Appendix A

Summary of Data Collection and Report Methodology

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Summary of Data Collection Operations and Report Methodology

The 2001 data for the *Natural Gas Annual* are taken primarily from Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition" and Form EIA-895, "Monthly Quantity and Value of Natural Gas Report." Each of these surveys and all other sources of data for this report are discussed separately in the following sections.

Changes in the *Natural Gas Annual 2001*

Change in Definition of Electric Sector and Industrial Sector

A noteworthy change in the *Natural Gas Annual 2001* is the change in data source and presentation of natural gas use by nonutility generators of electricity. Revisions are part of an EIA effort to use a common data source and definition for electric power. As a result, the definition and reporting of the industrial and electricity sectors have been revised and the data source for fuel consumed by non-utility electric generators (called "other nonutility power producers") are different from previous Natural Gas Annual publications. A summary of the changes is provided below. Additional information is available in the *Annual Energy Review*, Appendix H (http://www.eia.doe.gov/emeu/aer/pdf/pages/sec_h.pdf).

The *Natural Gas Annual 2001* presents information on fuel consumed by the electric power sector, defined to be electric generators whose primary business is to sell electricity, or electricity and heat. In contrast, the *Natural Gas Annual 2000* presented information for electric utilities. Fuel consumed by non-utility generators of electricity, previously reported in the industrial sector, is presented in the Natural Gas Annual 2001 based on the company's primary business. If the primary business is electricity generation, then the consumption is reported as electric power. If the primary business of the company is an industrial process, it is reported as industrial consumption. Data for years prior to 2001 have been revised to incorporate these changes in presentation.

Data reported for the electric power sector are derived from data submitted on electricity data forms used over the period 1993-2001. These include Forms EIA-759, "Monthly Power Plant Report" and EIA-860B, "Annual Electric Generator Report-Nonutility" through 2000 and Form EIA-906, "Power Plant Report" for 2001. In prior EIA data publications, deliveries of natural gas to "other nonutililty power producers" was based on survey data collected from local distribution companies and pipeline companies.

Natural Gas Annual Changes from Prior Years

Natural Gas Consumed as Vehicle Fuel

Volumes of natural gas consumed as vehicle fuel published in the Natural Gas Annual 2001 were estimated by the Coal, Nuclear, and Renewable Fuels Division of EIA based on Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users." Vehicle fuel prices continue to be calculated from data obtained from the Form EIA-176.

Cautionary Note: Number of Residential Consumers

EIA expects that there may be some double counting in the number of residential and commercial consumers reported for the years presented in this report, 1997 through 2001.

EIA collects information on the number of residential and commercial consumers through a survey of companies that deliver gas to consumers (Form EIA-176). The survey asks companies for the number of customers served as sales customers as well as customers to whom they deliver gas purchased from others. Traditionally, residential and commercial customers obtained the gas and all services associated with delivering it from their local distribution company (LDC). The LDC records these customers as sales customers. Customer choice programs allow consumers to select the provider from whom they purchase gas. When customers elect to

purchase gas from a provider other than the LDC, the LDC continues to deliver the gas to the household even though it no longer sells the gas. When customers switch to another provider, they become transportation service customers for the LDC. A residential customer who enters a customer choice program during a year may be classified both as a traditional sales customer and, after entering the customer choice program, as a transportation service customer. In addition, some residential and commercial consumers may switch from transportation to sales service, for instance, when a choice pilot program ends. The double reporting affects the number of consumers shown in the *Natural Gas Annual*.

Tables 19-20 assist readers in evaluating the extent and possible effect of double reporting. Tables 19-20 list the number of sales and transportation customers, for residential and commercial consumers, respectively, reported on Form EIA-176 for 2000 and 2001. Appendix A includes the survey Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." Numbers of residential customers are reported on this form for both sales (in Part V, line 5.4.1) and transportation (in Part V, line 7.4.1). Numbers of commercial customers are reported on this form for both sales (in Part V, line 5.4.2) and transportation (in Part V, line 7.4.2).

Customer choice programs, also known as retail unbundling programs, were implemented starting in the late 1990s. A description of these programs for States offering customer choice is on the EIA web site at: www.eia.doe.gov/oil_gas/Natural_gas/restructure/restructure.html.

Natural Gas Consumed in Agriculture

With the 1996 annual reporting cycle, EIA changed the customer category used for reporting deliveries to consumers in the agricultural industry from commercial to industrial. Most natural gas consumed in agriculture is used to drive irrigation systems and to dry crops. Separate reports of the volumes affected are not available so the direct impact of this change is not known.

Form EIA-176

Survey Design

The original version of Form EIA-176 was approved in 1980 with a mandatory response requirement. Prior to 1980, published data were based on voluntary responses to Bureau of Mines, U.S. Department of the Interior predecessor Forms BOM-6-1340-A and BOM-6-1341-A of the same title. The Form EIA-176 is a five-page form consisting of seven parts. Part I of the form contains identifying information including the company identification number, the company name and address, the State for which the report is filed, and address correction information. Part II contains certification information. The body of the form (Parts III-VII) is a multi-line schedule for reporting all supplies of natural gas and supplemental gaseous fuels and their disposition within the State indicated. Respondents filed completed forms with the EIA in Washington, D.C. Data for the year 2001 were due March 1, 2002.

Data reported on this form are not considered proprietary.

