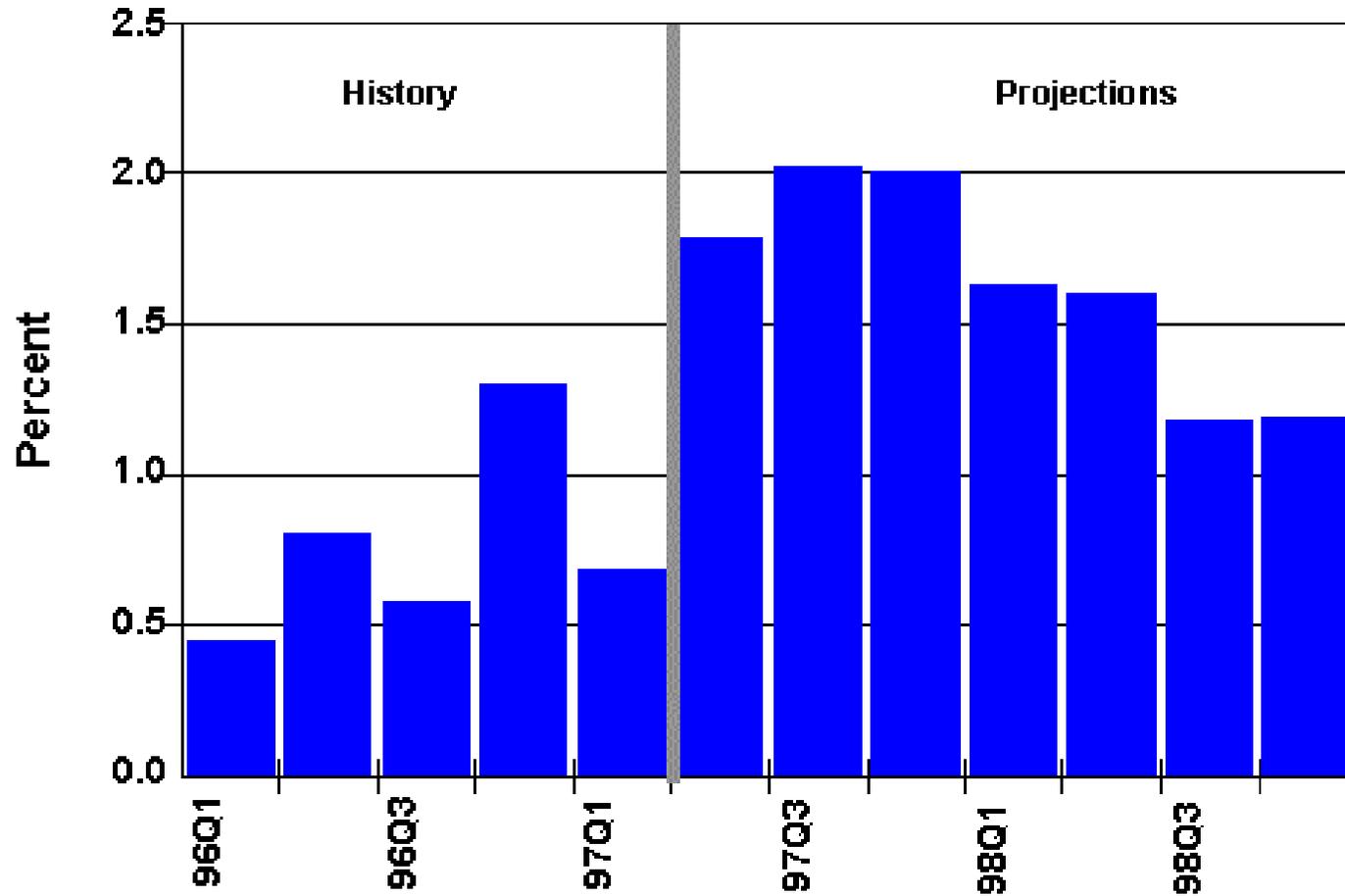
Distillate Fuel:

Demand

Distillate fuel demand for the first quarter proved to be somewhat stronger than appeared to be the case based on the preliminary numbers ([Figure U14](#)). Demand for the first three months of the year is now estimated to have been down only 0.2 percent above 1996 levels, compared to the 2.5-percent decline estimate provided in April's report ([Figure U15](#)). This adjustment has not resulted in higher projected demand for the rest of 1997, but merely lends strength to the expectation that solid growth in the diesel fuel market for the rest of 1997 is likely. Distillate demand growth this summer will probably average about 3.5 percent compared to 1996. Weather differences (in 1997) plus a slowing economy (in 1998) are expected nevertheless to keep annual average distillate demand growth in 1997 and 1998 well below the robust 5.0 percent rate seen in 1996.

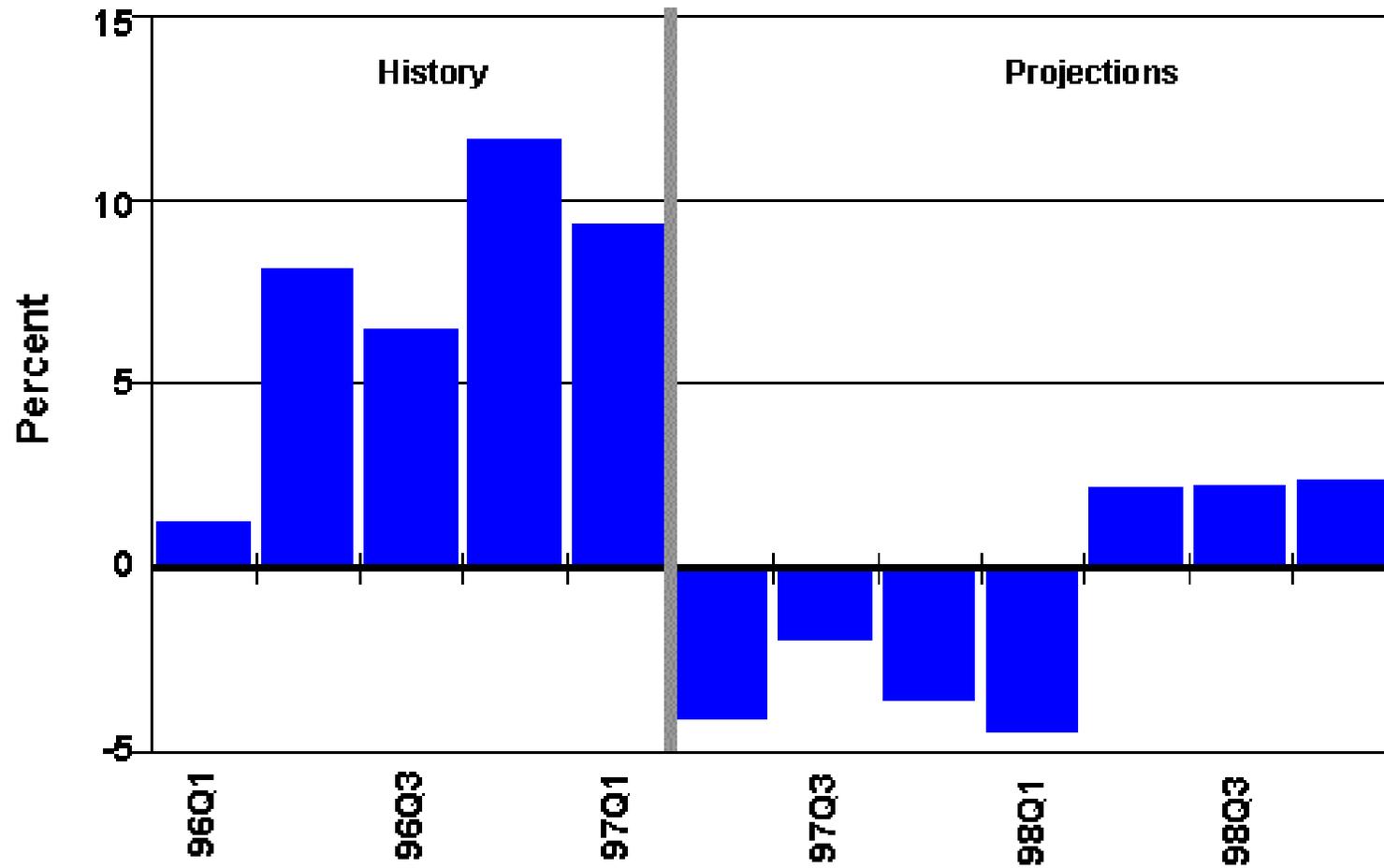
Prices

Figure U7. Quarterly Gasoline Demand Growth
(Percent Change from Year Ago)



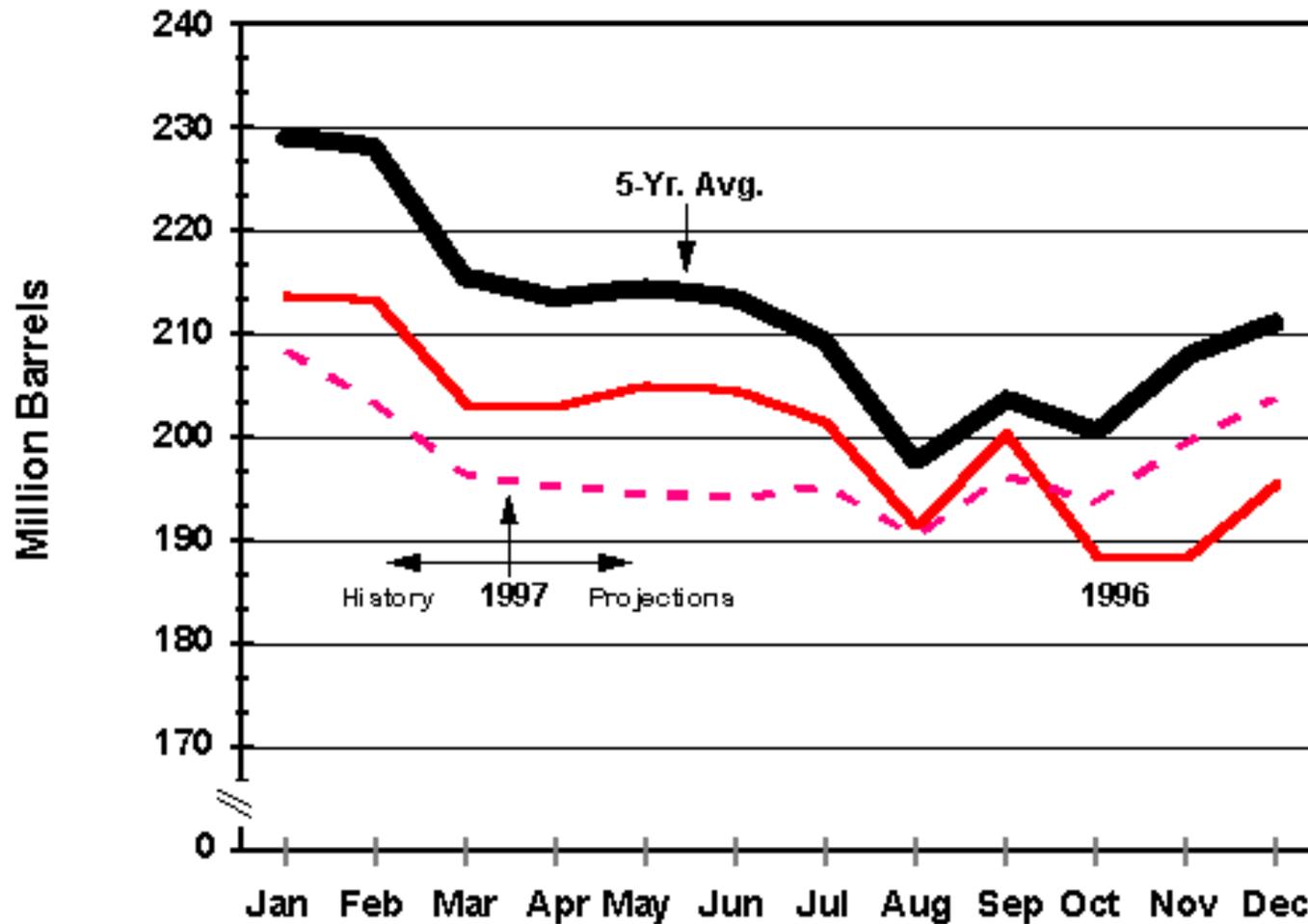
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U8. Quarterly Retail Gasoline Price Change
(Percent Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

