Short-Term Energy Outlook

March 1997 (Released March 6, 1997)

Energy Information Administration

What's New This Month -- March 1997

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

U.S. Macroeconomic and Other Assumptions:

Revised gross domestic product Figures for the fourth quarter of last year have contributed to a more robust economic outlook for the next year or two (Figure U1), and consequently the overall energy demand outlook has been shifted up marginally. However, in the United States at least, weather has proven to be much milder than normal (Figure U2), and, in addition to keeping fuel demand down in recent weeks, has relieved pressure on fuels prices, particularly for natural gas and other heating fuels. (See Table U1).

World Oil:

World oil demand is expected to continue to increase during the next 2 years. By 1998, total world oil demand may average 75.6 million barrels per day . Indicators point toward annual increments of 1.7 million to 1.8 million barrels per day in world demand over this year and next, or an annual average growth of 2.5 percent compared with the 1.3 percent average growth seen between 1991 and 1995. However, increases in oil production, especially for Iraq, Venezuela, and the North Sea should lead to prices that remain more or less stable, and should prevent any new downward pressure on oil inventories. (See Table U2).

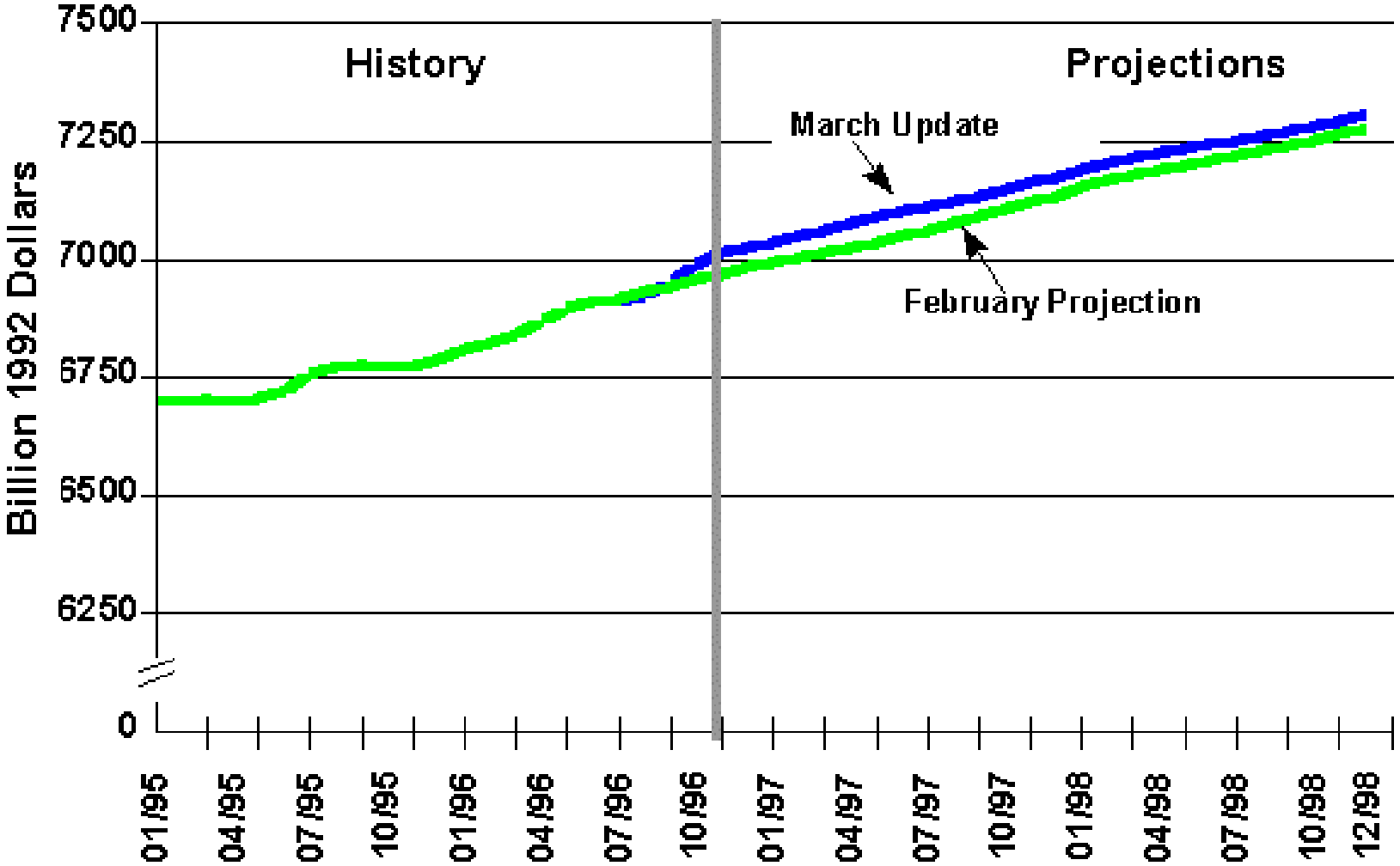
Oil Prices:

Crude oil prices succumbed to the mild February weather, dropping an average of about $2.60 per barrel in that month. However, despite the relative weakness of the current market situation, further sharp price declines are not anticipated. While mild weather (10 percent warmer than normal in February in the United States) has finally allowed distillate inventories to reach above year-ago levels, overall petroleum inventories remain below normal, particularly for crude oil and motor gasoline (Figures U3 and U4). Thus, while crude prices have eased for the moment, some support should rebuild as the driving season approaches (Figure U5). Still, the lofty midwinter prices are gone, and expected additions to world supply are expected to keep prices generally stable (except for seasonal changes) in the $21 to $21.50 per barrel range through 1998.

Gasoline:

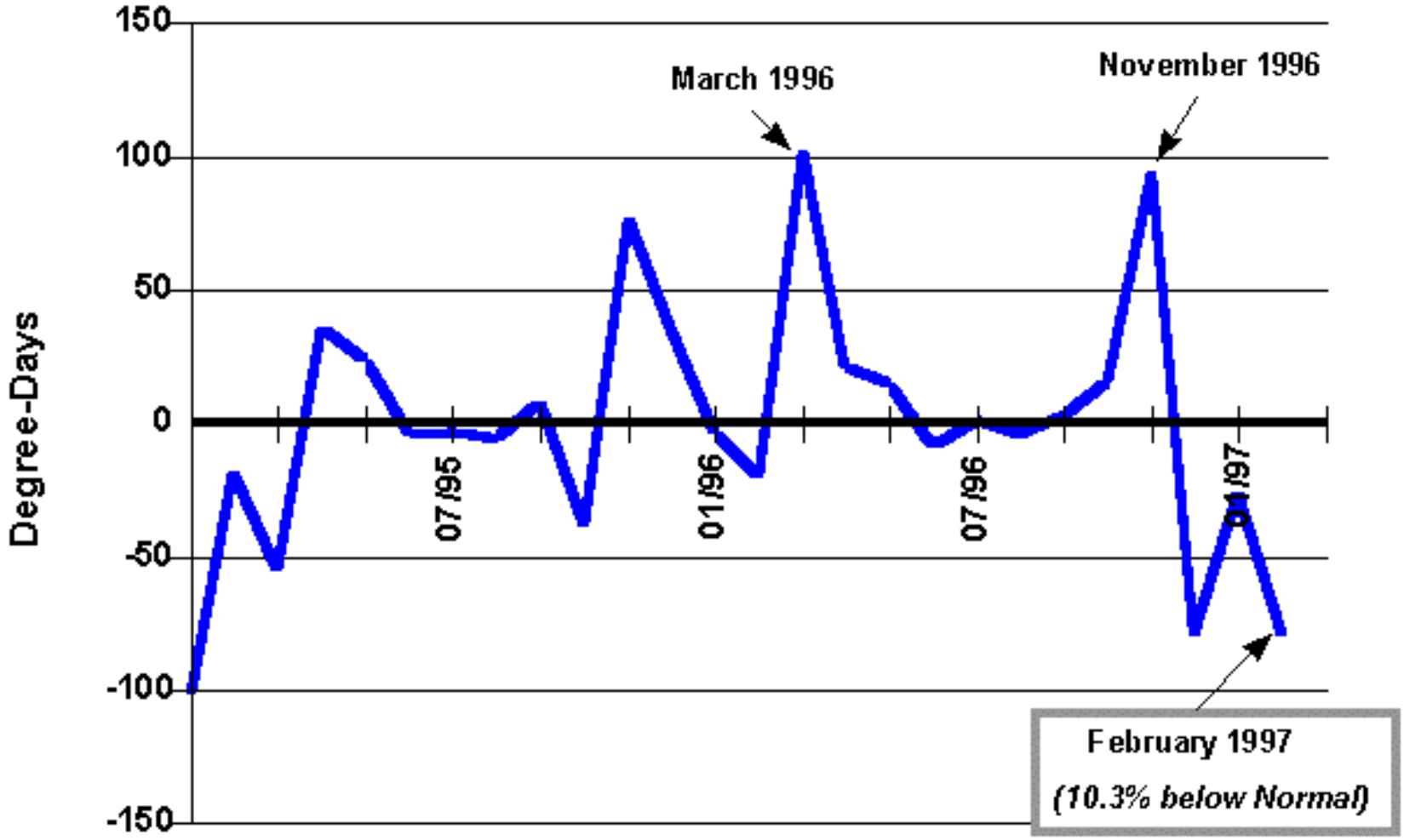
Gasoline prices, which have been running well above last year's levels this winter due to strong crude oil markets, are not expected to exhibit the kind of sharp run up seen last spring, when average pump prices rose 15 cents per gallon between the first and second quarters (see Table U3). Nevertheless, comparatively strong gasoline demand this year and continued low gasoline inventories are expected to generate spring and summer retail price averages as high as (or slightly above) levels seen last year, even if

