Appendix A

Summary of Data Collection Operations and Report Methodology

DOE personnel fueling a natural gas automobile.

Appendix A

Summary of Data Collection Operations and Report Methodology

The 1997 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.

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.

In 1982, the scope of the revised EIA-176 survey was expanded to collect the number of electric utility consumers in each State, volumes of gas transported to industrial and electric utility consumers, detailed information on volumes transported across State borders by the respondent for others and for the responding company, and detailed information on other disposition. These changes were incorporated to provide more complete survey information with a minimal change in respondent burden. The 1982 revision of the Form EIA-176 continues to be the basis for the current version of this form.

In 1988, the Form EIA-176 was revised to include data collection for deliveries of natural gas to commercial consumers for the account of others. The revised form was approved for use during report years 1987 through 1989. A short version of Form EIA-176 was also approved in 1988. Companies engaged in purchase and delivery activities but not in transportation and storage activities may file the short form. Usually, these companies are municipals handling small volumes of gas.

In 1990, the Form EIA-176 was revised to include more detailed information for gas withdrawn from storage facilities, gas added to storage facilities, deliveries of company-owned natural gas and natural gas transported for the account of others. The revised form was approved for use beginning with report year 1990.

Upon the Office of Management and Budget's (OMB) approval in 1993, the Form EIA-176 was revised. All deliveries to consumers are now categorized as firm or interruptible. Commercial and industrial consumers are further categorized as nonutility power producers or as those excluding nonutility power producers.

Approval of the Form EIA-176 for use through 1999 was received in 1996 from OMB. The form was modified as outlined in the "Change in Definition of Consumption Sector" below.

Data reported on this form are no longer considered proprietary. Response to the form continues to be mandatory.

In February 1998, forms for report year 1997 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 deliver 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 transport 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.

Change in Definition of Consumption Sector

With the 1996 annual reporting cycle, the Energy Information Administration has 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.

In comparing sectoral use over time, note that:

- there is an inherent shift in natural gas volumes from the commercial to industrial sectors due simply to changes in the reporting requirements. This break in series may indicate a spurious increase in industrial consumption with a corresponding decrease in the commercial sector;

- the sum of natural gas volumes consumed by the commercial and industrial sectors will not be changed by this modification in the instructions.

Response Statistics

Each company and its parent company or subsidiaries were required to file if they met the survey specifications. The original mailing totaled 1,924 questionnaire packages. To this original mailing, 10 names were added and 42 were deleted as a result of the survey processing. Additions were the result of 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 1,892 responses from approximately 1,800 companies.

Following the original mailing, second request mailing, and nonrespondents follow-up, 1,864 responses were entered into the data base. There were 28 nonrespondents.

Summary of Form EIA-176 Data Reporting Requirements

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 multiline 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 1997 were due April 1, 1998.

Computer edit programs verified 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 were specified in the instructions booklet to assure that the filed data were consistent and could 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. This comparison on a company-by-company basis showed significant differences that respondents were required to reconcile.

The FPC-14, "Annual Report for Importers and Exporters of Natural Gas," was discontinued in September 1995. 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 1997, the 115 companies filing the Form EIA-191 reported total injections of 2,796 billion cubic feet and total withdrawals of 2,823 billion cubic feet. This compares to 2,800 billion cubic feet of injections and 2,824 billion cubic feet of 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 for either and 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, sale for resale volumes reported as industrial consumption, cogeneration volumes not reported on Form EIA-857, and misinterpretation of general instructions.

A discussion of the comparison of the data on deliveries to electric utilities filed on Form EIA-176 and that reported in the EIA publication, *Electric Power Annual*, is included in this Appendix under "Electric Utility Data."

Routine Form EIA-176 Edit Checks

A series of manual and computerized edit checks were used to screen the Form EIA-176. The edits performed included validity, arithmetic, and analytical checks. A computerized check was also made for consistency with previous filings.

The incoming forms for the survey were reviewed prior to keying. This prescan determined if the respondent identification (ID) number and the company name and address were correct, if the data on the form appeared complete and reasonable, and if the certifying information was complete.

Manual checks on the data were also made. Each form was prescanned to determine that data were reported on the correct lines. The flow of gas through interstate pipelines was checked at the company level to assure that each delivery from a State was matched with a corresponding receipt in an adjoining State.

Form EIA-627 and 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. It was also designed to avoid duplication of the efforts involved in the collection of production and value data by producing States and to avoid an unnecessary respondent burden on gas and oil well operators.

In 1993, the Office of Management and Budget approved the Form EIA-627 for use in report years 1994 through 1996. In April 1996, forms for report year 1995 were mailed to the appropriate agencies in 33 States. Completed forms were returned to the Natural Gas Division for review, processing, and compilation.

In 1996, the Natural Gas Division redesigned the Form EIA-895, formerly known as the Form EIA-627, "Monthly Quantity of Natural Gas Report." The Form EIA-895, "Monthly Quantity and Value of Natural Gas Report," has both a monthly and 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 previously reported on monthly data.

Response Statistics

Of the 33 natural gas producing states, 32 participated in the voluntary EIA-895 survey in time for inclusion in this publication. Data for the nonresponding state (West Virginia) were imputed. As in 1996, data on the quantity of nonhydrocarbon gases removed were reported by 21 of the 33 producing states. These 21 States accounted for 63 percent of the total gross withdrawals in both 1996 and 1997. In addition, the gross withdrawal data from Kansas, Louisiana, Montana, and Oklahoma, which together accounted for 39 percent of total production, excluded all or most of the nonhydrocarbon gases removed on leases.

The commercial recovery of methane from coalbeds contribute 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 (113,752), Colorado (333,249), and New Mexico (601,931).

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 is for reporting the 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 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.

Figure A1. Form EIA-176

EIA-176 (Revised 1996)

Form Approved
OMB No. 19050175
Expires 12/31/99

U.S. DEPARTMENT OF ENERGY
Energy Information Administration
Washington DC 20585

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

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 statement, see Sections VI and VII of the instructions. Respondents are not required to file or reply to any Federal collection of information unless it has a valid OMB control number. Public reporting burden for this collection of information is estimated to average 20.8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Energy Information Administration, Office of Statistical Standards, EI-73, 1000 Independence Avenue, S.W., Washington, D.C. 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

EIA USE

RESPONDENT COPY.
Retain for your files.

Affix mailing label or enter mail address

Control (ID) No. _____

Name: _____
Operations in (State): _____
Street or Post Office Box: _____
City, State, Zip Code: _____
Attention: _____

PART I: IDENTIFICATION

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal Date
			☐☐	☐

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 PERSON

1.0 Name (Type or Print)	2.0 Telephone Number (including Area Code and Extension)
3.0 Signature	4.0 Date

Page 1

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal ☐ Date:

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 On-system Within the Report State (check all that apply)

- a ☐ Produced Natural Gas
- b ☐ Gathered
- c ☐ Processed
- d ☐ Purchased
- e ☐ Transported Interstate
- f ☐ Transported Intrastate
- 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

	Volume (Mcf at 14.73 psia)	e or f	Cost (Including taxes)	e or f
1.0 Company-owned natural gas produced on-system				
2.0 On-system 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 Transportated 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-opeated 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				

RESPONDENT COPY Page 2

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date

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

	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
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 ____				
5.4.1.1 Firm				
5.4.1.2 Interruptible				
5.4.2 Commercial Sales ____				
5.4.2.1 Commercial (excluding nonutility power producer sales)				
5.4.2.1.1 Firm				
5.4.2.1.2 Interruptible				
5.4.2.2 Commercial nonutility power producer sales				
5.4.2.2.1 Firm				
5.4.2.2.2 Interruptible				
5.4.3 Industrial Sales ____				
5.4.3.1 Industrial (excluding nonutility power producer sales)				
5.4.3.1.1 Firm				
5.4.3.1.2 Interruptible				
5.4.3.2 Industrial nonutility power producer sales				
5.4.3.2.1 Firm				
5.4.3.2.2 Interruptible				
5.4.4 Other Nonutility Power Producer Sales				
5.4.4.1 Firm				
5.4.4.2 Interruptible				

RESPONDENT COPY Page 3

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date

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

		Number of consumers	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
	Delivered directly to consumers					
5.4.5	Electric Utility Sales					
5.4.5.1	Firm					
5.4.5.2	Interruptible					
5.4.6	Natural Gas Used as Vehicle Fuel					
5.4.6.1	Firm					
5.4.6.2	Interruptible					
6.0	Average heat content of gas delivered directly to consumers	Btu				
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					
7.4.1.1	Firm					
7.4.1.2	Interruptible					
7.4.2	Commercial Consumers					
7.4.2.1	Commercial (excluding nonutility power producer consumers)					
7.4.2.1.1	Firm					
7.4.2.1.2	Interruptible					
7.4.2.2	Commercial nonutility power producer consumers					
7.4.2.2.1	Firm					
7.4.2.2.2	Interruptible					
7.4.3	Industrial Consumers					
7.4.3.1	Industrial (excluding nonutility power producer consumers)					
7.4.3.1.1	Firm					
7.4.3.1.2	Interruptible					
7.4.3.2	Industrial nonutility power producer consumers					
7.4.3.2.1	Firm					
7.4.3.2.2	Interruptible					
7.4.4	Other Nonutility Power Producer Consumers					
7.4.4.1	Firm					
7.4.4.2	Interruptible					
7.4.5	Electric Utility Sales					
7.4.5.1	Firm					
7.4.5.2	Interruptible					
7.4.6	Natural Gas Used as Vehicle Fuel					
7.4.6.1	Firm					
7.4.6.2	Interruptible					
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 (-)					

RESPONDENT COPY Page 4

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date:

PART VI: CONTINUATION SHEET
(To be used only if insufficient space was provided in Part IV and/or Part V)

Supply (Continued)	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
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: (Cont'd) 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) _____				
_____				
_____				

RESPONDENT COPY Page 5

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal Date:

PART VII: FOOTNOTES

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

RESPONDENT COPY Page 6

Figure A2. Form EIA-176, Short Form

EIA-176 (Revised 1996)

Form Approved
OMB No. 19050175
Expires 12/31/99

U.S. DEPARTMENT OF ENERGY
Energy Information Administration
Washington DC 20585

ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐ **SHORT FORM**

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 statement, see Sections VI and VII of the instructions. Respondents are not required to file or reply to any Federal collection of information unless it has a valid OMB control number. Public reporting burden for this collection of information is estimated to average 20.8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Energy Information Administration, Office of Statistical Standards, EI-73, 1000 Independence Avenue, S.W., Washington, D.C. 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

EIA USE

EIA COPY. Tear out, complete, and return to:

Energy Information Administration: EI-441
Mail Station: BG-094 FORSTL
U.S. Department of Energy
Washington, D.C. 20585
Attn: Form EIA-176

Affix mailing label or enter mail address

Control (ID) No. _____

Name: . . . . . _____
Operations in (State): . . . . . _____
Street or Post Office Box: . . . _____
City, State, Zip Code: . . . . . _____
Attention: . . . . . _____

PART I: IDENTIFICATION

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal Date
			☐☐	☐

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 PERSON

1.0 Name (Type or Print)	2.0 Telephone Number (including Area Code and Extension)
3.0 Signature	4.0 Date

Page 1

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date:

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 On-system Within the Report State (check all that apply)

- a ☐ Produced Natural Gas
- b ☐ Gathered
- c ☐ Processed
- d ☐ Purchased
- e ☐ Transported Interstate
- f ☐ Transported Intrastate
- 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

	Volume (Mcf at 14.73 psia)	e or f	Cost (Including taxes)	e or f
2.0 On-system 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				
7.0 Other sources of supply (specify):				
(Source and/or kind of fuel) ☐☐☐☐☐☐☐☐				
(Continue on Part IV, if more space is needed)				
8.0 Total supply within report State				

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

	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
9.0 Used in pipeline, storage and/or distribution operations				
5.4 Delivered directly to consumers				
(Type of transaction and consumer) **Number of consumers**				
5.4.1 Residential sales				
5.4.1.1 Firm				
5.4.1.2 Interruptible				
5.4.2 Commercial Sales				
5.4.2.1 Commercial (excluding nonutility power producer sales)				
5.4.2.1.1 Firm				
5.4.2.1.2 Interruptible				
5.4.2.2 Commercial nonutility power producer sales				
5.4.2.2.1 Firm				
5.4.2.2.2 Interruptible				
5.4.3 Industrial Sales				
5.4.3.1 Industrial (excluding nonutility power producer sales)				
5.4.3.1.1 Firm				
5.4.3.1.2 Interruptible				
5.4.3.2 Industrial nonutility power producer sales				
5.4.3.2.1 Firm				
5.4.3.2.2 Interruptible				

RESPONDENT COPY Page 2

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19 ☐☐

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA ☐☐	4.0 Resubmittal ☐ Date

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

	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
5.4.4 Other Nonutility Power Producer Sales				
5.4.4.1 Firm				
5.4.4.2 Interruptible				
5.4.5 Electric Utility Sales				
5.4.5.1 Firm				
5.4.5.2 Interruptible				
5.4.6 Natural Gas Used as Vehicle Fuel				
5.4.5.1 Firm				
5.4.5.2 Interruptible				
6.0 Average heat content of gas delivered directly to consumers				
(Btu per cubic foot) Btu				
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 (-)				

RESPONDENT COPY Page 3

EIA-176, ANNUAL REPORT OF NATURAL AND SUPPLEMENTAL GAS SUPPLY AND DISPOSITION, 19

1.0 Control No.	2.0 Company Name	3.0 Report State	EIA	4.0 Resubmittal Date:

PART VI: CONTINUATION SHEET Sheet_____of_____

(To be used only if insufficient space was provided in Part IV and/or Part V)

Supply (Continued)	Volume (Mcf at 14.73 psia)	e or f	Cost or Revenue (Including taxes)	e or f
PART IV, 7.0 Other sources of supply (specify source and/or kind of fuel): (Continued)				
Disposition (Continued)				
PART V, 10.0 Other disposition (specify): (Continued)				

PART VII: FOOTNOTES

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

RESPONDENT COPY Page 4

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 psia 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.

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.

For discussion of the comparison of production data collected on Form EIA-895 and that collected on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," see the EIA report, *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, Annual Reports*.

Electric Utility Data

The electric utility data published in this report are taken from the Forms EIA-759, "Monthly Power Plant Report," and FERC-423, "Monthly Report of Cost and Quality of Fuels for Electric Plants." These data were used in order to maintain consistency among EIA publications. Electric data are necessary on the Form EIA-176 to provide a supply/disposition balance on the form. Differences in the two surveys are apparent in the results published in Table 14, "Natural Gas Deliveries to Consumers by State," and Table 17, "Natural Gas Delivered to Electric Utilities for the Account of Others by State," where volumes in Table 17 sometimes exceed volumes in Table 14. A State-by-State comparison of the reported volumes of natural gas, as collected on the Forms EIA-176 and EIA-759 is shown in Table A1. The national totals differ by 345 billion cubic feet or 13 percent in relative terms.

While processing the data reported on the Form EIA-176, the EIA made special efforts to determine the reasons for the differences in reporting of electric utility data on the Forms EIA-176 and EIA-759. Typical instances of misreporting occurred in the reporting of gas delivered to electric utilities for the account of others. Some companies reported these deliveries under sales for resale. Others reported them under transportation, exchange and/or storage deliveries. A few others reported them under transported to industrials. Companies making mistakes were asked to refile, and new companies were asked to file when they were found making deliveries of gas. Most companies were cooperative, and their refilings and new filings improved the accuracy of the data.

Other Data Sources

The U.S. Minerals Management Service (USMMS) supplied data on the quantity and value of natural gas production and the number of producing wells in the Gulf of Mexico Outer Continental Shelf. Volumes of extraction losses were reported on Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." Heat (Btu) content extraction loss was estimated from data reported on Form EIA-64A and Form EIA-816, "Monthly Natural Gas Liquids Report." 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.

Report Methodology

Natural Gas Consumed as a Vehicle Fuel

Data on deliveries of natural gas delivered for use as a vehicle fuel were collected for the first time in 1990. In 1990 and 1991 deliveries of natural gas for vehicle fuel use were included with volumes delivered to commercial consumers. Beginning with the *Natural Gas Annual 1992*, vehicle fuel volumes are no longer included with commercial volumes.

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

EIA-895

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

Form Approved
OMB No. 19050192
Expires: 12/31/99

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

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.

Month	Gas and Condensate Wells	Oil Wells (Casinghead)	Total	Used for Repressuring, Etc.	Vented and Flared	Nonhydrocarbon 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

movements across U.S. borders, and supplemental gaseous fuels supply. 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.

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 that is 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 1997*, 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 (Table A4).

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. All gas processed in 9 States originated, or was produced in those States; but part of the gas processed in the other 17 States originated outside of the State in which the gas was processed. Gas produced from 10 States (Arizona, Indiana, Maryland, Missouri, Nebraska, Nevada, New York, Oregon, South Dakota, and Virginia) was not processed.

For comparative purposes, the quantities of natural gas delivered to processing plants, total liquids extracted, and estimated volumetric and heat content extraction losses by State or origin of the gas (i.e., the State in which the gas was produced) are shown in Table A5.

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 1997, on the Form EIA-895, "Monthly Quantity and Value of Natural Gas Report." Of the 32 States reporting on the Form EIA-895, 18 States reported quantities of natural gas used as lease fuel.

Most of Nevada's marketed production is consumed as lease fuel, 9 million cubic feet. 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 1997 (Table 13), 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 8 percent of 1997 gross withdrawals (37 percent of withdrawals in Alaska and 6.0 percent of withdrawals in the lower 48 States). Lease use reported by respondents averaged 0.03012 thousand cubic feet per thousand cubic feet of reported production in Alaska and 0.02498 thousand cubic feet per thousand cubic feet of reported production in the lower 48 States. The fuel-use estimates shown in Table 13 were calculated by applying the above ratios to the gross withdrawals from the various States (Table 3), not reporting lease use on the EIA-895.

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 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.

Census Divisions

The Bureau of the Census, U.S. Department of Commerce, has grouped the 50 States and the District of Columbia into Census divisions. Some of the tables and graphs in this report show data by Census division. These groupings are:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Middle Atlantic: New Jersey, New York, and Pennsylvania.

East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin.

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

East South Central: Alabama, Kentucky, Mississippi, and Tennessee.

West South Central: Arkansas, Louisiana, Oklahoma, and Texas.

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

Pacific Contiguous: California, Oregon, and Washington.

Pacific Noncontiguous: Alaska and Hawaii

Table A1. Comparison of Electric Utility Natural Gas Consumption Data by State, 1997
(Million Cubic Feet)

State	Form EIA-176	Form EIA-759	Difference	MDP[a]
Alabama	11,716	9,996	-1,720	17.2
Alaska	33,754	33,511	-243	0.7
Arizona	32,019	23,384	-8,635	36.9
Arkansas	21,077	24,802	3,725	17.7
California	364,645	377,967	13,322	3.7
Colorado	4,932	5,537	605	12.3
Connecticut	12,859	16,762	3,903	30.4
Delaware	15,285	16,090	805	5.3
Florida	298,371	296,940	-1,431	0.5
Georgia	6,800	7,341	541	8.0
Illinois	49,576	44,606	-4,970	11.1
Indiana	8,294	5,141	-3,154	61.3
Iowa	6,594	4,123	-2,471	59.9
Kansas	17,075	25,822	8,746	51.2
Kentucky	799	2,194	1,395	174.5
Louisiana	202,201	277,431	75,229	37.2
Maryland	10,910	11,004	94	0.9
Massachusetts	53,691	51,486	-2,205	4.3
Michigan	26,538	33,288	6,751	25.4
Minnesota	4,117	6,097	1,980	48.1
Mississippi	59,004	73,081	14,077	23.9
Missouri	6,152	7,464	1,312	21.3
Montana	380	420	40	10.6
Nebraska	1,665	2,656	991	59.5
Nevada	51,161	51,776	615	1.2
New Hampshire	0	564	564	0
New Jersey	22,506	29,528	7,021	31.2
New Mexico	15,692	33,376	17,684	112.7
New York	201,954	217,493	15,539	7.7
North Carolina	4,535	4,511	-24	0.5
North Dakota	1	1	0	24.8
Ohio	3,850	3,485	-365	10.5
Oklahoma	131,877	128,822	-3,054	2.4
Oregon	10,446	10,686	240	2.3
Pennsylvania	6,034	7,368	1,334	22.1
Rhode Island	27,298	27,162	-136	0.5
South Carolina	2,709	2,731	21	0.8
South Dakota	0	1,730	1,730	—
Tennessee	1,906	1,635	-270	16.5
Texas	861,916	1,056,582	194,666	22.6
Utah	3,469	4,079	609	17.6
Vermont	35	36	1	1.6
Virginia	10,803	11,571	768	7.1
Washington	2,518	2,619	101	4.0
West Virginia	184	219	34	18.7
Wisconsin	16,141	15,772	-369	2.3
Wyoming	25	95	69	275.1
Total	**2,623,516**	**2,968,984**	**345,468**	**13.2**

[a] Relative comparisons are expressed as the maximum difference percentage (MDP), or the absolute value of the difference between two volumes divided by the smaller of the two volumes, multiplied by 100.
— = Not applicable.

Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration (EIA), Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition" and Form EIA-759, "Monthly Power Plant Report."

Table A2. Natural Gas Unaccounted for by State, 1993-1997
(Million Cubic Feet)

State	1993	1994	1995	1996	1997
Alabama	3,937	5,295	9,997	-2,954	15,799
Alaska	1,206	2,669	-592	1,032	-1,790
Arizona	168,056	-1,782	2,606	1,191	2,975
Arkansas	4,199	5,650	8,881	7,639	7,569
California	181,570	217,809	174,506	277,924	292,339
Colorado	18,893	9,023	8,734	6,652	9,110
Connecticut	2,682	1,491	3,826	1,055	334
D.C.	610	528	1,006	784	1,074
Delaware	689	479	2,065	438	5,935
Florida	2,234	6,063	3,554	-4	4,391
Georgia	5,346	2,104	3,712	1,666	-1,260
Hawaii	24	53	21	88	6
Idaho	-6,264	5,572	8,893	-18,969	-61,021
Illinois	10,576	5,205	30,648	10,867	15,349
Indiana	11,840	979	539	-3,307	11,848
Iowa	5,666	4,963	4,849	4,500	5,370
Kansas	12,330	4,819	14,287	7,904	25,939
Kentucky	8,238	4,534	9,808	9,410	8,345
Louisiana	16,283	58,677	10,248	19,555	40,760
Maine	24	-131	292	241	231
Maryland	-5,891	3,620	9,879	5,592	12,147
Massachusetts	-2,960	12,194	1,091	-5,692	1,359
Michigan	91,266	-14,398	4,028	16,836	42,875
Minnesota	-183,638	-22,290	-32,466	6,703	4,855
Mississippi	9,503	35,595	21,441	13,047	18,066
Missouri	6,784	2,253	13,981	1,596	5,779
Montana	-1,713	79	-5,345	-6,233	-6,635
Nebraska	2,227	22,179	2,403	4,354	1,531
Nevada	1,393	-1	533	1,479	2,795
New Hampshire	4,008	327	453	466	1,046
New Jersey	5,811	-31,893	1,790	-741	3,500
New Mexico	6,205	7,827	9,924	6,859	-14,049
New York	99,726	84,704	18,129	940	126,641
North Carolina	5,208	2,906	7,640	1,300	8,125
North Dakota	-260	728	-66	1,259	1,041
Ohio	17,285	10,641	31,518	16,344	-67,821
Oklahoma	11,498	8,976	13,742	302	-32,983
Oregon	1,298	57	5,406	1,560	1,603
Pennsylvania	6,164	-1,317	18,220	-4,426	12,631
Rhode Island	-960	-1,603	2,362	-646	-2,652
South Carolina	1,064	298	2,315	846	2,807
South Dakota	445	999	1,107	994	500
Tennessee	8,280	2,884	8,123	11,613	8,426
Texas	-22,703	-28,206	-6,590	51,729	10,262
Utah	5,267	6,461	5,669	15,207	35,469
Vermont	103	14	802	1,817	4,690
Virginia	6,869	-831	8,328	4,810	7,057
Washington	51,049	68,028	66,580	68,447	59,159
West Virginia	3,420	7,790	8,561	5,044	64,475
Wisconsin	-345	1,218	5,402	-2,756	7,001
Wyoming	1,368	1,681	-1,784	3,911	5,349
Total	**575,911**	**514,924**	**521,057**	**548,274**	**708,350**

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

Table A3. Natural Gas Processed and Liquids Extracted at Natural Gas Processing Plants by State, 1997

Plant Location	Volume of Natural Gas Delivered to Processing Plants[a] (million cubic feet)			Total Liquids Extracted[b] (thousand barrels)	Extraction Loss (million cubic feet)
	State Production	Out of State Production	Natural Gas Processed		
Alabama	113,367	1,044	114,411	3,471	4,637
Alaska	2,964,734	0	2,964,734	34,908	41,535
Arkansas	185,244	0	185,244	429	554
California	243,054	0	243,054	9,246	11,600
Colorado	374,570	158	374,728	20,659	28,851
Florida	5,700	2,664	8,364	1,596	1,563
Illinois	500	0	500	60	200
Kansas	582,479	166,944	749,423	29,027	38,224
Kentucky	41,119	2,233	43,352	1,745	2,404
Louisiana	4,620,039	147,926	4,767,965	107,473	150,008
Michigan	86,564	0	86,564	4,484	6,147
Mississippi	4,372	0	4,372	232	300
Montana	8,851	8	8,859	324	409
New Mexico	851,305	0	851,305	74,970	109,046
North Dakota	51,657	0	51,657	3,897	5,076
Ohio	2,553	0	2,553	65	83
Oklahoma	1,012,149	1,859	1,014,008	67,745	96,830
Pennsylvania	8,870	2,791	11,661	587	734
Texas	4,139,591	32,376	4,171,967	275,315	391,174
Utah	237,345	12,585	249,930	13,757	17,872
West Virginia	68,960	132	69,092	5,057	7,179
Wyoming	862,108	944	863,052	35,952	49,333
Total	**16,465,131**	**371,664**	**16,836,795**	**690,999**	**963,759**

[a] "State Production" refers to gas delivered to processing plants located in the same State in which the gas was produced. "Out of State Production" refers to gas produced in other States and delivered to plants located in the State listed for processing.

[b] "Totals Liquids Extracted" represents the total quantity of liquids extracted from natural gas at natural gas processing plants located in the State.

Note: Totals may not equal sum of components due to independent rounding.

Source: Energy Information Administration (EIA), Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production."

Table A4. Estimated Composition of Liquids Extracted at Natural Gas Processing Plants and the Resulting Heat Content Extraction Loss by State, 1997

(Liquid Volumes in Thousand Barrels, Heat Content in Billion Btu)

State	Estimated Components and Products in Liquids Extracted[a]					Estimated Heat Content Extraction Loss[b]
	Ethane	Propane	Isobutane	N-Butane	Pentanes Plus	Heat Content
Alabama	35	1,202	188	929	1,117	14,645
Alaska	0	1,317	3,629	10,377	19,585	154,848
Arkansas	52	69	33	138	136	1,785
California	9	2,197	3,024	1,470	2,546	38,594
Colorado	7,841	5,880	970	2,443	3,526	77,431
Florida	575	534	0	341	146	5,970
Illinois	0	23	0	0	38	260
Kansas	3,842	13,617	3,190	3,627	4,750	114,392
Kentucky	292	900	81	284	188	6,771
Louisiana	37,015	30,836	10,225	10,468	18,928	405,737
Michigan	1,033	1,468	612	527	844	17,426
Mississippi	0	56	0	59	117	1,011
Montana	10	132	18	83	81	1,342
New Mexico	34,986	20,635	3,683	7,366	8,300	271,830
North Dakota	0	1,776	0	1,093	1,029	16,291
Ohio	0	29	0	17	19	273
Oklahoma	28,181	20,864	3,516	7,003	8,180	248,951
Pennsylvania	0	278	58	147	104	2,413
Texas	108,214	77,145	37,668	7,724	44,564	1,018,436
Utah	4,283	3,890	414	1,619	3,551	53,176
West Virginia	1,625	2,059	268	579	526	18,906
Wyoming	12,173	11,408	2,690	3,967	5,714	135,528
Total	**240,166**	**196,315**	**70,267**	**60,261**	**123,989**	**2,606,015**

[a] The liquid quantities shown are the estimated quantities of individual components and products contained in the liquids at the point at which the liquids were extracted from the natural gas. The estimates are based upon the assumption that the liquids extracted in each State were composed of natural gas components and products in the same proportions as those ultimately fractionated at processing and fractionating plants within the State. The quantities ultimately extracted in each State were obtained from unpublished summaries of the 12 monthly reports on Form EIA-816. For each State, ratios of the quantities of each component and product ultimately fractionated to the total quantity of liquids fractionated were developed. Those ratios were applied to the total liquids quantities extracted from natural gas in each State (see Table A3) to derive the estimated component and product quantities shown.

[b] Extraction loss represents that portion of the natural gas stream which was transferred to the petroleum and natural gas liquids supply chain as a result of the removal of part of the natural gas constituents in the form of natural gas liquids at natural gas processing plants. Estimates of the heat content extraction loss, i.e., the heat content of the extracted liquids, were computed using the following average heat content conversion factors (million Btu per barrel): ethane, 3.082; propane, 3.836; normal butane, 4.326; isobutane, 3.974; and pentanes plus, 4.620.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Estimated Components and Products in Liquids Extracted: Total liquids from Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production," apportioned to components and products based upon quantities of components and products fractionated as reported on Energy Information Administration (EIA), Form EIA-816, "Monthly Natural Gas Liquids Report" (see footnote a above). Heat Content extraction loss conversion factors (see footnote b above): Energy Information Administration, *Annual Energy Review, 1997*.

Table A5. Natural Gas Processed, Liquids Extracted, and Estimated Extraction Loss by State of Origin (Production) of Natural Gas, 1997

State	Volume of Natural Gas Delivered to Processing Plants (million cubic feet)			Total Liquids Extracted (thousand barrels)	Extraction Loss	
	Located Within the State	Located Outside of the State	Total Processed		Volume (million cubic feet	Estimated Heat Content (billion Btu)
Alabama	113,367	2,664	116,031	3,958	5,093	16,455
Alaska	2,964,734	0	2,964,734	34,908	41,535	154,848
Arkansas	185,244	5	185,249	429	554	1,785
California	243,054	0	243,054	9,246	11,600	38,594
Colorado	374,570	894	375,464	20,773	28,888	77,863
Florida	5,700	0	5,700	1,085	1,065	4,059
Illinois	500	0	500	60	200	260
Kansas	582,479	2,584	585,063	23,698	29,955	93,363
Kentucky	41,119	25	41,144	2,744	2,283	10,503
Louisiana	4,620,039	4,880	4,624,919	104,551	145,812	394,678
Michigan	86,564	0	86,564	4,484	6,147	17,426
Mississippi	4,372	1,044	5,416	256	342	1,112
Montana	8,851	331	9,182	367	428	1,504
New Mexico	851,305	712	852,017	74,983	109,113	271,878
North Dakota	51,657	8	51,665	3,898	5,076	16,295
Ohio	2,553	0	2,553	65	83	273
Oklahoma	1,012,149	52,619	1,064,768	70,596	100,449	259,719
Pennsylvania	8,870	107	8,977	486	569	1,996
Tennessee	0	2,233	2,233	23	124	89
Texas	4,139,591	288,024	4,427,615	280,689	399,939	1,039,658
Utah	237,345	158	237,503	13,490	16,984	52,143
West Virginia	68,960	2,791	71,751	4,136	7,341	15,503
Wyoming	862,108	12,585	874,693	36,074	50,179	136,014
Total	**16,465,131**	**371,664**	**16,836,795**	**690,999**	**963,759**	**2,606,015**

Notes: This table shows the volume of natural gas delivered to processing plants, the quantity of natural gas liquids extracted, and the estimated volumetric and heat content extraction losses traced back to the State of origin of the gas, i.e., to the State from which the gas was produced whether processed within or outside of the producing State. Totals may not equal sum of components due to independent rounding.

Sources: Natural gas delivered to plants, and total liquids extracted: Energy Information Administration (EIA), Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." Extraction Loss: Extraction loss volumes (Table A3) and estimated heat contents (Table A4) apportioned to State of origin based upon the origin of gas processed as reported on Form EIA-64A.

Table A6. Estimated Total Dry Natural Gas Proved Reserves by State, 1993-1997
(Billion Cubic Feet)

State	1993	1994	1995	1996	1997
Alabama	5,140	4,830	4,868	5,033	4,968
Alaska	9,907	9,733	9,497	9,294	10,562
Arkansas	1,552	1,607	1,563	1,470	1,475
California	2,682	2,402	2,243	2,082	2,273
Colorado	6,722	6,753	7,256	7,710	6,828
Florida	50	98	92	96	96
Kansas	9,348	9,156	8,571	7,694	6,989
Kentucky	1,003	969	1,044	983	1,364
Louisiana	9,174	9,748	9,274	9,543	9,673
Michigan	1,160	1,323	1,294	2,061	2,195
Mississippi	797	650	663	631	582
Montana	673	717	782	796	762
New Mexico	18,619	17,228	17,491	16,485	15,514
New York	264	242	197	232	224
North Dakota	525	507	463	462	479
Ohio	1,104	1,094	1,054	1,113	985
Oklahoma	13,289	13,487	13,438	13,074	13,439
Pennsylvania	1,717	1,800	1,482	1,696	1,852
Texas	34,718	35,974	36,542	38,270	37,761
Utah	2,040	1,789	1,580	1,633	1,839
Virginia	1,322	1,833	1,836	1,930	2,446
West Virginia	2,439	2,565	2,499	2,703	2,846
Wyoming	10,933	10,879	12,166	12,320	13,562
Federal Offshore	27,143	28,388	29,182	29,096	28,466
Other States[a]	94	65	69	67	43
Total	**162,415**	**163,837**	**165,146**	**166,474**	**167,223**

[a] Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, and Tennessee.
NA = Not available.

Note: Totals may not equal sum of components due to independent rounding.
Sources: Energy Information Administration (EIA), *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, Annual Reports*, DOE/EIA-0216.