In January 2002, forms for report year 2001 were mailed to all identified interstate natural gas pipeline companies; intrastate natural gas pipeline companies; investor and municipally owned natural gas distributors; underground natural gas storage operators; synthetic natural gas plant operators; field, well, or processing plant operators that delivered natural gas directly to consumers (including their own industrial facilities) other than for lease or plant use or processing; and field, well, or processing-plant operators that transported gas to, across, or from a State border through field or gathering facilities. Detailed instructions for completing the form were included in each survey package.

Completed forms were returned to the Natural Gas Division, Office of Oil & Gas, where each was checked for errors, corrected as necessary, and processed into computer-generated State and national data summaries.

Response Statistics

Each company and its parent company or subsidiaries were required to file if they met the survey specifications. The original mailing totaled 1,901 questionnaire packages. To this original mailing, 110 names were added and 34 were deleted as a result of the survey processing. Additions were the result of a special frames update effort and comparisons of the mailing list to other survey mailing lists. Deletions resulted from post office returns and determinations that companies were out of business, sold, or not within the scope of the survey. After all updates, the survey universe was 1,977 responses from approximately 1,700 companies.

Following the original mailing, second request mailing, and nonrespondents follow-up, 1,977 responses were entered into the data base. There were no nonrespondents.

Summary of Form EIA-176 Data Reporting Requirements

Computer edit programs verify the report year, State code, and arithmetic totals. Further tests were made to ensure that all necessary data elements were present and that the data were reasonable and internally consistent. The computerized edit system produced error listings with messages for each failed edit test. To resolve problems, respondents were contacted by telephone and were required to file amended forms with corrected data.

All natural gas and supplemental gaseous fuels volumes were reported on a physical custody basis in thousand cubic feet, and dollar values were reported to the nearest whole dollar. All volumes were reported at 14.73 pounds per square inch absolute pressure and 60 degrees Fahrenheit. Other minor report standards specified in the instructions booklet assure that the filed data are consistent and can be readily processed.

Comparison of the Form EIA-176 with Other Data Sources

Comparison of the EIA-176 data with data from similar series is another method of ensuring the validity of the data published in this report. When these comparisons on a company-by-company basis showed significant differences, respondents were required to reconcile the data.

Data on imports and exports of natural gas, as collected by the EIA-176 survey, were checked by comparing individual responses with quarterly data reports, "Natural Gas Imports and Exports," filed with the Office of Fossil Energy, U.S. Department of Energy. These quarterly reports are required as a condition of import/export authorizations. Where discrepancies were noted, respondents were required to file corrected reports.

Similarly, data on the underground storage of natural gas were compared with submissions of Form EIA-191, Underground Gas Storage Report." If significant differences were noted, companies were contacted to reconcile the discrepancies. During 2001, the operators of 418 underground storage facilities filing the Form EIA-191 reported total injections of 3,464 billion cubic feet and total withdrawals of 2,309 billion cubic feet. This was almost identical to volumes of injections and withdrawals as reported on the Form EIA-176.

Data on deliveries to residential, commercial, and industrial consumers were compared with data submitted on Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." Where discrepancies were noted, respondents were required to file corrected reports, sometimes both surveys. Numerous telephone calls were made to clarify any misunderstandings concerning the correct filing of both forms. Typical errors included electric utility volumes combined with industrial volumes, sales for resale volumes reported as industrial consumption, and misinterpretation of general instructions.

Pipeline flows were also compared to pipeline capacity information filed at the Federal Energy Regulatory Commission. Flow volumes in excess of pipeline capacity required research and, in some cases, respondents were required to file corrected reports.

Form EIA-895

Survey Design

Beginning with 1980 data, natural gas production data previously obtained on an informal basis from appropriate State agencies were collected on Form EIA-627. This form was designed by the EIA to collect annual natural gas production data from the appropriate State agencies under a standard data reporting system within the limits imposed by the diversity of data collection systems of the various producing States.

In 1996, the Form was redesigned and assigned a new number. The new Form EIA-895 included both a Monthly and an Annual Schedule for quantity and value of natural gas production. The Annual Schedule is to be filed with the December Monthly Schedule each year and should include any changes or updates in previously reported monthly data.

In April 2002, forms for report year 2001 were mailed to the appropriate agencies in 32 States. Completed forms were returned to the Natural Gas Division for review, processing, and compilation.

Response Statistics

Of the 32 natural gas producing States, 28 participated in the EIA-895 voluntary survey by filing the completed form or by responding to telephone contacts. Data for the 4 nonresponding States (IL, MD, PA and WV) were estimated. Data on the quantities of nonhydrocarbon gases removed in 2001 were reported by the appropriate agencies of 10 of the 32 producing States. These 10 States accounted for 59 percent of total 2001 gross withdrawals.

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 (113,527), Colorado (386,349), New Mexico (532,081) and Wyoming (253,305).

Summary of EIA-895 Data Reporting Requirements

The Form EIA-895 is a two-page form divided into five parts. Part I requests identifying information including the name and location of the responding State agency and the name and telephone number of a contact person within the agency. Part II collects monthly data on 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; and marketed production. Part III of the form is for reporting the monthly volume and value of marketed production. Part IV of the form requests annual data, including 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; value of marketed production; and quantity of marketed production (value based). Part V is a space to be used by the respondent to explain data elements reported that may be based on definitions differing from those applied to data in previous years.