Figure U1. Real Gross Domestic Product



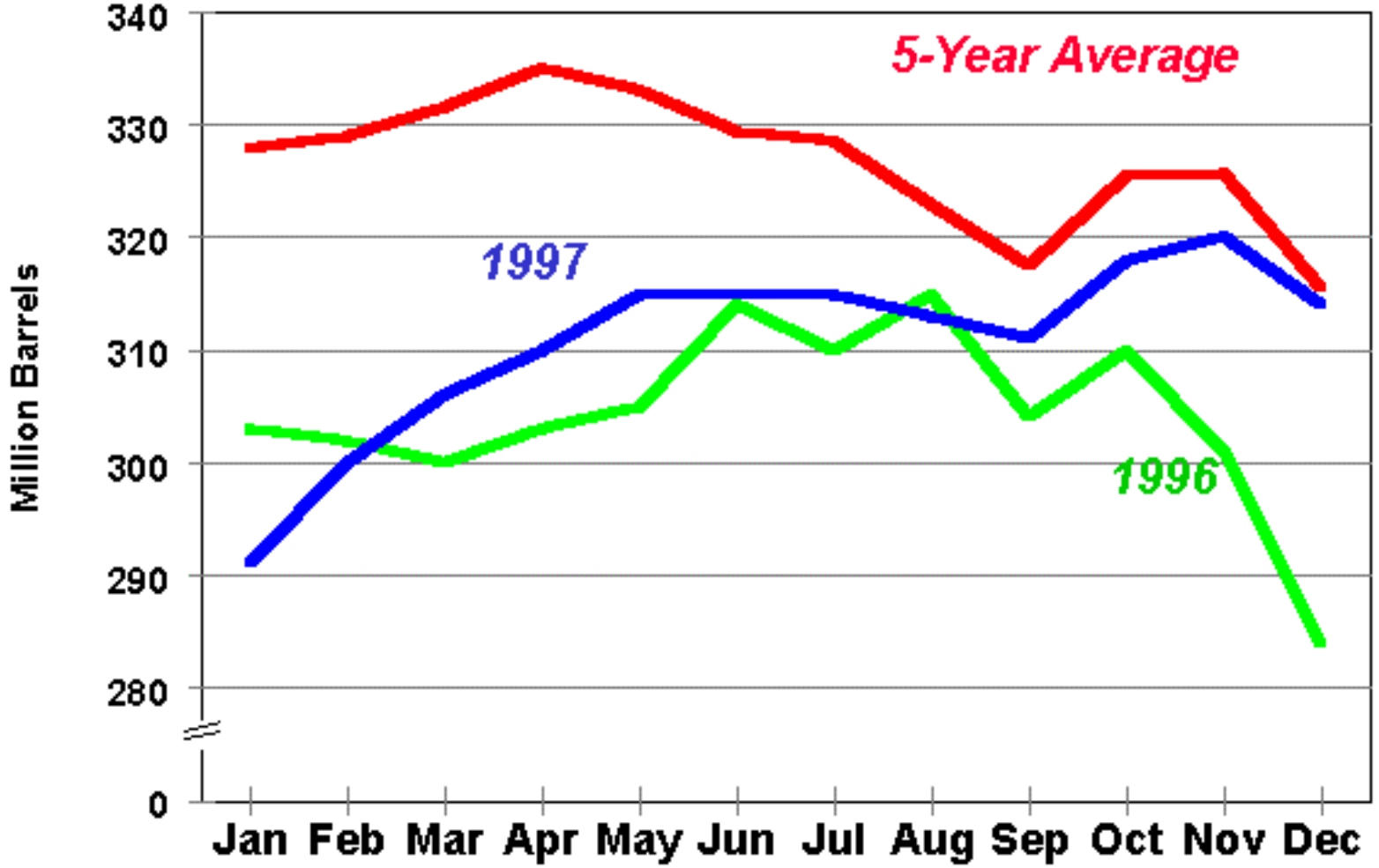
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U2. U.S. Heating Degree-Days
(Deviations from Normal)



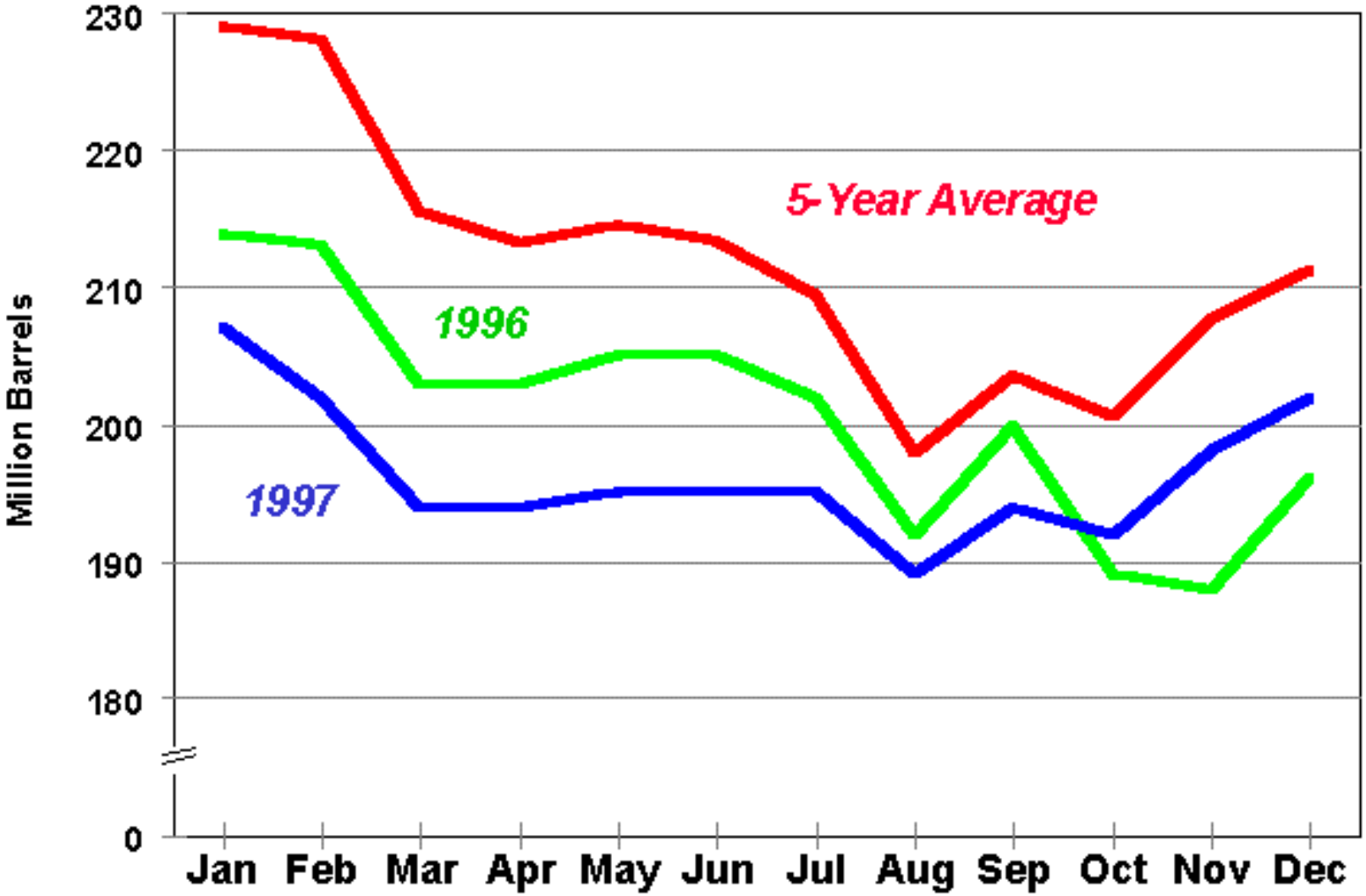
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U3. Crude Oil Stocks



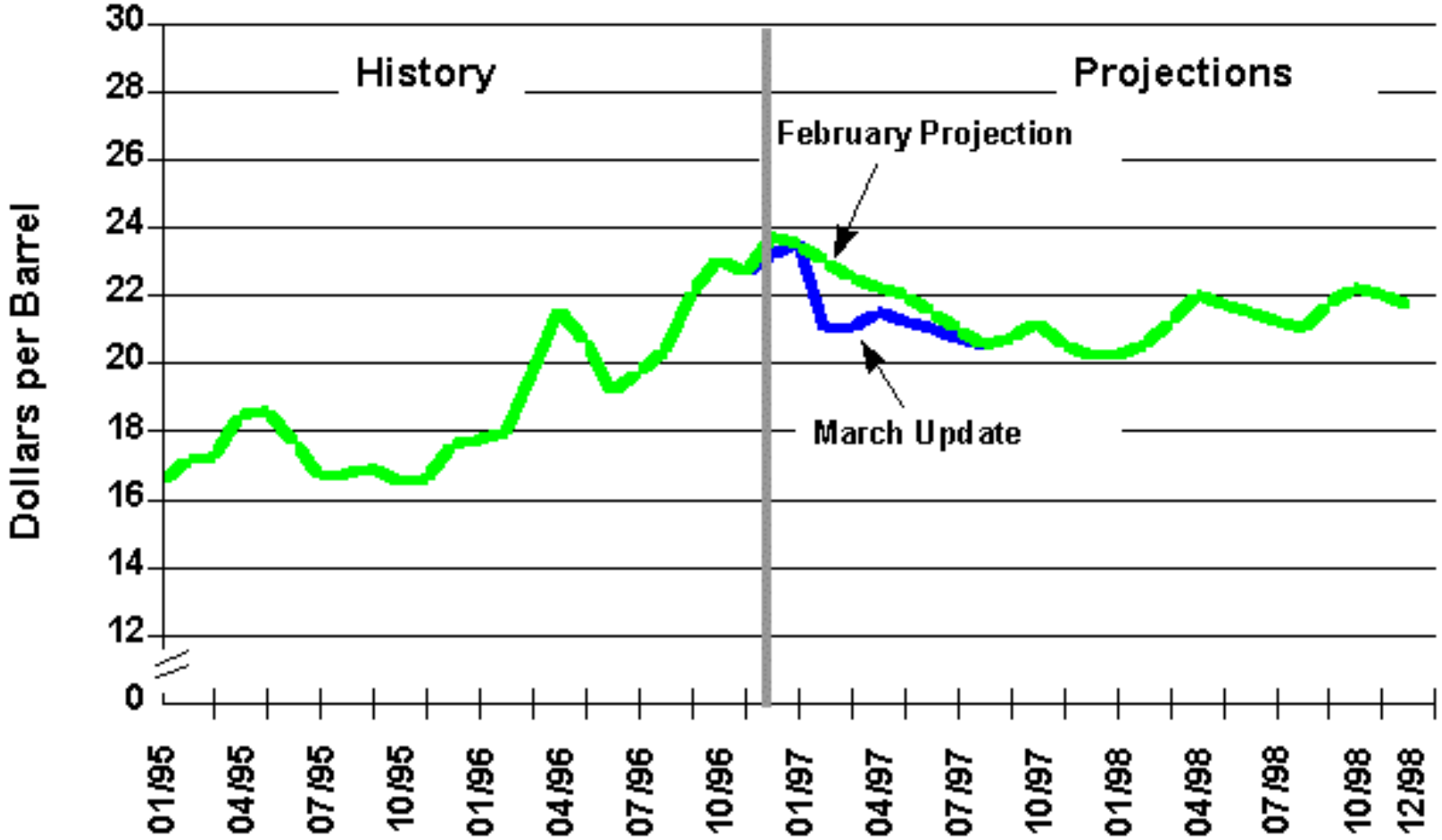
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U4. Motor Gasoline Stocks



