

## Natural Gas

**Note 1. Supplemental Gaseous Fuels:** Any gaseous substance that, introduced into or commingled with natural gas, increases the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, or air or inert gases added for Btu stabilization.

Annual data beginning with 1980 are from the Energy Information Administration (EIA) *Natural Gas Annual (NGA)*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years.

Monthly data are considered preliminary until after the publication of the EIA *NGA*. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

**Note 2. Storage:** Gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. The difference is due to changes in the quantity of native gas included in the base gas and/or losses in base gas due to migration from storage reservoirs.

Total underground storage capacity at the end of each calendar year since 1975 (first year data were available), in billion cubic feet, was:

1975 ... 6,280	1985 .. 8,087	1995 ... 7,953
1976 ... 6,544	1986 .. 8,145	1996 ... 7,980
1977 ... 6,678	1987 .. 8,124	1997 ... 8,332
1978 ... 6,890	1988 .. 8,124	1998 ... 8,179
1979 ... 6,929	1989 .. 8,124	1999 ... 8,229
1980 ... 7,434	1990 .. 8,125	2000 ... 8,241
1981 ... 7,805	1991 .. 7,993	2001 ... 8,415
1982 ... 7,915	1992 .. 7,932	2002 ... 8,207
1983 ... 7,985	1993 .. 7,989	
1984 ... 8,043	1994 .. 8,043	

Monthly underground storage data are collected from the Federal Energy Regulatory Commission (FERC) Form FERC-8 (interstate data) and EIA Form EIA-191 (intrastate data). Beginning in January 1991, all data are collected on the revised Form EIA-191. Injection and withdrawal data from the FERC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of the EIA *NGA*.

The final monthly and annual storage and withdrawal data for 1980–2001 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

**Note 3. Balancing Item:** The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems which vary in scope, format, definitions, and type of respondents.

The increase of 0.2 trillion cubic feet (Tcf) in the “Balancing Item” category in 1983, followed by a decline of 0.5 Tcf in 1984, reflected unusually large differences resulting from the use of the annual billing cycle (essentially December 15 through the following December 14) consumption data in conjunction with calendar year supply data. Record cold temperatures during the last half of December 1983 resulted in a reported 0.3 Tcf increase in net withdrawals from underground storage for peak shaving as compared with the same period in 1982, but the effect of this cold weather was reflected primarily in 1984 consumption data. For underground storage data, see Table F2 in the May 1985 Energy Information Administration (EIA) *Natural Gas Monthly NGM*, which was published in July 1985.

**Note 4. Consumption:** Consumption includes pipeline fuel use, lease and plant fuel use, and deliveries to consuming sectors.

Final data for series other than “Other Industrial CHP” and “Electric Power Sector” are from the EIA *NGA*. Monthly data are considered preliminary until after publication of the EIA *NGA*. For more detailed information on the methods of estimating preliminary and final monthly data, see the EIA *NGM*.

**Note 5. Consumption, 1989-1992:** Prior to 1993, deliveries to nonutility generators were not separately collected from natural gas companies on Form EIA-176, “Annual Report of Natural and Supplemental Gas Supply and Disposition.” As a result, for 1989 through 1992, those volumes are probably included in both the industrial and electric power sectors and double-counted in total consumption. In 1993, 0.28 trillion cubic feet was reported as delivered to nonutility generators.

**Note 6. Nonhydrocarbon Gases Removed:** Annual data on nonhydrocarbon gases removed from marketed production—carbon dioxide, helium, hydrogen sulfide, and nitrogen—are from the EIA *NGA*. Data are not available prior to 1980. Monthly data are reported by three States and computed for six States. Monthly data are preliminary until after publication of the EIA *NGA*. Differences between annual data published in the EIA *NGA* and the sum of the preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data.

For further information on methods of estimating preliminary monthly data, see the EIA *NGM*.

#### **Note 7. Production.**

Annual data—Final annual data are from the EIA *NGA*.

Estimated monthly data—Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see the EIA *NGM*.

