Short-Term Energy Outlook

June 1997 (Released July 6, 1997)

Energy Information Administration

What's New This Month

Here are the highlights of the changes to the forecast that we have made for the month of June, 1997 (all results refer to the mid world oil price case unless otherwise specified):

The Economy:

A revised economic outlook has induced an upward adjustment to expectations about energy demand growth in general, relative to our May Outlook. Real gross domestic product is expected to be generally higher than assumed for last month's report, although much of the difference for 1997 is concentrated in the remarkably strong first quarter (5.5 percent GDP growth on an annualized basis). Subsequent quarters are not expected to exhibit similarly torrid growth, but expected levels of business activity have been ratcheted up throughout the forecast (Figure U1). Growth in GDP is expected to average 3.7 percent in 1997 (compared to 2.8 percent assumed last month) and 1.8 percent in 1998 (compared to 2.0 percent previously). In this scenario, growth in disposable income would be about 3.8 percent in 1997 and 2.2 percent in 1998. Inflation is expected to remain moderate over the next few years. Consumer price inflation is expected to be 2.3 percent in both 1997 and 1998. Manufacturing production is expected to match real GDP growth, reaching 3.8 percent in 1997, as investment and export growth remain strong. In 1998, manufacturing production growth slows somewhat to 3.2 percent as investment growth decelerates. Total employment will increase slowly over the forecast. (See Table U1).

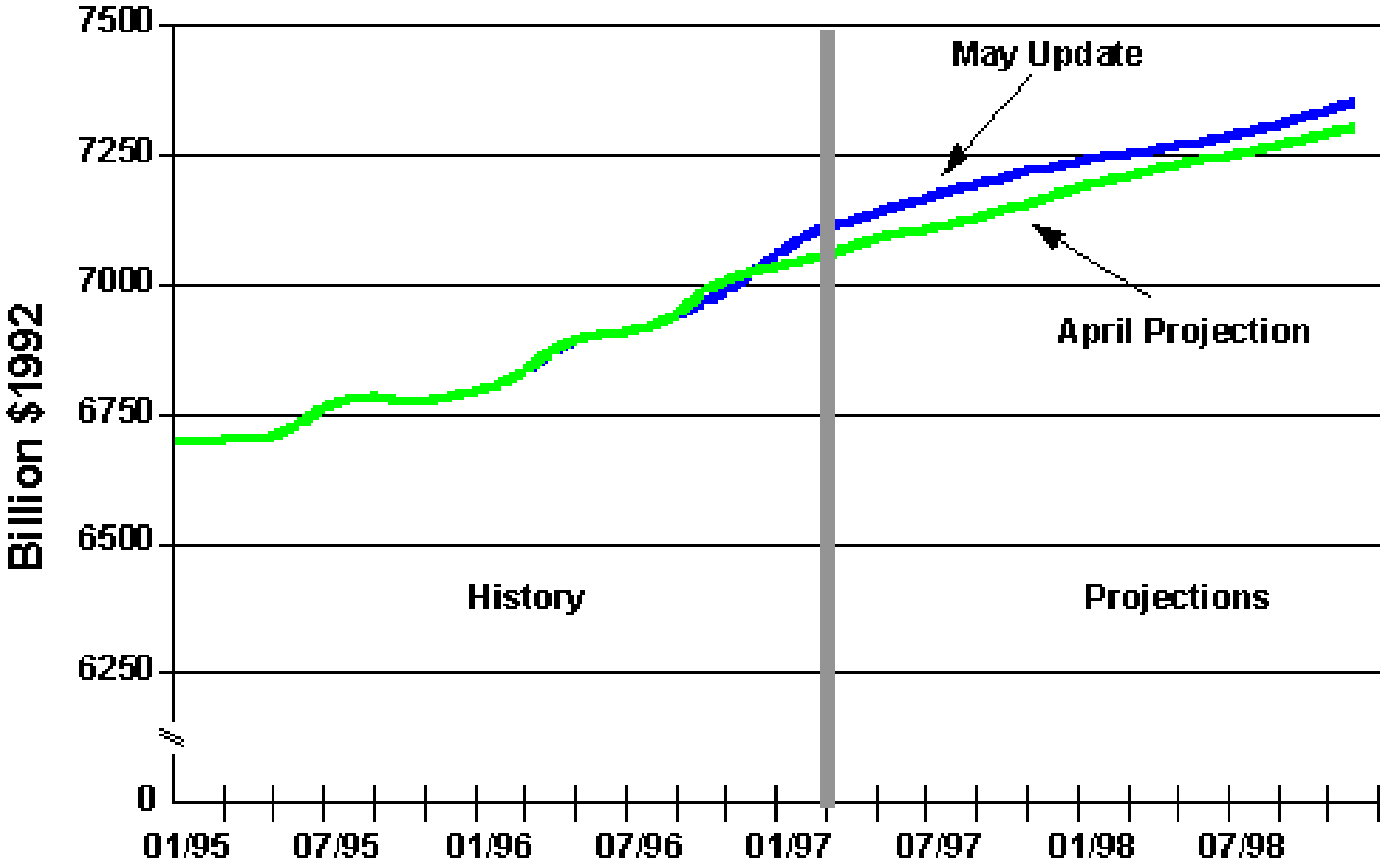
Oil Prices:

Relatively little that has happened since last month has encouraged us to change the mid case oil price forecast much one way or the other. In general, the expected decline from winter highs appears to be on track. Using the U.S. refiner acquisition cost of imported oil as a benchmark, crude prices fell from a high of $23.33 per barrel last December to an estimated $19.10 in May (Figure U2). Currently, indicators seem to point to somewhat higher prices through the summer than we projected last month. As a result, we have increased third quarter 1997 crude prices to an even $19.00 per barrel from the $18.25 projected last month. Some additional support for crude oil prices may develop by the time the heating season gets into full swing, but when all is said and done, average crude prices are seen remaining in the $19.00 to $20.00 per barrel range for most of the forecast (through 1998), assuming that weather is normal and no unexpected supply developments intervene. (See Tables U2 and U3utab3.html).

Petroleum Demand:

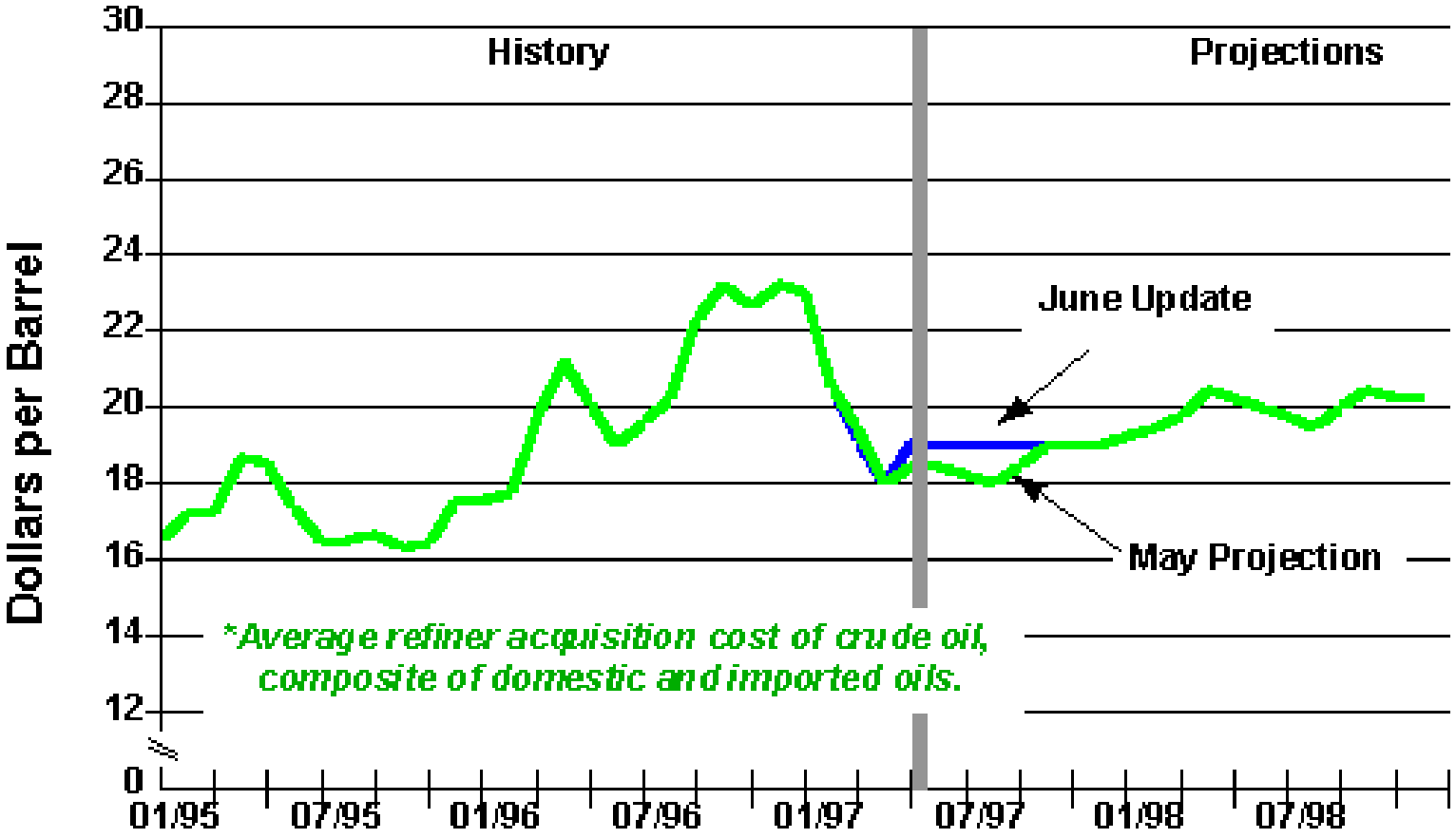
The higher economic growth rate assumptions contribute to higher levels of domestic petroleum demand than previously forecast (Figure U3). Despite the fact that additional historical information now places first quarter 1997 petroleum demand 0.3 percent (49 thousand barrels per day) below the first quarter 1996 level, for the year as a whole we