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

Figure U5. U.S. Crude Oil Prices*



*** Refiner acquisition cost.**

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

Table U1. U.S. Macroeconomic and Weather Assumptions: Mid World Oil Price Case - March 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)	**6824**	**6893**	**6928**	**7009**	*7049*	*7090*	*7121*	*7161*	*7203*	*7236*	*7262*	*7295*	**6914**	*7106*	*7249*
GDP Implicit Price Deflator															
(Index, 1992=1.000)	**1.090**	**1.096**	**1.102**	**1.107**	*1.113*	*1.119*	*1.125*	*1.131*	*1.139*	*1.145*	*1.152*	*1.159*	**1.099**	*1.122*	*1.149*
Real Disposable Personal Income															
(billion chained 1992 Dollars - SAAR)	**5038**	**5054**	**5114**	**5147**	*5206*	*5241*	*5288*	*5316*	*5356*	*5372*	*5393*	*5410*	**5089**	*5263*	*5383*
Manufacturing Production															
(Index, 1987=1.000)	**1.229**	**1.248**	**1.263**	**1.274**	*1.291*	*1.300*	*1.307*	*1.310*	*1.317*	*1.325*	*1.333*	*1.338*	**1.253**	*1.302*	*1.328*
Consumer Price Index															
(index, 1980-1984=1.000)	**1.551**	**1.565**	**1.574**	**1.587**	*1.597*	*1.606*	*1.617*	*1.629*	*1.641*	*1.653*	*1.665*	*1.678*	**1.569**	*1.612*	*1.660*
Petroleum Product Price Index															
(index, 1980-1984=1.000)	**1.263**	**1.274**	**1.281**	**1.287**	*1.289*	*1.285*	*1.287*	*1.291*	*1.294*	*1.300*	*1.306*	*1.312*	**1.276**	*1.288*	*1.303*
Commercial Employment															
(millions)	**80.2**	**81.0**	**81.6**	**82.2**	*82.8*	*83.4*	*83.9*	*84.4*	*84.8*	*85.2*	*85.5*	*85.9*	**81.2**	*83.6*	*85.4*
Housing Stock															
(millions)	**110.6**	**111.0**	**111.4**	**111.8**	*112.1*	*112.5*	*112.9*	*113.2*	*113.6*	*113.9*	*114.2*	*114.6*	**111.2**	*112.7*	*114.1*
Weather															
Heating Degree-Days															
Middle Atlantic	**3120**	**750**	**87**	**2008**	*2820*	*716*	*105*	*2026*	*2993*	*716*	*105*	*2026*	**5965**	*5667*	*5839*
New England	**3361**	**933**	**151**	**2247**	*3087*	*915*	*171*	*2269*	*3267*	*915*	*171*	*2269*	**6692**	*6441*	*6621*
U.S.	**2406**	**552**	**89**	**1667**	*2222*	*524*	*89*	*1636*	*2327*	*524*	*89*	*1636*	**4714**	*4471*	*4576*
U.S. Gas-Weighted	**2501**	**636**	**135**	**1768**	*2333*	*539*	*81*	*1686*	*2426*	*539*	*81*	*1686*	**5040**	*4639*	*4732*
Cooling Degree-Days (U.S.)	**21**	**368**	**725**	**54**	*27*	*334*	*758*	*72*	*30*	*334*	*758*	*72*	**1168**	*1190*	*1193*
Miscellaneous Indicators															
Gas Weighted Industrial Production															
(index, 1987=1.000)	**1.161**	**1.172**	**1.189**	**1.199**	*1.205*	*1.213*	*1.220*	*1.223*	*1.228*	*1.234*	*1.240*	*1.242*	**1.180**	*1.215*	*1.236*
Vehicle Miles Traveled															
(million miles/day)	**6181**	**7014**	**7134**	**6625**	*6446*	*7158*	*7333*	*6836*	*6615*	*7318*	*7479*	*6979*	**6739**	*6945*	*7100*
Vehicle Fuel Efficiency															
(miles per gallon)	**19.61**	**20.91**	**21.23**	**19.94**	*20.14*	*20.91*	*21.23*	*20.10*	*20.20*	*21.01*	*21.30*	*20.22*	**20.46**	*20.62*	*20.71*
Real Vehicle Fuel Cost															
(cents per mile)	**3.93**	**4.11**	**3.91**	**4.12**	*4.08*	*4.03*	*3.89*	*3.96*	*3.84*	*3.86*	*3.78*	*3.91*	**4.02**	*3.98*	*3.84*

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 Atmosphe
Statistical Release G.17(419); U.S. Department of Transportation; American Iron and Steel Institute. Macroeconomic projections are based on DRI/McGraw-Hill Forecast CONTROL02

Table 02: International Petroleum Supply and Demand: Mid World Oil Price Case - March 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**	**18.7**	*18.1*	*18.1*	*18.4*	*18.8*	*18.6*	*18.3*	*18.7*	*19.0*	**18.2**	*18.3*	*18.6*
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**	*14.7*	*14.0*	*14.5*	*14.9*	*14.9*	*14.1*	*14.6*	*15.1*	**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*	**5.8**	*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**	**40.6**	**42.3**	*42.3*	*40.2*	*41.2*	*42.8*	*43.2*	*40.7*	*41.8*	*43.3*	**41.2**	*41.6*	*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	**1.6**	**1.4**	**1.4**	**1.5**	*1.6*	*1.4*	*1.4*	*1.5*	*1.7*	*1.4*	*1.4*	*1.6*	**1.4**	*1.5*	*1.5*
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**	**8.4**	**8.0**	**9.1**	*9.3*	*9.1*	*8.6*	*9.8*	*9.9*	*9.6*	*9.2*	*10.5*	**8.6**	*9.2*	*9.8*
Other Non-OECD	**12.6**	**12.7**	**12.7**	**12.9**	*13.0*	*13.1*	*13.1*	*13.3*	*13.3*	*13.4*	*13.4*	*13.7*	**12.7**	*13.1*	*13.5*
Total Non-OECD	**31.0**	**30.3**	**29.9**	**31.8**	*32.4*	*31.6*	*31.2*	*33.2*	*33.5*	*32.9*	*32.5*	*34.5*	**30.8**	*32.1*	*33.3*
Total World Demand	**73.3**	**70.0**	**70.5**	**74.1**	*74.7*	*71.8*	*72.5*	*76.0*	*76.7*	*73.6*	*74.2*	*77.8*	**72.0**	*73.7*	*75.6*
Supply (b)															
OECD															
U.S. (50 States)	**9.4**	**9.4**	**9.4**	**9.5**	*9.4*	*9.3*	*9.2*	*9.2*	*9.2*	*9.1*	*9.1*	*9.1*	**9.4**	*9.3*	*9.1*
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*	*6.6*	*6.9*	*7.1*	*7.1*	*7.1*	*7.2*	*7.4*	**6.2**	*6.8*	*7.2*
Other OECD	**1.5**	**1.6**	**1.6**	**1.6**	*1.6*	*1.6*	*1.6*	*1.6*	*1.7*	*1.7*	*1.7*	*1.7*	**1.6**	*1.6*	*1.7*
Total OECD	**19.5**	**19.6**	**19.6**	**20.2**	*20.0*	*20.1*	*20.3*	*20.6*	*20.6*	*20.5*	*20.6*	*20.9*	**19.7**	*20.3*	*20.6*
Non-OECD															
OPEC	**28.1**	**28.1**	**28.3**	**28.7**	*29.2*	*29.3*	*29.3*	*29.4*	*29.5*	*29.7*	*29.8*	*29.9*	**28.3**	*29.3*	*29.7*
Former Soviet Union	**7.1**	**7.1**	**7.1**	**7.1**	*7.1*	*7.1*	*7.2*	*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**	*10.5*	*10.5*	*10.6*	*10.8*	*10.9*	*11.0*	*11.0*	*11.1*	**10.2**	*10.6*	*11.0*
Total Non-OECD	**51.7**	**51.8**	**52.0**	**52.6**	*53.2*	*53.5*	*53.7*	*54.1*	*54.4*	*54.7*	*55.1*	*55.5*	**52.0**	*53.6*	*54.9*
Total World Supply	**71.2**	**71.4**	**71.6**	**72.7**	*73.2*	*73.5*	*74.0*	*74.7*	*75.0*	*75.2*	*75.7*	*76.3*	**71.7**	*73.9*	*75.6*
Stock Changes															
Net Stock Withdrawals or Additions (-)															
U.S. (50 States including SPR)	**0.9**	**-0.7**	**-0.1**	**0.6**	*0.3*	*-0.8*	*-0.4*	*0.4*	*0.4*	*-0.6*	*-0.3*	*0.4*	**0.2**	*-0.1*	*-0.0*
Other	**1.1**	**-0.7**	**-1.0**	**0.7**	*1.1*	*-1.0*	*-1.2*	*0.9*	*1.4*	*-1.1*	*-1.2*	*1.1*	**0.0**	*-0.0*	*0.0*
Total Stock Withdrawals	**2.0**	**-1.4**	**-1.1**	**1.4**	*1.4*	*-1.7*	*-1.6*	*1.3*	*1.8*	*-1.7*	*-1.5*	*1.5*	**0.2**	*-0.1*	*0.0*
Closing Stocks, OECD only (billion barrels)	**2.6**	**2.6**	**2.7**	**2.6**	*2.5*	*2.6*	*2.7*	*2.6*	*2.6*	*2.6*	*2.7*	*2.6*	**2.6**	*2.6*	*2.6*
Non-OPEC Supply	**43.1**	**43.3**	**43.3**	**44.1**	*44.1*	*44.2*	*44.7*	*45.3*	*45.4*	*45.6*	*45.9*	*46.5*	**43.5**	*44.6*	*45.9*
Net Exports from Former Soviet Union	**2.4**	**2.8**	**2.8**	**2.4**	*2.3*	*2.8*	*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 - March 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**	**23.02**	*21.92*	*21.25*	*20.67*	*20.68*	*20.67*	*21.75*	*21.32*	*22.00*	**20.59**	*21.10*	*21.46*
Natural Gas Wellhead															
(dollars per thousand cubic feet)	**2.00**	**2.12**	**2.15**	**2.55**	*2.56*	*1.94*	*1.92*	*2.09*	*2.05*	*1.95*	*1.96*	*2.12*	**2.21**	*2.13*	*2.02*
Petroleum Products (dollars per gallon)															
Gasoline Retail (b)	**1.20**	**1.35**	**1.31**	**1.30**	*1.31*	*1.35*	*1.33*	*1.29*	*1.27*	*1.34*	*1.34*	*1.32*	**1.29**	*1.32*	*1.32*
No. 2 Diesel Oil, Retail	**1.16**	**1.23**	**1.21**	**1.30**	*1.28*	*1.26*	*1.23*	*1.26*	*1.24*	*1.25*	*1.23*	*1.28*	**1.23**	*1.26*	*1.25*
No. 2 Heating Oil, Wholesale	**0.59**	**0.61**	**0.63**	**0.72**	*0.63*	*0.59*	*0.61*	*0.64*	*0.63*	*0.63*	*0.61*	*0.67*	**0.64**	*0.62*	*0.64*
No. 2 Heating Oil, Retail	**0.96**	**0.97**	**0.90**	**1.05**	*1.03*	*0.96*	*0.93*	*1.00*	*1.04*	*1.00*	*0.95*	*1.02*	**0.97**	*0.99*	*1.01*
No. 6 Residual Fuel Oil, Retail (c)	**0.46**	**0.43**	**0.42**	**0.49**	*0.49*	*0.47*	*0.45*	*0.47*	*0.49*	*0.48*	*0.46*	*0.50*	**0.45**	*0.47*	*0.48*
Electric Utility Fuels (dollars per million Btu)															
Coal	**1.29**	**1.30**	**1.28**	**1.27**	*1.28*	*1.29*	*1.27*	*1.26*	*1.26*	*1.28*	*1.25*	*1.24*	**1.29**	*1.27*	*1.26*
Heavy Fuel Oil (d)	**3.01**	**2.93**	**2.83**	**3.43**	*3.27*	*3.15*	*3.05*	*3.31*	*3.26*	*3.22*	*3.11*	*3.47*	**3.01**	*3.19*	*3.26*
Natural Gas	**2.79**	**2.55**	**2.47**	**2.88**	*3.03*	*2.43*	*2.40*	*2.65*	*2.68*	*2.48*	*2.45*	*2.69*	**2.63**	*2.57*	*2.55*
Other Residential															
Natural Gas															
(dollars per thousand cubic feet)	**5.74**	**6.67**	**8.29**	**6.51**	*6.24*	*6.69*	*7.80*	*6.27*	*6.14*	*6.67*	*7.86*	*6.39*	**6.30**	*6.45*	*6.43*
Electricity															
(cents per Kilowatthour)	**7.90**	**8.52**	**8.83**	**8.25**	*7.81*	*8.39*	*8.66*	*8.19*	*7.75*	*8.35*	*8.63*	*8.15*	**8.38**	*8.27*	*8.22*

