

Highlights

Overview

This issue of the *Natural Gas Monthly* contains estimates of natural gas data through August 2000 for many data series at the national level. National-level natural gas prices are available through April, May, or July, depending on the price series. Data at the State level generally are available through May 2000. This issue also contains the Special Report, "U.S. Natural Gas Imports and Exports - 1999."

Highlights of the most recent data estimates contained in this issue are:

The amount of working gas in underground storage at the end of August 2000 is estimated to be 2,256 billion cubic feet, 9 percent lower than the average of 2,482 billion cubic feet for August during 1995-1999.

Dry natural gas production from January through August 2000 is relatively the same as during the same period of 1999.

The daily rate of industrial natural gas consumption is 8 percent higher for January through August 2000 than for the same period in 1999. Much of the increase can be attributed to the reclassification of some electricity generating units from the electric utility sector to the industrial sector.

The average natural gas wellhead price for January through July 2000 is estimated to be \$2.42 per thousand cubic feet, 31 percent higher than for the same period in 1999.

Supply

Cumulative dry gas production for January through August in 2000 is relatively the same volume as in 1999. It is estimated to be 12,441 billion cubic feet or 51.0 billion cubic feet per day, 0.3 billion cubic feet per day less than the cumulative daily average for the same period in 1999 (Table 1). Cumulative net imports for January through August are estimated to be 2,252 billion cubic feet or 9.2 billion cubic feet per day, the same daily rate as for 1999 and 1.0 billion cubic feet more per day than in 1998 (Table 2).

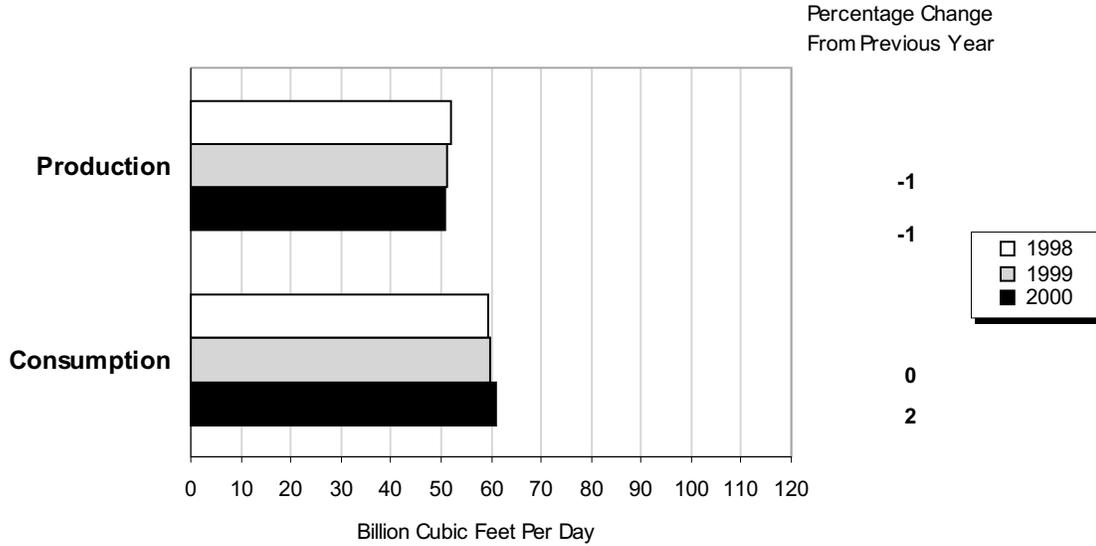
Estimated dry gas production for August 2000 is 1,598 billion cubic feet or 51.5 billion cubic feet per day. Dry production is 0.5 billion cubic feet more per day for August 2000 compared with the rate in July 2000 of 51.0 billion cubic feet per day. Dry gas production for August 2000 is 3 percent higher compared with August 1999.

Drilling for both oil and natural gas is rebounding from the low levels of 1999. Total drilling reached an estimated 92.5 million feet for January through July 2000, 70 percent higher than for the same period in 1999 and 3 percent lower than in 1998.¹ The number of oil and gas rotary rigs in operation reached a record low of 496 in April 1999,² but has increased to an estimated 942 in July 2000. The average number of gas rigs in operation for January through July 2000 is estimated to be 644, which is 52 percent higher than for the same period in 1999 and 10 percent higher than in 1998.

1 Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(2000/08) (Washington, DC, August 2000), Table 5.1.