Figure U1. Real Gross Domestic Product



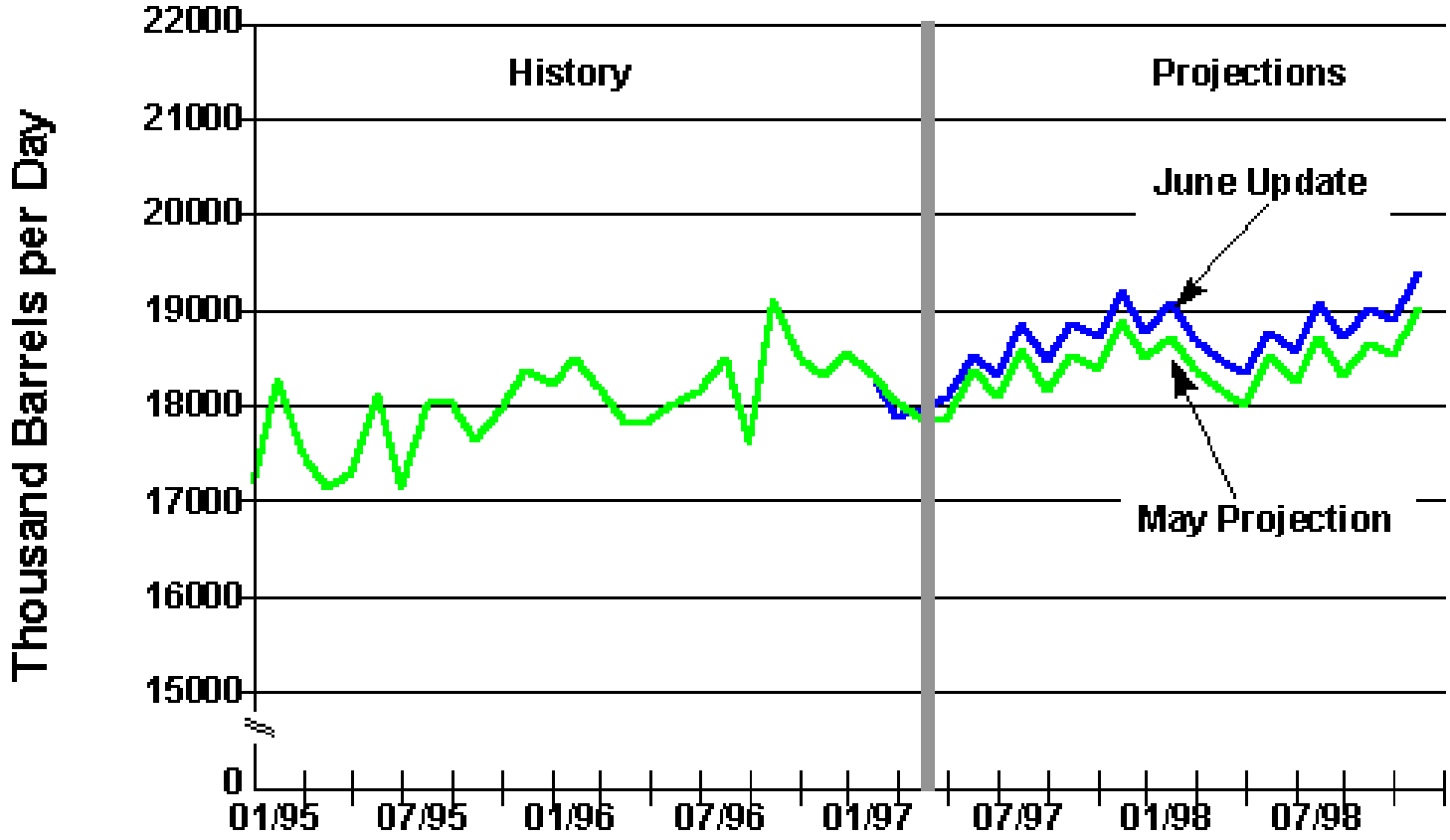
Source: Energy Information Administration, Short-Term Energy Model, June 1997.

Figure U2. Monthly U.S. Crude Oil Costs*



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

Figure U3. U.S. Total Petroleum Demand



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

Table U1. U.S. Macroeconomic and Weather Assumptions: Mid World Oil Price Case - June 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**	**6892**	**6928**	**6993**	*7089*	*7142*	*7184*	*7221*	*7249*	*7273*	*7299*	*7340*	**6907**	*7160*	*7290*
GDP Implicit Price Deflator															
(Index, 1992=1.000)	**1.090**	**1.096**	**1.102**	**1.107**	*1.115*	*1.120*	*1.128*	*1.134*	*1.141*	*1.147*	*1.154*	*1.160*	**1.099**	*1.124*	*1.151*
Real Disposable Personal Income															
(billion chained 1992 Dollars - SAAR)	**5034**	**5052**	**5112**	**5146**	*5227*	*5249*	*5305*	*5338*	*5368*	*5380*	*5406*	*5434*	**5086**	*5280*	*5397*
Manufacturing Production															
(Index, 1987=1.000)	**1.229**	**1.248**	**1.263**	**1.276**	*1.297*	*1.311*	*1.328*	*1.334*	*1.338*	*1.342*	*1.344*	*1.351*	**1.254**	*1.318*	*1.344*
Consumer Price Index															
(index, 1980-1984=1.000)	**1.551**	**1.564**	**1.575**	**1.588**	*1.597*	*1.602*	*1.613*	*1.626*	*1.637*	*1.649*	*1.661*	*1.674*	**1.570**	*1.610*	*1.656*
Producer Price Index															
(index, 1980-1984=1.000)	**1.263**	**1.275**	**1.282**	**1.287**	*1.287*	*1.277*	*1.280*	*1.286*	*1.291*	*1.297*	*1.302*	*1.307*	**1.277**	*1.282*	*1.299*
Commercial Employment															
(millions)	**80.2**	**81.0**	**81.6**	**82.2**	*82.8*	*83.3*	*84.1*	*84.7*	*85.2*	*85.7*	*86.1*	*86.4*	**81.2**	*83.7*	*85.9*
Housing Stock															
(millions)	**110.6**	**111.0**	**111.4**	**111.8**	*112.1*	*112.5*	*112.9*	*113.3*	*113.6*	*114.0*	*114.4*	*114.7*	**111.2**	*112.7*	*114.2*
Weather															
Heating Degree-Days															
Middle Atlantic	**3120**	**750**	**87**	**2015**	*2814*	*753*	*105*	*2026*	*2993*	*716*	*105*	*2026*	**5972**	*5698*	*5839*
New England	**3361**	**933**	**151**	**2243**	*3119*	*945*	*171*	*2269*	*3267*	*915*	*171*	*2269*	**6688**	*6504*	*6621*
U.S.	**2406**	**552**	**89**	**1656**	*2143*	*591*	*89*	*1636*	*2327*	*524*	*89*	*1636*	**4703**	*4458*	*4576*
U.S. Gas-Weighted	**2501**	**636**	**135**	**1768**	*2275*	*618*	*81*	*1686*	*2426*	*539*	*81*	*1686*	**5040**	*4660*	*4732*
Cooling Degree-Days (U.S.)	**21**	**368**	**725**	**60**	*29*	*318*	*758*	*72*	*30*	*334*	*758*	*72*	**1174**	*1176*	*1193*
Miscellaneous Indicators															
Gas Weighted Industrial Production															
(index, 1987=1.000)	**1.161**	**1.172**	**1.189**	**1.208**	*1.216*	*1.228*	*1.237*	*1.242*	*1.245*	*1.249*	*1.255*	*1.260*	**1.182**	*1.231*	*1.252*
Vehicle Miles Traveled															
(million miles/day)	**6181**	**7014**	**7134**	**6625**	*6425*	*7181*	*7363*	*6866*	*6660*	*7389*	*7549*	*7048*	**6739**	*6961*	*7164*
Vehicle Fuel Efficiency															
(miles per gallon)	**19.61**	**20.91**	**21.23**	**19.98**	*20.16*	*21.07*	*21.40*	*20.21*	*20.39*	*21.17*	*21.54*	*20.35*	**20.47**	*20.74*	*20.89*
Real Vehicle Fuel Cost															
(cents per mile)	**3.93**	**4.12**	**3.91**	**4.11**	*4.06*	*3.82*	*3.71*	*3.81*	*3.77*	*3.77*	*3.64*	*3.76*	**4.02**	*3.84*	*3.73*

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 CONTROL0497.

Table U2. International Petroleum Supply and Demand: Mid World Oil Price Case - June 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**	*18.2*	*18.2*	*18.6*	*18.9*	*18.8*	*18.5*	*18.8*	*19.1*	**18.2**	*18.5*	*18.8*
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*	*1.9*	*1.8*	**1.8**	*1.8*	*1.8*
Europe	**14.6**	**13.7**	**14.4**	**14.6**	*14.8*	*13.9*	*14.6*	*14.9*	*15.0*	*14.1*	*14.8*	*15.0*	**14.3**	*14.5*	*14.7*
Japan	**6.4**	**5.2**	**5.4**	**6.0**	*6.5*	*5.3*	*5.4*	*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**	**39.7**	**40.7**	**42.2**	*42.5*	*40.3*	*41.6*	*42.9*	*43.5*	*40.9*	*42.1*	*43.4*	**41.2**	*41.8*	*42.5*
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**	**69.9**	**70.3**	**73.7**	*74.6*	*71.9*	*72.5*	*75.8*	*76.7*	*73.7*	*74.2*	*77.6*	**71.7**	*73.7*	*75.5*
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*	*20.7*	**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*	*29.5*	*29.7*	*29.8*	*30.1*	**28.3**	*29.4*	*29.8*
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*	*54.4*	*54.9*	*55.2*	*55.7*	**52.0**	*53.7*	*55.1*
Total World Supply	**71.2**	**71.4**	**71.6**	**72.8**	*73.6*	*73.4*	*73.9*	*74.6*	*74.8*	*75.1*	*75.7*	*76.4*	**71.8**	*73.9*	*75.5*
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	**0.9**	**-0.7**	**-0.1**	**0.5**	*-0.0*	*-0.5*	*-0.5*	*0.4*	*0.5*	*-0.7*	*-0.4*	*0.4*	**0.1**	*-0.2*	*-0.0*
Other	**0.9**	**-0.8**	**-1.2**	**0.4**	*1.0*	*-1.0*	*-1.0*	*0.7*	*1.4*	*-0.7*	*-1.2*	*0.7*	**-0.2**	*-0.1*	*0.0*
Total Stock Withdrawals	**1.8**	**-1.5**	**-1.3**	**0.9**	*1.0*	*-1.5*	*-1.5*	*1.1*	*1.9*	*-1.4*	*-1.6*	*1.1*	**-0.0**	*-0.2*	*0.0*
Closing Stocks, OECD only (billion barrels)	**2.6**	**2.6**	**2.7**	**2.7**	*2.6*	*2.7*	*2.8*	*2.7*	*2.6*	*2.7*	*2.8*	*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*

[a]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.

[b]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.

[c]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. 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 - June 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**	*20.93*	*18.71*	*19.00*	*19.00*	*19.50*	*20.25*	*19.74*	*20.34*	**20.60**	*19.37*	*19.97*
Natural Gas Wellhead															
(dollars per thousand cubic feet)	**2.01**	**2.10**	**2.13**	**2.74**	*2.86*	*2.13*	*2.16*	*2.36*	*2.38*	*2.07*	*2.05*	*2.35*	**2.25**	*2.38*	*2.21*
Petroleum Products (dollars per gallon)															
Gasoline Retail [b]	**1.20**	**1.35**	**1.31**	**1.30**	*1.31*	*1.29*	*1.28*	*1.25*	*1.26*	*1.31*	*1.30*	*1.28*	**1.29**	*1.28*	*1.29*
No. 2 Diesel Oil, Retail	**1.16**	**1.23**	**1.21**	**1.30**	*1.25*	*1.17*	*1.16*	*1.20*	*1.20*	*1.20*	*1.18*	*1.23*	**1.23**	*1.19*	*1.20*
No. 2 Heating Oil, Wholesale	**0.59**	**0.61**	**0.63**	**0.72**	*0.64*	*0.57*	*0.56*	*0.60*	*0.60*	*0.57*	*0.56*	*0.61*	**0.64**	*0.60*	*0.59*
No. 2 Heating Oil, Retail	**0.96**	**0.97**	**0.90**	**1.05**	*1.05*	*0.95*	*0.90*	*0.96*	*1.00*	*0.95*	*0.90*	*0.97*	**0.98**	*0.97*	*0.96*
No. 6 Residual Fuel Oil, Retail [c]	**0.46**	**0.43**	**0.42**	**0.49**	*0.45*	*0.41*	*0.41*	*0.43*	*0.45*	*0.44*	*0.42*	*0.46*	**0.45**	*0.43*	*0.44*
Electric Utility Fuels (dollars per million Btu)															
Coal	**1.30**	**1.30**	**1.28**	**1.28**	*1.29*	*1.30*	*1.27*	*1.26*	*1.26*	*1.28*	*1.25*	*1.24*	**1.29**	*1.28*	*1.25*
Heavy Fuel Oil [d]	**3.01**	**2.93**	**2.83**	**3.35**	*2.87*	*2.86*	*2.80*	*2.97*	*2.96*	*3.03*	*2.85*	*3.18*	**3.01**	*2.87*	*2.99*
Natural Gas	**2.81**	**2.55**	**2.46**	**2.96**	*3.28*	*2.58*	*2.58*	*2.83*	*2.81*	*2.44*	*2.38*	*2.73*	**2.64**	*2.74*	*2.54*
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	**5.74**	**6.67**	**8.35**	**6.48**	*6.69*	*6.85*	*7.92*	*6.35*	*6.27*	*6.79*	*7.87*	*6.37*	**6.30**	*6.72*	*6.51*
Electricity															
(cents per Kilowatthour)	**7.90**	**8.52**	**8.83**	**8.31**	*7.98*	*8.47*	*8.78*	*8.31*	*7.87*	*8.46*	*8.75*	*8.26*	**8.39**	*8.39*	*8.34*

[a] Refiner acquisition cost (RAC) of imported crude oil.
[b] Average for all grades and services.
[c] Average for all sulfur contents.
[d] 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.

now expect demand growth to average about 1.4 percent (250,000 barrels per day). An additional 1.8 percent (about 330,000 barrels per day) is now expected for 1998. At the currently-projected 18.82 million barrels per day, the 1998 figure would be very close to the all-time high of 18.85 million recorded in 1978. (See Table U4.)