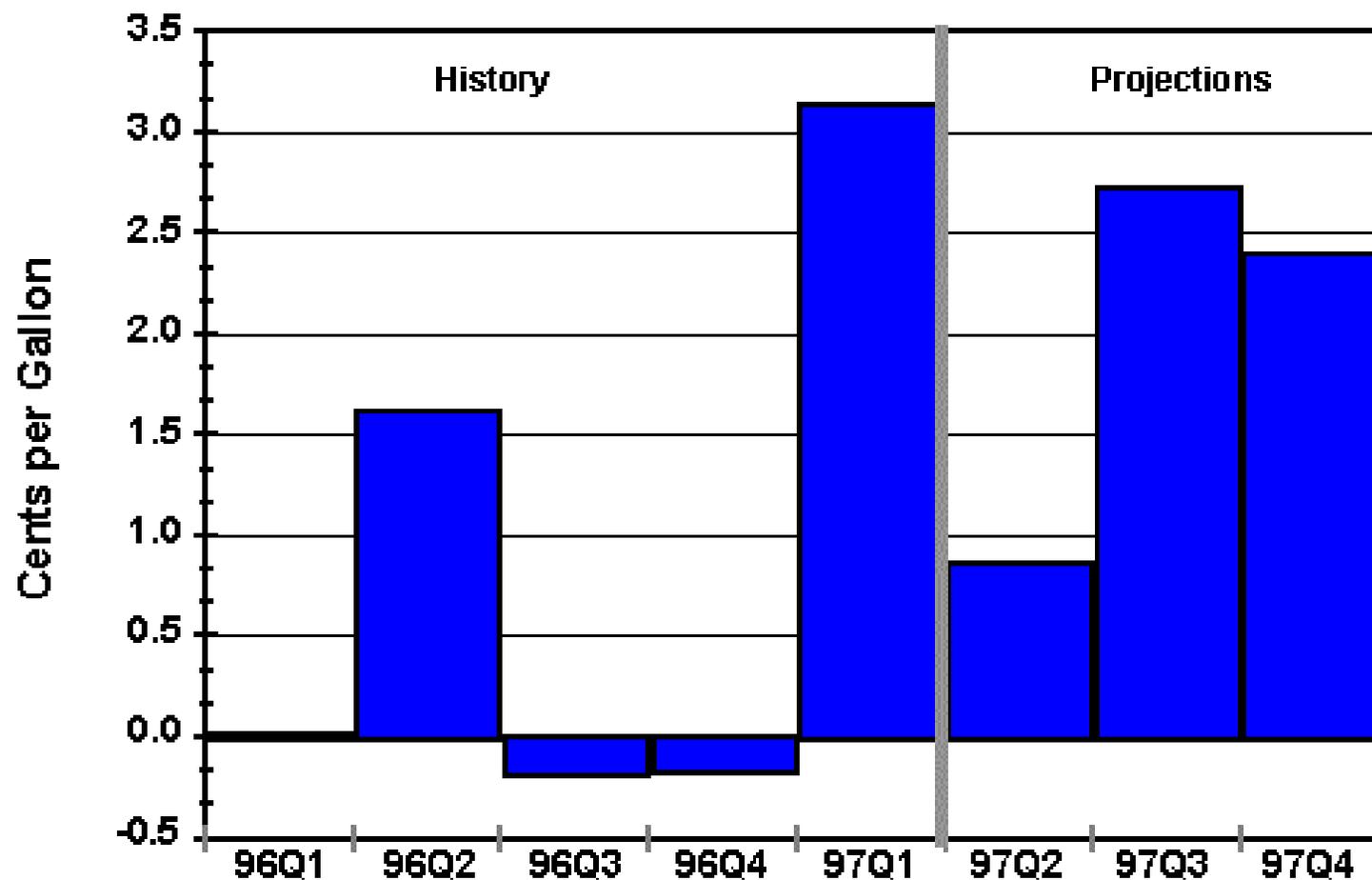
Figure U9. Total Motor Gasoline Stocks



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U10. Refiner Gasoline Margins*

(Change from Year Ago)

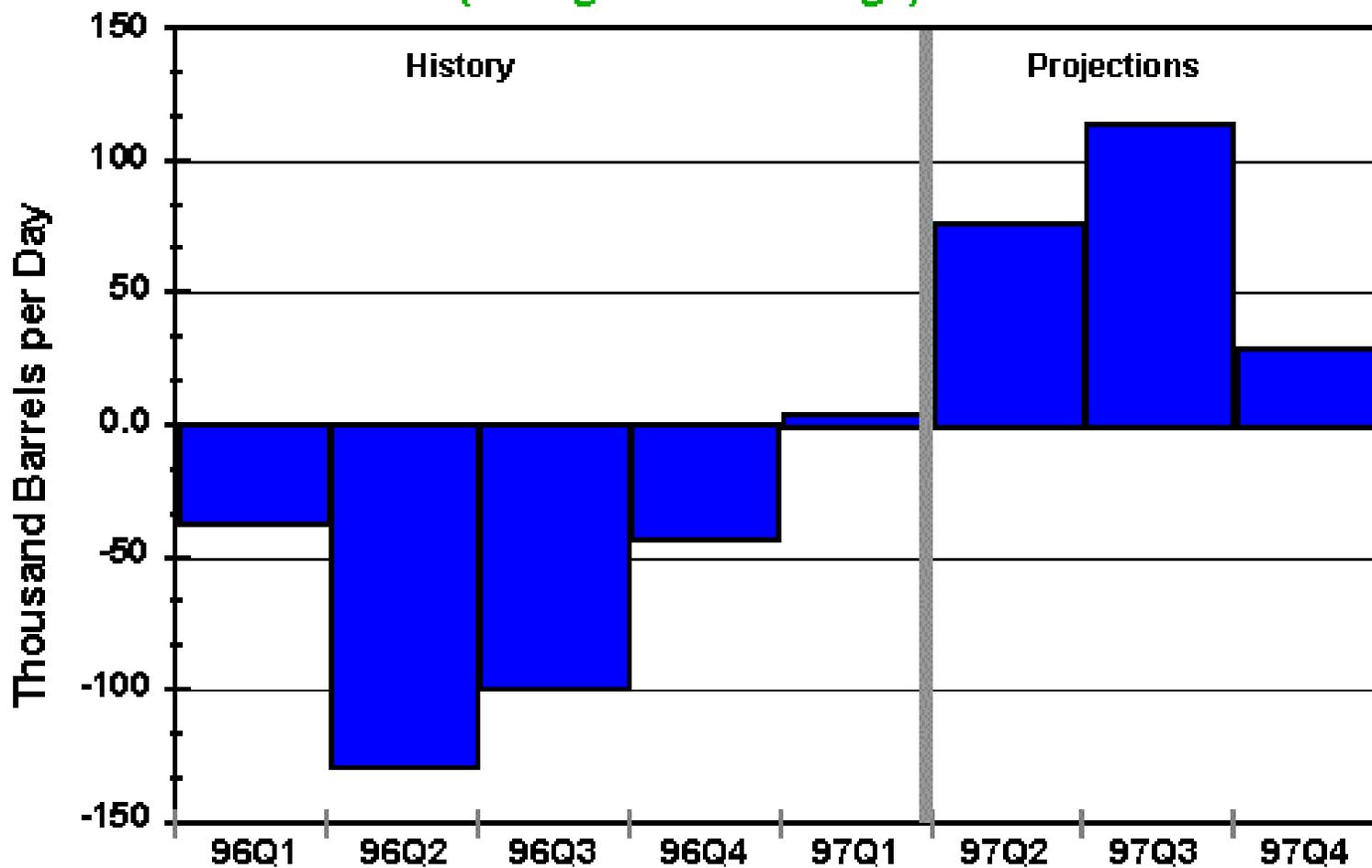


*Refiner Price of Gasoline less Crude Cost

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

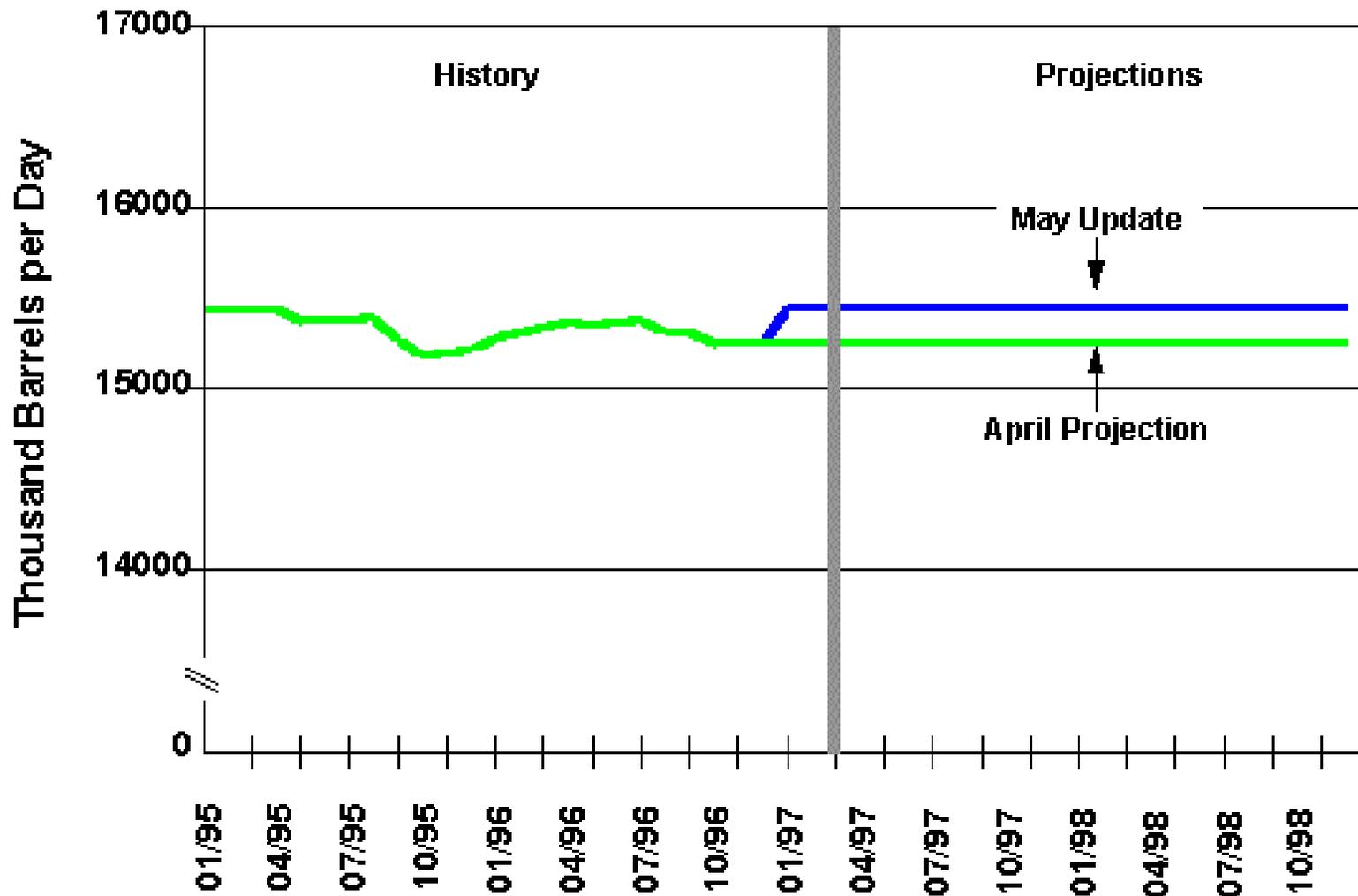
Figure U11. Motor Gasoline Field Production

(Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

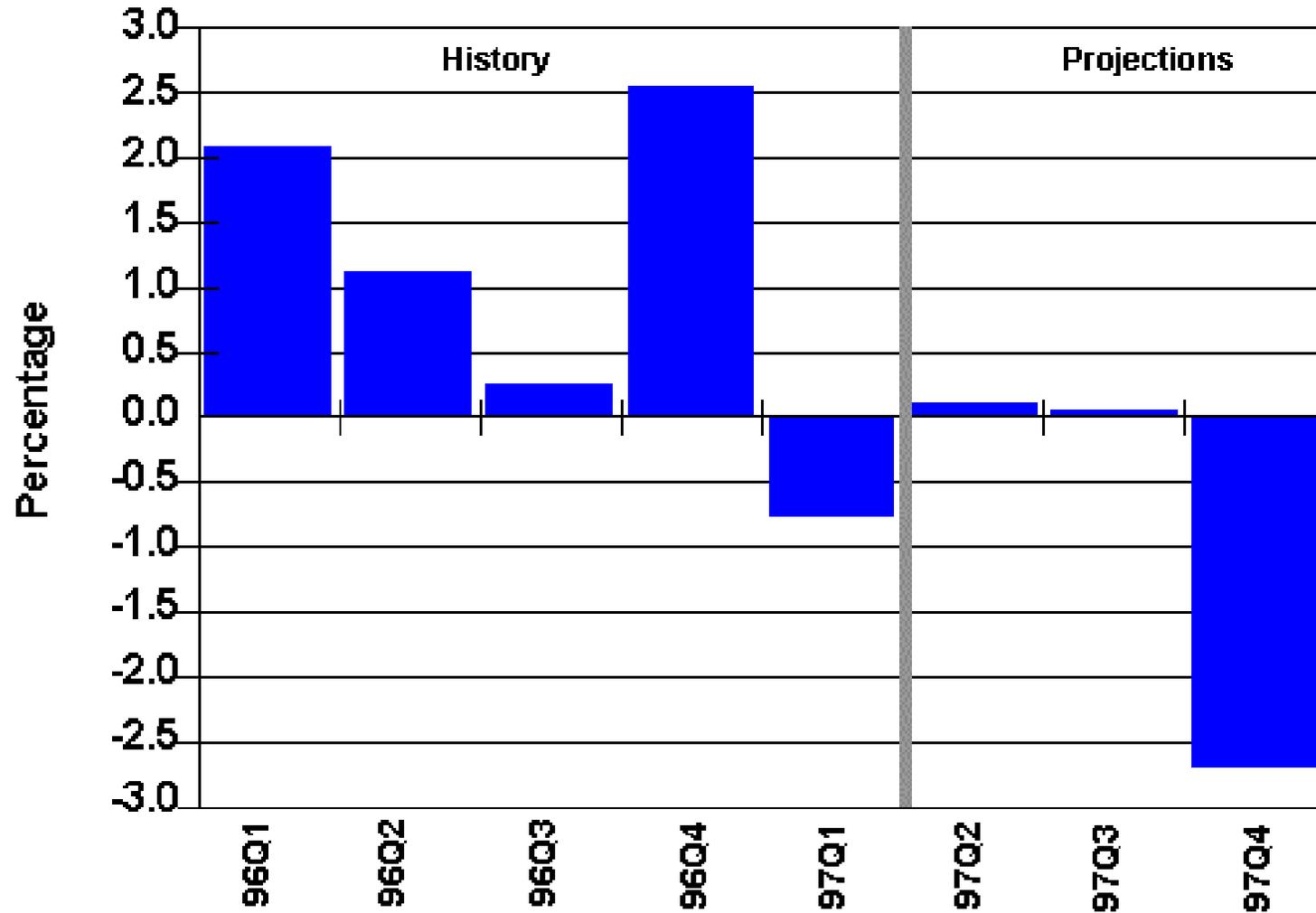
Figure U12. Operable Refinery Capacity



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

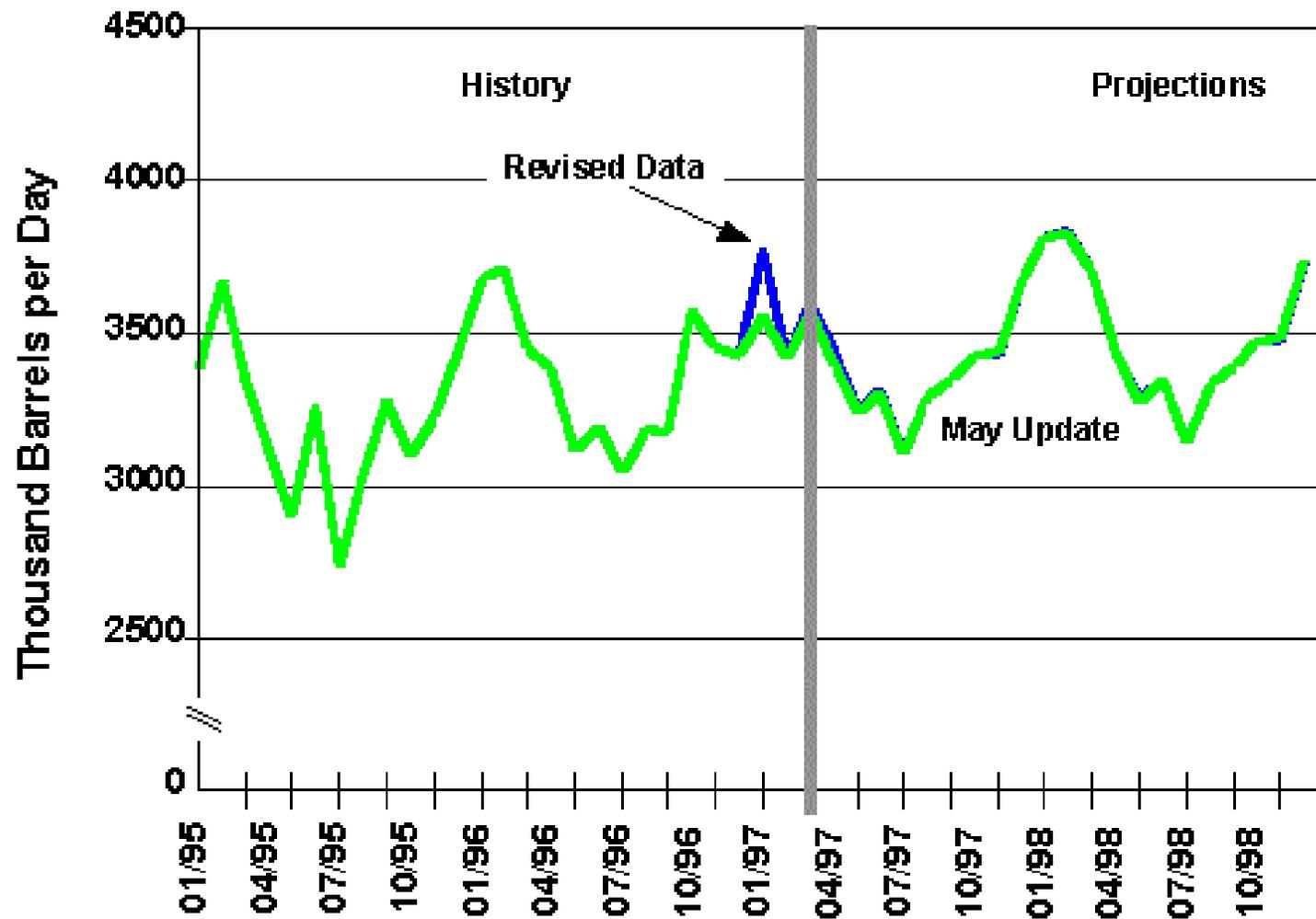
Figure U13. Refinery Utilization

(Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

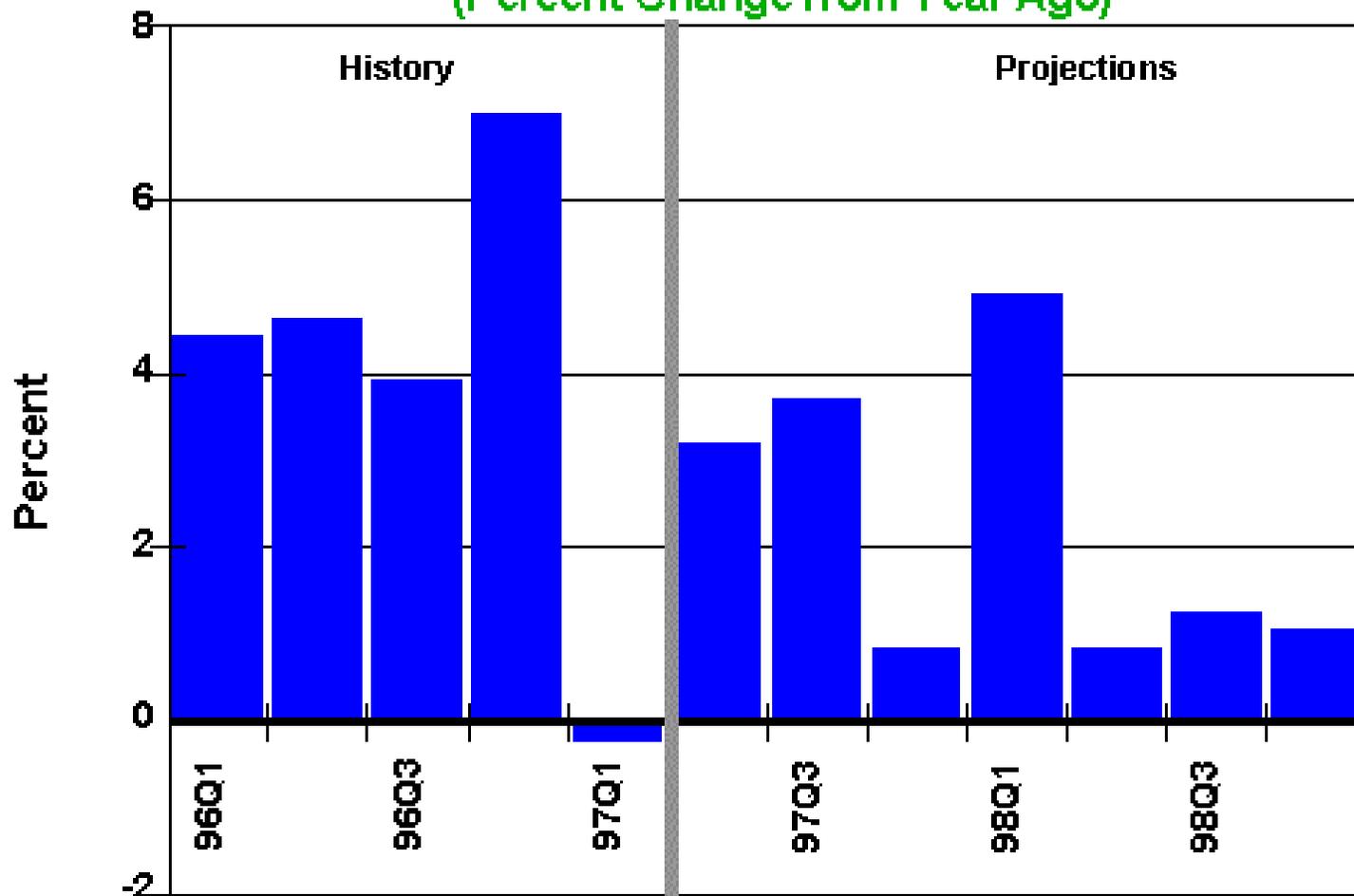
Figure U14. Distillate Fuel Demand



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U15. Quarterly Distillate Fuel Demand

(Percent Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Table U4. U.S. Petroleum Supply and Demand: Mid World Oil Price Case - May 1997
(Thousand Barrels per Day, Except Closing Stocks)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|-------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Supply | | | | | | | | | | | | | | | |
| Crude Oil Supply | | | | | | | | | | | | | | | |
| Domestic Production ^a | 6519 | 6474 | 6424 | 6468 | <i>6441</i> | <i>6385</i> | <i>6309</i> | <i>6311</i> | <i>6289</i> | <i>6207</i> | <i>6140</i> | <i>6134</i> | 6471 | 6361 | 6192 |
| Alaska | 1460 | 1375 | 1347 | 1400 | <i>1351</i> | <i>1294</i> | <i>1259</i> | <i>1291</i> | <i>1278</i> | <i>1215</i> | <i>1178</i> | <i>1193</i> | 1396 | 1299 | 1216 |
| Lower 48 | 5060 | 5099 | 5077 | 5068 | <i>5089</i> | <i>5091</i> | <i>5050</i> | <i>5020</i> | <i>5011</i> | <i>4992</i> | <i>4961</i> | <i>4942</i> | 5076 | 5062 | 4976 |
| Net Imports (including SPR) ^b | 6901 | 7666 | 7602 | 7317 | <i>7329</i> | <i>7880</i> | <i>7861</i> | <i>7441</i> | <i>7288</i> | <i>8064</i> | <i>8045</i> | <i>7691</i> | 7372 | 7629 | 7774 |
| Other Supply | | | | | | | | | | | | | | | |
| NGL Production..... | 1735 | 1827 | 1859 | 1900 | <i>1837</i> | <i>1829</i> | <i>1840</i> | <i>1851</i> | <i>1823</i> | <i>1837</i> | <i>1842</i> | <i>1858</i> | 1831 | 1839 | 1840 |
| Net Product Imports ^c | 960 | 1146 | 988 | 1093 | <i>1164</i> | <i>1276</i> | <i>1297</i> | <i>1173</i> | <i>1282</i> | <i>1340</i> | <i>1280</i> | <i>1161</i> | 1047 | 1228 | 1265 |
| Other Supply | 2177 | 801 | 1219 | 1856 | <i>1535</i> | <i>665</i> | <i>975</i> | <i>1832</i> | <i>1838</i> | <i>779</i> | <i>1130</i> | <i>1894</i> | 1513 | 1252 | 1410 |
| Demand | | | | | | | | | | | | | | | |
| Total Demand..... | 18292 | 17914 | 18092 | 18634 | <i>18306</i> | <i>18035</i> | <i>18282</i> | <i>18608</i> | <i>18520</i> | <i>18227</i> | <i>18437</i> | <i>18738</i> | 18234 | 18309 | 18481 |
| Motor Gasoline..... | 7511 | 7985 | 8001 | 7896 | <i>7562</i> | <i>8128</i> | <i>8163</i> | <i>8055</i> | <i>7686</i> | <i>8258</i> | <i>8259</i> | <i>8150</i> | 7849 | 7979 | 8090 |
| Jet Fuel | 1605 | 1517 | 1587 | 1600 | <i>1570</i> | <i>1530</i> | <i>1609</i> | <i>1651</i> | <i>1621</i> | <i>1578</i> | <i>1639</i> | <i>1674</i> | 1577 | 1590 | 1628 |
| Distillate Fuel Oil | 3616 | 3231 | 3135 | 3490 | <i>3608</i> | <i>3334</i> | <i>3252</i> | <i>3519</i> | <i>3785</i> | <i>3361</i> | <i>3293</i> | <i>3557</i> | 3368 | 3428 | 3498 |
| Residual Fuel Oil..... | 958 | 771 | 829 | 807 | <i>913</i> | <i>792</i> | <i>757</i> | <i>882</i> | <i>1037</i> | <i>773</i> | <i>722</i> | <i>820</i> | 841 | 836 | 837 |
| Other Oils ^d | 4602 | 4410 | 4540 | 4841 | <i>4653</i> | <i>4251</i> | <i>4501</i> | <i>4501</i> | <i>4391</i> | <i>4257</i> | <i>4524</i> | <i>4537</i> | 4599 | 4476 | 4428 |
| Ending Stocks (million barrels per day) | | | | | | | | | | | | | | | |
| Crude Oil Stocks (excl. SPR)..... | 300 | 314 | 304 | 285 | <i>310</i> | <i>314</i> | <i>311</i> | <i>311</i> | <i>318</i> | <i>322</i> | <i>316</i> | <i>314</i> | 285 | 311 | 314 |
| Total Motor Gasoline..... | 203 | 205 | 200 | 196 | <i>196</i> | <i>194</i> | <i>197</i> | <i>204</i> | <i>213</i> | <i>204</i> | <i>201</i> | <i>206</i> | 196 | 204 | 206 |
| Jet Fuel | 34 | 39 | 43 | 40 | <i>39</i> | <i>41</i> | <i>42</i> | <i>42</i> | <i>40</i> | <i>41</i> | <i>42</i> | <i>41</i> | 40 | 42 | 41 |
| Distillate Fuel Oil | 90 | 102 | 115 | 127 | <i>97</i> | <i>108</i> | <i>129</i> | <i>130</i> | <i>92</i> | <i>105</i> | <i>125</i> | <i>128</i> | 127 | 130 | 128 |
| Residual Fuel Oil..... | 32 | 35 | 38 | 46 | <i>39</i> | <i>42</i> | <i>45</i> | <i>45</i> | <i>35</i> | <i>39</i> | <i>40</i> | <i>43</i> | 46 | 45 | 43 |
| Other Oils ^e | 235 | 267 | 280 | 251 | <i>238</i> | <i>284</i> | <i>303</i> | <i>255</i> | <i>250</i> | <i>295</i> | <i>311</i> | <i>262</i> | 251 | 255 | 262 |
| Crude Oil in SPR..... | 589 | 584 | 574 | 566 | <i>564</i> | 566 | 564 | 564 |