Routine Form EIA-895 Edit Checks

Each filing of the Form EIA-895 is manually checked for reasonableness and mathematical accuracy. Volumes are converted, as necessary, to a standard 14.73 pounds per square inch absolute pressure base. Value data are compared to the previous year's data for reasonableness. When data on nonhydrocarbon gases removed, gas vented and flared, and gas used for repressuring are not reported for a State that historically reported one or more of these items, a volume is imputed. The imputation is based on the average ratio of gas volumes in the missing category to total gross withdrawals in States with values reporting gas in that category. This average ratio is applied to the volume of total gross withdrawals reported by the State to calculate the volume for the missing items. State agencies are contacted by telephone in order to correct errors. Amended filings or resubmissions are not a requirement, since participation in the survey is voluntary.

In addition to routine edit checks, EIA made a significant review of data provided by the States on venting and flaring of natural gas and removal of nonhydrocarbon gases. As a result of the review, a number of revisions for 2000 are included in the publication.

Comparison of the Form EIA-895 with Other Data Sources

Annual production data, as reported on the Form EIA-895, are compared to the sum of monthly data previously reported on the Monthly Schedule. The comparison is made in order to assure the reasonableness of the data reported on the Form EIA-895, Annual Schedule. Any significant differences are resolved by contacting the reporting State.

Other Data Sources

Offshore Production

The U.S. Minerals Management Service (MMS) has not been able to provide production data on the quantity and value of natural gas production and the number of producing wells for the Federal offshore Gulf of Mexico region Shelf since July 2001. As a result, EIA estimated volumes and revenues for the Federal offshore Gulf of Mexico production in the months of 2001 for which data are missing. These estimates are included in the production estimates and prices for the States of Alabama, Louisiana, and Texas. These data will be revised in EIA data products after official MMS data are available.

Marketed Production

Marketed production of natural gas is taken from responses to Part IV of the Form EIA-895. It is the quantity of natural gas produced that is available for marketing and is reported in Tables 3 and 6. It refers to quantities of gas available after processes related to production are complete. These processes are repressuring, pressure maintenance, cycling, venting and flaring, removing nonhydrocarbon gases, using fuel on the lease.

Average wellhead prices are calculated from volumes and values reported in Part IV of the Form EIA-895. These data are shown as "Reported Wellhead Value" in Table 6. The volumes in this section refer to the actual amounts of natural gas reported to the States as sold.

In many States, the marketed production volumes used in revenue calculations are larger than the reported wellhead value volumes. Differences in these volumes generally result from differences in definition and reporting requirements for separate data systems in the State. For example, while production quantities of Federal, tribal, and State royalty gas are included in marketed production, some State reporting rules exclude these quantities from reported wellhead value volumes.

Natural Gas Processed and Extraction Loss

Extraction loss is the reduction in the volume of natural gas available for disposition resulting from the removal of natural gas liquid constituents at natural gas processing plants. It represents that portion of the "raw" gas stream transferred from the natural gas supply chain to the petroleum and natural gas liquids supply chain. Extraction loss does not include the reduction in volume resulting from the removal of nonhydrocarbon constituents or gas used as fuel, vented, flared, or otherwise disposed of within natural gas processing plants. Extraction loss also results in a reduction in the total heat (Btu) content of the natural gas stream equal to the heat content of the liquids extracted.

The Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production," collects data on the volume of natural gas received for processing, the total quantity of natural gas liquids produced, and the resulting shrinkage (defined as extraction loss in this report) from all natural gas processing- and cycling-plant operators. The quantity of natural gas received and liquids produced are reported by State of origin of the natural gas. Shrinkage volumes are calculated and reported by plant operators based upon the chemical composition of the liquids extracted using standard conversion factors specified in the form instructions. A description of the Form EIA-64A survey is presented in the EIA publication, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, Annual Reports*.

The heat (Btu) content of liquids extracted is not reported on the Form EIA-64A. Therefore, in order to estimate the extraction loss heat content, data reported on the Form EIA-816, "Monthly Natural Gas Liquids Report," were used to determine the individual products contained in the total liquids reported on Form EIA-64A. A description of the Form EIA-816 survey is presented in the EIA publication, *Petroleum Supply Annual 2000*, Volume II.

To estimate the quantities of individual products extracted in each State, data from the Form EIA-64A survey were used to determine the total liquids production, and data from the Form EIA-816 survey were used to estimate the quantities of the individual products contained in those total liquids.The Form EIA-816 captures information on the quantity of individual components (i.e., ethane, propane, normal butane, isobutane, and pentanes plus) produced or contained in mixes of plant liquids as determined by chemical analysis. The volumetric ratios of the individual components to the total liquids, as calculated from the 12 monthly Form EIA-816 reports for each State, were applied to the annual total liquids production, as reported on the Form EIA-64A, to estimate the quantities of individual components removed at gas-processing plants.

The heat (Btu) content of extracted liquids was estimated by applying conversion factors to the estimated quantities of products extracted in each State. These conversion factors, in million Btu per barrel of liquid produced, were ethane, 3.082; propane, 3.836; normal butane, 4.326; isobutane, 3.974; and pentane plus, 4.620. It should be noted that, at the State level, extraction losses are not necessarily related to State production.

Imports and Exports

Volumes and prices of natural gas imports and exports were reported to the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*. These data are nonproprietary and are filed annually by each individual or organization having authorization to import and export natural gas.