Preliminary monthly data—Monthly data are considered preliminary until after publication of the EIA *NGA*. Preliminary monthly data are gathered from reports to the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary, to a standard 14.73 psi pressure base. Unless there are major changes, data are not revised until after publication of the EIA *NGA*.

Final monthly data—Differences between annual data in the EIA *NGA* and the sum of preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data.

**Note 8. Extraction Loss:** Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

Annual data are from the EIA *NGA*, where they are estimated on the basis of the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the EIA *NGA*.

Preliminary monthly data are estimated on the basis of extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

Monthly data are revised and considered final after the publication of the EIA *NGA*. Final monthly data are estimated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the EIA *NGA*.

**Note 9. Imports and Exports:** The United States imports natural gas via pipeline from Canada and Mexico and imports liquefied natural gas (LNG) via tanker from Algeria, Australia, Indonesia, Nigeria, Oman, Qatar, Trinidad and Tobago, and the United Arab Emirates. In addition, very small amounts of LNG arrived from Canada in 1973 (667 million cubic feet), 1977 (572 million cubic feet), and 1981 (6 million cubic feet). The United States exports natural gas via pipeline to Canada and Mexico and exports LNG via tanker to Japan. Also, small amounts of LNG have gone to Mexico since 1998.

Annual and final monthly data are from the annual EIA Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see the EIA *NGM*. Preliminary data are revised after the publication of the EIA *U.S. Imports and Exports of Natural Gas*.

#### **Table 4.4 Sources**

##### **Residential, Commercial, Lease and Plant Fuel, and Pipeline Fuel**

1973–1998: Energy Information Administration (EIA), *Natural Gas Annual 2000*, Table 95.

1999 forward: EIA, *Natural Gas Monthly*, September 2004, Table 3.

##### **Other Industrial Total**

1973–1992: EIA, *Natural Gas Annual 2000*, Table 95.

1993–1998: EIA, Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers."

1999 forward: EIA, *Natural Gas Monthly*, September 2004, Table 3.

##### **Other Industrial CHP**

Table 7.3c.

##### **Electric Power Sector**

1973–1988: Table 7.3e.

1989 forward: Table 7.3b.

##### **Vehicle Fuel**

Annual Data:

1990 and 1991: EIA, *Natural Gas Annual 2000*, Table 95.

1992–1995: Science Applications International Corporation, "Alternative Transportation Fuels and Vehicles Data Development," unpublished final report prepared for EIA (McLean, VA, July 1996) and U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy.

1996–2003: EIA, Office of Coal, Nuclear, Electric, and Alternative Fuels.

Monthly Estimates: Derived by dividing the annual value by the number of days in the year and then multiplying by the number of days in the month.

**All Other Series:** Calculated.

#### **Table 4.5 Sources**

##### **Storage Activity**

1973–1975: Energy Information Administration (EIA) *Natural Gas Annual 1994, Volume 2*, Table 9.

1976–1979: EIA, *Natural Gas Production and Consumption 1979*, Table 1.

1980–1995: EIA, *Historical Natural Gas Annual 1930 Through 2000*, Table 11.

1996–1998: EIA, *Natural Gas Monthly*, February 2003, Table 9. 1999 forward: EIA, *Natural Gas Monthly*, September 2004, Table 9.

**Other Data**

1973 and 1974: American Gas Association (AGA), *Gas Facts, 1972 Data*, Table 57, *Gas Facts, 1973 Data*, Table 57, and *Gas Facts, 1974 Data*, Table 40.

1975 and 1976: Federal Energy Administration (FEA), Form FEA-G318-M-O, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8, "Underground Gas Storage Report."

1977 and 1978: EIA, Form FEA-G-318-M-O, "Underground Gas Storage Report," and Federal Energy

Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report."

1979–1995: EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report."

1996–2000: EIA, *Natural Gas Monthly*, February 2002, Table 9.

2001: EIA, *Natural Gas Monthly*, February 2004, Table 9.

2002 forward: EIA, *Natural Gas Monthly*, September 2004, Table 9.