^aIncludes lease condensate.

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

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

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

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

SPR: Strategic Petroleum Reserve

NGL: Natural Gas Liquids

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

Heating oil prices actually proved to be more resilient during late winter than was indicated in last month's report, as demonstrated in [Figures U16](#) And [U17](#).

Nevertheless, with lower crude oil prices expected, heating oil prices this summer should be below earlier projections, if only marginally so.

Retail diesel fuel prices have come down quickly since peaking last November. More recent data show a particularly rapid fall-off in February and March ([Figure U18](#)). Nevertheless, on a year- to-year basis, diesel fuel has not until now been available at a discount. Most of the price relief is expected over the next few quarters, particularly in the fourth quarter of this year ([Figure U19](#)).

Stocks

Distillate fuel stocks are now in the normal range ([see Distillate Watch](#) for the latest distillate stock information), and they are expected to remain in comparatively good shape for the remainder of this year ([Figure U20](#)). Part of the expectation for quieter times on the distillate price front for the remainder of 1997 hinges on the continuation of this situation: that is, distillate stocks staying inside or near the normal range. A repeat of the large deficits seen in 1996 would obviously add to price pressure, especially if weather turns cold next winter.

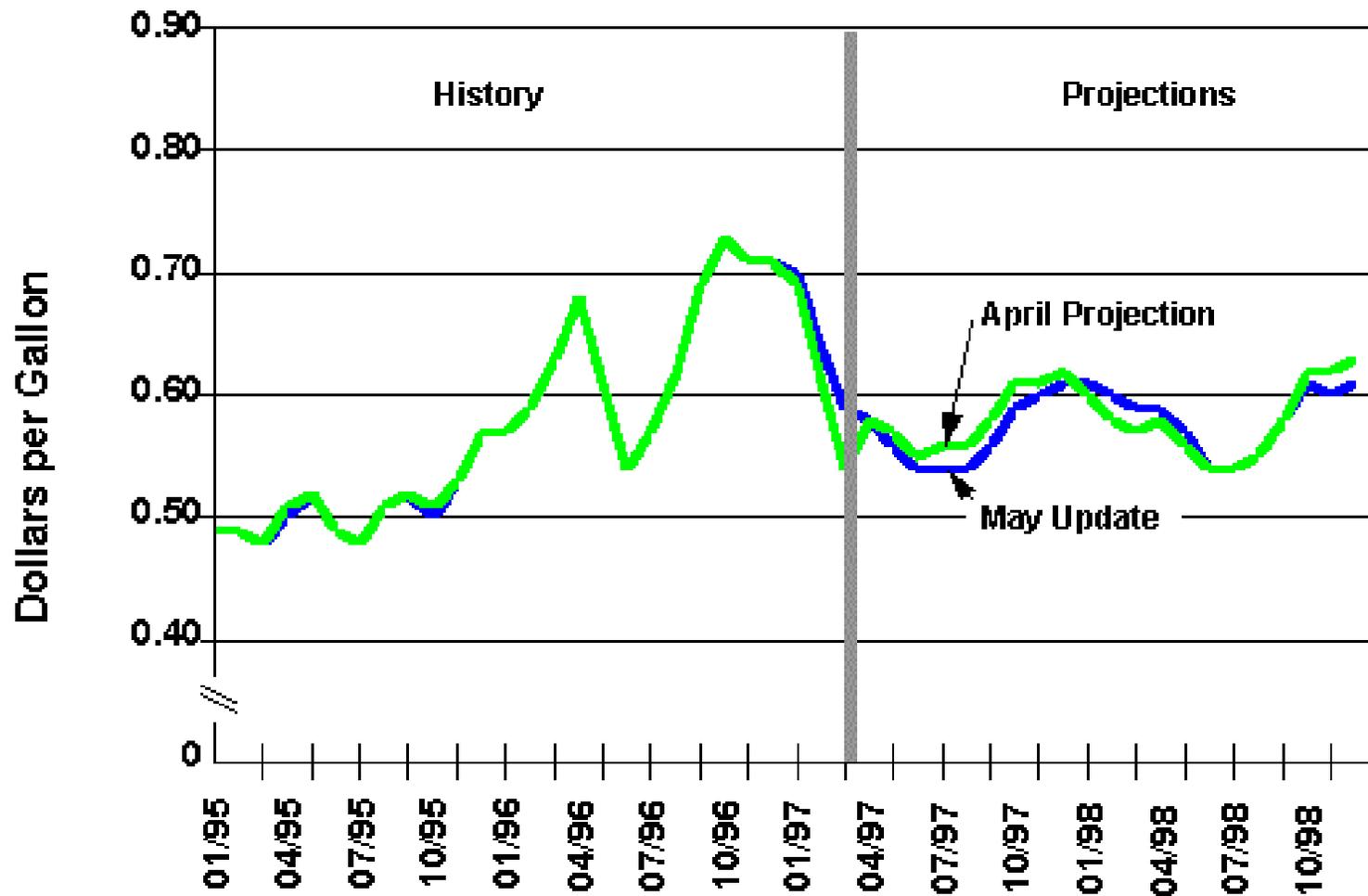
Natural Gas:

If that was a mild winter we just had, one would only venture with some trepidation to consider what a really cold one would have done to spot and average wellhead natural gas prices. New data show that average wellhead prices for January were even higher than we had estimated last month ([Figure U21](#)). Although prices have certainly retreated dramatically from mid-winter highs, the market seems now to be anticipating summer prices well above \$2.00 per thousand cubic feet again this year. If summer gas demand increases as expected (up an average of over 3 percent during the April to September period - [Figure U22](#)) spot and average wellhead prices might continue to increase (at least gradually) until after next winter. The progress of gas in storage over the summer will be critical to whether or not sharp price increases may be avoided next winter. As it is, storage is expected to remain about 200 billion cubic feet above 1996 levels until mid summer and at least marginally better than last year until next January ([Figure U23](#)). Cold weather, particularly if early in the heating season, could change that situation (and increase the probability of much higher winter prices) very quickly. ([See also: Table U5](#)).

Electricity:

On the year, electricity demand is not expected to do anything spectacular, with an overall growth rate of 1.4 percent in 1997, compared to the 2.4 percent seen in 1996 ([Figure U24](#)). First quarter demand growth almost certainly hit negative territory (or close to it on a per day basis) because of mild winter weather, and while some increase in third quarter demand may be forthcoming due to higher cooling demand, much of that may be offset by weaker cooling demand this spring ([Figure U25](#)). The most likely periods for noticeably increased residential sales this year seems to be in the last half of

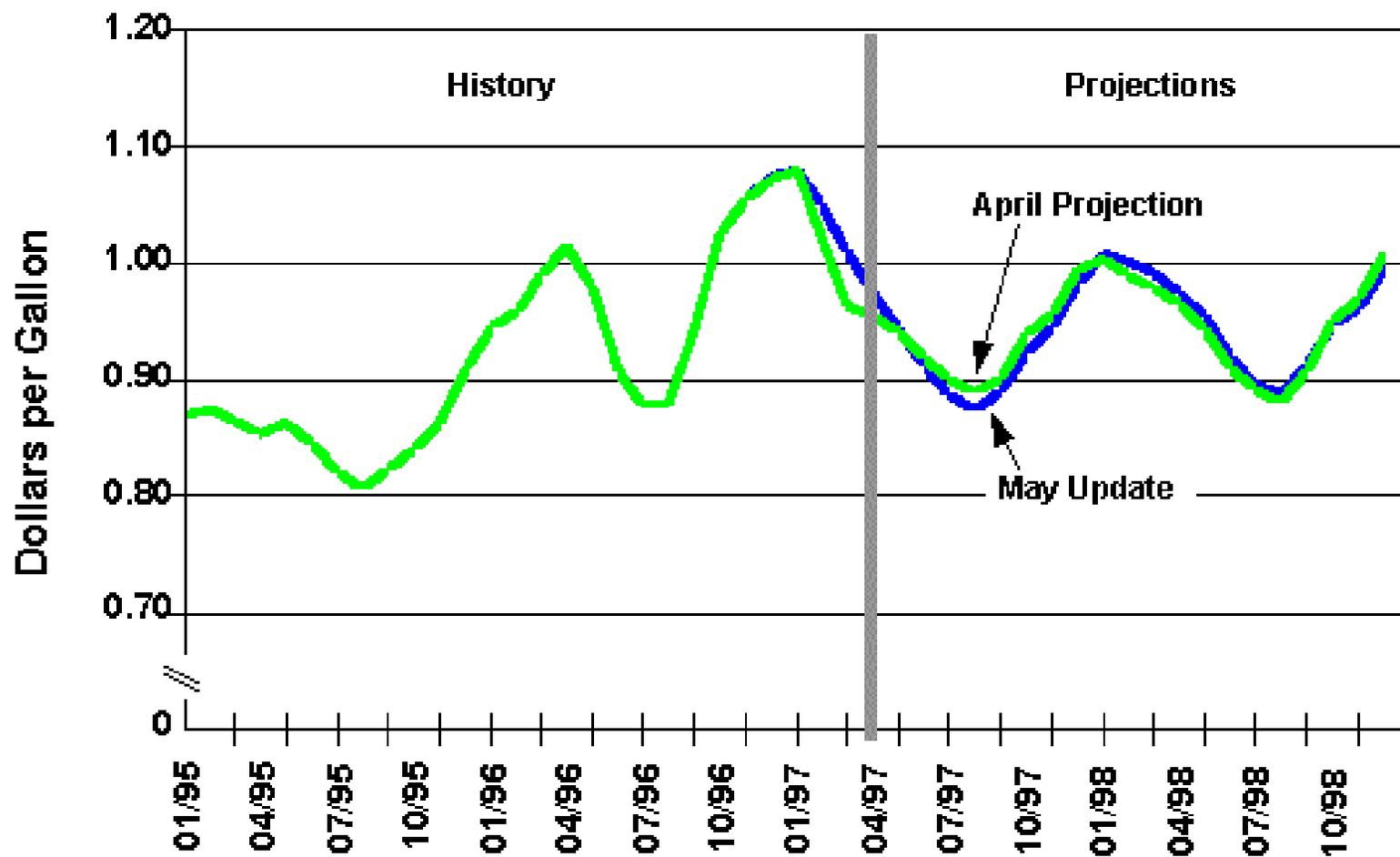
Figure U16. Monthly Wholesale Heating Oil Prices*



*Average U.S. refiner price of number 2 heating oil.