Alliance Pipeline moves saturated natural gas from the Canadian border at Sherwood, ND, to the Aux Sable processing plant in Illinois. EIA adjusted the Alliance import volumes to remove volumes of natural gas liquids reported by Alliance. This adjustment makes Alliance's import volumes natural gas comparable with other volumes of dry natural gas imported by pipeline.

Lease and Plant Fuel

Lease and plant fuel represent those quantities of natural gas used in well, field, and/or lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and as fuel in natural gas processing plants.

Lease fuel data were collected for report year 2001, on the Form EIA-895, "Monthly Quantity and Value of Natural Gas Report." Of the 32 States reporting on the Form EIA-895, 16 States reported quantities of natural gas used as lease fuel. In the absence of reporting quantities on the Form EIA-895, the Form EIA-176 was used to estimate lease fuel quantities. Although EIA recognizes that lease data collected on the Form EIA-176 do not constitute a census or result from a statistically selected sample, the data collected in the survey provide the best information available to the EIA for estimating such usage. To estimate lease use during 2001 (Table 15), several simplifying assumptions were made:

- The quantity of gas used for lease fuel was assumed to be a function of gross withdrawals of natural gas from gas and oil wells.

- The average proportion of company-owned on-system production reported as used in lease operations by respondents to the Form EIA-176 was assumed to be typical of the average use by all operators as a proportion of gross withdrawals.

- Average usage was calculated separately for Alaska and for the lower 48 States to reflect the distinctive field operations in Alaska, particularly on the North Slope.

Form EIA-176 respondents reported volumes of company-owned onsystem production amounting to 0.0287 percent of 2001 total gross withdrawals reported on the EIA-895 (0.0555 percent of withdrawals in Alaska and 0.0229 percent of withdrawals in the lower 48 States). Lease use reported by respondents on the EIA-176 averaged 0.01659 per thousand cubic feet of reported production in Alaska and 0.01592 per thousand cubic feet of reported production in the lower 48 States. The fuel-use estimates shown in Table 15 were calculated by applying the EIA-176 ratios to the gross withdrawals from the various States (Table 3), not reporting lease use on the EIA-895.

Electric Power Generation Data

The data reported for the electric power sector in the *Natural Gas Annual 2001* are derived entirely from data submitted on electricity data collection forms. These include Form EIA-759, "Monthly Power Plant Report" (for electric utilities), Form EIA-860B, "Annual Electric Generator Report – Nonutility", Form EIA-906, "Power Plant Report" (for both utilities and nonutilities), and Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants". In previous Natural Gas Annual reports, consumption of gas by nonutility power producers was based on natural gas survey forms submitted by gas delivery agents (local distribution companies and pipelines) and consumption of gas by utilities was based on surveys of electric utility generators. The *Natural Gas Annual 2001* reports natural gas prices for electric utilities only, as no data source is available for prices paid by nonutility electricity generators.

Adjustments have been made to all presentations, including prior years, of data on electric power. The electric power sector includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. The change from "electric utilities" to "electric power" was made in order to maintain consistency among EIA publications. In addition, EIA revised some historical data on electric power to resolve data anomalies that were identified based on an extensive review of reported data.

Revisions have been made to pre-2001 data resulting from changing the source of natural gas consumption data for nonutilities, and from EIA's data review and from changes in the reported composition for the industrial and electricity sectors. Total natural gas consumption of gas was affected by these changes. For example, the revised estimate of natural gas consumption for 2000, reported in the *Natural Gas Annual 2001* is almost 4 percent higher (.78 trillion cubic feet) than in the *Natural Gas Annual 2000*. In addition, for 2000 data as reported in the *Natural Gas Annual 2001* compared to the *Natural Gas Annual 2000*, industrial consumption is lower by 1.4 trillion cubic feet (14 percent). Further, electric power consumption is 2.2 trillion cubic feet higher than was reported for the electric utility sector (that excludes nonutility generators) in the *Natural Gas Annual 2000*. The impact on total consumption for the years 1997 through 1999, as reported in the *Natural Gas Annual 2001*, is about 4 to 5 percent larger than was published in the *Natural Gas Annual 2000.*

Natural Gas Consumed as a Vehicle Fuel

Volumes of natural gas consumed as vehicle fuel published in the *Natural Gas Annual 2001* were estimated by the Coal, Nuclear, and Renewable Fuels Division of EIA based on Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users." Vehicle fuel prices continue to be calculated from data obtained from the EIA-176.

Coverage of Consumer Prices

Coverage for prices varies by consumer sector as discussed below. All average prices are computed by dividing the reported revenue by its associated sales volume. Prices for deliveries of natural gas to consumers, except electric utilities, are calculated from reports to Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." City gate prices are calculated from reports to the Form EIA-857, "Monthly Report of Natural Gas Purchases and Deliveries to Consumers." Both the EIA-176 and EIA-857 are completed by companies that deliver natural gas to end-use consumers.

With the unbundling of services in the natural gas industry, pipeline and local distribution companies provide transportation service for their end-user customers. In this report, those volumes are described as deliveries of gas for the account of others. When companies that deliver gas are the sellers of that gas, they are able to report the associated revenue to the Energy Information Administration. Those volumes are described as onsystem sales. When the firm that physically delivers gas to the end user acts as a transportation agent, it does not know the sales price of the gas. Respondents, therefore, do not report a revenue amount associated with deliveries for the account of others in their submissions of the Form EIA-176.