Gasoline:

Prices

Gasoline prices, which have been going through the rather unusual process of declining from winter levels may be poised for a short rebound. Using a composite retail gasoline price (all grades, all service) as a benchmark, retail prices fell gradually from about $1.32 per gallon in January to an estimated $1.29 in May (Figure U4). With the driving season now officially under way, some increase in pump prices may be expected for June. Recent weekly retail price observations indicate that, after declining more or less steadily from mid-January to mid-May, prices have turned upward a bit, particularly in the Mid West and Mountain regions of the country (see EIA's Motor Gasoline Watch for a summary of the latest weekly price surveys). But as seasonal swings in gasoline prices go, this year is likely to be resoundingly unremarkable. Furthermore, it still looks to be a good bet that summer prices will indeed be below the 1996 averages (if only slightly), something we have been projecting in our base case for several months now (Figure U5 and Table U3).

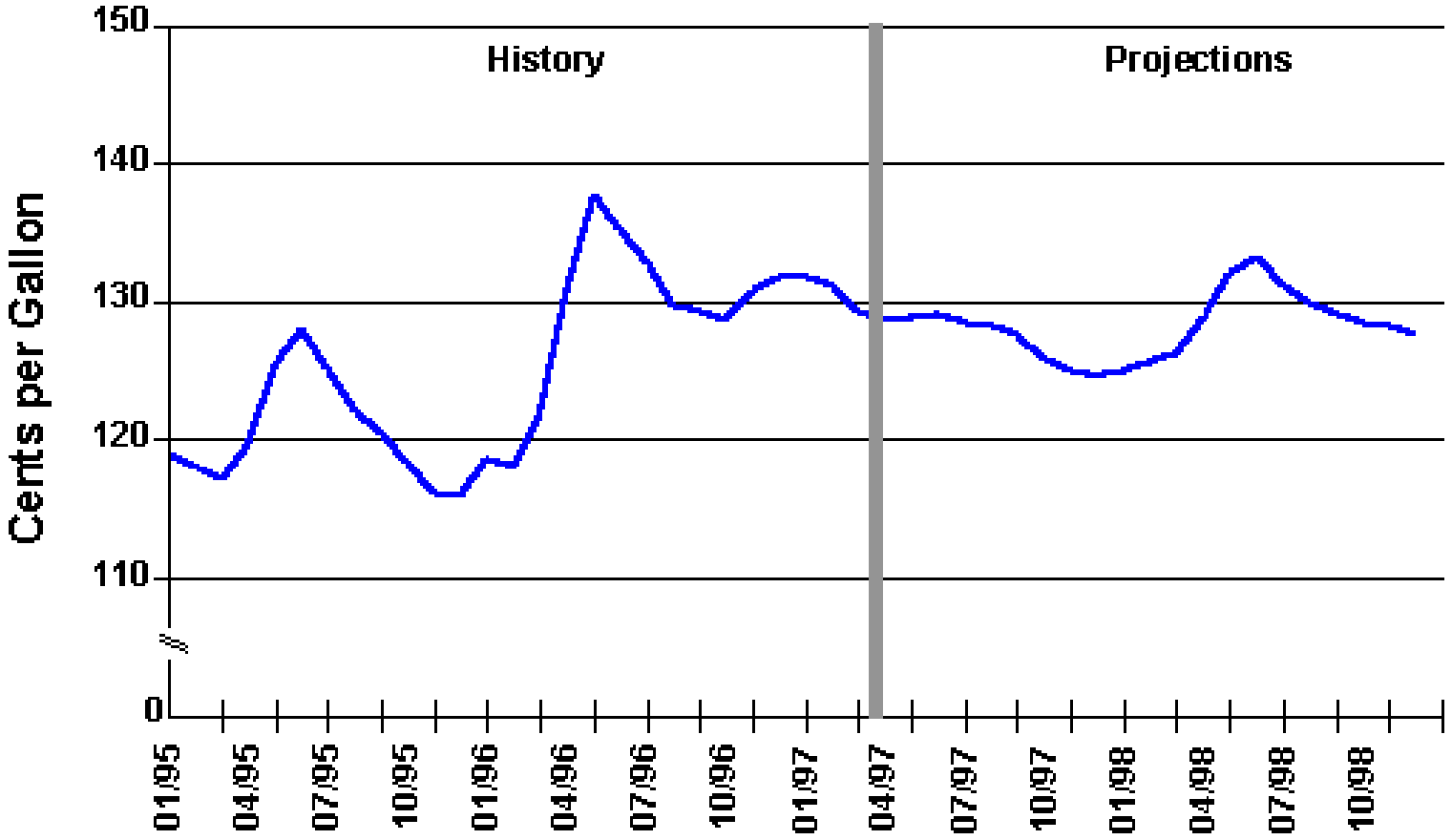
Refiner prices for motor gasoline (wholesale prices) increased more quickly in early 1997 than crude oil on average, generating higher average refiner gasoline margins (Figure U6). This seems to have contributed to higher profits for domestic refining companies so far this year, despite relatively weak overall petroleum demand growth due to mild weather. Based on an internal EIA compilation of a sample of public financial statements by domestic refining / marketing companies (including domestic refining / marketing divisions of major international oil companies), first quarter 1997 refining / marketing net income apparently rose by about 20 percent compared to the same period in 1996. The relatively tight domestic gasoline market situation is expected to keep refiner gasoline margins (if not overall profits) above 1996 levels through the summer.

The situation for gasoline prices in California improved sharply in May. The relatively high spot price quotes heard since the beginning of the year in Los Angeles, particularly noticeable in March, fell in line with Gulf Coast and East Coast markets by May (Figures U7 and U8). The resolution of refinery capacity and labor problems has evidently brought the West Coast gasoline market back to normal. Retail prices in California remain well above the national average but are coming down (Figure U9). Based on the spot price movements in California over the last couple of months, the spread between California and U.S. average retail prices should continue to narrow in June.

Demand

Given the benefit of more complete data, the gasoline demand estimate for the first