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

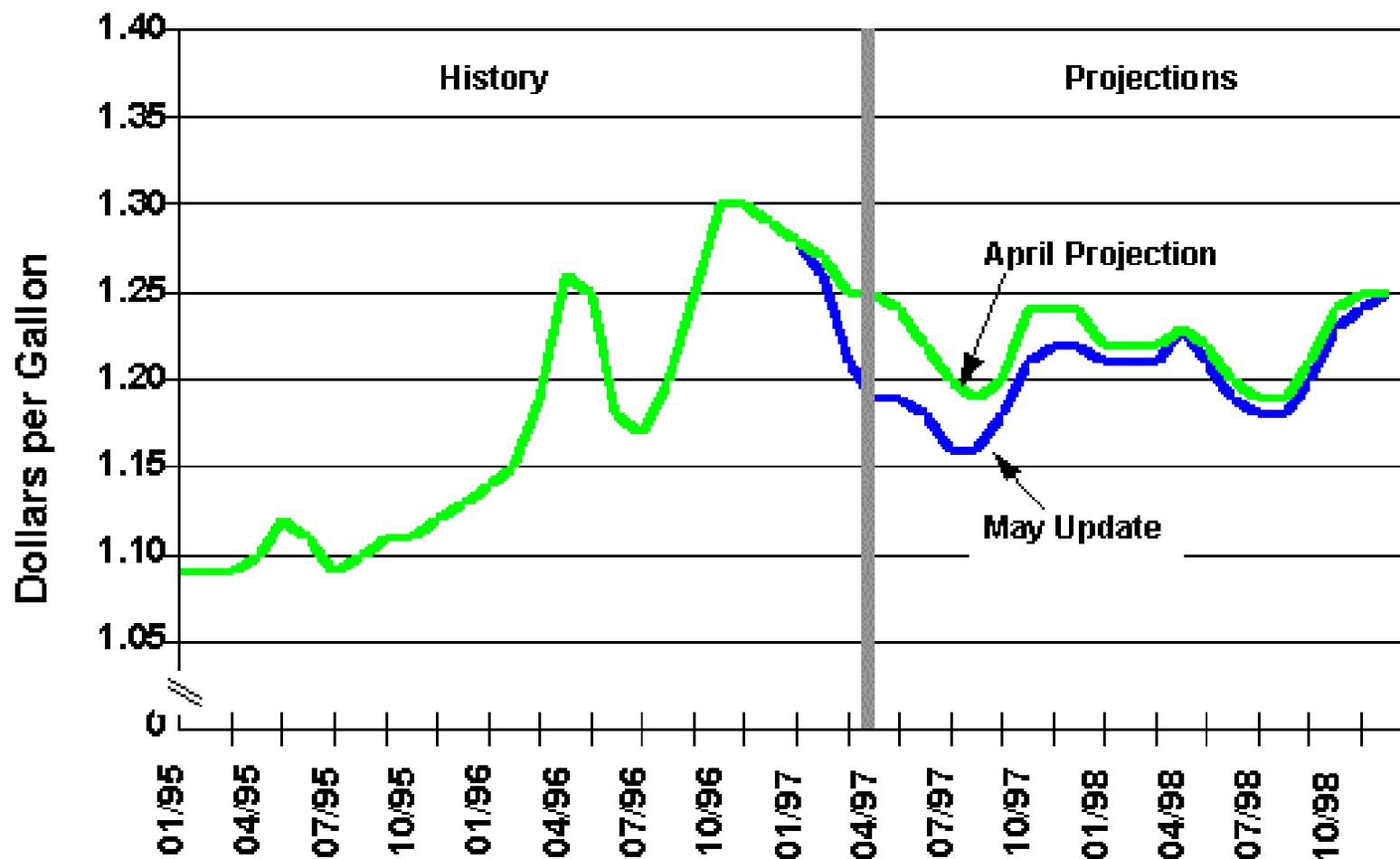
Figure U17. Monthly Retail Heating Oil Prices*



*Average U.S. price of heating oil sold to residences

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

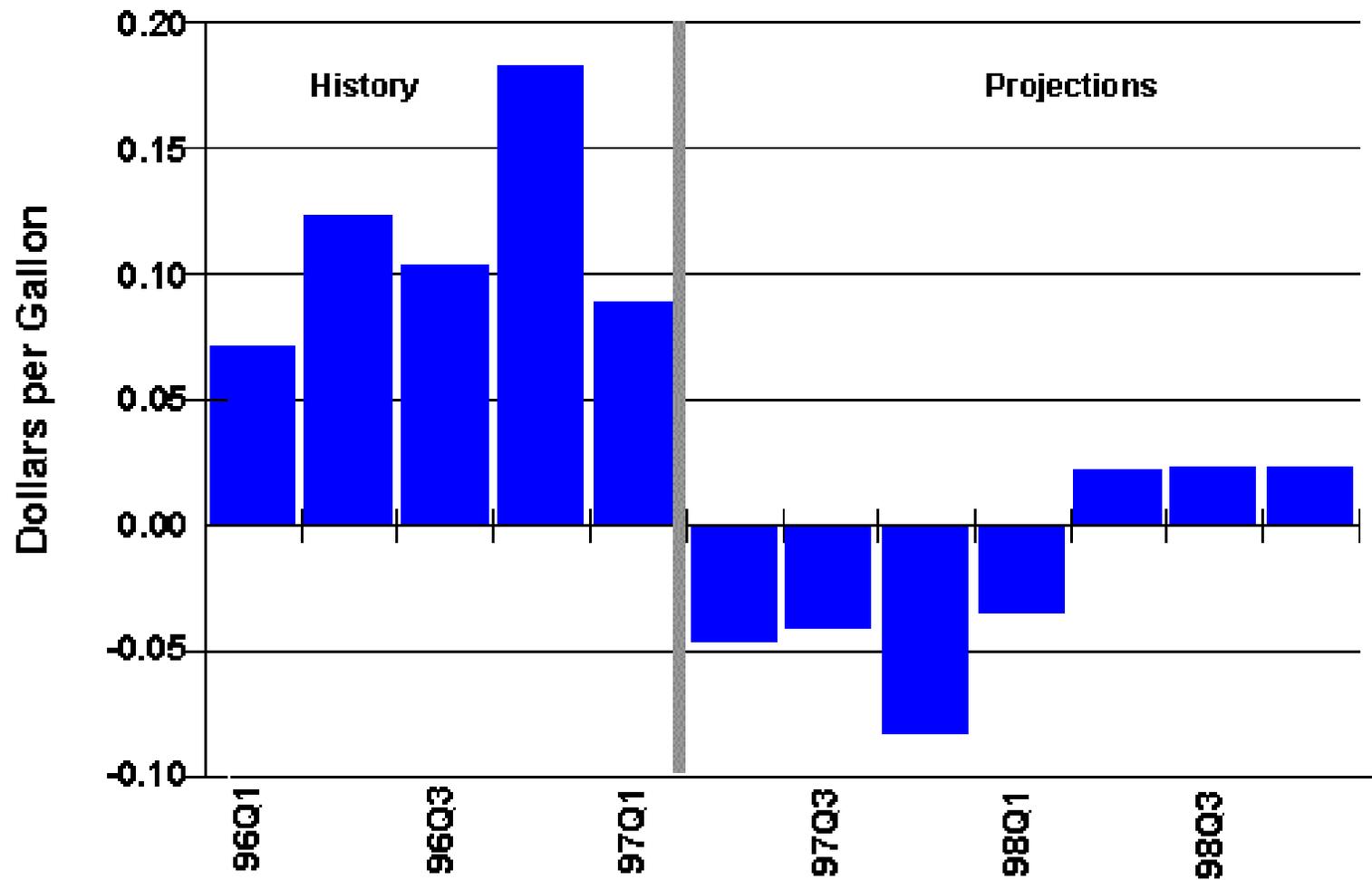
Figure U18. Monthly Retail Diesel Fuel Prices*



*Average U.S. diesel fuel price including excise taxes

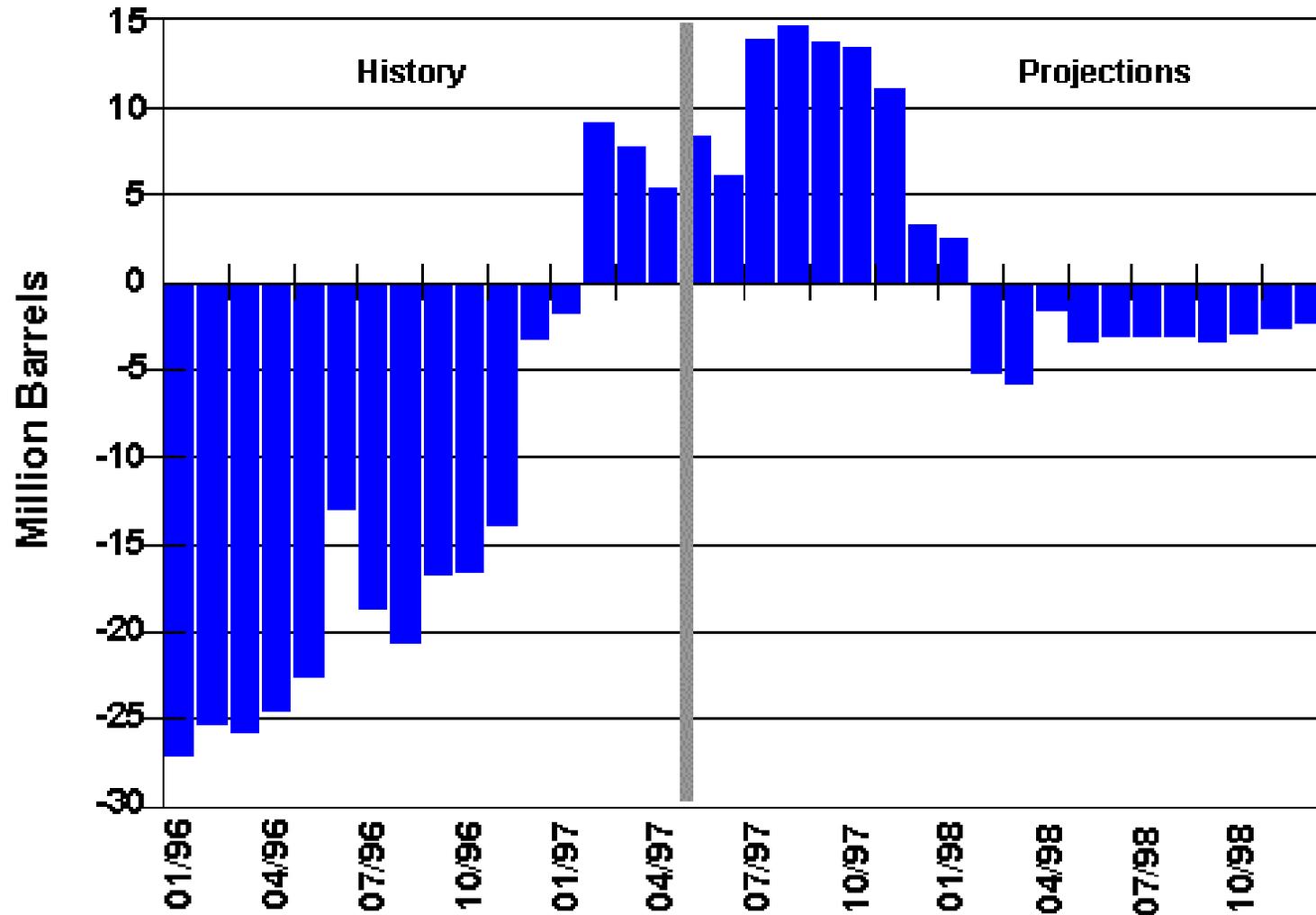
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U19. Quarterly Retail Diesel Prices
(Change from Year Ago)



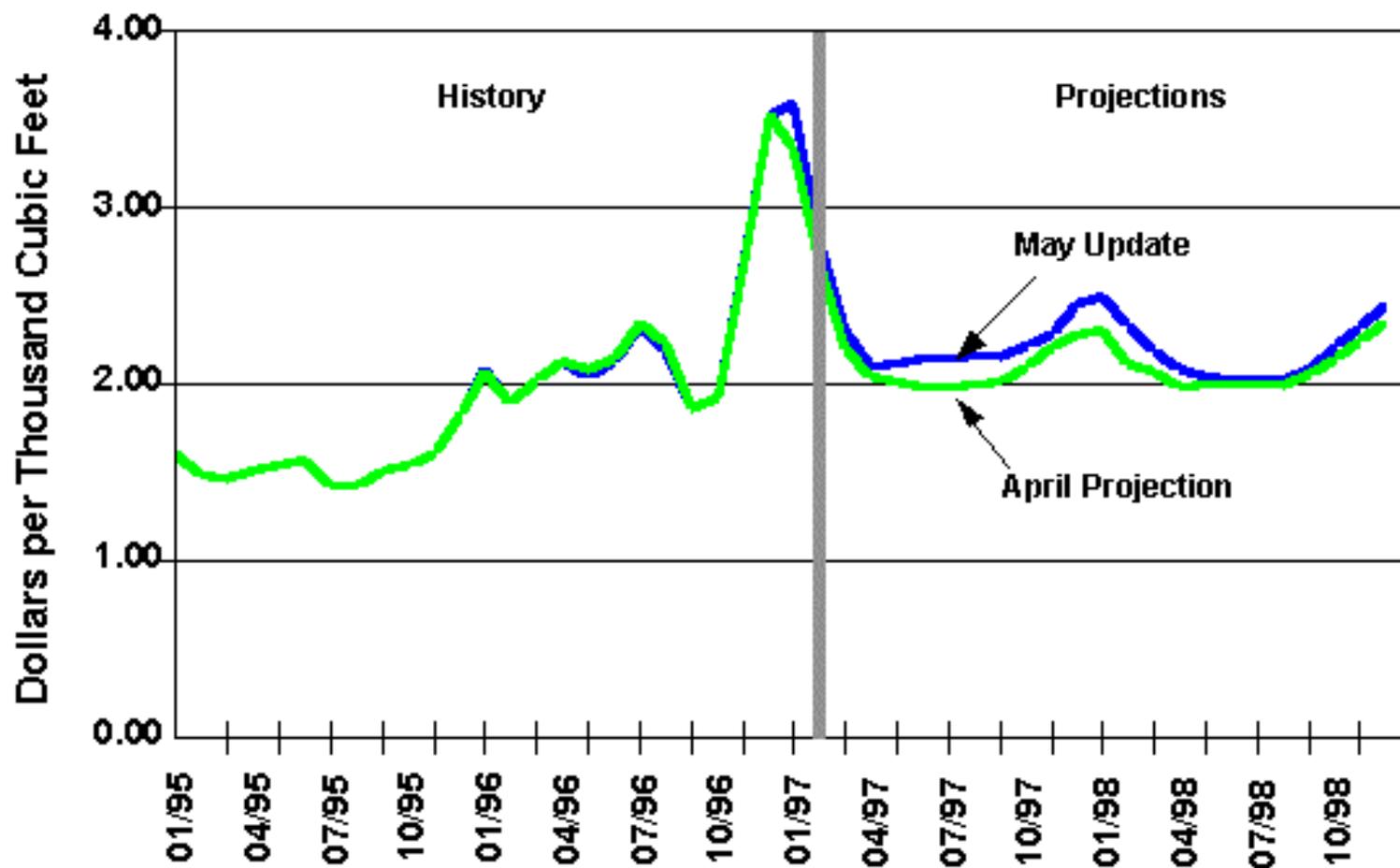
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U20. Distillate Stocks at Month-End
 (Change from Year Ago)