City Gate: City gate prices represent the total cost paid by gas distribution companies for gas received at the point where the gas is physically transferred from a pipeline company or transmission system. This price is intended to reflect all charges for the acquisition, storage, and transportation of gas as well as other charges associated with the LDC s obtaining the gas for sale to consumers.

Prices for gas delivered to the city gate represent all of the volumes of gas delivered. Since these prices are reported on a monthly form, the annual average city gate price is calculated by summing the monthly revenues reported and dividing that figure by the sum of the monthly reported volumes.

Residential: Prices in this publication for the residential sector cover nearly all of the volumes of gas delivered.

Commercial and Industrial: Prices for the commercial and industrial sectors are often associated with relatively small volumes of the total gas delivered. This occurs because they are reported by those that deliver gas and not by either the gas resellers or by the consumers. The delivery agent provides transportation service only and does not know the commodity cost of the gas it transports.

Natural gas prices reported for commercial and industrial consumers represent only those purchases from local distribution companies. It excludes volumes transported, but not sold, by the local distribution company or pipeline company. Further, the prices do not represent any electric power generator whose principal line of business is either commercial or industrial in nature. EIA does not have a source of data for fuel prices paid by nonutility consumers.

Electric Utilities: Prices for natural gas are also reported to the EIA on the Form FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants," a consumer survey form. Electric utility prices in this report are taken from this form. The respondents are all large regulated electric utilities that report consumption and prices of fuels and represent most of the volumes delivered to electric utilities. These prices are also published in the EIA report, *Cost and Quality of Fuels for Electric Utility Plants*. Prices to electric utilities, because they are derived from a survey of the utilities themselves, represent most of the volumes consumed by this sector.

Vehicle Fuel: For the *Natural Gas Annual 2001*, natural gas consumption for vehicle fuel estimates were prepared by the Coal, Nuclear, and Renewable Fuels Division of EIA based on the Form EIA-886, "Annual Survey of Alternative Fueled Vehicle Suppliers and Users." Vehicle fuel prices continue to be calculated from data obtained from the Form EIA-176. Most of the natural gas delivered for vehicle fuel represents deliveries to refueling stations that are used primarily or exclusively by fleet vehicles. Thus, the prices are often those associated with the operation of fleet vehicles and may be based on internal transfer prices for companies primarily in the natural gas business. Because two different sources are used, with a different reporting population, coverage varies and leads to instances in which volumes, but no price data are available.

Natural Gas Balancing Item

The natural gas balancing item represents the difference between the sum of the components of natural gas supply and the sum of the components of natural gas disposition. It is calculated for each State as the result of a comparison between total reported supply and total reported disposition (Table 2). In the formula used, total reported supply is the sum of marketed production, net interstate movements, net movements across U.S. borders, and supplemental gaseous fuels supplies. Total reported disposition is the sum of extraction loss, net storage changes (net additions to storage), and consumption. When this calculation results in a negative quantity for the balancing item it represents an excess of reported supply in relation to reported disposition, and positive quantities indicate the opposite situation.

The differences between supply and demand represent quantities lost, the net result of gas company conversions of flow data metered at varying temperature and pressure conditions to a standard temperature and pressure base, metering inaccuracies, the effect of variations in company accounting and billing practices, differences between billing cycle and calendar-period time frames, and imbalances resulting from EIA s merger of data reporting systems, which vary in scope, format, definitions, and type of respondents. The balancing items in individual States may also reflect the underreporting on Form EIA-176 of gas transported across State borders for the account of others by some interstate pipelines.

Figure A1. Form EIA-176

www.eia.doe.gov Energy Information Administration

U.S. DEPARTMENT OF ENERGY
ENERGY INFORMATION ADMINISTRATION
Washington, D.C. 20585

Form Approved
OMB No. 19050175
Expiration Date: 12/31/02
(Revised 1999)

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION
FORM EIA-176

REPORT YEAR ☐☐☐☐

This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). For the provisions concerning the confidentiality of information and sanctions statements, see Sections VII and VIII of the instructions.

PART I: IDENTIFICATION

Complete and return by March 1, 2000 to:

Energy Information Administration: EI-45
Mail Station: 2G-024 FORSTL
U.S. Department of Energy
Washington, D.C. 20585
Attn: Form EIA-176
OR
Fax to: (202) 586-1076 (ATTN: EIA-176)

Questions? Call (202) 586-6303

Affix mailing label or enter mailing address

Control (ID) No. . . . . _____
Name: . . . . . _____
Operations in (State): . . . . . _____
Street or Post Office Box: . . . . . _____
City, State, Zip Code: . . . . . _____
Attention: . . . . . _____

1.0 Control No.	**2.0** Company Name:	**3.0** Report State	EIA	**4.0** Revised Report Indicator

5.0 Company status, name, and/or address change or correction. (Check appropriate box.)

a. ☐ Name and address on mailing label are correct.
b. ☐ Change name, attention line, and/or mail address as indicated below.
c. ☐ Company was sold to, or merged with, company entered below.
d. ☐ Company went out of business. Customer accounts taken over by company entered below.
e. ☐ Other changes, corrections, or comments: _____

5.1 Change company name and/or address to:

a. Company Name: . . . . . _____
b. Operations in (State): . . . . . _____
c. Street or Post Office Box: . . . . . _____
d. City, State, Zip Code: . . . . . _____
e. Attention: . . . . . _____