Figure U4. Monthly Average Gasoline Pump Prices*

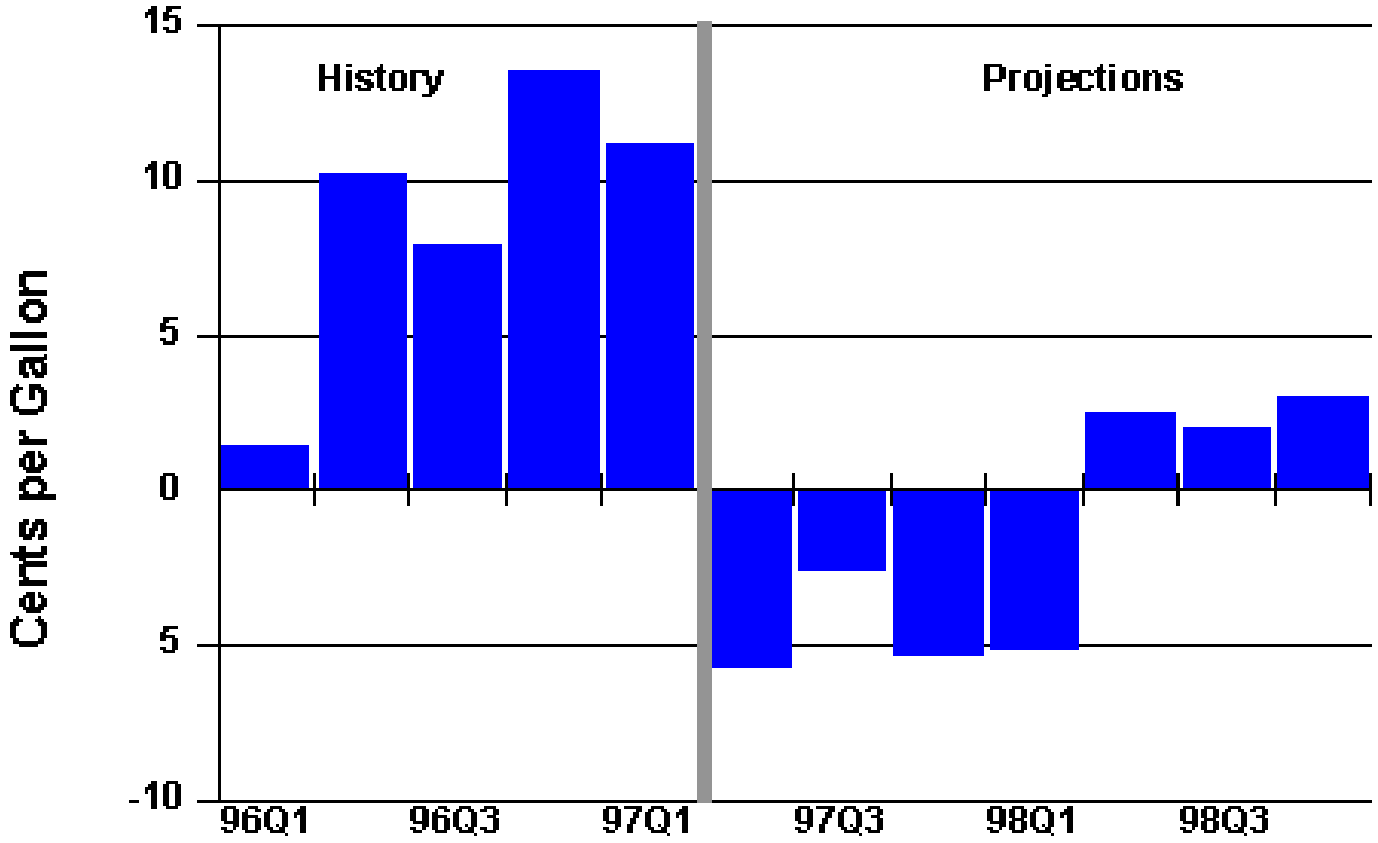


** U.S. average, all grades, all service, including excise taxes*

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

Figure U5. Quarterly Retail Gasoline Prices

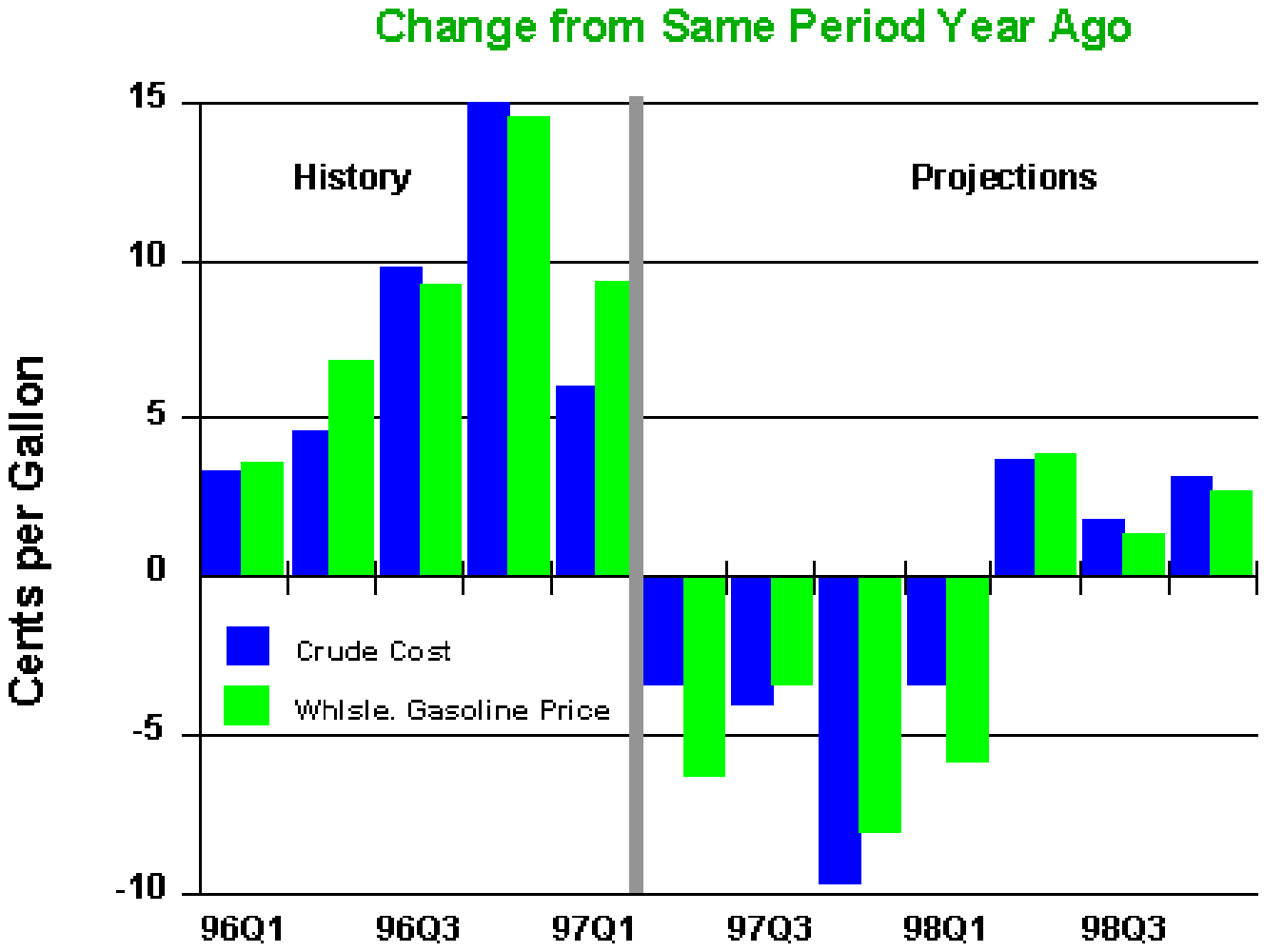
Change from Same Period Year Ago



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

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

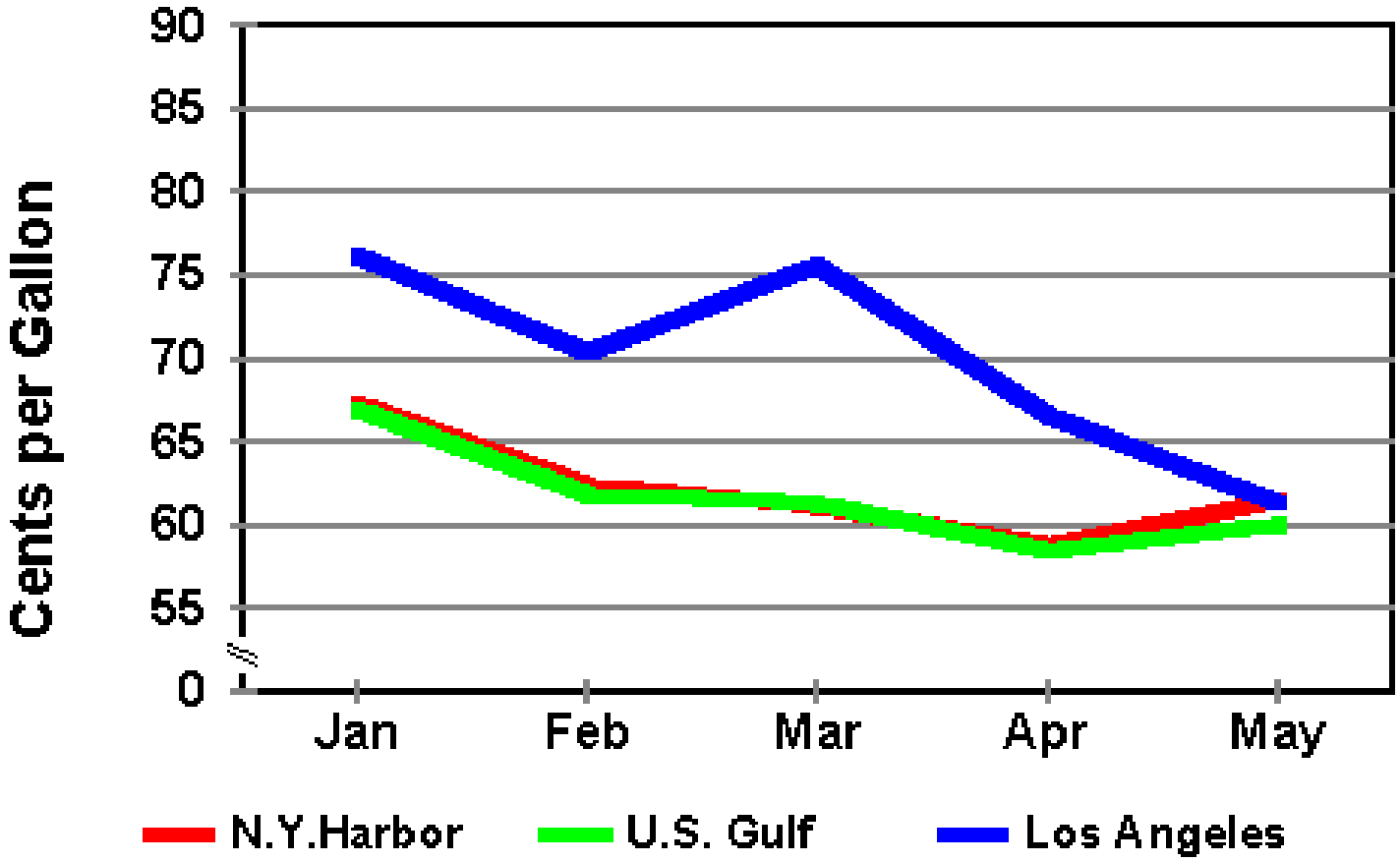
Figure U6. Quarterly Gasoline and Oil Prices



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

Figure U7. Recent Conventional Gasoline Spot Prices

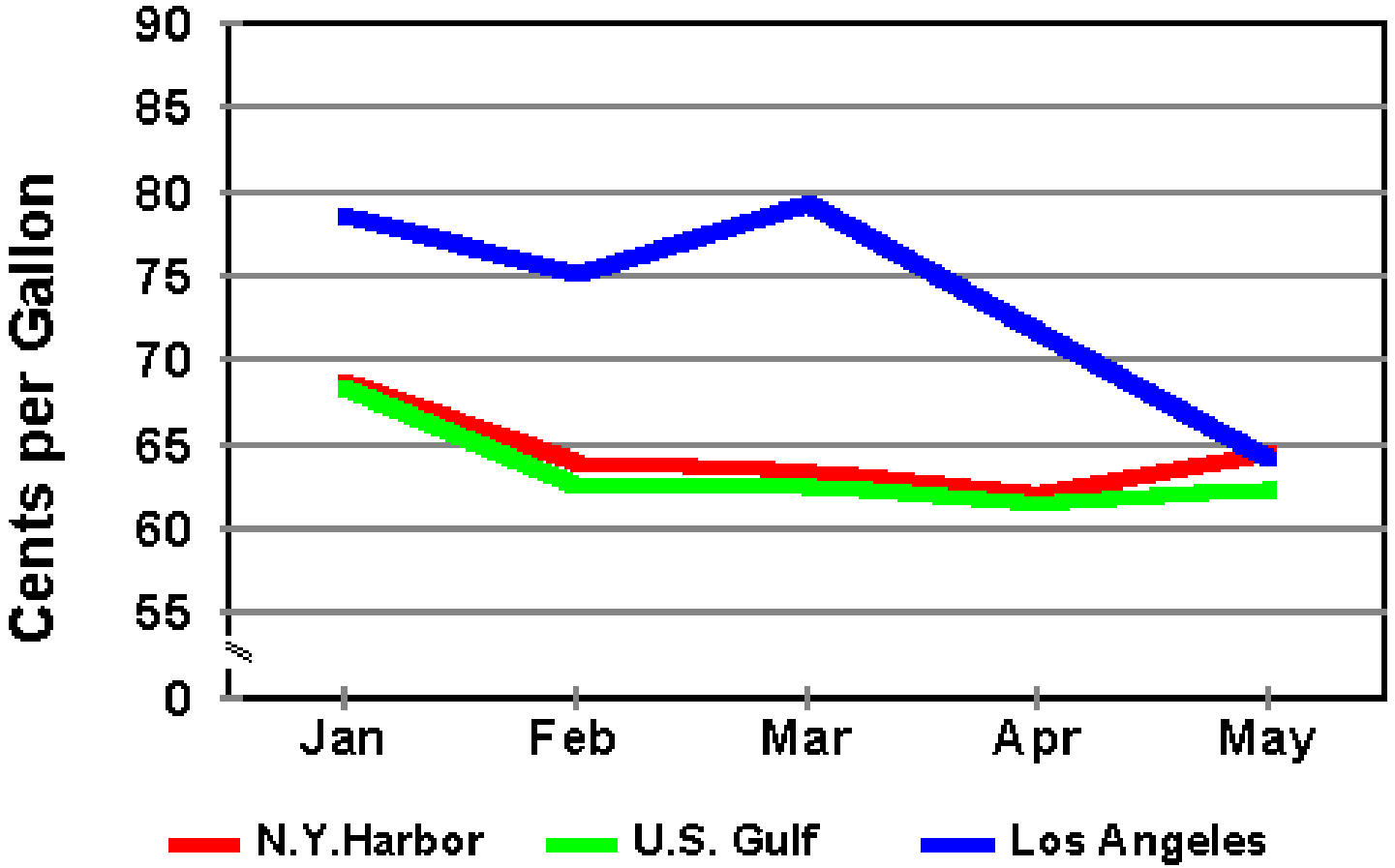
(Regular Grade, by Location)