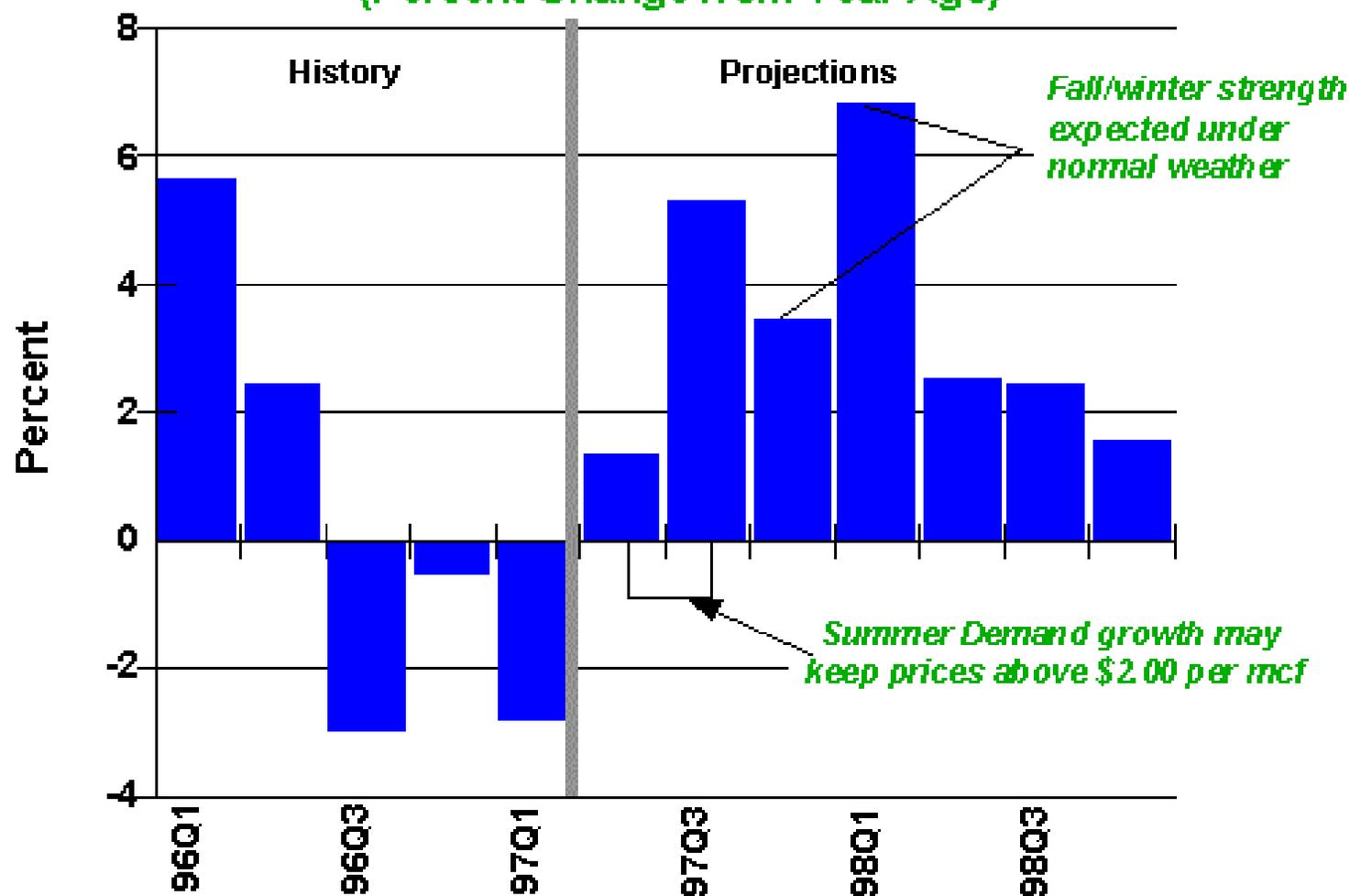
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U21. Monthly Average Wellhead Natural Gas Prices



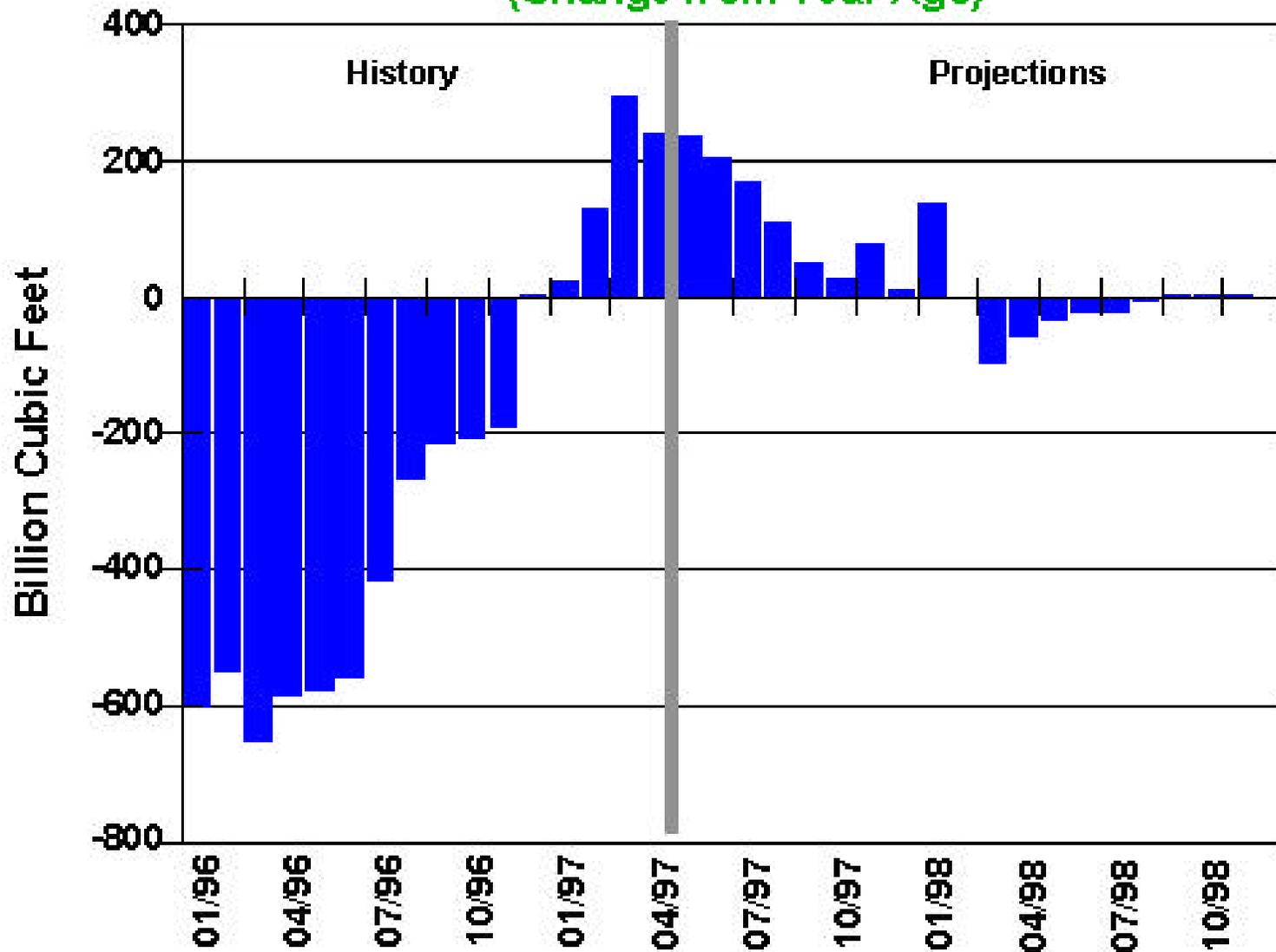
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U22. Quarterly Natural Gas Demand
 (Percent Change from Year Ago)



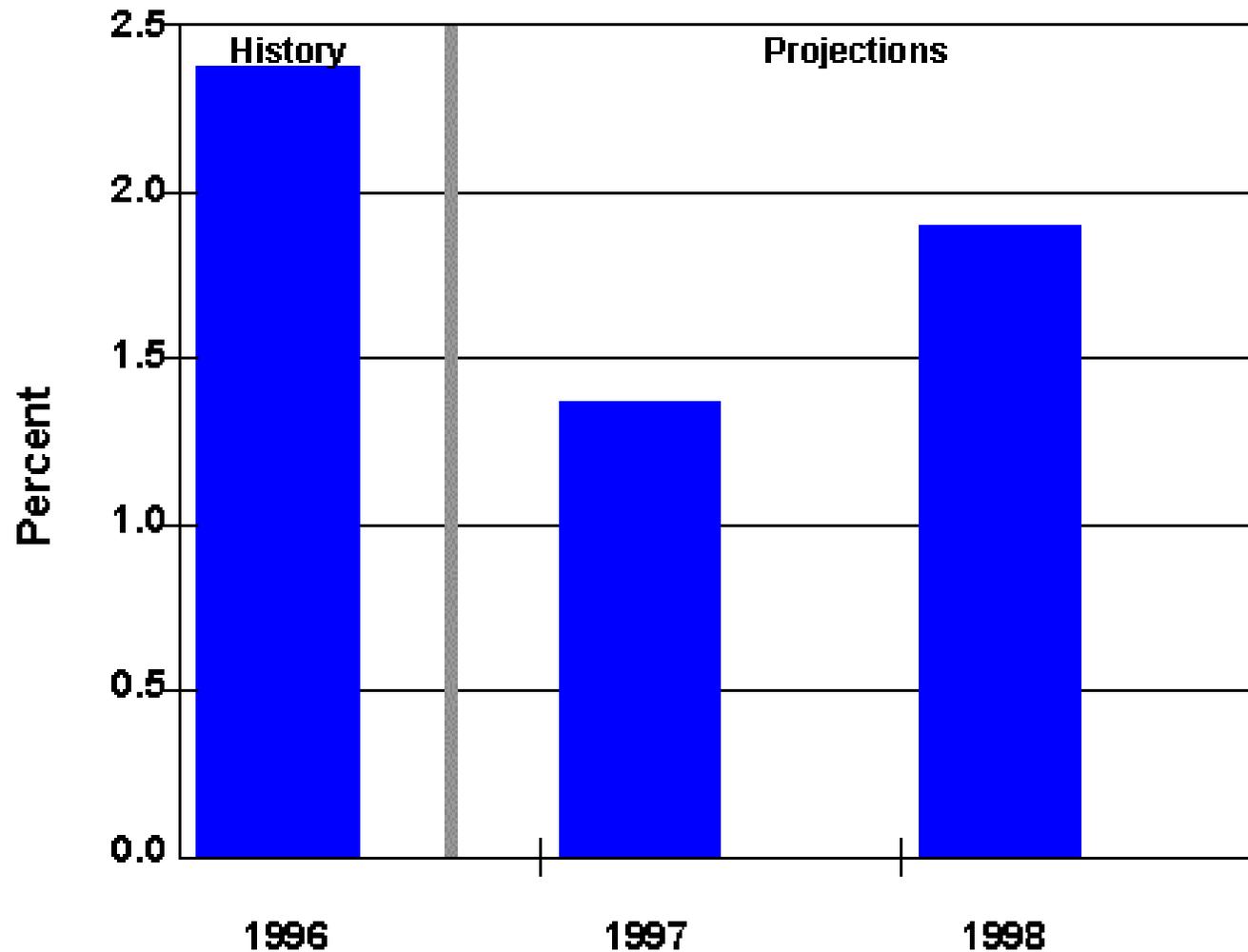
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U23. Natural Gas in Underground Storage
 (Change from Year Ago)