(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; *Monthly Energy Review* , DOE/EIA-0035; *Electric Power Monthly* , DOE/EIA-0226.

crude oil prices fall from first quarter average levels (Figure U6).

The gasoline market, which exhibited low growth in 1996 (annual demand growth was 0.8 percent) is due for something of a revival in 1997, if the usual patterns of growth in highway travel prevail and if real (inflation-adjusted) prices fall, as is expected in the base case. Highway travel, which was significantly impacted in early 1996 by bad weather and road conditions (first quarter 1996 growth was flat compared to 1995), is expected to turn in a robust performance for the first three months of 1997, at least as far as year-over-year comparisons are concerned. This is especially likely given the comparatively mild weather the U.S. has experienced lately. On the other hand, preliminary data on gasoline demand available for the first 7 or 8 weeks of 1997 does not indicate a rapid acceleration of demand growth yet, but even with this data it appears to be likely that the United States will see an average demand level for the first quarter that is 1.5 percent above first quarter 1996, a year-to-year rate that is about twice the rate for all of 1996. And despite relatively high gasoline prices prevailing since last spring, the U.S. gasoline market has exhibited a move upward since last summer, with the fourth quarter 1996 showing a 1.5 percent increase over the same period in 1995, compared to well below 1.0 percent for the previous three quarters. This trend is expected to continue, and, with year-to-year price comparisons falling rapidly toward zero (or below), should yield year-to-year demand growth above 2 percent during the summer (see Figure U7 and Table U4).

Heating Oil:

Under continued mild weather, or even under more seasonably normal temperatures for the remainder of this winter, the threat of soaring heating oil prices has faded to the mere fringes of probability. Due to a very mild weather conditions in the eastern United States, particularly in February (approximately 13 percent below normal heating degree-days in the Northeast), heating oil demand was down and distillate inventories up from last month's *Outlook* (see Figure U8), and a downward shift in current and expected heating oil prices has resulted (Figure U9). Heating oil stocks are now ranging above year-ago levels and are in comparatively comfortable shape as the winter comes to a close. Although a late winter cold snap could move prices back up, the market is much better positioned now to absorb such an event without major price reaction.

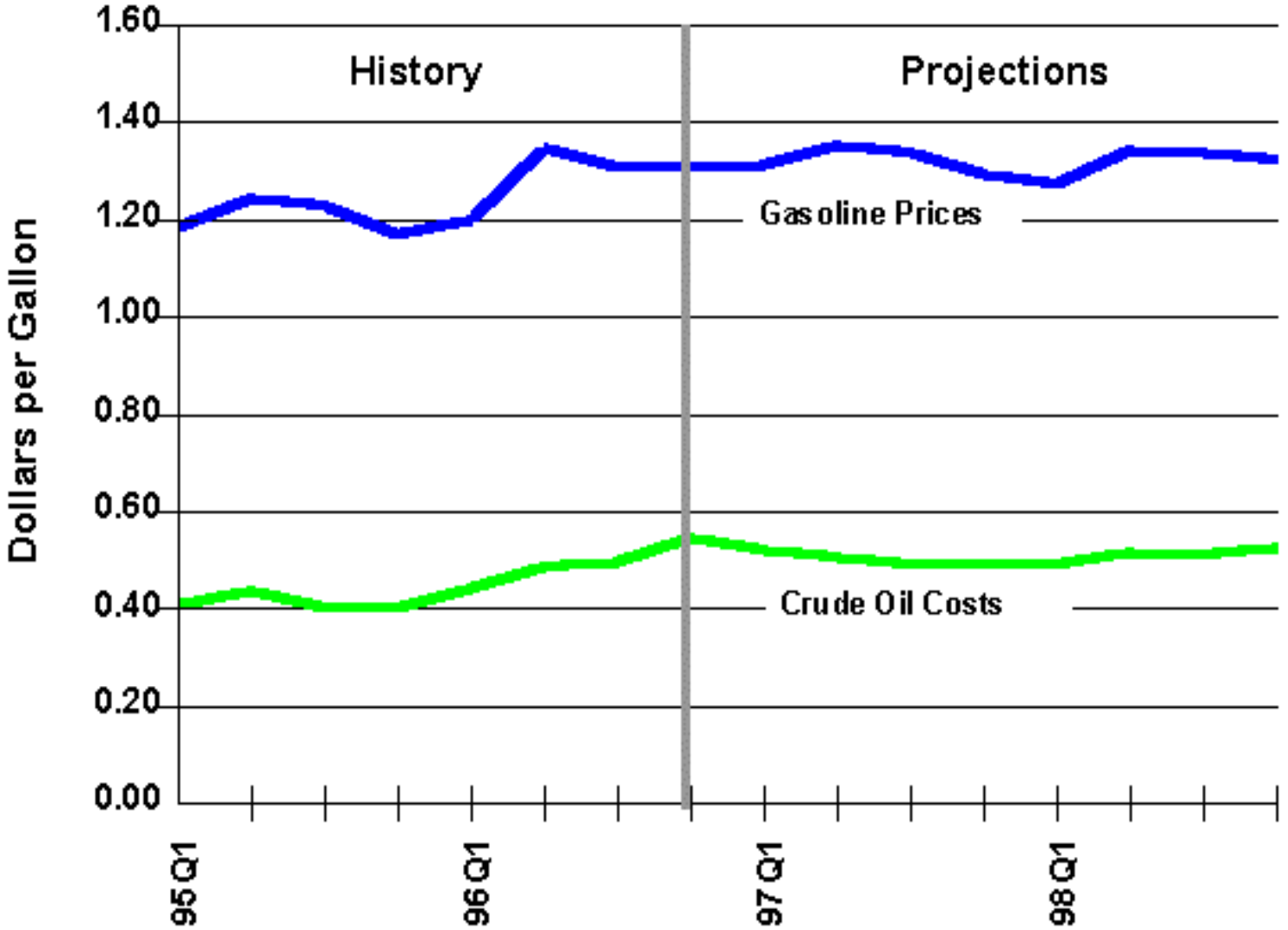
Natural Gas:

Spot natural gas prices reacted strongly to weak heating demand in February, resulting in a more rapid decline from the high January levels than was anticipated last month when normal weather was assumed (Figure U10). Normal weather in March and April may yield a modest recovery in spot prices for the near term, but prospects for diminished pressure on inventories should prevent wellhead prices from ranging above $2 per thousand cubic feet until next heating season.