Source: Energy Information Administration, Weekly Petroleum Status Report

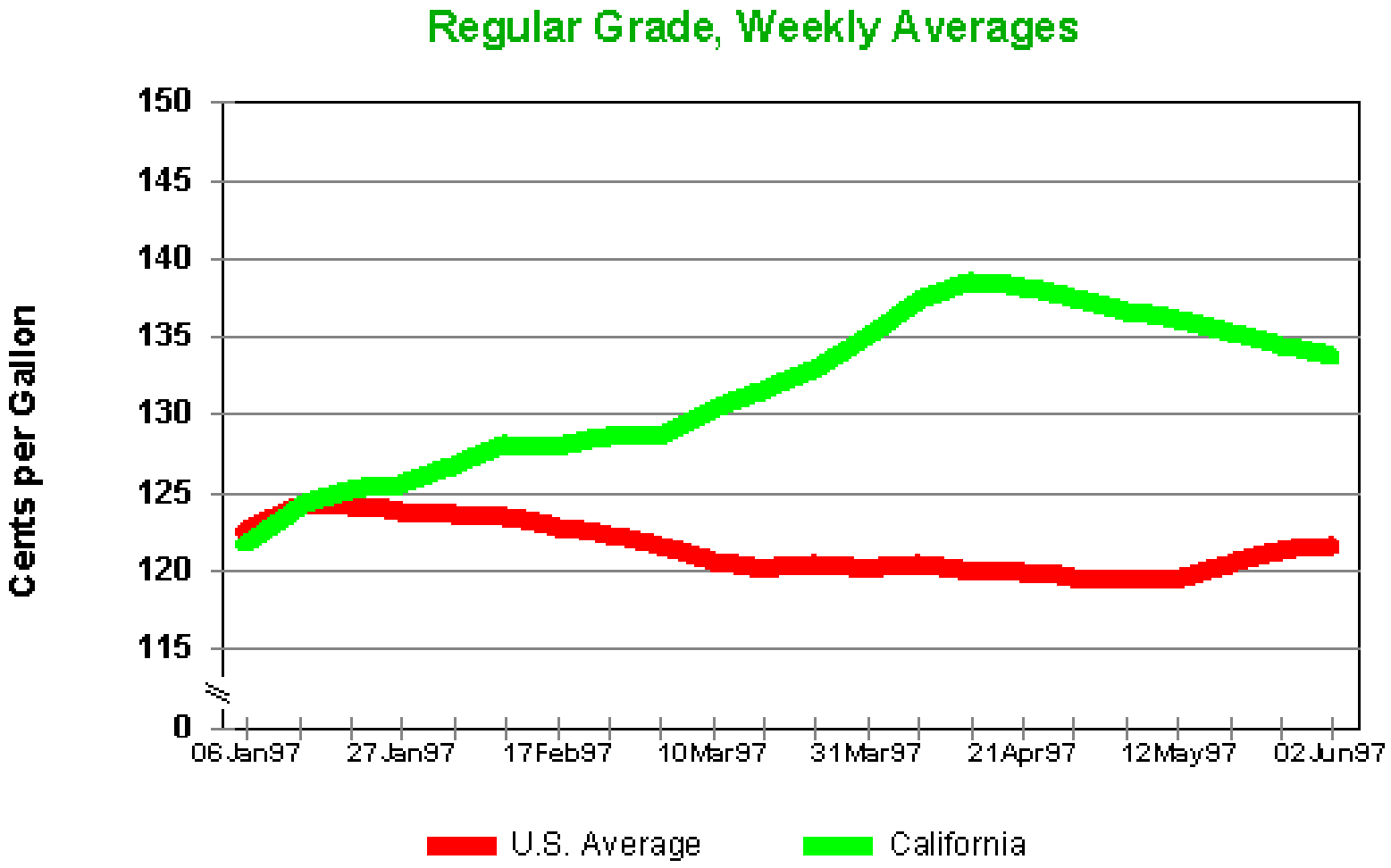
Figure U8. Recent Reformulated Gasoline Spot Prices

(Regular Grade, by Location)



Source: Energy Information Administration, Weekly Petroleum Status Report

Figure U9. California Retail Gasoline Prices



Source: Energy Information Administration, Weekly Petroleum Status Report

Table U4. U.S. Petroleum Supply and Demand: Mid World Oil Price Case - June 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**	*6455*	*6393*	*6309*	*6312*	*6289*	*6207*	*6140*	*6134*	**6471**	6366	6192
Alaska	**1460**	**1375**	**1347**	**1400**	*1364*	*1302*	*1259*	*1291*	*1278*	*1215*	*1178*	*1193*	**1396**	1304	1216
Lower 48	**5060**	**5099**	**5077**	**5068**	*5091*	*5091*	*5050*	*5020*	*5011*	*4992*	*4961*	*4942*	**5076**	5063	4976
Net Imports (including SPR) [b]	**6901**	**7666**	**7602**	**7317**	*7317*	*7948*	*8016*	*7669*	*7534*	*8263*	*8248*	*7844*	**7372**	7739	7974
Other Supply															
NGL Production	**1735**	**1827**	**1859**	**1900**	*1873*	*1851*	*1887*	*1909*	*1870*	*1866*	*1879*	*1890*	**1831**	1880	1876
Net Product Imports [c]	**960**	**1146**	**988**	**1093**	*1299*	*1040*	*1286*	*1216*	*1292*	*1443*	*1483*	*1284*	**1047**	1210	1376
Other Supply	**2177**	**801**	**1219**	**1856**	*1299*	*965*	*1058*	*1823*	*1856*	*756*	*1034*	*1953*	**1513**	1288	1399
Demand															
Total Demand	**18292**	**17914**	**18092**	**18634**	*18243*	*18197*	*18556*	*18929*	*18841*	*18535*	*18784*	*19105*	**18234**	18483	18817
Motor Gasoline	**7511**	**7985**	**8001**	**7896**	*7589*	*8115*	*8191*	*8096*	*7777*	*8312*	*8345*	*8252*	**7849**	8000	8173
Jet Fuel	**1605**	**1517**	**1587**	**1600**	*1567*	*1560*	*1642*	*1687*	*1641*	*1601*	*1661*	*1693*	**1577**	1614	1649
Distillate Fuel Oil	**3616**	**3231**	**3135**	**3490**	*3577*	*3368*	*3287*	*3563*	*3828*	*3398*	*3321*	*3586*	**3368**	3448	3532
Residual Fuel Oil	**958**	**771**	**829**	**807**	*897*	*774*	*812*	*926*	*1022*	*810*	*771*	*857*	**841**	852	864
Other Oils [d]	**4602**	**4410**	**4540**	**4841**	*4613*	*4380*	*4624*	*4657*	*4573*	*4414*	*4686*	*4717*	**4599**	4569	4599
Ending Stocks (million barrels per day)															
Crude Oil Stocks (excl. SPR)	**300**	**314**	**304**	**285**	*314*	*323*	*316*	*315*	*321*	*322*	*316*	*314*	**285**	315	314
Total Motor Gasoline	**203**	**205**	**200**	**196**	*200*	*195*	*195*	*202*	*208*	*205*	*207*	*204*	**196**	202	204
Jet Fuel	**34**	**39**	**43**	**40**	*39*	*42*	*44*	*42*	*40*	*41*	*42*	*41*	**40**	42	41
Distillate Fuel Oil	**90**	**102**	**115**	**127**	*102*	*109*	*129*	*130*	*94*	*107*	*129*	*130*	**127**	130	130
Residual Fuel Oil	**32**	**35**	**38**	**46**	*41*	*41*	*44*	*45*	*35*	*39*	*40*	*43*	**46**	45	43
Other Oils [e]	**235**	**267**	**280**	**251**	*253*	*284*	*301*	*256*	*252*	*300*	*317*	*270*	**251**	256	270
Crude Oil in SPR	**589**	**584**	**574**	**566**	*563*	*564*	*564*	*564*	*564*	*564*	*564*	*564*	**566**	564	564

[a]Incudes lease condensate.

[b]Net imports equals gross imports plus SPR imports minus exports.

[c]Includes finished petroleum products, unfinished oils, gasoline blending components, and natural gas plant liquids for processing.

[d]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.

[e]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 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.

quarter has been revised upward again this month, showing a full 1-percent growth rate compared to Q1 1996. This is twice the growth rate reported in our April forecast and 0.3 percentage points higher than last month. But even with this latest revision to the demand estimate, apparent gasoline use so far in 1997 does not look particularly strong in light of the robust economic growth and favorable driving conditions (i.e. mild weather). Nevertheless, with lower prices this summer and a strong economy, more normal growth in travel and a continuation of strong transportation sector fuel demand is expected. Overall gasoline demand, then, should reach 8 million barrels per day in 1997, 1.9 percent above 1996 levels. With real prices expected to fall again in 1998, a similar rate of growth in gasoline demand is expected next year (Table U4).utab4.html.

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 http://www.eia.doe.gov/emeu/steo/pub/upd/may97/may97u09.gif(Figure U10). This situation may keep short-term gasoline supply relatively tight through the driving season. However, the currently high levels of motor gasoline production, combined with continued moderate crude oil prices, should counter any upward price pressure from lower stocks. Thus, the prospects for lower average gasoline prices this summer are still very good.

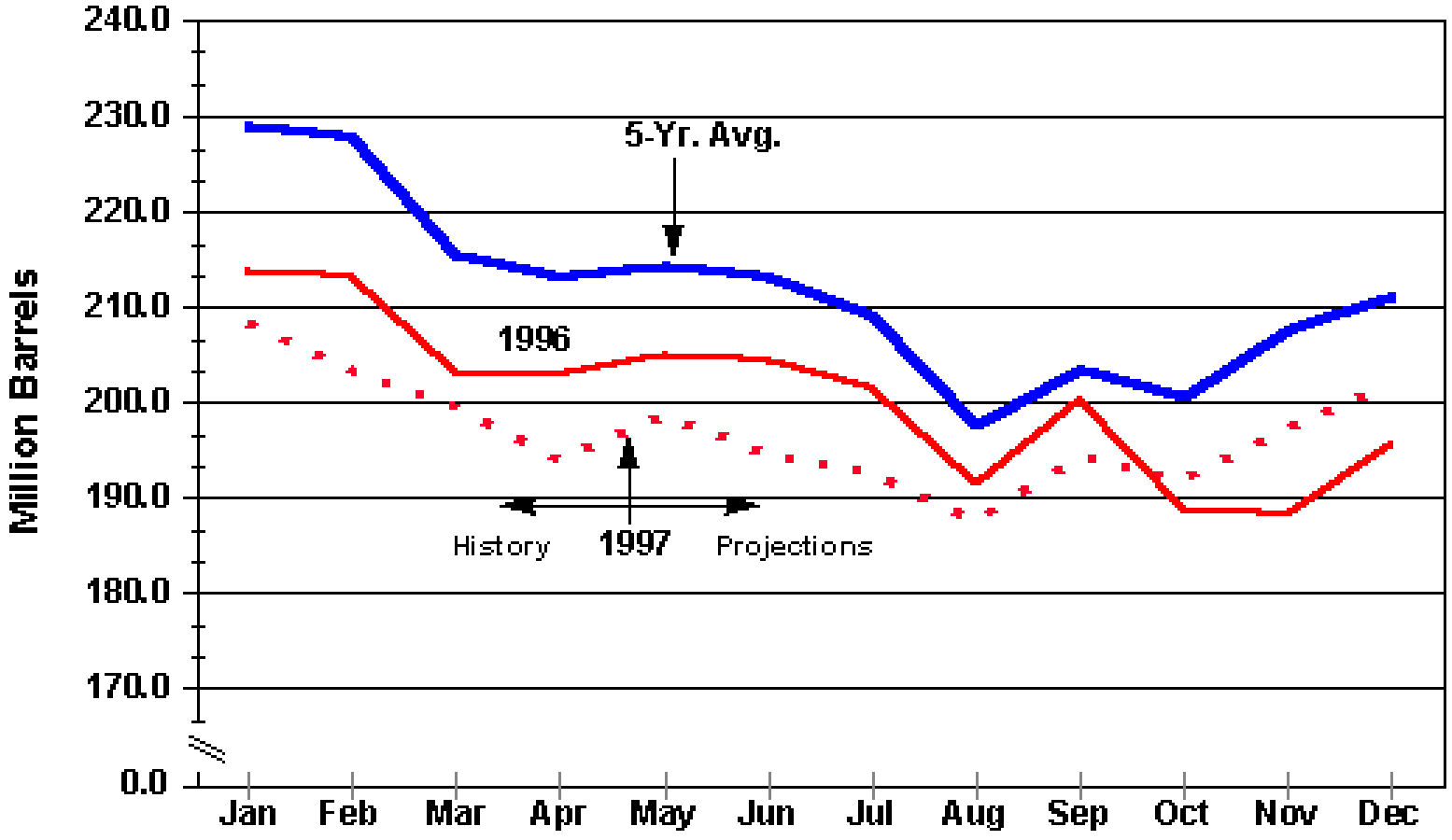
Natural Gas:

Natural gas net storage injections for May probably fell somewhat short of expectations, leaving total gas in storage a little further below normal than we had anticipated last month. At last check (through May 23), net injections were running at a rate of about 9.9 billion cubic feet per day, at least between May 2 and May 23 (see EIA's Natural Gas Weekly Market Update for the latest information on gas storage and prices). Extrapolated and compared to ending-April storage figures, net injections for May totaled about 298 billion cubic feet. This compares to a projected 320 billion in the May Outlookgifs/jun9711.gif. The market has not apparently taken this incremental deficit as being particularly significant, since expected prices (based on the summer futures contracts) have actually eased from earlier levels. As it is, we expect spot gas prices to track slightly below last months projections, but still see a strong likelihood for next winter's prices to peak above $2.50 per thousand cubic feet (Figure U11 - see also Tables U3 and U5).

Electricity and Coal:

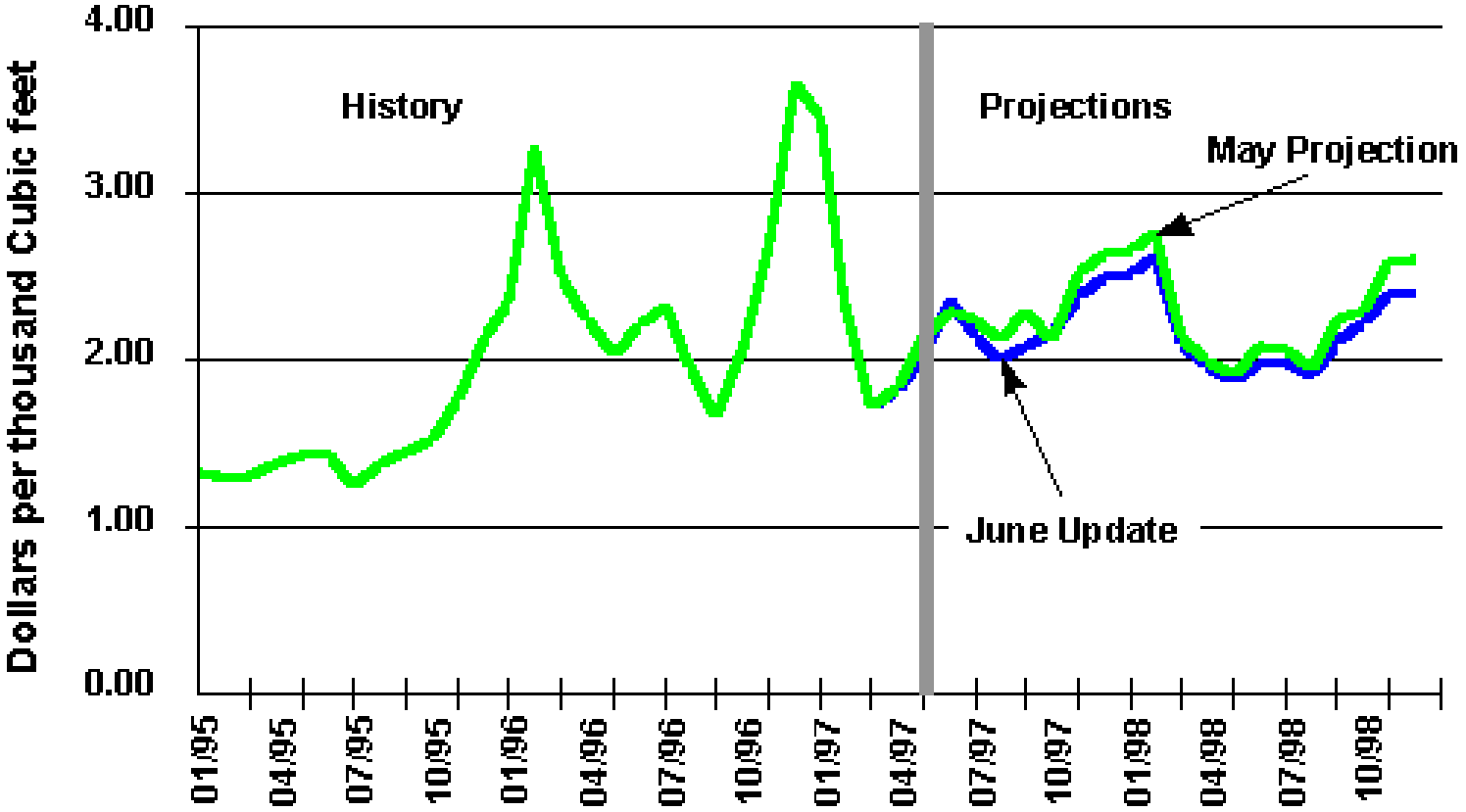
Hampered by a very weak first quarter, electricity demand is not expected to accelerate this year (Figure U12). The average 1997 growth rate is projected to be only 1.4 percent (compared to the 2.4 percent posted in 1996) despite the expected boost to economic growth this year. Late summer and early fall should grow at above average rates, but this is largely dependent upon industrial electricity use reviving from its earlier anemia (0.2 percent growth in 1996). Residential and commercial demand may boost the overall

Figure U10. Total Motor Gasoline Stocks



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

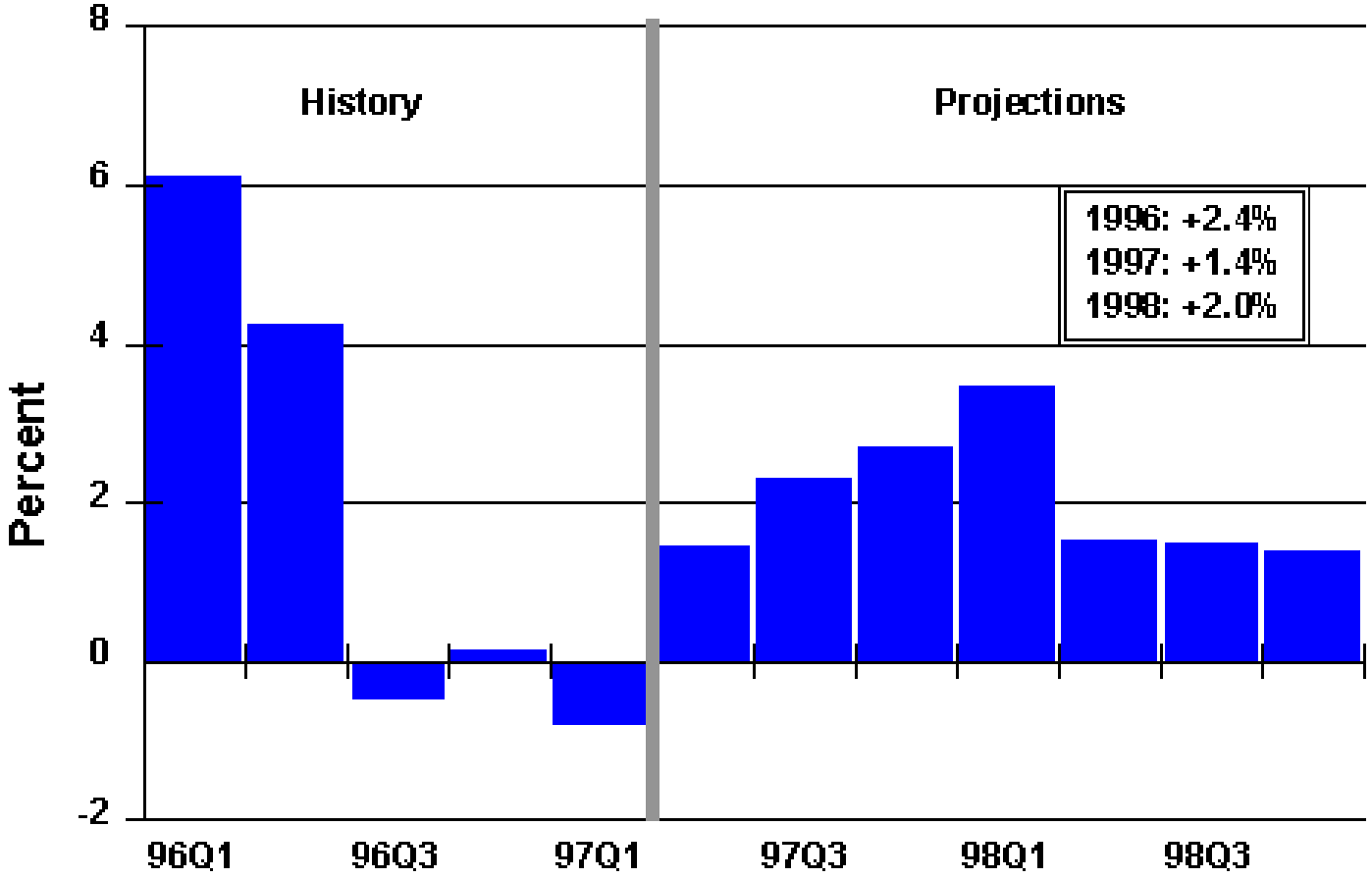
Figure U11. Average Spot Natural Gas Prices



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

Figure U12. Total Electricity Demand

Quarterly Percent Change from Same Period Year Ago



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

growth rate in 1998, assuming normal weather. But industrial output and electricity demand growth should be slowing down by then, holding the aggregate growth rate to about 2.0 percent next year.