PART II: CONTACT INFORMATION (person most knowledgeable about the reported data)

1.0 Contact (Please Print)		**2.0** Title
3.0 Phone Number: ( ) -	**4.0** Fax Number: ( ) -	**5.0** E-Mail Address:
6.0 Signature		**7.0** Date

Title 18 USC 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION

REPORT YEAR ☐☐☐☐

1.0 Control No.	**2.0** Company Name:	**3.0** Report State EIA ☐☐	**4.0** Revised Report Indicator ☐

PART III: TYPE OF COMPANY AND GAS ACTIVITIES OPERATED IN THE REPORT STATE

1.0 Type of company (check one)

- a. ☐ Investor owned distributor
- b ☐ Municipally owned distributor
- c. ☐ *Interstate* pipeline
- d. ☐ *Intrastate* pipeline
- e. ☐ Storage operator
- f. ☐ SNG plant operator
- g. ☐ Integrated oil and gas
- h. ☐ Producer
- i. ☐ Gatherer
- j. ☐ Processor
- k. ☐ Other (specify) _____

2.0 Gas Activities Operated Onsystem Within the Report State (check all that apply)

- a. ☐ Produced Natural Gas
- b. ☐ Gathered
- c. ☐ Processed
- d. ☐ Purchased
- e. ☐ Transported *Interstate* (between two or more states)
- f. ☐ Transported *Intrastate* (only within one state)
- g. ☐ Stored Underground
- h. ☐ Stored LNG
- i. ☐ Injected Propane-air
- j. ☐ Produced SNG
- k. ☐ Imported
- l.. ☐ Exported
- m. ☐ Delivered for Resale
- n. ☐ Delivered directly to consumers
- o. ☐ Other (specify) _____

PART IV: SUPPLY OF NATURAL AND SUPPLEMENTAL GAS RECEIVED WITHIN OR TRANSPORTED INTO REPORT STATE

Item Description	Volume (Mcf at 14.73 psia)	Estimate/ Footnote* (*see below)	Cost (including taxes)	Estimate/ Footnote* (*see below)
1.0 Company-owned natural gas produced onsystem				
2.0 Onsystem purchases received:				
2.1 From producers, gatherers, and/or gas processors				
2.2 From pipelines and/or distribution companies				
2.3 From synthetic natural gas plants or SNG pipeline				
2.4 At State line or U.S. border from:				
Company / State or Country				
(Continue on Part VI, if more space is needed)				
3.0 Transportation and/or exchange receipts:				
3.1 Received within the report State				
3.2 Received at the State line or U.S. border from:				
Company / State or Country				
(Continue on Part VI, if more space is needed)				
4.0 Transported into the report State from:				
State or Country				
(Continue on Part VI, if more space is needed)				
5.0 Withdrawn from storage facilities:				
5.1 Withdrawn from company-operated underground storage:				
5.1.1 Company-owned natural gas				
5.1.2 Natural gas owned by others				
5.2 Company-owned natural gas received directly from underground storage operators				
5.3 Received from underground storage operators for the account of others				
5.4 From liquefied natural gas storage				
6.0 Synthetic natural gas produced				
7.0 Other sources of supply (specify source and/or kind of fuel):				
(Continue on Part VI, if more space is needed)				
8.0 Total supply within report State				

* Enter **E** if data reported is an estimate; enter **F** if a footnote explaining the data is included in PART VII.

Page 2

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION

REPORT YEAR ☐☐☐☐

1.0 Control No.	**2.0** Company Name:	**3.0** Report State EIA ☐☐	**4.0** Revised Report Indicator ☐

PART V: DISPOSITION OF NATURAL AND SUPPLEMENTAL GAS RECEIVED WITHIN OR TRANSPORTED OUT OF REPORT STATE

Item Description	**Volume** (Mcf at 14.73 psia)	Estimate/ Footnote* (*see below)	**Cost (including taxes)**	Estimate/ Footnote* (*see below)
1.0 Used in well, lease, and field operations				
2.0 Returned to oil and/or gas reservoirs				
3.0 Used, removed, or lost in gas processing or treating plants				
3.1 Company-operated plants::				
3.1.1 Volume delivered to company-operated plants for redelivery ..... Mcf				
3.1.2 Volume used for plant fuel				
3.1.3 Extraction loss estimated gas phase volume of liquids extracted				
3.1.4 Volume of nonhydrocarbons removed (e.g., H_2S & CO^2)				
3.1.5 Vented, flared, and/or lost				
3.2 Plants operated by others:				
3.2.1 Volume delivered to plants operated by others for redelivery ..... Mcf				
3.2.2 Total volume used, removed, vented and/or flared				
4.0 Added to storage facilities				
4.1 Injected into company-operated underground storage:				
4.1.1 Company-owned natural gas				
4.1.2 Natural gas owned by others				
4.2 Company owned gas delivered directly to underground storage operators				
4.3 Delivered to underground storage operators for the account of others				
4.4 Added to liquefied natural gas storage				
5.0 Deliveries of company-owned natural gas:				
5.1 Delivered to other pipelines within the report State				
5.2 Delivered to resellers (e.g., distribution companies)				
5.3 Delivered at the State line or U.S. border to:				
Company State or Country ☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
5.4 Delivered directly to consumers **Number of Consumers**				
5.4.1 Residential Sales ☐☐☐☐☐☐☐				
5.4.2 Commercial Sales ☐☐☐☐☐☐☐				
5.4.3 Industrial Sales ☐☐☐☐☐☐☐				
5.4.4 Other Nonutility Power Producer Sales ☐☐☐☐☐				
5.4.5 Electric Utility Sales ☐☐☐☐☐☐☐				
5.4.6 Natural Gas Used as Vehicle Fuel ☐☐☐☐☐				
6.0 Average heat content of gas delivered directly to consumers ☐☐☐☐ Btu				

* Enter **E** if data reported is an estimate; enter **F** if a footnote explaining data is included in PART VII.