Natural gas demand growth in 1997 is expected to be about 1.7 percent, slightly below what it was in 1996. The slowdown follows principally from the marked reversal in heating demand that is likely to characterize 1997. Lower prices and continued economic expansion should keep industrial gas demand on an upward track through

Figure U6. Retail Gasoline Prices* vs Crude Costs

(Quarterly Averages)

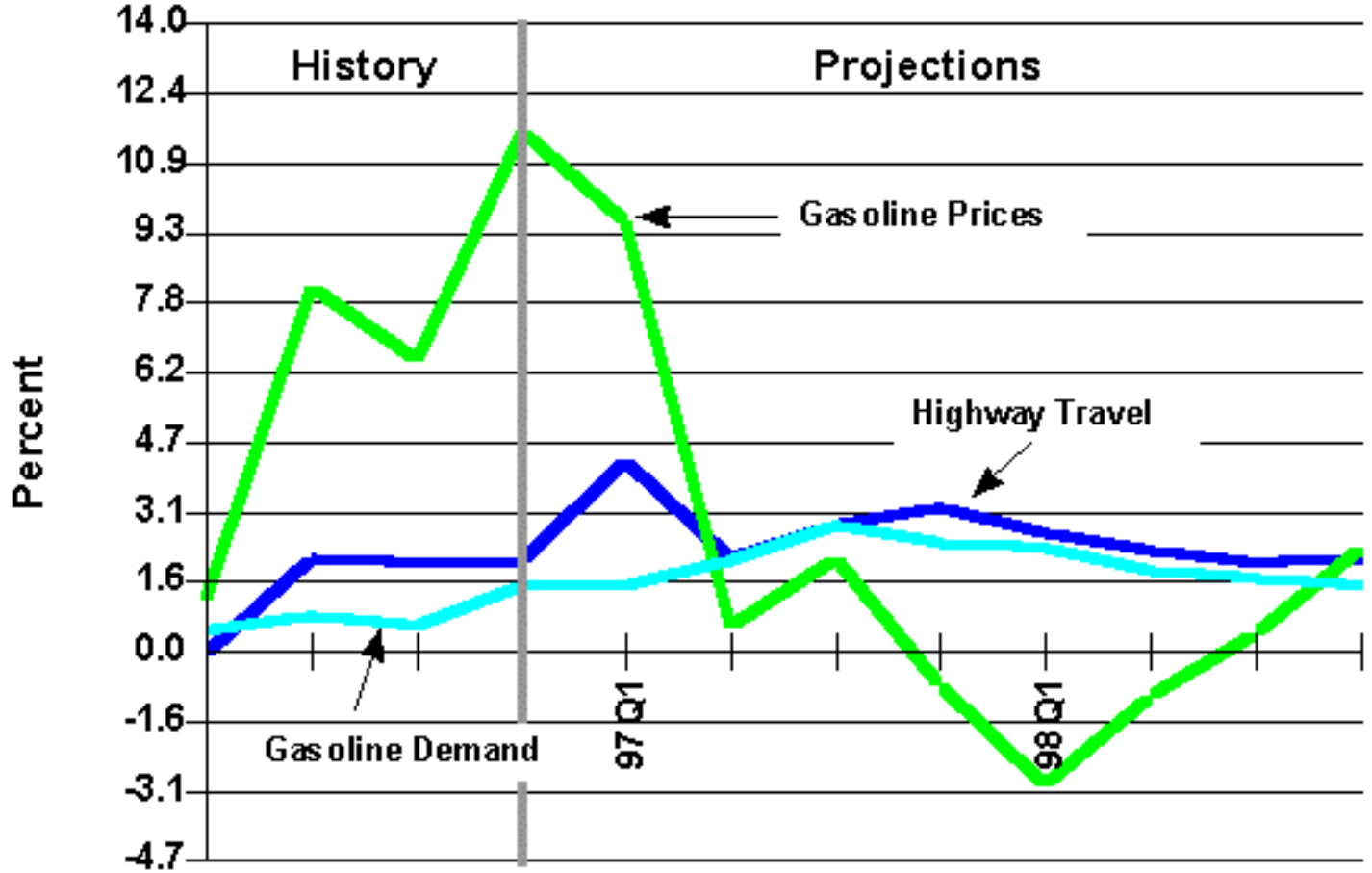


* Average pump price, all service, all grades.

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

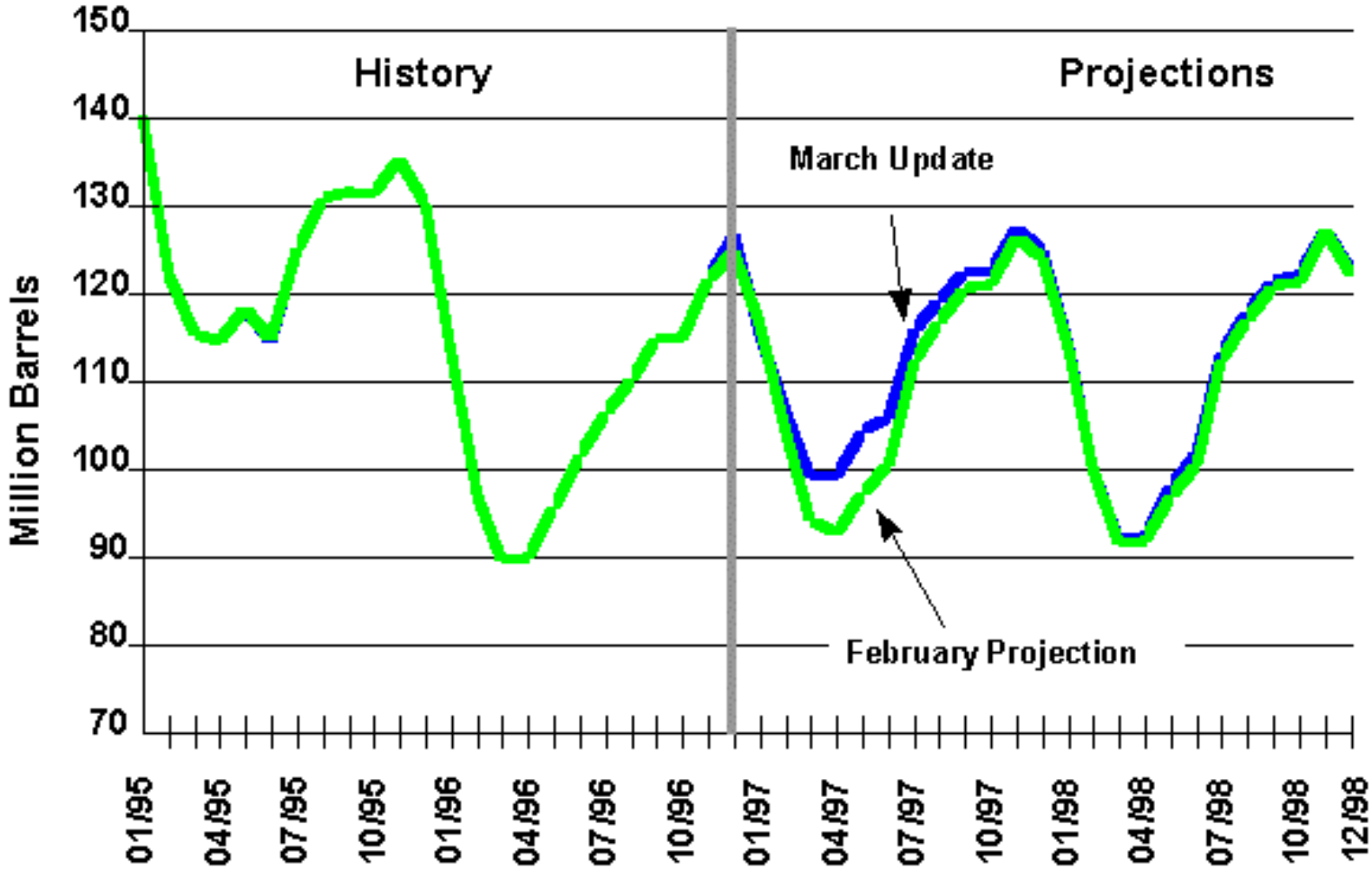
Figure U7. U.S. Gasoline Market Projections

(Quarterly Year-Over-Year Percent Changes)



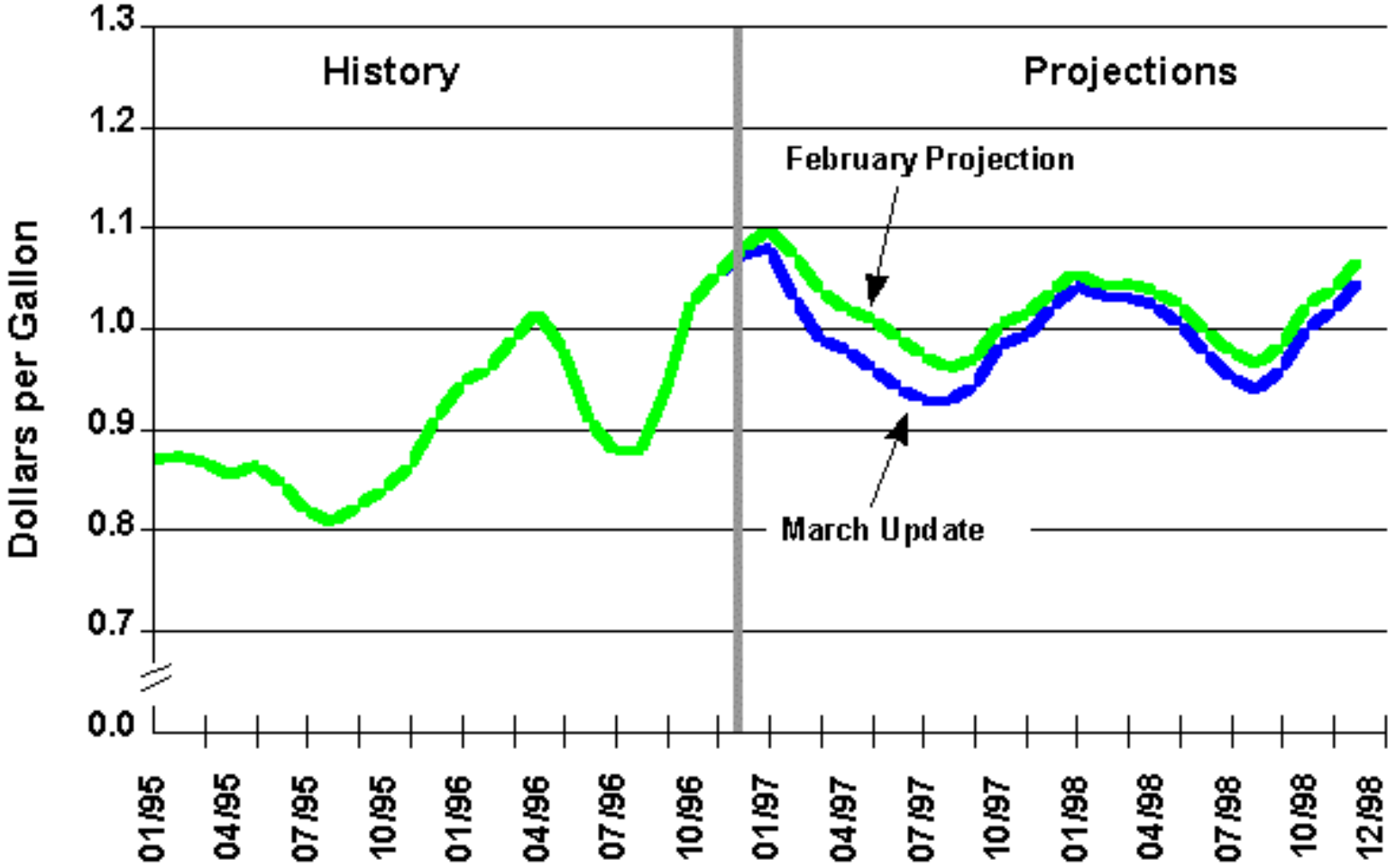
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U8. Total Distillate Stocks