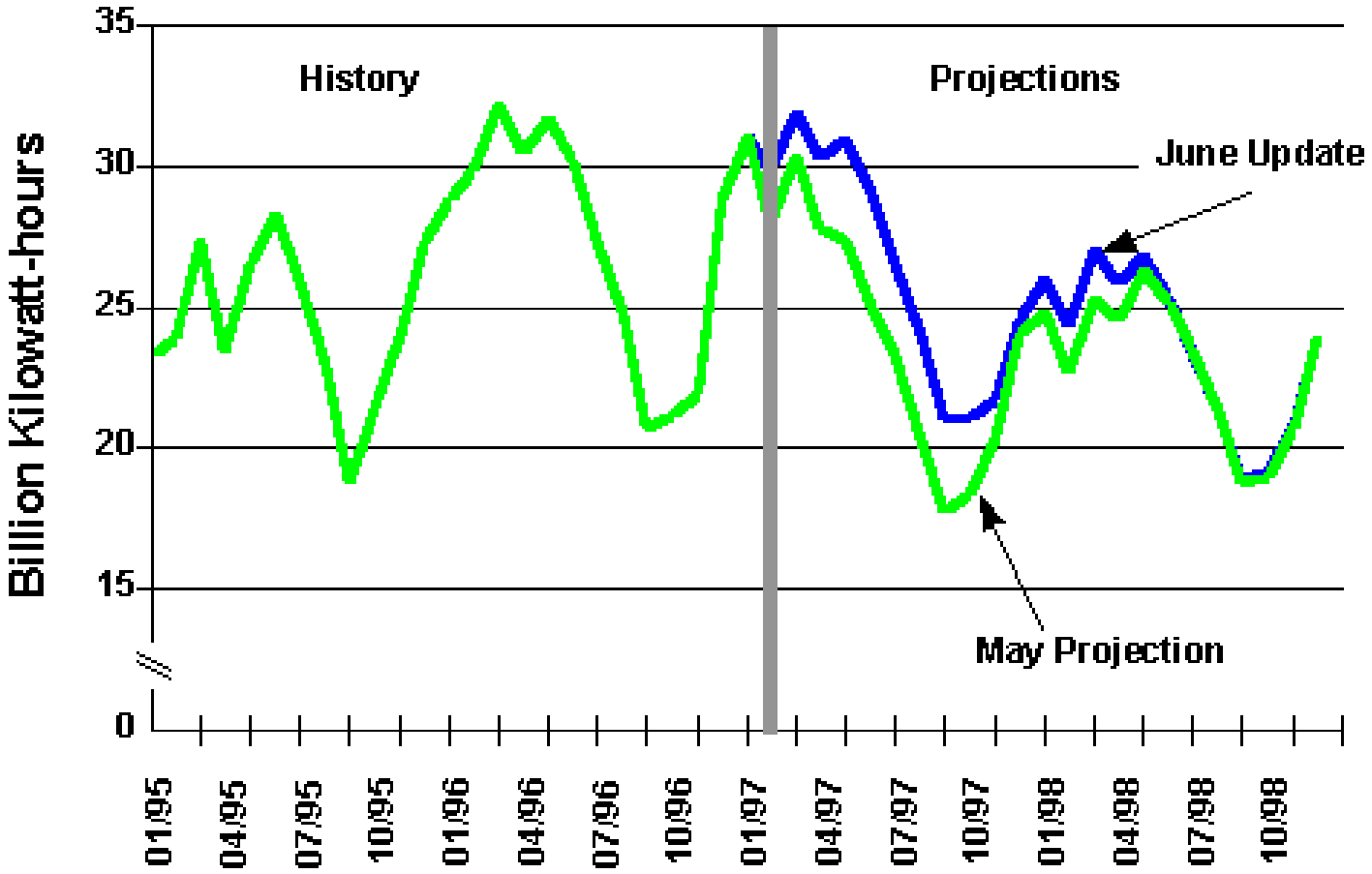
Electricity supply patterns are shaping up to be different from what was projected last month. It has become clear that precipitation patterns during the winter and early spring will keep hydroelectric output fairly close to last year's near-record levels (only 1983 was higher). Electricity supply from hydroelectric sources have been accordingly adjusted upward this month (Figure U13). Thus, any falloff in hydroelectric this year will be small (Figure U14). However, with normal precipitation assumed for the remainder of the forecast, the expected downturn in hydroelectric output in 1998 is all the greater (down 12.2 percent from expected 1997 levels). This revision tends to hold off anticipated increases in natural gas demand for power generation for now, particularly on the West Coast. However, other factors will probably contribute to increased electric utility use of natural gas this year.

Nuclear output is expected to decline by about 3.4 percent in 1997. It would be only the second time aggregate annual output from nuclear power plants will have declined since the years immediately following the Three-Mile Island accident in 1979 (there was also a decline of 1.5 percent in 1993). Continued uncertainty surrounding the (currently shut down) Millstone nuclear plant units in Waterford Connecticut, and the closure of the Maine Yankee nuclear plant in Wiscasset, Maine have fueled concerns about potential power shortages in New England this summer. Meanwhile, in Illinois, the LaSalle units 1 and 2, which have been shut down since last September, are currently scheduled to remain offline until early 1998 due to performance concerns. Also in Illinois, the Zion units 1 and 2 are out until late July or early August. In Wisconsin, the Point Beach plant units 1 and 2 have been out for much of this year due to maintenance and refueling. In its 1997 Summer Assessment, the North American Electric Reliability Council (NERC) recently warned of potential electricity shortages in the New England and Illinois/Wisconsin area due to the unavailability of nuclear capacity. Steps to avoid potential shortages will include increasing utilization of non-nuclear plants by the affected utilities or by other utilities capable of selling power to them. We expect that coal and natural gas (as well as petroleum in parts of New England) will fill in for much of the expected 23 billion kilowatt-hours decline in nuclear output in 1997 (Figure U15).

At this point, most of the reduction in nuclear output in 1997 is expected to be reversed in 1998, but by that time significant reductions in hydroelectric power output from the current abnormally high levels are likely to occur. This should keep aggregate natural gas use at electric utilities climbing through 1998, as West Coast utilities substitute gas-fired output for declining hydropower. (See also Tables U6 and U7).

Figure U13. Hydroelectric Power Generation

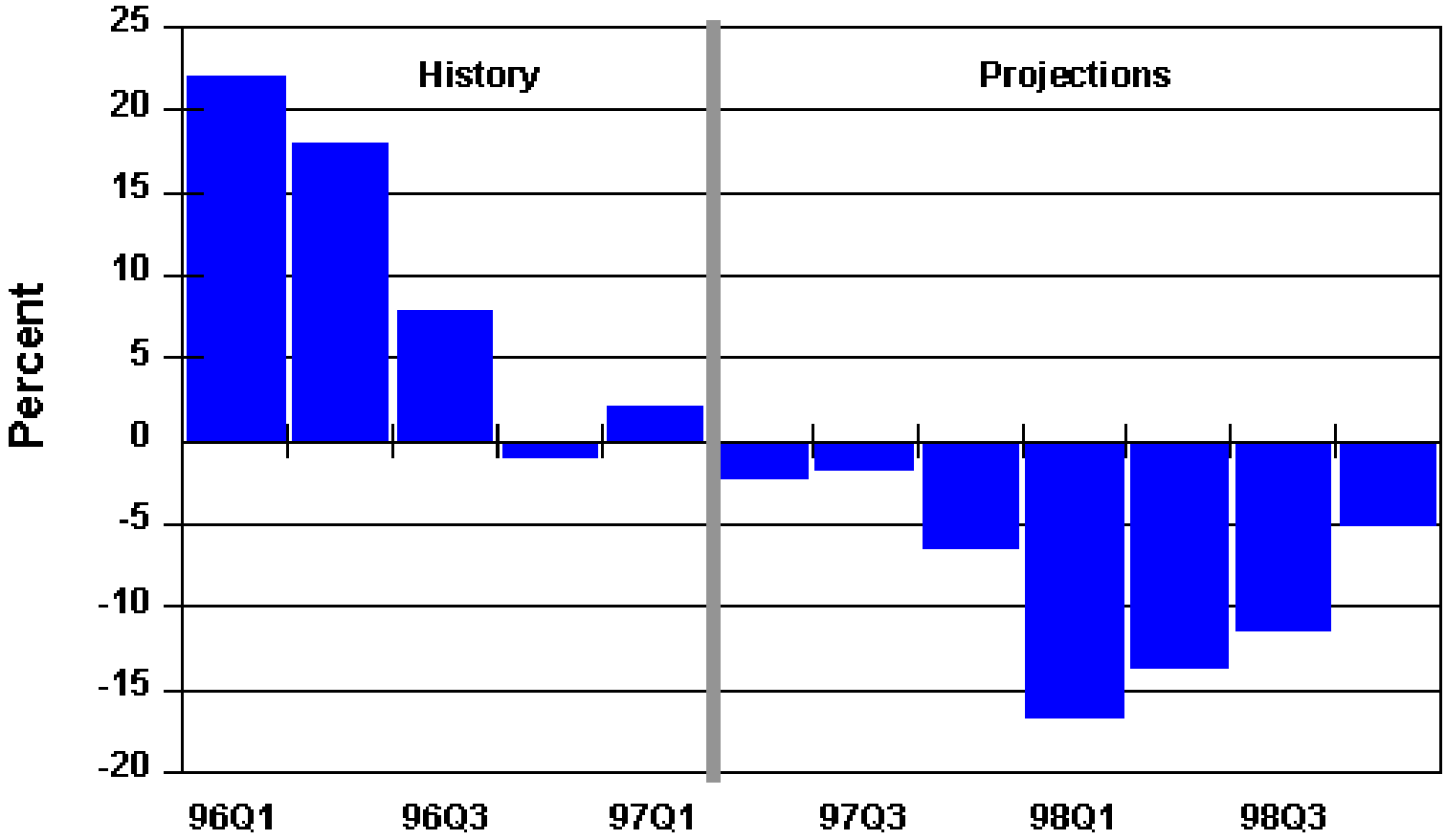
Electric Utilities



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

Figure U14. Quarterly Changes in Hydroelectric Power

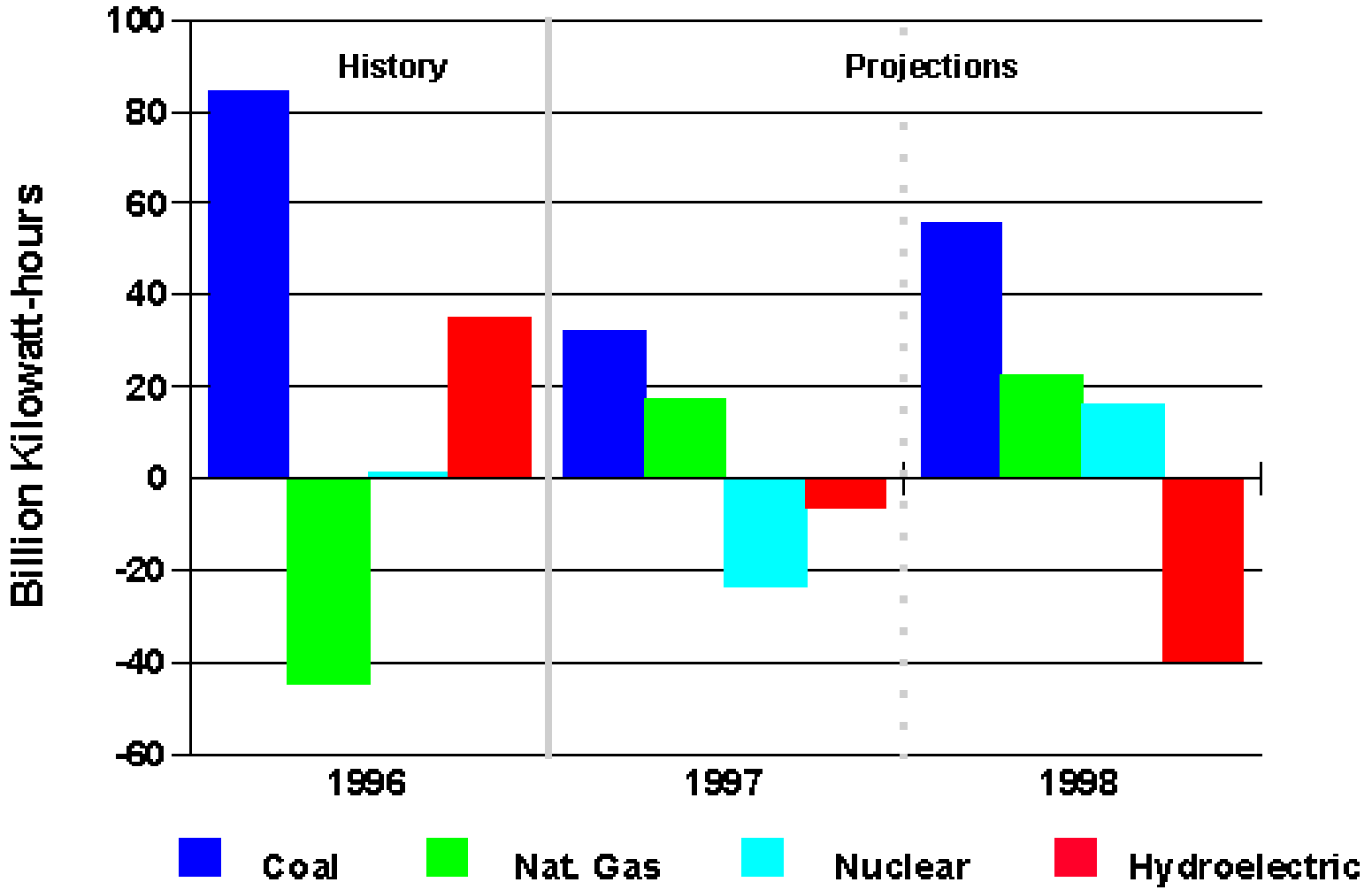
(Percent Change from Year Ago: Electric Utilities)



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

Figure U15. Annual Net Electricity Generation by Source

(Change from Year Ago: Electric Utilities)



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

Table U5. U.S. Natural Gas Supply and Demand: Mid World Oil Price Case - June 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**	**4.85**	*4.74*	*4.74*	*4.77*	*4.93*	*4.82*	*4.83*	*4.86*	*4.99*	**19.02**	*19.17*	*19.50*
Net Imports	**0.66**	**0.66**	**0.67**	**0.73**	*0.75*	*0.72*	*0.72*	*0.78*	*0.79*	*0.77*	*0.78*	*0.84*	**2.72**	*2.97*	*3.17*
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**	**5.61**	*5.52*	*5.49*	*5.51*	*5.74*	*5.64*	*5.63*	*5.67*	*5.87*	**21.86**	*22.27*	*22.80*
Net Withdrawals from Storage	**1.46**	**-0.82**	**-1.07**	**0.42**	*1.19*	*-0.73*	*-0.92*	*0.46*	*1.28*	*-0.80*	*-0.94*	*0.46*	**-0.00**	*0.00*	*0.00*
Total Supply	**6.91**	**4.57**	**4.35**	**6.03**	*6.71*	*4.76*	*4.60*	*6.21*	*6.92*	*4.82*	*4.73*	*6.33*	**21.86**	*22.27*	*22.80*
Balancing Item [a]	**0.17**	**0.29**	**-0.04**	**-0.37**	*0.21*	*0.23*	*-0.08*	*-0.36*	*0.45*	*0.24*	*-0.05*	*-0.36*	**0.05**	*-0.00*	*0.27*
Total Primary Supply	**7.08**	**4.85**	**4.31**	**5.66**	*6.92*	*4.98*	*4.51*	*5.85*	*7.37*	*5.06*	*4.67*	*5.97*	**21.91**	*22.27*	*23.07*
Demand															
Lease and Plant Fuel	**0.31**	**0.31**	**0.31**	**0.32**	*0.32*	*0.32*	*0.32*	*0.33*	*0.32*	*0.32*	*0.32*	*0.33*	**1.25**	*1.28*	*1.29*
Pipeline Use	**0.23**	**0.16**	**0.14**	**0.18**	*0.23*	*0.17*	*0.15*	*0.19*	*0.24*	*0.17*	*0.15*	*0.19*	**0.71**	*0.74*	*0.75*
Residential	**2.46**	**0.91**	**0.38**	**1.48**	*2.31*	*0.91*	*0.38*	*1.41*	*2.46*	*0.87*	*0.38*	*1.43*	**5.23**	*5.01*	*5.15*
Commercial	**1.32**	**0.61**	**0.39**	**0.89**	*1.26*	*0.63*	*0.41*	*0.89*	*1.39*	*0.62*	*0.42*	*0.91*	**3.20**	*3.19*	*3.34*
Industrial (Incl. Cogenerators)	**2.30**	**2.14**	**2.08**	**2.27**	*2.35*	*2.19*	*2.14*	*2.40*	*2.44*	*2.24*	*2.20*	*2.45*	**8.79**	*9.08*	*9.32*
Electric Utilities	**0.46**	**0.73**	**1.01**	**0.53**	*0.47*	*0.76*	*1.12*	*0.62*	*0.52*	*0.85*	*1.20*	*0.65*	**2.73**	*2.97*	*3.22*
Total Demand	**7.08**	**4.85**	**4.31**	**5.66**	*6.92*	*4.98*	*4.51*	*5.85*	*7.37*	*5.06*	*4.67*	*5.97*	**21.91**	*22.27*	*23.07*

[a]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.

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 U6. U.S. Coal Supply and Demand: Mid World Oil Price Case - June 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**	**266.8**	*274.2*	*265.3*	*272.9*	*273.1*	*276.3*	*268.8*	*275.5*	*275.7*	**1056.7**	*1085.4*	*1096.4*
Imports	**1.7**	**1.6**	**2.1**	**1.8**	*1.4*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	**7.1**	*7.1*	*7.5*
Exports	**20.5**	**23.0**	**23.5**	**23.4**	*20.8*	*23.0*	*23.3*	*23.2*	*22.5*	*23.2*	*23.4*	*23.3*	***90.5***	*90.3*	*92.4*
Demand															
Coke Plants	**8.0**	**8.0**	**8.0**	**7.8**	*7.9*	*7.9*	*7.8*	*8.4*	*7.9*	*7.9*	*8.0*	*8.4*	**31.7**	*32.0*	*32.1*
Electric Utilities	**214.9**	**203.2**	**233.6**	**223.0**	*218.2*	*205.8*	*238.7*	*223.1*	*227.6*	*213.8*	*243.3*	*227.0*	***874.7***	*885.8*	*911.8*
Nonutilities (Excl. Cogen.) [a]	**6.0**	**5.9**	**6.0**	**5.9**	*6.5*	*6.5*	*6.5*	*6.5*	*7.1*	*6.9*	*7.0*	*7.0*	**24.1**	*26.0*	*27.9*
Retail and General Industry [b]	**20.3**	**18.0**	**17.9**	**20.3**	*19.9*	*17.4*	*17.8*	*20.4*	*20.0*	*17.9*	*17.7*	*20.3*	**76.4**	*75.5*	*76.0*
Total Demand	**249.2**	**235.1**	**265.5**	**257.0**	*252.5*	*237.6*	*270.8*	*258.4*	*262.6*	*246.5*	*276.0*	*262.7*	**1006.9**	*1019.3*	*1047.8*

[a]Consumption 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.

[b]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.

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 - June 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**	*434.7*	*412.0*	*476.7*	*446.5*	*457.1*	*429.1*	*485.6*	*454.0*	**1737.5**	*1769.9*	*1825.9*
Petroleum	**22.3**	**12.8**	**19.0**	**14.1**	*19.0*	*15.6*	*20.5*	*15.5*	*22.5*	*15.0*	*18.3*	*13.1*	**68.2**	*70.6*	*68.8*
Natural Gas	**44.6**	**70.8**	**96.6**	**50.8**	*44.6*	*71.7*	*105.0*	*58.7*	*48.6*	*79.5*	*113.1*	*61.4*	**262.8**	*280.0*	*302.7*
Nuclear	**174.3**	**163.5**	**177.0**	**159.9**	*160.6*	*156.4*	*175.8*	*158.8*	*171.3*	*154.3*	*180.0*	*162.6*	**674.7**	*651.6*	*668.2*
Hydroelectric	**91.1**	**92.4**	**73.1**	**72.1**	*92.9*	*90.5*	*71.8*	*67.4*	*77.5*	*78.2*	*63.7*	*64.0*	**328.7**	*322.6*	*283.4*
Geothermal and Other [a]	**1.6**	**1.4**	**2.1**	**2.0**	*1.5*	*1.7*	*1.7*	*1.9*	*1.7*	*1.6*	*1.7*	*1.6*	**7.2**	*6.8*	*6.5*
Subtotal	**762.1**	**746.6**	**830.5**	**739.9**	*753.3*	*747.9*	*851.5*	*748.8*	*778.7*	*757.7*	*862.4*	*756.7*	**3079.1**	*3101.5*	*3155.5*
Nonutility Generation [b]	**100.3**	**91.8**	**94.2**	**108.3**	*99.6*	*96.9*	*101.6*	*116.7*	*103.0*	*100.1*	*105.0*	*120.7*	**394.7**	*414.7*	*428.8*
Total Generation	**862.4**	**838.4**	**924.7**	**848.2**	*852.9*	*844.8*	*953.1*	*865.5*	*881.7*	*857.8*	*967.4*	*877.4*	**3473.8**	*3516.2*	*3584.3*
Net Imports	**7.1**	**9.5**	**13.0**	**8.4**	*7.5*	*9.3*	*12.7*	*8.1*	*6.9*	*9.2*	*12.6*	*8.3*	**38.0**	*37.6*	*37.0*
Total Supply	**869.5**	**857.4**	**937.7**	**856.6**	*860.4*	*854.1*	*965.8*	*873.6*	*888.6*	*867.0*	*980.0*	*885.7*	**3511.8**	*3553.8*	*3621.3*
Demand															
Residential	**290.7**	**239.2**	**302.1**	**246.5**	*280.0*	*239.8*	*306.7*	*254.9*	*297.5*	*244.7*	*314.0*	*261.4*	**1078.5**	*1081.4*	*1117.7*
Commercial	**212.3**	**215.8**	**248.1**	**215.4**	*214.9*	*219.3*	*254.5*	*221.0*	*222.9*	*225.1*	*259.9*	*224.8*	**891.6**	*909.8*	*932.7*
Industrial	**245.6**	**252.5**	**262.8**	**253.4**	*249.8*	*260.0*	*270.9*	*259.2*	*250.8*	*260.6*	*270.8*	*259.4*	**1014.3**	*1039.8*	*1041.5*
Other	**24.6**	**24.3**	**26.6**	**24.7**	*23.7*	*23.1*	*25.8*	*23.8*	*24.2*	*23.0*	*25.4*	*23.4*	**100.2**	*96.3*	*96.0*
Subtotal	**773.2**	**731.9**	**839.6**	**740.0**	*768.4*	*742.2*	*857.9*	*758.9*	*795.4*	*753.3*	*870.2*	*768.9*	**3084.7**	*3127.3*	*3187.9*
Own Use NonUti. [b]	**41.1**	**37.6**	**38.6**	**44.4**	*39.8*	*38.7*	*40.6*	*46.6*	*40.7*	*39.6*	*41.5*	*47.7*	**161.8**	*165.6*	*169.5*
Total Demand	**814.3**	**769.5**	**878.3**	**784.4**	*808.1*	*780.9*	*898.4*	*805.5*	*836.1*	*792.9*	*911.7*	*816.6*	**3246.4**	*3292.9*	*3357.4*

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

[b] 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."

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.