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION

REPORT YEAR ☐☐☐☐

1.0 Control No.	**2.0** Company Name:	**3.0** Report State EIA ☐☐	**4.0** Revised Report Indicator ☐

PART V: DISPOSITION OF NATURAL AND SUPPLEMENTAL GAS RECEIVED WITHIN OR TRANSPORTED OUT OF REPORT STATE (continuation)

Item Description	Volume (Mcf at 14.73 psia)	Estimate/ Footnote* (*see below)	Cost (including taxes)	Estimate/ Footnote* (*see below)
7.0 Natural gas transported for the account of others				
7.1 Delivered to other pipelines within the report State				
7.2 Delivered to resellers for the account of others				
7.3 Delivered at the State line or U.S. border to:				
Company				
State or Country ☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
7.4 Transported and delivered to consumers for the account of others:				
Number of Consumers				
7.4.1 Residential Consumers . . . . . ☐				
7.4.2 Commercial Consumers . . . . . ☐				
7.4.3 Industrial Consumers . . . . . ☐				
7.4.4 Other Nonutility Power Producer Consumers . . . . . ☐				
7.4.5 Electric Utility Consumers . . . . . ☐				
7.4.6 Natural Gas Used as Vehicle Fuel . . . . ☐				
8.0 Deliveries of exchange gas or storage gas				
8.1 Delivered at point(s) within the report State				
8.2 Delivered at the State line or U.S. Border to:				
Company				
State or Country ☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
9.0 Used in pipeline, storage and/or distribution operations				
10.0 Other disposition (specify) ☐☐☐☐☐☐☐☐				
(Continue on Part VI, if more space is needed)				
11.0 Total disposition accounted for				
12.0 Unaccounted for gas supply (+) or disposition (-)				

* Enter **E** if data reported is an estimate; enter **F** if a footnote explaining data is included in PART VII.

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION
REPORT YEAR ____

1.0 Control No.	**2.0** Company Name:	**3.0** Report State EIA	**4.0** Revised Report Indicator

PART VI: CONTINUATION SHEET (To be used only if insufficient space was provided on Part IV and/or Part V) **Sheet ____ of ____**

Supply (Continued)	**Volume** (Mcf at 14.73 psia)	Estimate/ Footnote* (*see below)	**Cost or Revenue (including taxes)**	Estimate/ Footnote* (*see below)
PART IV, 2.4: On-system purchases received at State line or U.S. border from: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART IV, 3.2: Transportation and/or exchange receipts at State line or U.S. border from: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART IV, 4.0: Transported into the report State from: (Continued)				
State or Country				
State or Country				
State or Country				
State or Country				
PART IV, 7.0: Other sources of supply (specify source and/or kind of fuel): (Continued)				
Disposition (Continued)				
PART V, 5.3: Company-owned natural gas deliveries at State line or U.S. border to: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART V, 7.3: Transported for the account of others out of report State to: (Continued)				
State or Country				
State or Country				
State or Country				
State or Country				
PART V, 8.2: Deliveries of exchange gas at State line or U.S. border to: (Continued)				
Company				
State or Country				
Company				
State or Country				
PART V, 10.0: Other disposition (specify): (Continued)				

* Enter **E** if data reported is an estimate; enter **F** if a footnote explaining the data is included in PART VII.

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION
REPORT YEAR

1.0 Control No.	**2.0** Company Name:	**3.0** Report State EIA	**4.0** Revised Report Indicator

PART VII: FOOTNOTES

Part No.	Item No.	Sub-item (State, Company, or Line)	Line No.	Footnote

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Figure A2. Form EIA-895

www.eia.doe.gov Energy Information Administration

U.S. DEPARTMENT OF ENERGY
Energy Information Administration
Washington, D.C. 20585

Form Approval
OMB No. 19050192
Expiration Date: 12/31/02
(Revised 1999)

MONTHLY QUANTITY AND VALUE OF NATURAL GAS REPORT
FORM EIA-895

This report is voluntary under Public Law 93-275. For the provisions concerning the confidentiality of information and sanctions, see Sections VI and VII of the instructions.