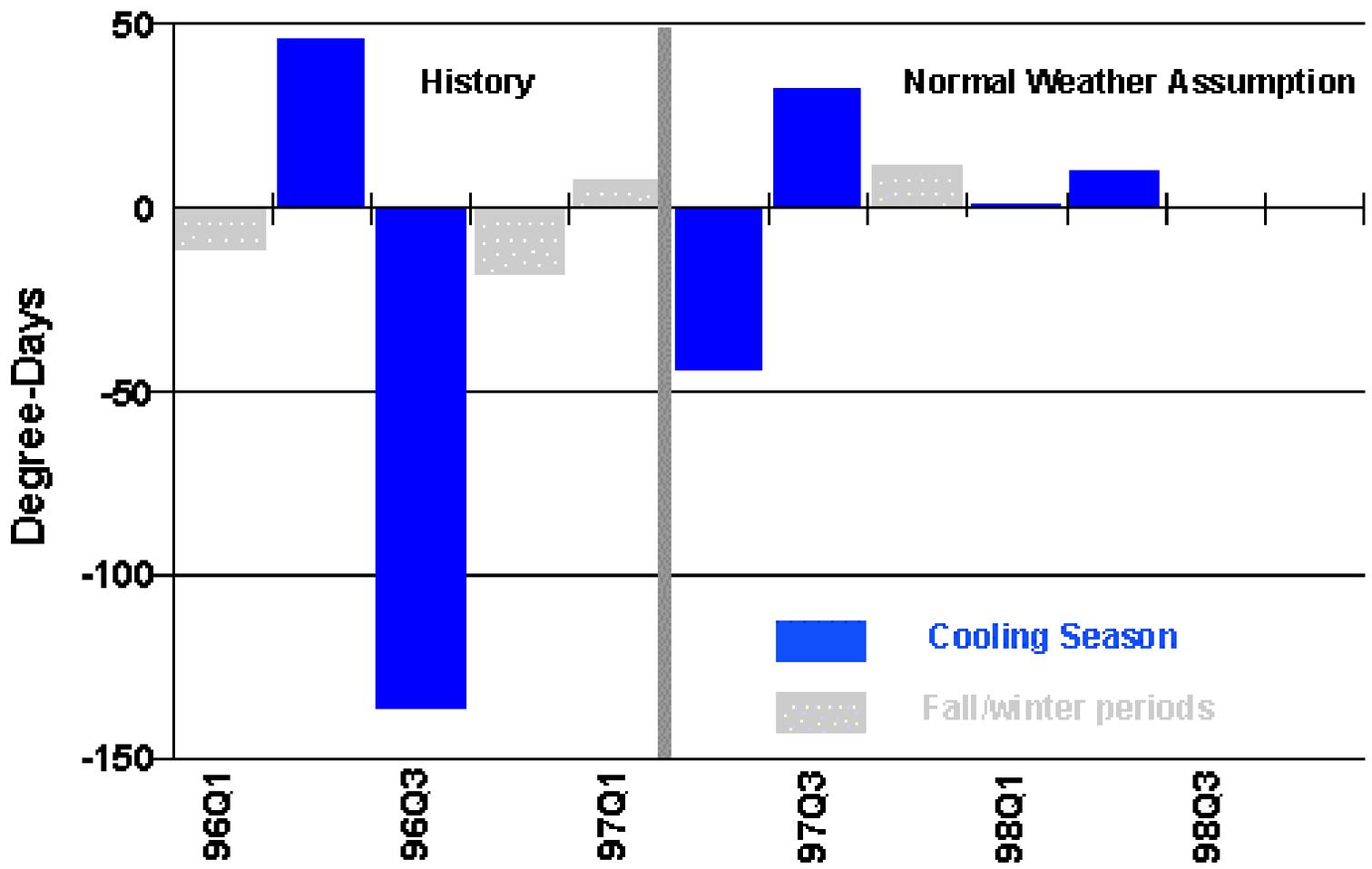
Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U24. Electricity Demand Growth



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U25. U.S. Cooling Degree-Days* (Change from Year Ago)



*U.S. population-weighted cooling degree-days. Assumed normal for forecast.

Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Table U5. U.S. Natural Gas Supply and Demand: Mid World Oil Price Case - May 1997
(Trillion Cubic Feet)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|--------------------------------------|------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Supply | | | | | | | | | | | | | | | |
| Total Dry Gas Production | 4.75 | 4.70 | 4.72 | 4.86 | 4.75 | 4.74 | 4.76 | 4.93 | 4.84 | 4.84 | 4.86 | 4.99 | 19.03 | 19.18 | 19.53 |
| Net Imports..... | 0.66 | 0.66 | 0.67 | 0.73 | 0.72 | 0.71 | 0.72 | 0.79 | 0.79 | 0.77 | 0.78 | 0.85 | 2.72 | 2.94 | 3.19 |
| Supplemental Gaseous Fuels | 0.04 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 | 0.04 | 0.13 | 0.13 | 0.13 |
| Total New Supply | 5.44 | 5.39 | 5.42 | 5.62 | 5.51 | 5.48 | 5.51 | 5.75 | 5.67 | 5.64 | 5.67 | 5.87 | 21.87 | 22.24 | 22.84 |
| Net Withdrawals from Storage .. | 1.46 | -0.82 | -1.07 | 0.42 | 1.17 | -0.73 | -0.91 | 0.46 | 1.28 | -0.80 | -0.94 | 0.46 | -0.00 | -0.01 | 0.00 |
| Total Supply | 6.91 | 4.57 | 4.35 | 6.04 | 6.68 | 4.75 | 4.60 | 6.21 | 6.95 | 4.83 | 4.73 | 6.33 | 21.87 | 22.23 | 22.85 |
| Balancing Item ^a | 0.18 | 0.29 | -0.04 | -0.38 | 0.21 | 0.17 | -0.06 | -0.35 | 0.41 | 0.21 | -0.08 | -0.38 | 0.04 | -0.03 | 0.15 |
| Total Primary Supply | 7.09 | 4.86 | 4.31 | 5.66 | 6.89 | 4.92 | 4.54 | 5.86 | 7.36 | 5.04 | 4.65 | 5.95 | 21.91 | 22.20 | 23.00 |
| Demand | | | | | | | | | | | | | | | |
| Lease and Plant Fuel..... | 0.31 | 0.31 | 0.31 | 0.32 | 0.33 | 0.30 | 0.31 | 0.32 | 0.31 | 0.31 | 0.31 | 0.33 | 1.25 | 1.25 | 1.26 |
| Pipeline Use | 0.23 | 0.16 | 0.14 | 0.18 | 0.22 | 0.16 | 0.16 | 0.21 | 0.23 | 0.16 | 0.15 | 0.19 | 0.71 | 0.74 | 0.73 |
| Residential..... | 2.46 | 0.91 | 0.38 | 1.48 | 2.31 | 0.85 | 0.39 | 1.42 | 2.47 | 0.88 | 0.39 | 1.43 | 5.23 | 4.96 | 5.17 |
| Commercial | 1.32 | 0.61 | 0.39 | 0.89 | 1.28 | 0.63 | 0.42 | 0.90 | 1.40 | 0.63 | 0.43 | 0.91 | 3.21 | 3.22 | 3.37 |
| Industrial (Incl. Cogenerators) | 2.30 | 2.14 | 2.08 | 2.27 | 2.31 | 2.18 | 2.12 | 2.38 | 2.42 | 2.22 | 2.18 | 2.43 | 8.78 | 8.99 | 9.25 |
| Electric Utilities..... | 0.46 | 0.73 | 1.01 | 0.53 | 0.45 | 0.80 | 1.15 | 0.64 | 0.54 | 0.85 | 1.19 | 0.65 | 2.73 | 3.03 | 3.22 |
| Total Demand..... | 7.09 | 4.86 | 4.31 | 5.66 | 6.89 | 4.92 | 4.54 | 5.86 | 7.36 | 5.04 | 4.65 | 5.95 | 21.91 | 22.20 | 23.00 |

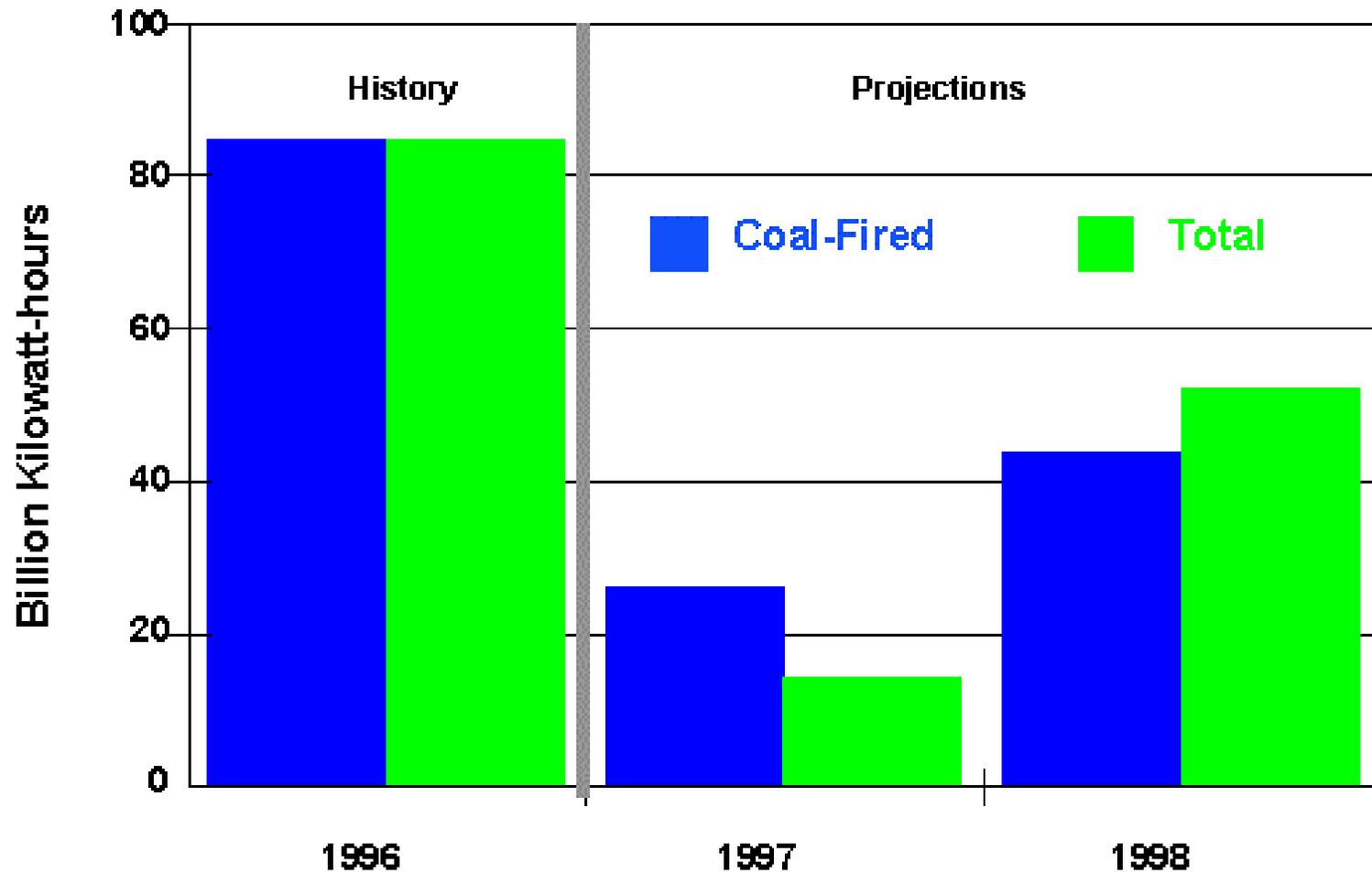
^aThe balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

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.

the year. (See also: [Table U7](#)).

Much of what electricity demand increases are expected this year will be met by coal-fired generation at electric utilities ([Figure U26](#)). However, expected reductions in hydroelectric power availability are expected to increase natural gas demand for power generation, particularly in the Pacific Northwest ([Figure U27](#)).

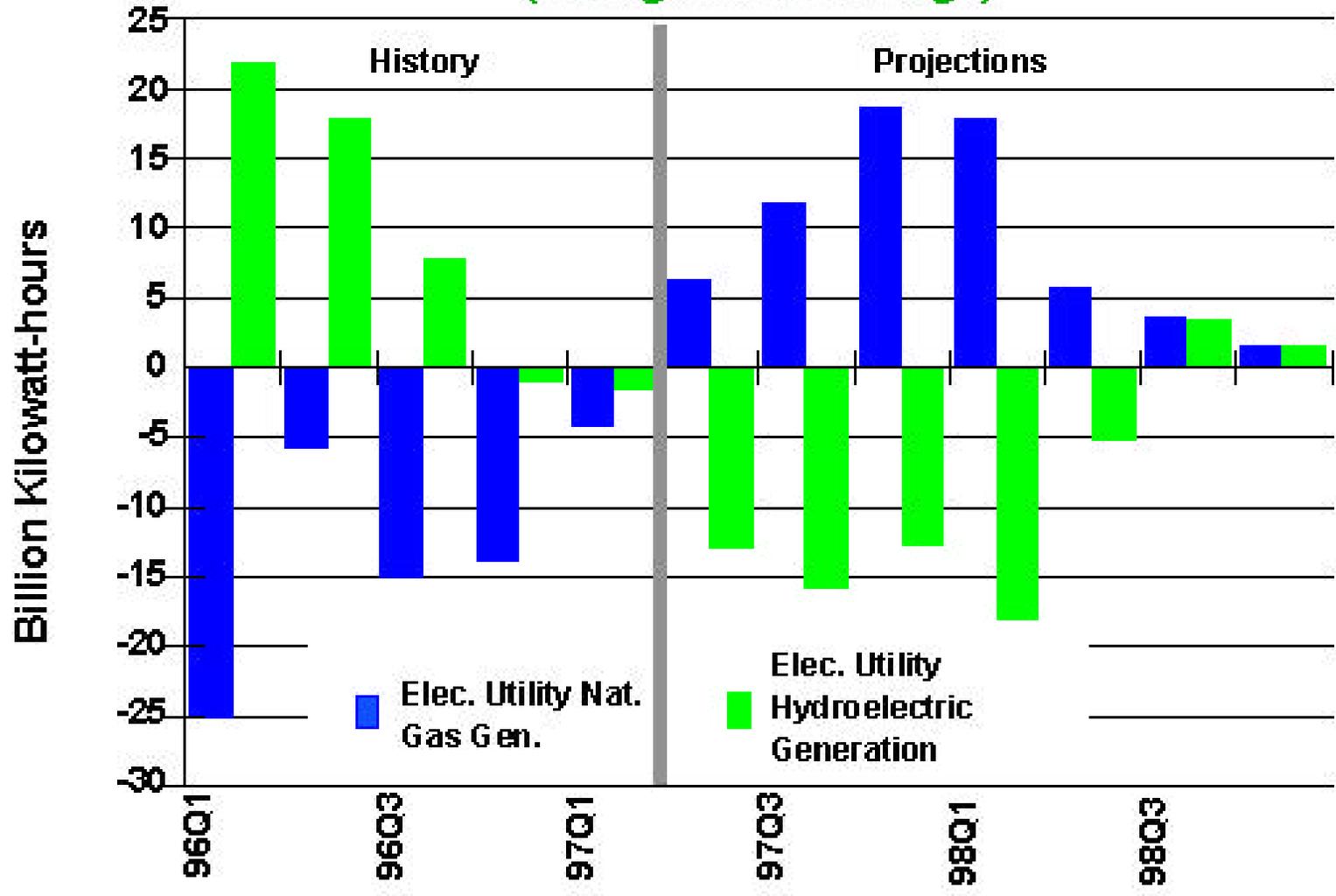
Figure U26. Electricity Generation Growth
(Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Figure U27. Natural Gas and Hydroelectric Generation

(Change from Year Ago)



Source: Energy Information Administration, Short-Term Energy Model, May 1997.

Table U6. U.S. Coal Supply and Demand: Mid World Oil Price Case - May 1997
(Million Short Tons)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Supply | | | | | | | | | | | | | | | |
| Production | 258.1 | 261.6 | 270.3 | 272.6 | <i>267.5</i> | <i>273.1</i> | <i>275.7</i> | <i>269.7</i> | <i>279.0</i> | <i>274.7</i> | <i>279.2</i> | <i>274.1</i> | 1062.6 | <i>1086.0</i> | <i>1107.0</i> |
| Imports..... | 1.7 | 1.6 | 2.1 | 1.8 | <i>1.6</i> | <i>1.9</i> | 7.1 | <i>7.3</i> | <i>7.5</i> |
| Exports | 20.5 | 23.0 | 23.5 | 23.4 | <i>21.9</i> | <i>23.0</i> | <i>23.3</i> | <i>23.2</i> | <i>22.5</i> | <i>23.2</i> | <i>23.4</i> | <i>23.3</i> | 90.5 | <i>91.5</i> | <i>92.4</i> |
| Demand | | | | | | | | | | | | | | | |
| Coke Plants | 8.0 | 8.0 | 8.0 | 7.8 | <i>7.8</i> | <i>8.1</i> | <i>8.2</i> | <i>8.2</i> | <i>7.8</i> | <i>8.1</i> | <i>8.4</i> | <i>8.1</i> | 31.7 | <i>32.3</i> | <i>32.3</i> |
| Electric Utilities | 214.9 | 203.2 | 233.6 | 223.0 | <i>216.5</i> | <i>207.2</i> | <i>238.3</i> | <i>220.8</i> | <i>226.4</i> | <i>211.8</i> | <i>240.8</i> | <i>224.4</i> | 874.7 | <i>882.8</i> | <i>903.5</i> |
| Nonutilities (Excl. Cogen.) ^a | 6.0 | 5.9 | 6.0 | 5.9 | <i>6.5</i> | <i>6.4</i> | <i>6.5</i> | <i>6.5</i> | <i>6.9</i> | <i>7.1</i> | <i>7.0</i> | <i>7.0</i> | 24.0 | <i>26.0</i> | <i>28.0</i> |
| Retail and General Industry ^b | 20.3 | 18.0 | 17.9 | 20.3 | <i>20.0</i> | <i>17.6</i> | <i>18.1</i> | <i>20.6</i> | <i>20.1</i> | <i>17.9</i> | <i>17.9</i> | <i>20.5</i> | 76.4 | <i>76.3</i> | <i>76.4</i> |
| Total Demand | 249.2 | 235.1 | 265.5 | 257.0 | <i>250.8</i> | <i>239.3</i> | <i>271.1</i> | <i>256.1</i> | <i>261.2</i> | <i>244.9</i> | <i>274.1</i> | <i>260.0</i> | 1006.8 | <i>1017.4</i> | <i>1040.2</i> |

^aConsumption of coal by Independent Power Producers (IPPs). In 1995, IPP consumption was estimated to be 5.2 million tons per quarter. Quarterly estimates and projections for coal consumption by nonutility generators are based on estimates for annual coal-fired generation at nonutilities, 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). Data for fourth quarter 1996 are estimates.

^bSynfuels 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.

Notes: Rows and columns may not add due to independent rounding. Historical data are printed in bold; forecasts are in italic. 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 U7. U.S. Electricity Supply and Demand: Mid World Oil Price Case - May 1997
(Billion Kilowatthours)

| | 1996 | | | | 1997 | | | | 1998 | | | | Year | | |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1996 | 1997 | 1998 |
| Supply | | | | | | | | | | | | | | | |
| Net Utility Generation | | | | | | | | | | | | | | | |
| Coal | 428.2 | 405.7 | 462.7 | 441.0 | <i>431.1</i> | <i>415.4</i> | <i>475.9</i> | <i>441.3</i> | <i>454.3</i> | <i>424.7</i> | <i>480.2</i> | <i>448.2</i> | 1737.5 | <i>1763.7</i> | <i>1807.4</i> |
| Petroleum | 22.3 | 12.8 | 19.0 | 14.1 | <i>19.5</i> | <i>15.3</i> | <i>17.8</i> | <i>13.5</i> | <i>19.7</i> | <i>13.6</i> | <i>16.4</i> | <i>11.6</i> | 68.2 | <i>66.0</i> | <i>61.4</i> |
| Natural Gas | 44.6 | 70.8 | 96.6 | 50.8 | <i>42.7</i> | <i>75.2</i> | <i>108.0</i> | <i>60.2</i> | <i>50.3</i> | <i>79.5</i> | <i>111.9</i> | <i>61.1</i> | 262.8 | <i>286.1</i> | <i>302.9</i> |
| Nuclear | 174.3 | 163.5 | 177.0 | 159.9 | <i>169.5</i> | <i>157.4</i> | <i>183.6</i> | <i>165.8</i> | <i>177.1</i> | <i>159.5</i> | <i>186.0</i> | <i>168.0</i> | 674.7 | <i>676.3</i> | <i>690.6</i> |
| Hydroelectric..... | 91.1 | 92.4 | 73.1 | 72.1 | <i>89.6</i> | <i>80.3</i> | <i>61.5</i> | <i>62.9</i> | <i>72.9</i> | <i>76.1</i> | <i>63.7</i> | <i>63.8</i> | 328.7 | <i>294.3</i> | <i>276.5</i> |
| Geothermal and Other ^a | 1.6 | 1.4 | 2.1 | 2.0 | <i>1.6</i> | <i>1.8</i> | <i>1.8</i> | <i>1.8</i> | <i>1.7</i> | <i>1.7</i> | <i>1.7</i> | <i>1.7</i> | 7.2 | <i>7.0</i> | <i>6.6</i> |
| Subtotal..... | 762.1 | 746.6 | 830.5 | 739.9 | <i>754.0</i> | <i>745.4</i> | <i>848.6</i> | <i>745.5</i> | <i>776.0</i> | <i>755.1</i> | <i>859.9</i> | <i>754.4</i> | 3079.1 | <i>3093.4</i> | <i>3145.4</i> |
| Nonutility Generation ^b | 100.3 | 91.8 | 94.2 | 108.3 | <i>99.6</i> | <i>96.9</i> | <i>101.6</i> | <i>116.7</i> | <i>103.0</i> | <i>100.1</i> | <i>105.0</i> | <i>120.7</i> | 394.7 | <i>414.7</i> | <i>428.8</i> |
| Total Generation | 862.4 | 838.4 | 924.7 | 848.2 | <i>853.6</i> | <i>842.3</i> | <i>950.2</i> | <i>862.2</i> | <i>879.0</i> | <i>855.2</i> | <i>964.9</i> | <i>875.1</i> | 3473.8 | <i>3508.1</i> | <i>3574.2</i> |
| Net Imports | 7.1 | 9.5 | 13.0 | 8.6 | <i>6.9</i> | <i>9.3</i> | <i>12.7</i> | <i>8.4</i> | <i>6.9</i> | <i>9.2</i> | <i>12.6</i> | <i>8.3</i> | 38.3 | <i>37.3</i> | <i>37.0</i> |
| Total Supply..... | 869.5 | 857.4 | 937.7 | 856.8 | <i>860.5</i> | <i>851.6</i> | <i>962.9</i> | <i>870.6</i> | <i>885.9</i> | <i>864.4</i> | <i>977.5</i> | <i>883.4</i> | 3512.1 | <i>3545.4</i> | <i>3611.2</i> |
| Demand | | | | | | | | | | | | | | | |
| Residential | 290.7 | 239.2 | 302.1 | 246.5 | <i>282.5</i> | <i>240.1</i> | <i>307.4</i> | <i>255.4</i> | <i>298.2</i> | <i>245.2</i> | <i>314.4</i> | <i>261.9</i> | 1078.5 | <i>1085.5</i> | <i>1119.8</i> |
| Commercial..... | 212.3 | 215.8 | 248.1 | 215.4 | <i>215.4</i> | <i>219.4</i> | <i>254.1</i> | <i>220.2</i> | <i>221.8</i> | <i>223.8</i> | <i>258.3</i> | <i>223.3</i> | 891.6 | <i>909.2</i> | <i>927.2</i> |
| Industrial | 245.6 | 252.5 | 262.8 | 253.4 | <i>248.7</i> | <i>258.2</i> | <i>268.6</i> | <i>257.0</i> | <i>249.0</i> | <i>259.2</i> | <i>269.9</i> | <i>258.5</i> | 1014.3 | <i>1032.5</i> | <i>1036.6</i> |
| Other..... | 24.6 | 24.3 | 26.6 | 24.7 | <i>23.5</i> | <i>23.4</i> | <i>26.4</i> | <i>24.6</i> | <i>25.1</i> | <i>24.0</i> | <i>26.4</i> | <i>24.3</i> | 100.2 | <i>97.9</i> | <i>99.9</i> |
| Subtotal..... | 773.2 | 731.9 | 839.6 | 740.0 | <i>770.1</i> | <i>741.2</i> | <i>856.4</i> | <i>757.3</i> | <i>794.1</i> | <i>752.2</i> | <i>869.1</i> | <i>768.1</i> | 3084.7 | <i>3125.1</i> | <i>3183.6</i> |
| Own Use NonUti. ^b | 41.1 | 37.6 | 38.6 | 44.4 | <i>39.8</i> | <i>38.7</i> | <i>40.6</i> | <i>46.6</i> | <i>40.7</i> | <i>39.6</i> | <i>41.5</i> | <i>47.7</i> | 161.8 | <i>165.6</i> | <i>169.5</i> |
| Total Demand | 814.3 | 769.5 | 878.3 | 784.4 | <i>809.9</i> | <i>779.9</i> | <i>897.0</i> | <i>803.9</i> | <i>834.9</i> | <i>791.7</i> | <i>910.6</i> | <i>815.8</i> | 3246.4 | <i>3290.7</i> | <i>3353.0</i> |

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

^bElectricity 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."

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