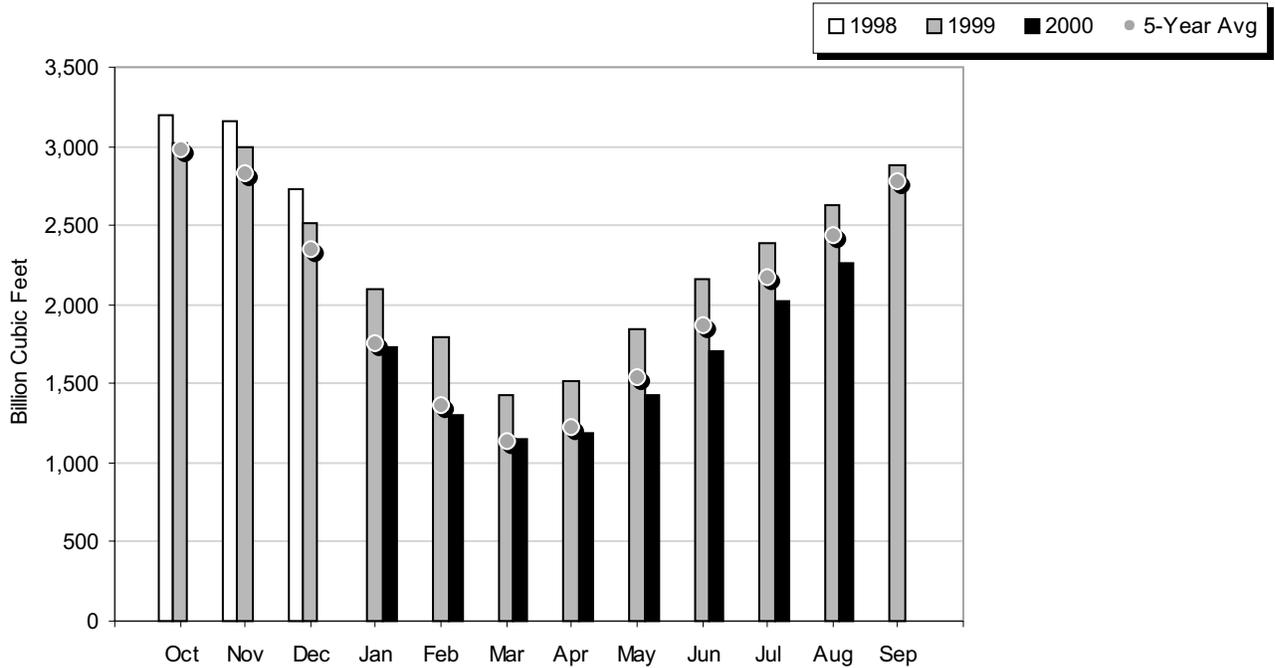
2 Monthly Energy Information Administration data on rotary rigs in operation begin in January 1973. Separate data for oil and natural gas rigs begin in August 1987.

Figure HI1. Average Daily Rate of Natural Gas Production and Consumption, January-August, 1998-2000



Source: Table 2.

Figure HI2. Working Gas in Underground Storage in the United States, 1998-2000



Note: The 5-year average is calculated using the latest available monthly data. For example, the December average is calculated from December storage levels for 1995 to 1999 while the January average is calculated from January levels for 1996 to 2000. Data are reported as of the end of the month, thus October data represent the beginning of the heating season.

Source: Form EIA-191, "Underground Natural Gas Storage Report," Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition," and Short-Term Integrated Forecasting System.

Net imports through August 2000 closely resemble the continually high monthly volumes seen in 1999. For August 2000, estimated net imports are 295 billion cubic feet or 9.5 billion cubic feet per day, 1 percent less than in August 1999 and 12 percent higher than in August 1998. Canadian pipeline imports account for 95 percent of total cumulative imports through August 2000, compared with 94 percent for the same period in 1999. Through August 2000, Trinidad has provided the bulk (52 percent) of the cumulative liquefied natural gas (LNG) imports compared with Algeria who provided 66 percent of the LNG imports during the same period last year.

At the end of the 5th month of the nonheating season, working gas in underground storage is estimated to be 2,256 billion cubic feet (Table 10). Working gas in storage at the end of August 2000 is 12 percent higher than at the end of July 2000; however, it is 14 percent less than at the end of August 1999 and 9 percent less than the average for August in 1995-1999. Net injections of natural gas into storage facilities are estimated to be 240 billion cubic feet during the month of August 2000, 2 billion cubic feet more than last year.

An explosion on El Paso Natural Gas Company's pipeline in New Mexico on August 19, 2000, which resulted in the deaths of 12 people, shut down gas service into southern California on this line and two parallel lines. However, El Paso has rerouted supplies and withdrawn natural gas from storage to make up for a shortfall of approximately 1,200 million cubic feet per day.³ The U.S. Department of Transportation, whose Office of Pipeline Safety oversees safety issues, has given El Paso permission to resume gas flow through the two parallel lines, but at 80 percent of their normal combined flow rate.⁴

End-Use Consumption

Cumulative end-use consumption of natural gas for January through August 2000 is estimated to be 13,653 billion cubic feet or 56.0 billion cubic feet per day, 1 percent above the daily rate for the same period of 1999 (Table 3). The largest percentage changes among the end-use sectors occurred in the industrial sector, where daily average consumption is up by 8 percent,

and the residential sector, where daily average consumption is down by 3 percent (Figure HI3).

Through August 2000, residential natural gas consumption has been below that of 1999 in every month but February. The daily rate of consumption in February 2000 was 9 percent higher than in February 1999, but this was followed by consumption in March 2000 that was 17 percent below that of March 1999. During the subsequent months, residential consumption in 2000 was from 2 to 8 percent lower than in the corresponding month of 1999. Cumulatively for January through August 2000, an estimated 3,194 billion cubic feet was consumed by residential users, an average rate of 13.1 billion cubic feet per day.

In the commercial sector, natural gas consumption is estimated to be 2,142 billion cubic feet for January through August 2000. This corresponds to a daily rate of 8.8 billion cubic feet per day, which is 1 percent higher than that of the same period in 1999. During 5 of the first 8 months in 2000, commercial users consumed more natural gas than they had during 1999. The largest percentage difference occurred in May when commercial consumption exceeded that of May 1999 by 14 percent.

Industrial users consumed an estimated 6,129 billion cubic feet of natural gas during January through August 2000, or 25.1 billion cubic feet per day, 8 percent higher than the daily rate for the same period in 1999. Except for January 2000, when industrial consumption was nearly equal to that of January 1999, monthly industrial consumption of natural gas has been from 7 to 15 percent higher than in the corresponding month of 1999 (through August). Much of the increase in industrial consumption reflects the reclassification of some gas consumption from the electric utility sector to the industrial sector. As restructuring of the electric utility industry proceeds, many previously regulated generating plants have been sold to entities that are not regulated utilities. These facilities are reclassified as nonutility generators, and the gas that they consume is reported as industrial, rather than electric utility consumption.

3 Energy Information Administration, *Natural Gas Weekly Market Update*.
http://www.eia.doe.gov/oil_gas/natural_gas/nat_frame.html.

4 Financial Times Energy, "Twelfth N.M. victim dies; line flow still reduced," *Gas Daily* (September 6, 2000), p 5.

Data on natural gas consumption by electric utilities are available through May 2000. Cumulative consumption for January through May was an estimated 1,087 billion cubic feet, or 7.2 billion cubic feet per day, 2 percent above the daily rate for the same period of 1999. Electric utility consumption in May 2000 exceeded that of May 1999 by 14 percent, but consumption in April 2000 was 16 percent lower than in April 1999. As previously noted, natural gas consumption reported in the electric utility sector may be lowered given the shifting of some generating units from utilities to nonutilities.

Prices

The average natural gas wellhead price declined somewhat from June 2000 to July 2000, falling from an estimated \$3.58 per thousand cubic feet to \$3.49 per thousand cubic feet (Table 4). However, both the price for July and the cumulative average for the year remain well above those of previous years (Figure HI4). For January through July 2000, the average wellhead price is estimated to be \$2.42 per thousand cubic feet, \$0.57 (31 percent) higher than for the same period in 1999 and \$0.39 (19 percent) higher than in 1998.

Natural gas futures prices declined somewhat during July 2000, but climbed again during August 2000 (Figure HI5). The daily settlement price on the near-month futures contract at the Henry Hub (on the New York Mercantile Exchange) hit a peak thus far this year of \$4.747 per million Btu on August 21. This price, for the September 2000 contract, was the highest-ever settlement price for a near-month contract. The September contract closed at \$4.618 per million Btu on August 29, 2000, \$1.706 (59 percent) higher than the closing price of the September 1999

contract. Futures settlement prices on out-month contracts (farther in the future than the near-month) have exceeded \$5.00 per million Btu for the first time since the futures market opened in April 1990. On September 5, 2000, settlement prices on the November and December 2000 and January 2001 contracts were \$5.030, \$5.104, and \$5.043 per million Btu, respectively.⁵

Factors in the higher prices include high demand for natural gas to generate electricity to meet air conditioning needs in the Southwest and in southern California, as well as continued concern about the amount of gas in storage at this point in the refill season. The accident on El Paso's pipeline also contributed to the price spike on the near-month contract in late August.

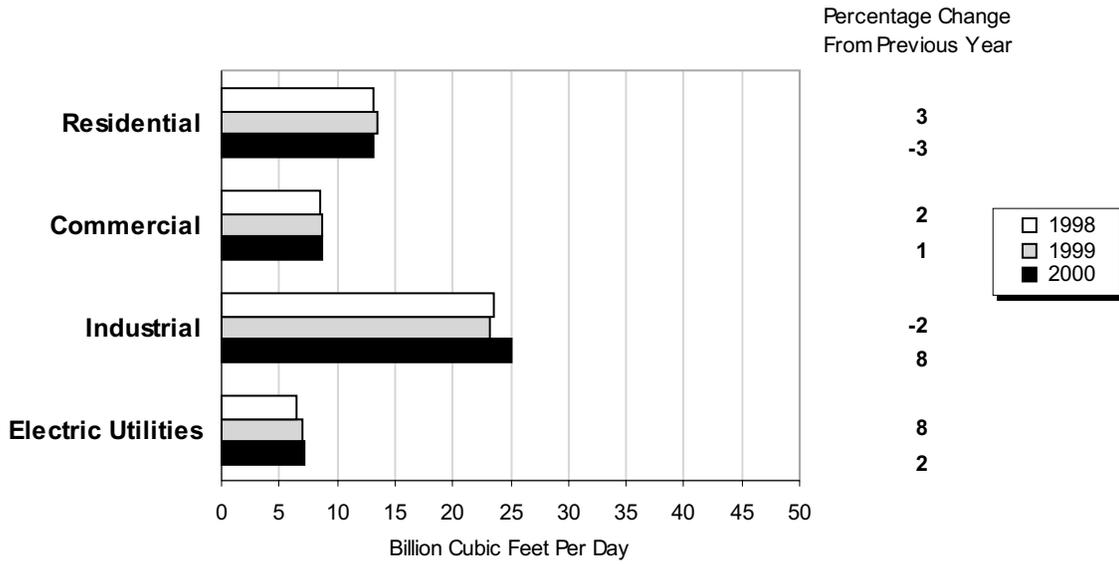
Estimates of end-use natural gas prices,⁶ which are available through May 2000 (through April for electric utilities), are all higher than for the same period last year. Residential users paid an average of \$6.68 per thousand cubic feet during January through May 2000, \$0.49 (8 percent) higher than in 1999. In the commercial sector, users paid an average of \$5.35 per thousand cubic feet, \$0.18 (3 percent) higher than in 1999.

Prices in the industrial and electric utility sectors react more quickly to changes in the wellhead price because the commodity cost is a larger share of the delivered price in these two sectors than in the residential and commercial sectors. For January through May 2000, industrial users paid an average \$3.50 per thousand cubic feet for natural gas, \$0.62 (22 percent) higher than in the same period of 1999. In the electric utility sector, for January through April 2000, users paid an average \$2.98 per thousand cubic feet, \$0.73 (32 percent) higher than in the same period of 2000.

5 Financial Times Energy, *Gas Daily*, (September 6, 2000), p.4.

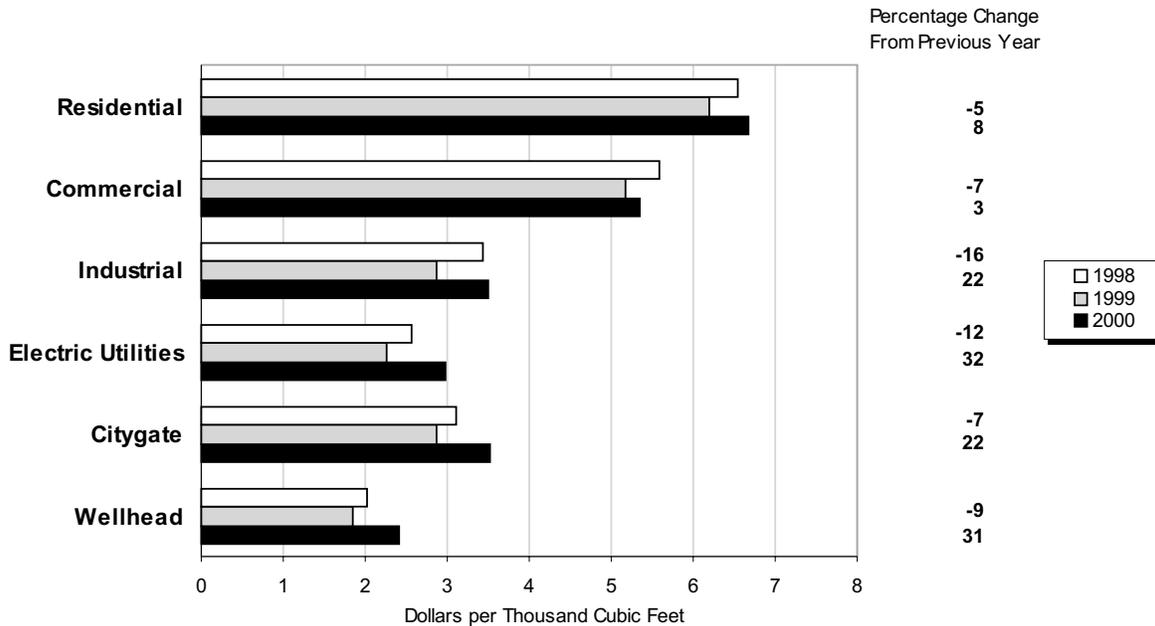
6 End-use prices in the residential, commercial, and industrial sectors are for onsystem gas sales only. While monthly onsystem sales are nearly 100 percent of residential deliveries, in 2000 they have averaged 68 percent of commercial deliveries and only 18 percent of industrial deliveries (Table 4).

Figure HI3. Average Daily Rate of Natural Gas Deliveries to Consumers, January-August, 1998-2000



Note: Electric utilities reflect deliveries for January-May.
Source: Table 3.

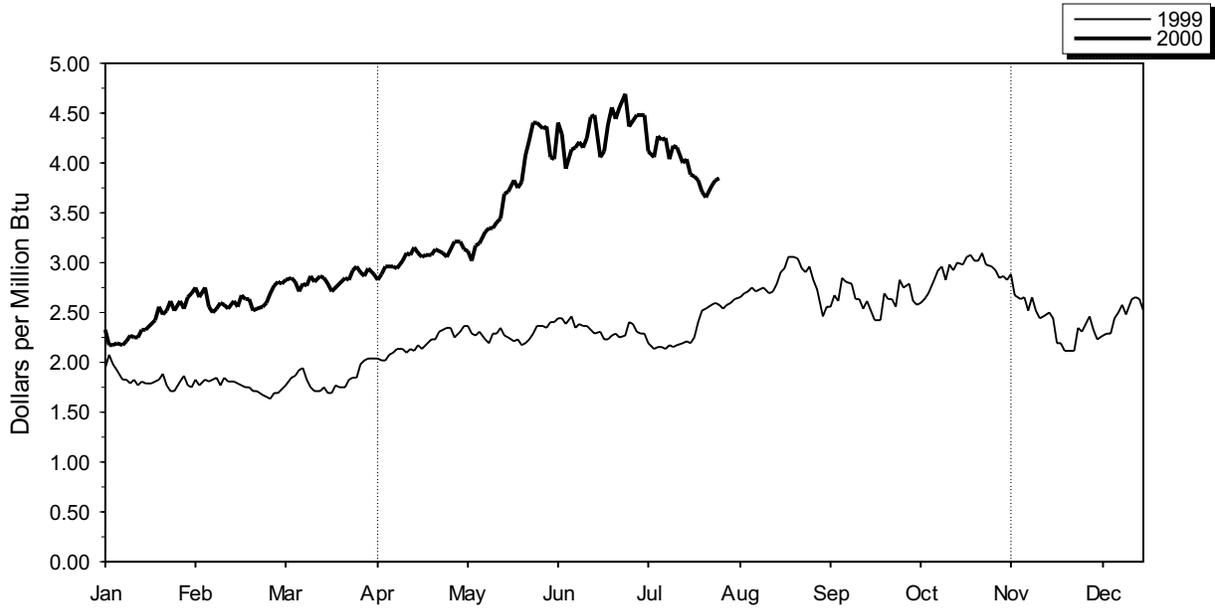
Figure HI4. Average Delivered and Wellhead Natural Gas Prices, January-May, 1998-2000



Note: Commercial and industrial average prices reflect onsystem sales only. The reporting of wellhead prices is 2 months ahead of the reporting of city gate, residential, commercial, and industrial prices. The reporting of electric utility prices is 1 month behind the reporting of city gate, residential, commercial, and industrial prices.

Source: Table 4.

Figure HI5. Daily Futures Settlement Prices at the Henry Hub



Note: The futures price is for the near-month contract, that is, for the next contract to terminate trading. Contracts are traded on the New York Mercantile Exchange. April 1 is the beginning of the natural gas storage refill season. November 1 is the beginning of the heating season.

Source: Commodity Futures Trading Commission, Division of Economic Analysis.