PART I. IDENTIFICATION DATA

1. Name of State Reporting	**2. Report Period**: Month [ ][ ] Year [2][0][ ][ ]
3. Name of Office/Agency	**Complete and return forms to:** **Energy Information Administration, EI-45** **Mail Station: 2G-024 FORSTL** **Washington, D. C. 20585** **Attn: EIA-895** **OR Fax to: (202) 586-1076** **Questions? Call (202) 586-6119**
4. Office Address (Street, City, State, Zip Code)	

PART II. NATURAL GAS VOLUMES (Report All Volumes in Thousands of Cubic Feet)

Enter the pressure base at which all volumes are reported (psia at 60 degrees Fahrenheit)

Item	Volume (Thousand cubic feet)
Gross Withdrawals (excluding lease condensate)	
Gas and Condensate Wells	
Oil Wells (Casinghead)	
TOTAL	
Used for Repressuring	
Vented and Flared	
Nonhydrocarbon Gases Removed	
Natural Gas Used as Fuel on Leases	
Marketed Production (Excluding Lease Fuel)	

PART III. QUANTITY AND VOLUME OF MARKETED PRODUCTION

Volume (thousand cubic feet)	Value (thousand dollars)

PART III. CONTACT INFORMATION (person most knowledgeable about the reported data)

5. Contact Name:	**6.** Title:	
7. Phone Number: ( ) -	**8**. Fax Number: ( ) -	**9.** E-Mail Address:
10. Signature:		**11.** Date:

Title 18 USC 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

www.eia.doe.gov Energy Information Administration

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FORM EIA-895

PART IV: ANNUAL SCHEDULE (to be completed when a calendar year of monthly reports has been completed)

Enter the total number of producing gas wells in operation as of December 31 for the reporting year

Enter the pressure base at which all volumes are reported (psia at 60° degrees Fahrenheit)

Month	Gas and Condensate Wells	Oil Wells (Casinghead)	Total	Used for Repressuring Etc.	Vented and Flared	Non-hydrocarbon Gases Removed	Natural Gas Used as Fuel on Leases	Marketed Production	Value of Marketed Production	Quantity of Marketed Production (Value Based)
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										
Total										

PART V: COMMENTS

Table A1. Natural Gas Unaccounted for by State, 1997-2001
(Million Cubic Feet)

State	1997	1998	1999	2000	2001
Alabama	15,799	32,788	3,021	16,075	-12,086
Alaska	-1,790	3,923	-1,993	-3,905	-37
Arizona	2,975	-40,211	23,178	4,114	-2,321
Arkansas	7,569	3,985	4,301	4,206	11,557
California	292,339	61,625	-9,344	-19,844	47,830
Colorado	9,110	11,664	15,001	24,278	5,825
Connecticut	334	2,187	1,948	21	1,537
D.C.	1,074	794	1,398	695	1,330
Delaware	5,935	4,808	-1,254	1,864	1,573
Florida	4,391	3,105	8,645	1,509	-308
Georgia	-1,260	9,828	-49,244	2,205	26
Hawaii	6	61	17	-73	-129
Idaho	-61,021	-19,015	-11,107	-15,955	-915
Illinois	15,349	14,312	8,777	12,209	98,854
Indiana	11,848	10,081	6,268	8,983	-9,698
Iowa	5,370	34,578	17,180	6,248	300
Kansas	25,939	22,666	11,636	10,844	-451
Kentucky	8,345	409	2,045	9,248	-2,092
Louisiana	40,760	82,184	-14,397	15,943	-81,809
Maine	231	78	570	-3,190	822
Maryland	12,147	6,588	9,570	8,163	7,242
Massachusetts	1,359	4,702	11,798	2,124	4,854
Michigan	42,875	2,685	32,940	7,335	7,494
Minnesota	4,855	825	3,643	5,006	9,200
Mississippi	18,066	-122,470	18,000	7,036	-26,425
Missouri	5,779	7,267	9,669	25,317	-1,892
Montana	-6,635	2,146	-1,613	1,342	-1,130
Nebraska	1,531	1,630	-281	5,444	-4,600
Nevada	2,795	623	-1,947	-5,953	-830
New Hampshire	1,046	149	540	282	-285
New Jersey	3,500	-16,615	-22,294	7,582	7,470
New Mexico	2,010	-2,065	-13,432	-606	-45,695
New York	126,641	115,611	42,660	88,282	46,171
North Carolina	8,125	-274	27,932	4,534	-2,758
North Dakota	1,041	7,590	-137	748	-396
Ohio	-67,821	6,586	32,614	17,624	-12,375
Oklahoma	-32,983	29,312	-14,856	33,494	914
Oregon	1,603	3,116	390	2,022	-2,285
Pennsylvania	12,631	6,187	-7,268	14,472	1,377
Rhode Island	-2,652	-3,400	-2,901	-878	914
South Carolina	2,807	138	1,049	32,754	-17,320
South Dakota	500	1,227	-339	1,511	347
Tennessee	8,426	1,630	6,936	10,748	12,498
Texas	10,262	-73,153	40,909	22,008	-101,808
Utah	35,469	3,895	7,090	5,348	-1,912
Vermont	4,690	777	-915	-518	0
Virginia	7,057	5,521	7,789	9,678	6,600
Washington	59,159	1,772	-1,662	3,940	-26,426
West Virginia	64,475	11,554	6,709	8,641	5,256
Wisconsin	7,001	7,791	4,770	-3,652	-857
Wyoming	5,349	7,961	5,495	4,375	1,059
Total	**724,409**	**259,157**	**219,507**	**393,678**	**-75,790**

Note: Unaccounted 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, as reported by survey respondents. These differences may be due to quantities lost or to the effects of differences in company accounting systems in terms of scope and definition. A positive "unaccounted for" volume means that supply exceeds disposition by that amount. A negative "unaccounted for" volume means that supply is less than disposition.

Source: Energy Information Administration (EIA), Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition."