

# Appendix B

## Data Sources

The data in this publication are taken from survey reports collected by the Energy Information Administration (EIA), the Federal Energy Regulatory Commission (FERC), and the Office of Fossil Energy of the U.S. Department of Energy (DOE). The EIA is the independent statistical and analytical agency within the DOE. The FERC is an independent regulatory commission within the DOE that has jurisdiction primarily in the regulation of electric utilities and the interstate natural gas industry. The Office of Fossil Energy has the authority under Section 3 of the Natural Gas Act of 1938 to grant authorizations for the import and export of natural gas.

Data are collected from annual, quarterly, and monthly surveys. The primary annual report is the Form EIA-176 "Annual Report of Natural and Supplemental Gas Supply and Disposition," a mandatory survey of all companies that deliver natural gas to consumers or that transport gas across State lines. The Office of Fossil Energy provides quarterly files of monthly data on imports and exports. The monthly reports include surveys of the natural gas industry, surveys of the electric power industry, and a voluntary survey completed by energy or conservation agencies in the gas-producing States. The monthly natural gas industry surveys are the Form EIA-191 filed by companies that operate underground storage facilities, the voluntary Form EIA-895 filed by the gas-producing States and the U.S. Minerals Management Service, the Form EIA-857, filed by a sample of companies that deliver natural gas to consumers, and the Form EIA-910, filed by natural gas marketers in select States. The electric power industry surveys are the Form EIA-906 filed by a sample of electric power generators and the Form FERC-423 filed (for price data) by fossil-fueled electric utilities. Responses to the monthly surveys are mandatory, except for Form EIA-895. A description of the survey respondents, reporting requirements, and processing of the data is given on the following pages for each of the surveys. Copies of the forms and instructions are available on the EIA website.

### **Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition"**

The Form EIA-176 is mailed to all identified interstate and intrastate natural gas pipeline companies; investor and municipally owned natural gas distributors; underground natural gas storage operators; synthetic natural gas plant operators; and field, well, or processing plant operators that deliver natural gas directly to consumers (including their own industrial facilities); and/or companies that transport gas across a State border through field or gathering facilities. Each company is required to file if it meets the survey specifications. The mailing in 2003 for report year 2002 totaled approximately 2000 questionnaire packages. While final nonresponse rates vary, the rates have averaged about 1 percent in recent years.

The EIA-176 is a multi-line, multi-page schedule for reporting all supplies of natural gas and supplemental gaseous fuels and their disposition within the State indicated. Respondents file completed forms with EIA in Washington, DC. Data for the report year are due by March 1st. Extensions of the filing deadline for up to 30 days are granted to any respondent upon request.

All natural gas and supplemental gaseous fuels volumes are reported on a physical custody basis in thousand cubic feet (Mcf), and dollar values are reported to the nearest whole dollar. All volumes are reported at 14.73 pounds per square inch absolute pressure (psia) and 60 degrees Fahrenheit.

Data from Form EIA-176 are also published in the *Natural Gas Annual*. Data reported on this form are no longer considered proprietary. Response to the form continues to be mandatory.

## Form EIA-895, "Monthly and Annual Quantity and Value of Natural Gas Report"

Data collection on the Form EIA-895, "Monthly and Annual Quantity and Value of Natural Gas Report," began in January 1995. This form was designed to replace the Interstate Oil and Gas Compact Commission (IOGCC) voluntary form, "Monthly Report of Natural Gas Production." All gas-producing States and the U.S. Minerals Management Service are requested to report on the Form EIA-895; a voluntary report. In 1996, an annual schedule was added to the voluntary Form EIA-895 to replace a prior annual production form. The form was designed to provide a standard reporting system, to the extent possible, for the natural gas data reported by the States. Data are not considered proprietary.

Form EIA-895 is mailed to energy or conservation agencies in all 32 natural gas producing States. All producing States participate voluntarily in the EIA-895 survey by filing the completed form or by responding to telephone contacts. Reports on company production are due 20 days after the end of the report month to the States. (In most cases, the data are not available to the States until after this time period.) Therefore, States are requested to send the report within 80 days after the end of the report month. Monthly data are obtained from about half of the reporting States and MMS on this schedule. EIA prepares estimates for the remaining States based on annual data submissions from the States until monthly State data are provided. The annual schedule of the Form EIA-895 is due with the December data report. Of the 32 natural gas producing states, 31 participated in the annual EIA-895 survey by filing the completed form or by responding to telephone calls. Data for the State of Illinois, which did not respond, were estimated.

The Form EIA-895 is a three-page form collecting monthly and annual data on elements of the production of natural gas beginning with gross withdrawals from gas and oil wells. Starting in 2003, the Form EIA-895 also collects information about production of coalbed methane. The commercial recovery of methane from coalbeds contributes a significant amount to the production totals in a number of States. Coalbed methane seams production quantities (in million cubic feet) are included in gross withdrawals totals for the following States: Alabama (115,949), Colorado (474,342), New Mexico (497,260), and Wyoming (327,785) for 2002.

Data are also collected on volumes returned to formation for repressuring, pressure maintenance,

and cycling; quantities vented and flared; quantities of nonhydrocarbon gases removed; quantities of fuel used on lease; and marketed production as well as the monthly volume and value of marketed production. The annual schedule collects data on the number of producing gas wells, the production of natural gas including gross withdrawals from both gas and oil wells; volumes returned to formation for repressuring, pressure maintenance, and cycling; quantities vented and flared; quantities of nonhydrocarbon gases removed; quantities of fuel used on lease; marketed production; the value of marketed production; and quantity of marketed production (value based). Respondents are asked to report all volumes in thousand cubic feet at the States standard pressure base and at 60 degrees Fahrenheit. All dollar values are reported in thousands.

Data on the quantities of nonhydrocarbon gases removed from marketed production in 2002, including carbon dioxide, helium, hydrogen sulfide and nitrogen, were reported by the appropriate agencies of 9 of the 32 producing States. These 9 States accounted for 36 percent of total 2002 gross withdrawals. The State of Missouri has reported zero gross withdrawals since 1997.

State marketed production data are derived from State data submissions, State and MMS websites reporting natural gas production, and EIA estimates. State marketed production data for a particular month are estimated if data are unavailable at the time of publication. For most States, the data are estimated based on final monthly data reported on the Form EIA-895 for the previous year. Monthly State estimates for nonhydrocarbon gas removed, gas used for repressuring, and gas vented and flared are based on the ratio of the item to gross withdrawals as reported on the annual EIA-895. These ratios are applied to the months estimates for gross withdrawals to calculate figures for nonhydrocarbon gases removed, gas used for repressuring, and gas vented and flared. Current monthly estimates for gross withdrawals are calculated from final monthly data filed on Form EIA-895 for the previous year, if necessary. The Reserves and Production Division of the Office of Oil and Gas, EIA, provides estimates of marketed production for the States of Texas, Louisiana, and Oklahoma.

Data from Form EIA-895 are also published in the *EIA Natural Gas Annual*.

## Form EIA-191, “Underground Natural Gas Storage Report”

The Form EIA-191, “Monthly Underground Natural Gas Storage Report,” is completed by approximately 122 companies that operate underground facilities. The final monthly and annual response rates are 100 percent. The EIA-191 monthly schedule contains current month data on the total quantities of gas in storage, injections and withdrawals, the location (including State and county, field, reservoir) and peak day withdrawals during the reporting period. The annual schedule contains type of facility, storage field capacity, maximum deliverability and pipelines to which each field is connected. The annual schedule for the prior year is filed with the January submission.

Collection of the survey is on a custody basis. Information requested must be provided within 20 days after the last day of each month. Twelve reports are required per calendar year. Respondents are required to indicate whether the data reported are actual or estimated. For most of the estimated filings, the actual data or necessary revisions are submitted on separate forms for each month. Actual data on natural gas injections and withdrawals from underground storage are based on metered quantities. Data on quantities of gas in storage and on storage capacity represent, in part, reservoir engineering evaluations. All volumes are reported at 14.73 psia and 60 degrees Fahrenheit.

The EIA publications, *Monthly Energy Review* and *Winter Fuels Report*, contain data from the EIA-191 survey.

## “Quarterly Natural Gas Import and Export Sales and Price Report”

Beginning in 1995, import and export data have been taken from the “Quarterly Natural Gas Import and Export Sales and Price Report.” This report is prepared by the Office of Fossil Energy, U.S. Department of Energy, based on information submitted by all firms having authorization to import or export natural gas. The Office of Fossil Energy provides authorizations for import or export to applicants under Section 3 of the Natural Gas Act of 1938.

All companies are required, as a condition of their authorizations to file quarterly reports with the Office of Fossil Energy. The data are reported at a monthly level of detail.

## Form EIA-857, “Monthly Report of Natural Gas Purchases and Deliveries to Consumers”

Monthly price and volume data on gas deliveries are collected on the Form EIA-857 from a sample of respondents representing the 50 States and the District of Columbia. Response to Form EIA-857 is mandatory and data are considered proprietary. Completed forms are required to be submitted to EIA on or before the 30th day after the end of the report month.

A sample of approximately 400 natural gas companies, including interstate pipelines, intrastate pipelines, and local distribution companies report to the survey. The sample was selected independently for each of the 50 States and the District of Columbia from a frame consisting of all respondents to Form EIA-176 who reported deliveries of natural gas to consumers in the residential, commercial, or industrial sectors. Each selected company is required to complete and file the Form EIA-857 monthly. Each month about half the responses are received by the due date although response rates by first publication of the relevant month are approximately 87 percent. When a response is extremely late, and the company represents less than 25 percent of the natural gas volumes delivered by all sampled companies in the State, values are imputed as described in Appendix C. When the company’s submission is eventually received, the submitted data are used for future processing and revisions. Final response rates are approximately 95 percent.

Form EIA-857 data are used to estimate monthly sales of natural gas (volume and price) by State and monthly deliveries of natural gas on behalf of others (volume) by State to three consumer sectors – residential, commercial, and industrial. (Monthly deliveries of natural gas to electric power generators are reported on the Form EIA-906, “Power Plant Report,” monthly prices for electric utilities are obtained from Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Plants”, and monthly prices for nonutility power producers are from Form EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants Report.”) See Appendix C for a discussion of the sample design and estimation procedures. Data from Form EIA-857 are also used to calculate the city gate price.

**Form EIA-910, “Monthly Natural Gas Marketer Survey”**

The Form EIA-910, “Monthly Natural Gas Marketer Survey” collects information on natural gas sales from marketers in selected States (Georgia, Maryland, New York, Ohio and Pennsylvania) that have active customer choice programs. These States were selected based on the percentage of natural gas sold by marketers in the residential and commercial end-use sectors. The survey collects monthly price and volume data on natural gas sold by all marketers in the selected States. A natural gas marketer is a company that competes with other companies to sell natural gas service, but relies on regulated local distribution companies to deliver the gas. The data

collected on the Form EIA-910 is integrated with residential and commercial price data from the Form EIA-857 for the States of Georgia, Maryland, New York, Ohio, and Pennsylvania. Response to the EIA-910 is mandatory and data are considered proprietary.

Approximately 150 natural gas marketers report to the survey. Final monthly survey response rates are approximately 98 percent. Responses are filed with EIA in Washington, DC on or before the 30th day after the end of the report month.

All natural gas volumes are reported in thousand cubic feet at 14.73 psia at 60 degrees Fahrenheit and dollar values are reported as whole dollar.