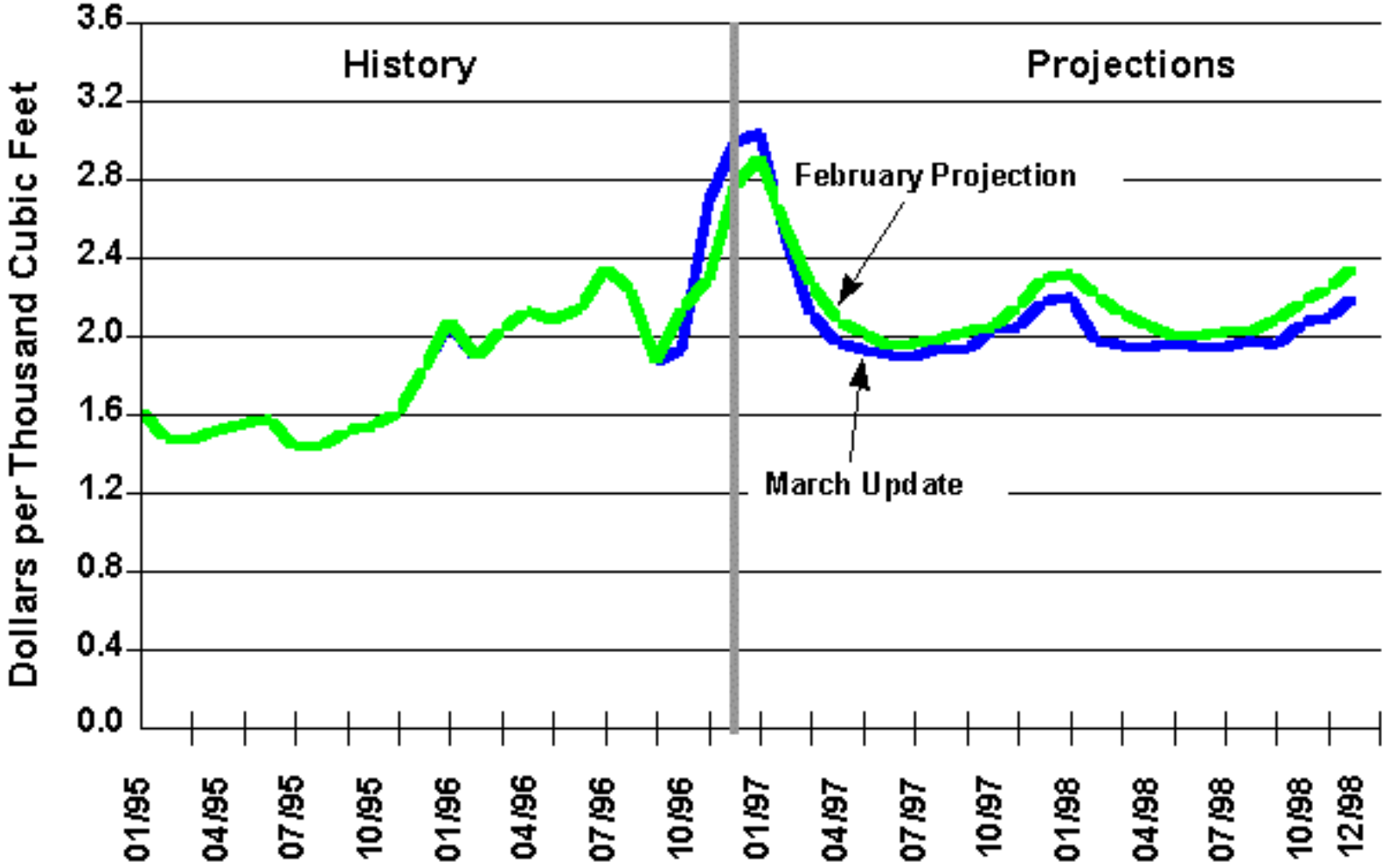
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U9. Residential Heating Oil Prices



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

Figure U10. Wellhead Natural Gas Prices



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

Table U4. U.S. Petroleum Supply and Demand: Mid World Oil Price Case - March 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**	*6445*	*6328*	*6250*	*6252*	*6233*	*6151*	*6079*	*6070*	**6471**	*6318*	*6133*
Alaska	**1460**	**1375**	**1347**	**1400**	*1362*	*1306*	*1261*	*1291*	*1283*	*1221*	*1189*	*1205*	**1395**	*1305*	*1224*
Lower 48	**5060**	**5099**	**5077**	**5068**	*5084*	*5022*	*4989*	*4961*	*4950*	*4930*	*4891*	*4865*	**5076**	*5014*	*4909*
Net Imports (including SPR) (b)	**6901**	**7666**	**7602**	**7288**	*7086*	*7996*	*7978*	*7725*	*7374*	*8107*	*8223*	*8001*	**7365**	*7699*	*7929*
Other Supply															
NGL Production	**1735**	**1827**	**1859**	**1899**	*1930*	*1894*	*1868*	*1872*	*1886*	*1869*	*1856*	*1872*	**1830**	*1891*	*1871*
Net Product Imports (c)	**960**	**1146**	**988**	**1022**	*915*	*1275*	*1298*	*1166*	*1404*	*1376*	*1373*	*1208*	**1029**	*1165*	*1340*
Other Supply	**2177**	**801**	**1219**	**1952**	*1709*	*609*	*1017*	*1776*	*1719*	*818*	*1123*	*1856*	**1537**	*1276*	*1377*
Demand															
Total Demand	**18292**	**17914**	**18092**	**18629**	*18085*	*18102*	*18411*	*18791*	*18616*	*18321*	*18654*	*19007*	**18232**	*18349*	*18650*
Motor Gasoline	**7511**	**7985**	**8001**	**7896**	*7622*	*8150*	*8226*	*8102*	*7798*	*8294*	*8359*	*8224*	**7849**	*8027*	*8170*
Jet Fuel	**1605**	**1517**	**1587**	**1600**	*1615*	*1569*	*1623*	*1656*	*1623*	*1579*	*1639*	*1674*	**1577**	*1616*	*1629*
Distillate Fuel Oil	**3616**	**3231**	**3135**	**3490**	*3600*	*3316*	*3276*	*3523*	*3777*	*3373*	*3328*	*3566*	**3368**	*3428*	*3510*
Residual Fuel Oil	**958**	**771**	**829**	**815**	*915*	*807*	*771*	*973*	*1026*	*823*	*801*	*982*	**843**	*867*	*908*
Other Oils (d)	**4602**	**4410**	**4540**	**4828**	*4333*	*4260*	*4515*	*4537*	*4392*	*4252*	*4527*	*4561*	**4595**	*4411*	*4433*
Ending Stocks (million barrels)															
Crude Oil Stocks (excl. SPR)	**300**	**314**	**304**	**290**	*303*	*314*	*311*	*314*	*321*	*324*	*317*	*317*	**290**	*314*	*317*
Total Motor Gasoline	**203**	**205**	**200**	**196**	*194*	*195*	*195*	*202*	*211*	*202*	*199*	*204*	**196**	*202*	*204*
Jet Fuel	**34**	**39**	**43**	**40**	*35*	*39*	*42*	*43*	*41*	*42*	*42*	*44*	**40**	*43*	*44*
Distillate Fuel Oil	**90**	**102**	**115**	**129**	*98*	*106*	*122*	*125*	*92*	*102*	*121*	*123*	**129**	*125*	*123*
Residual Fuel Oil	**32**	**35**	**38**	**46**	*38*	*40*	*43*	*43*	*35*	*37*	*39*	*41*	**46**	*43*	*41*
Other Oils (e)	**235**	**267**	**280**	**239**	*240*	*283*	*300*	*253*	*248*	*293*	*309*	*259*	**239**	*253*	*259*
Crude Oil in SPR	**589**	**584**	**574**	**566**	*566*	*566*	*566*	*566*	*566*	*566*	*566*	*566*	**566**	*566*	*566*

(a) Includes 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.
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.
(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.

1998. Electric utility gas use is expected to recover ground lost in 1996 when high prices and ample water levels led to displacement by coal and hydroelectric power sources. A normal weather scenario in 1998 could yield a 3.9 percent growth rate in total gas demand next year as long as the economy continues to expand modestly. (See Figure U11 and Table U5).

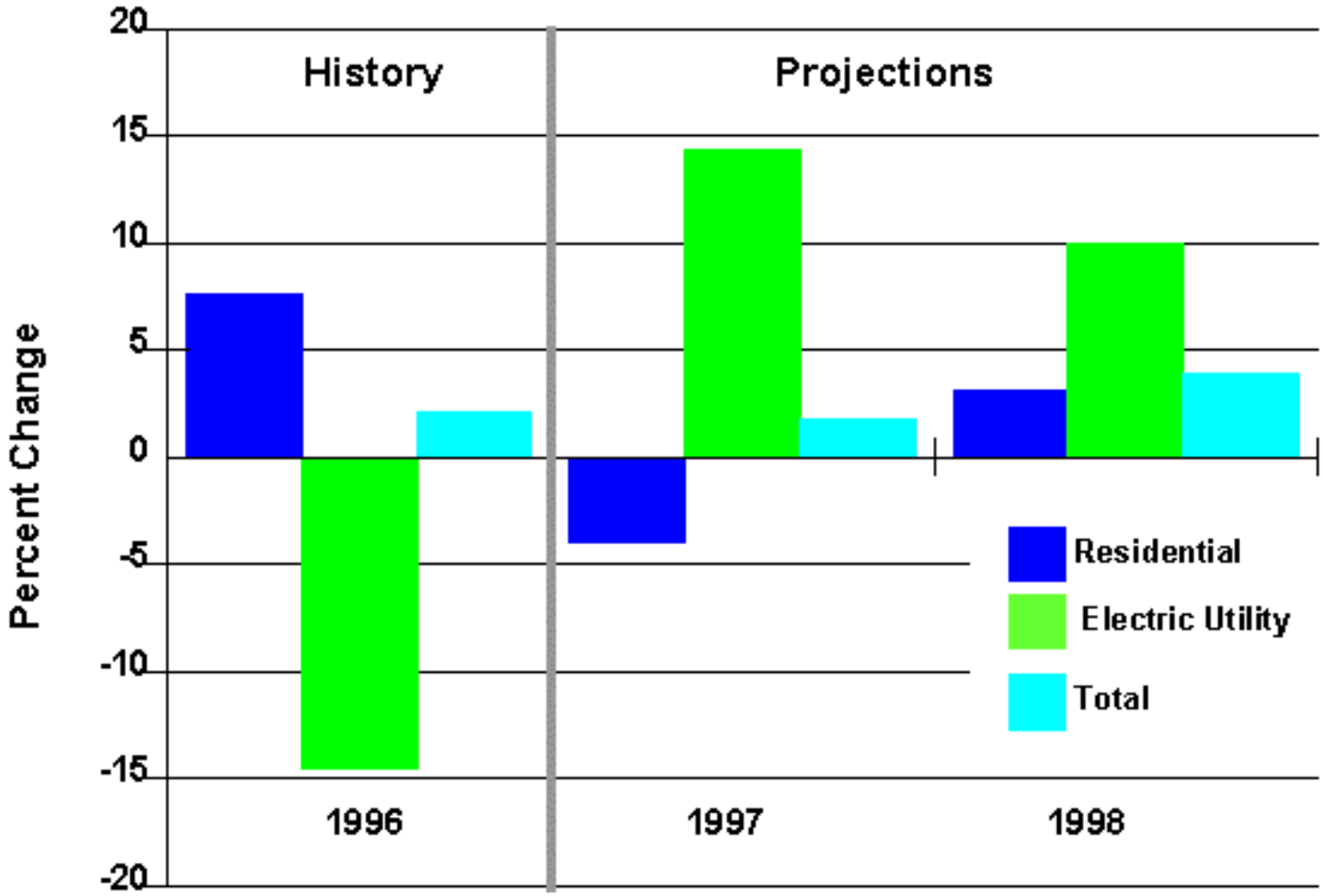
Coal:

Coal demand growth in 1997 is expected to moderate sharply from the rapid (5.0-percent) rate seen in 1996, as the competitiveness of natural gas for power generation is largely restored and as electricity demand itself slows from the above-average rate (2.4 percent) seen in 1996. Normal weather for next heating season would likely make more gas available for power generation in late 1997 and early 1998 than was seen between last October and this past January. (See Figure U12 and Table U6).

Electricity:

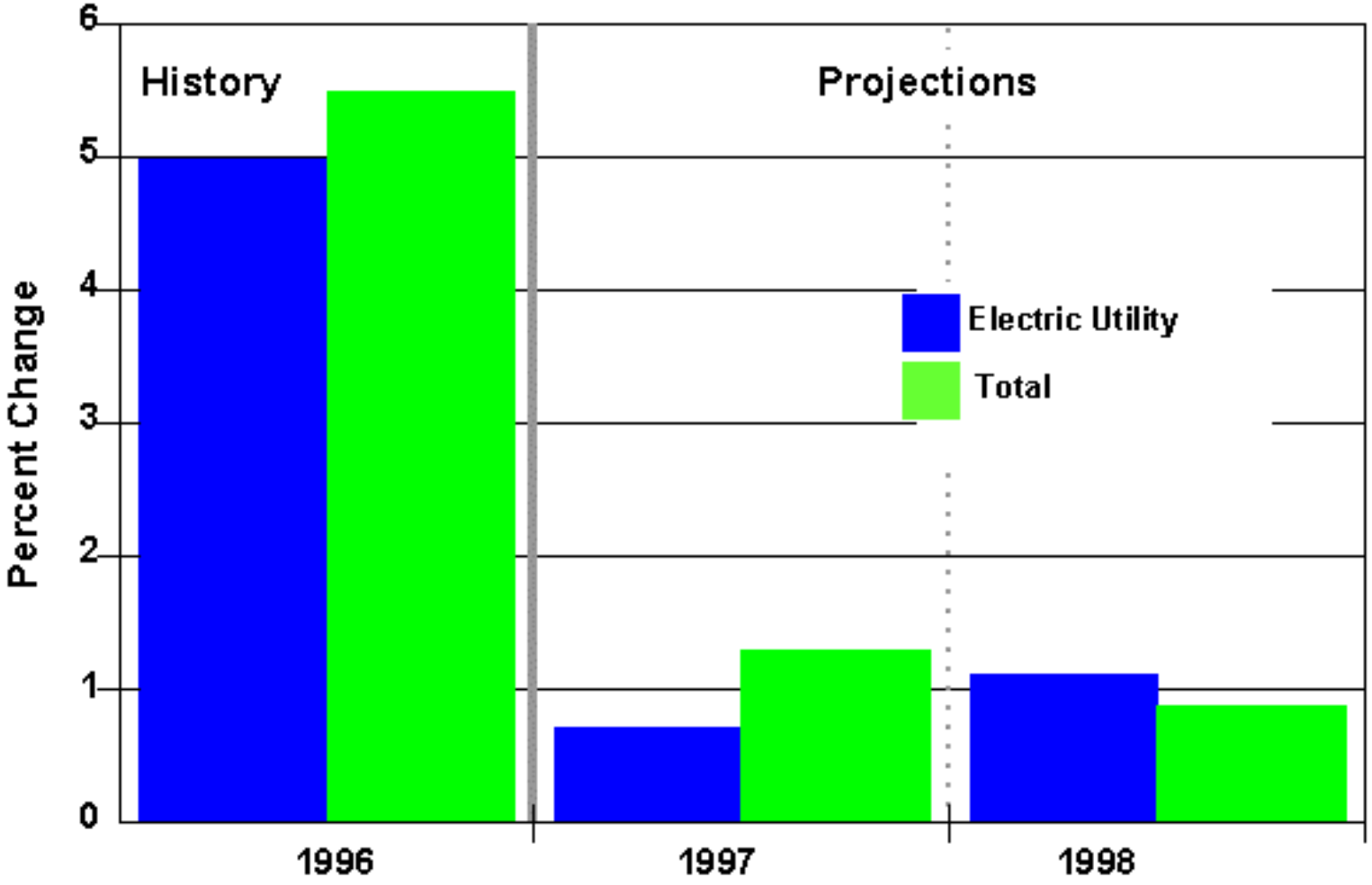
Electricity demand growth is not expected to be immune to the downward shift in heating demand seen so far in 1997. Normal weather for the rest of 1997 should result in annual residential electricity demand growth of below 1 percent this year, down from the estimated 3.4 percent advance seen in 1996. A similar but somewhat less marked effect is expected for commercial demand. A surge in manufacturing output in the United States this year should pull industrial electricity out of the absolutely anemic growth pattern seen in 1996 (estimated at only 0.3 percent), but, even with this, growth in industrial electricity demand much above 1 percent over the next two years seems unlikely. Normal weather in 1998 implies some acceleration of total electricity demand next year but, at this point, the rate seems unlikely to surpass or even match the overall growth rate in the economy. (See Figure U13 and Table U7).

Figure U11. Annual Natural Gas Demand Growth



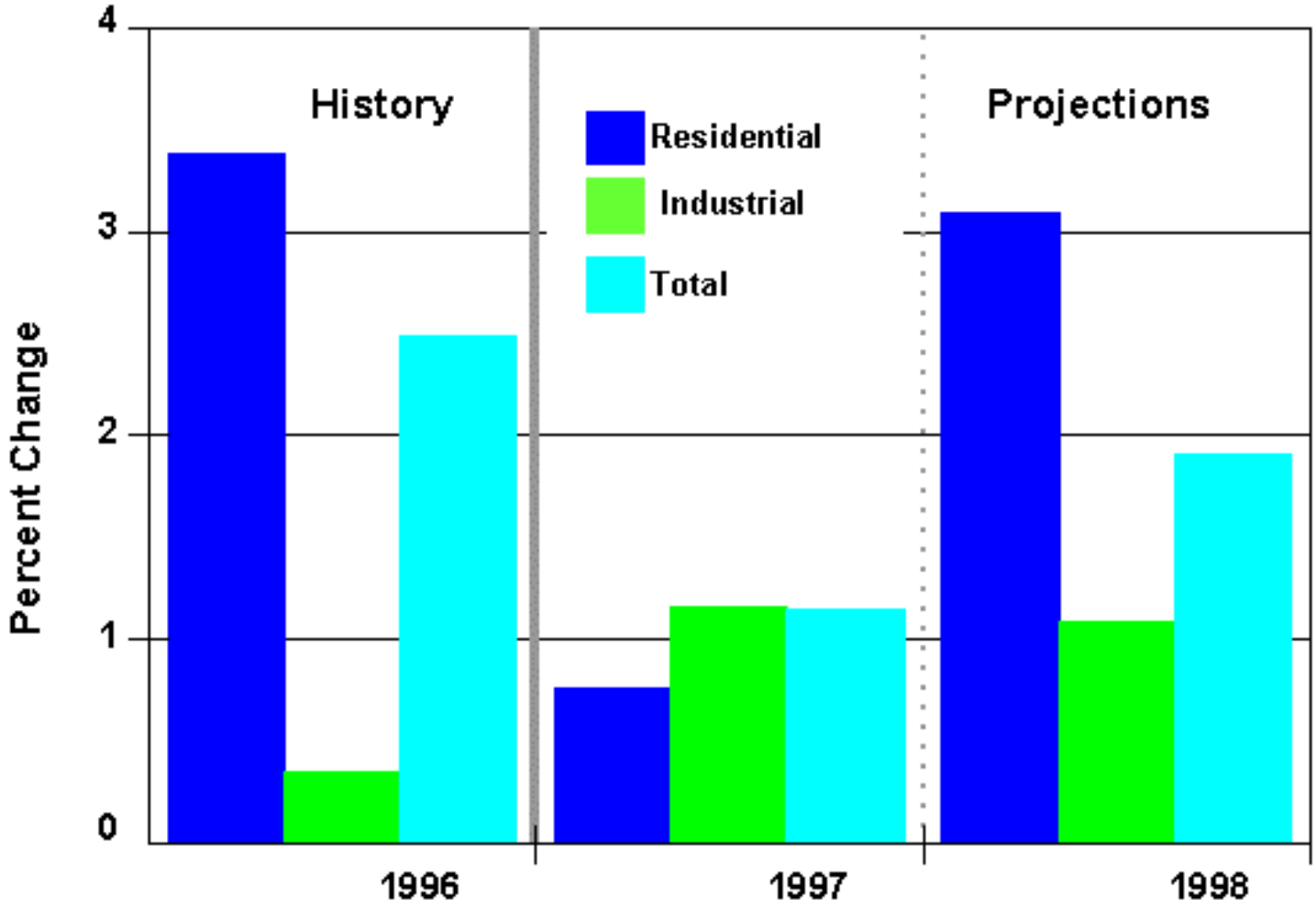
Source: Energy Information Administration, Short-Term Energy Model, March 1997.

Figure U12. Annual Coal Demand Growth



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

Figure U13. Annual Electricity Demand Growth



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

Table U5. U.S. Natural Gas Supply and Demand: Mid World Oil Price Case - March 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	**4.74**	**4.70**	**4.71**	**4.85**	*4.77*	*4.77*	*4.77*	*4.92*	*4.91*	*4.89*	*4.90*	*5.05*	**19.01**	*19.22*	*19.75*
Net Imports	**0.66**	**0.65**	**0.67**	**0.72**	*0.69*	*0.70*	*0.71*	*0.77*	*0.78*	*0.76*	*0.77*	*0.83*	**2.71**	*2.87*	*3.13*
Supplemental Gaseous Fuels	**0.04**	**0.03**	**0.03**	**0.04**	*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**	**5.41**	**5.61**	*5.50*	*5.49*	*5.50*	*5.72*	*5.72*	*5.68*	*5.70*	*5.91*	**21.85**	*22.22*	*23.01*
Net Withdrawals from Storage	**1.46**	**-0.82**	**-1.07**	**0.42**	*1.24*	*-0.79*	*-0.87*	*0.45*	*1.21*	*-0.78*	*-0.85*	*0.46*	**-0.00**	*0.04*	*0.04*
Total Supply	**6.91**	**4.57**	**4.34**	**6.03**	*6.74*	*4.71*	*4.64*	*6.17*	*6.93*	*4.90*	*4.84*	*6.37*	**21.84**	*22.26*	*23.04*
Balancing Item (a)	**0.21**	**0.31**	**-0.02**	**-0.32**	*0.30*	*0.26*	*-0.11*	*-0.27*	*0.56*	*0.20*	*-0.21*	*-0.35*	**0.19**	*0.18*	*0.20*
Total Primary Supply	**7.12**	**4.88**	**4.32**	**5.71**	*7.04*	*4.96*	*4.53*	*5.90*	*7.49*	*5.10*	*4.63*	*6.02*	**22.03**	*22.44*	*23.24*
Demand															
Lease and Plant Fuel	**0.31**	**0.31**	**0.31**	**0.32**	*0.32*	*0.31*	*0.31*	*0.33*	*0.32*	*0.32*	*0.32*	*0.33*	**1.25**	*1.27*	*1.28*
Pipeline Use	**0.23**	**0.16**	**0.14**	**0.18**	*0.23*	*0.16*	*0.15*	*0.19*	*0.23*	*0.16*	*0.15*	*0.19*	**0.71**	*0.72*	*0.73*
Residential	**2.46**	**0.90**	**0.38**	**1.47**	*2.34*	*0.87*	*0.39*	*1.42*	*2.47*	*0.88*	*0.39*	*1.44*	**5.22**	*5.01*	*5.17*
Commercial	**1.36**	**0.63**	**0.39**	**0.89**	*1.30*	*0.62*	*0.41*	*0.89*	*1.40*	*0.63*	*0.42*	*0.91*	**3.27**	*3.22*	*3.36*
Industrial (Incl. Cogenerators)	**2.30**	**2.14**	**2.09**	**2.28**	*2.33*	*2.17*	*2.13*	*2.38*	*2.43*	*2.22*	*2.18*	*2.44*	**8.80**	*9.02*	*9.26*
Electric Utilities	**0.46**	**0.74**	**1.01**	**0.57**	*0.53*	*0.84*	*1.14*	*0.69*	*0.65*	*0.91*	*1.18*	*0.71*	**2.78**	*3.20*	*3.45*
Total Demand	**7.12**	**4.88**	**4.32**	**5.71**	*7.04*	*4.96*	*4.53*	*5.90*	*7.49*	*5.10*	*4.63*	*6.02*	**22.03**	*22.44*	*23.24*

(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 - March 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**	*275.0*	*273.0*	*275.6*	*269.6*	*279.0*	*274.7*	*279.2*	*274.0*	**1062.6**	*1093.3*	*1106.9*
Imports	**1.7**	**1.6**	**2.1**	**1.9**	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	*1.9*	**7.2**	*7.5*	*7.5*
Exports	**20.5**	**23.0**	**23.5**	**23.3**	*22.3*	*23.0*	*23.3*	*23.2*	*22.5*	*23.2*	*23.4*	*23.3*	***90.3***	*91.9*	*92.4*
Demand															
Coke Plants	**8.0**	**8.0**	**7.9**	**8.3**	*7.8*	*8.1*	*8.3*	*8.3*	*7.8*	*8.2*	*8.4*	*8.2*	**32.1**	*32.5*	*32.7*
Electric Utilities	**214.8**	**203.0**	**232.9**	**223.0**	*217.2*	*206.8*	*238.0*	*216.4*	*220.8*	*208.7*	*239.4*	*218.0*	***873.7***	*878.5*	*887.0*
Nonutilities (Excl. Cogen.) (a)	**5.9**	**5.9**	**6.0**	**6.0**	*6.6*	*6.5*	*6.5*	*6.5*	*7.0*	*7.0*	*7.1*	*7.0*	**24.0**	*25.9*	*28.0*
Retail and General Industry (b)	**20.3**	**18.0**	**17.9**	**20.9**	*20.2*	*17.7*	*18.2*	*20.8*	*20.2*	*18.0*	*18.0*	*20.7*	**77.1**	*76.9*	*76.9*
Total Demand	**249.0**	**234.9**	**264.7**	**258.2**	*251.8*	*239.1*	*271.0*	*252.0*	*255.8*	*241.9*	*272.9*	*253.9*	**1006.9**	*1013.8*	*1024.6*

(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 - March 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	**427.5**	**405.1**	**462.2**	**442.5**	*439.0*	*415.0*	*474.8*	*431.3*	*441.4*	*416.8*	*476.3*	*433.0*	**1737.3**	*1760.1*	*1767.5*
Petroleum	**22.4**	**12.8**	**18.6**	**11.4**	*14.4*	*12.8*	*17.7*	*16.5*	*20.0*	*13.8*	*19.4*	*18.3*	**65.3**	*61.4*	*71.4*
Natural Gas	**44.6**	**71.3**	**96.7**	**54.7**	*49.5*	*78.8*	*107.4*	*65.0*	*61.1*	*85.2*	*110.7*	*67.1*	**267.3**	*300.6*	*324.1*
Nuclear	**174.4**	**163.5**	**177.0**	**159.9**	*174.8*	*157.4*	*183.6*	*165.8*	*177.1*	*159.5*	*186.0*	*168.0*	**674.8**	*681.6*	*690.6*
Hydroelectric	**91.1**	**92.6**	**73.1**	**72.1**	*81.1*	*77.6*	*61.5*	*62.9*	*72.9*	*76.1*	*63.7*	*63.8*	**328.8**	*283.1*	*276.5*
Geothermal and Other (a)	**1.5**	**1.5**	**2.2**	**0.7**	*-6.5*	*0.6*	*1.8*	*1.8*	*1.7*	*1.6*	*1.7*	*1.7*	**5.8**	*-2.4*	*6.7*
Subtotal	**761.4**	**746.7**	**829.8**	**741.3**	*752.2*	*742.1*	*846.9*	*743.2*	*774.1*	*753.0*	*857.8*	*751.9*	**3079.3**	*3084.4*	*3136.8*
Nonutility Generation (b)	**100.3**	**91.9**	**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	**861.8**	**838.6**	**924.0**	**849.6**	*851.8*	*839.0*	*948.4*	*860.0*	*877.0*	*853.2*	*962.8*	*872.6*	**3474.0**	*3499.2*	*3565.6*
Net Imports	**7.1**	**9.5**	**13.0**	**8.6**	*6.9*	*9.3*	*12.7*	*8.4*	*6.9*	*9.2*	*12.6*	*8.3*	**38.3**	*37.3*	*37.0*
Total Supply	**868.9**	**857.6**	**937.0**	**858.2**	*858.7*	*848.3*	*961.1*	*868.4*	*883.9*	*862.4*	*975.4*	*880.9*	**3512.3**	*3536.5*	*3602.6*
Demand															
Residential	**290.5**	**239.2**	**302.2**	**246.7**	*284.5*	*239.1*	*307.5*	*255.6*	*298.4*	*245.4*	*314.6*	*262.1*	**1078.6**	*1086.7*	*1120.4*
Commercial	**209.9**	**216.3**	**246.6**	**215.1**	*213.9*	*217.9*	*252.5*	*218.2*	*219.5*	*221.2*	*255.5*	*220.3*	**887.8**	*902.4*	*916.4*
Industrial	**247.7**	**252.5**	**262.6**	**253.9**	*246.3*	*256.9*	*267.7*	*256.5*	*248.8*	*259.2*	*270.1*	*258.8*	**1016.7**	*1027.4*	*1036.9*
Other	**24.6**	**24.3**	**26.8**	**24.6**	*24.7*	*24.3*	*27.0*	*25.1*	*25.6*	*24.4*	*26.9*	*24.8*	**100.3**	*101.2*	*101.8*
Subtotal	**772.7**	**732.4**	**838.1**	**740.3**	*769.4*	*738.2*	*854.7*	*755.4*	*792.2*	*750.2*	*867.1*	*765.9*	**3083.4**	*3117.7*	*3175.5*
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	**813.8**	**770.0**	**876.7**	**784.7**	*809.2*	*776.8*	*895.3*	*802.0*	*832.9*	*789.8*	*908.6*	*813.6*	**3245.2**	*3283.3*	*3345.0*

(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.