Appendix A
Summary of Data Collection and Report Methodology

The 2024 data for the *Natural Gas Annual* are taken primarily from Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*. We discuss this survey 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 and had a mandatory response requirement. Before 1980, published data were based on voluntary responses to forms BOM-6-1340-A and BOM-6-1341-A from the Bureau of Mines in the U.S. Department of the Interior.

Form EIA-176 is a five-page form consisting of seven parts. Part 1 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 2 contains information on reporting requirements, and Part 3 asks for the type of operations the company conducts. The body of the form (Parts 4-7) 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 2024 were due March 1, 2025.

Data reported on Form EIA-176 is considered public information (not proprietary) and may be publicly released in company or individually identifiable form.

In January 2025, we emailed forms for report year 2024 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 use, plant use, or processing
- Field, well, or processing-plant operators that transported natural gas to, across, or from a state border through field or gathering facilities
- Liquefied natural gas (LNG) storage operators
- Producers of high-Btu renewable natural gas that inject into an interstate or intra-state pipeline, or who deliver to a natural gas distributor

We included detailed instructions for completing the form in each survey package.

Respondents submitted completed forms to EIA, and we checked each form for errors, made corrections as necessary, and processed the data into computer-generated state and national data summaries.

Response Statistics

Each company and its parent company or subsidiaries were required to file for each state in which their

operations met the Form EIA-176 survey criteria. The original mailing totaled 2,144 questionnaire packages, distributed via email. To the original mailing list, 37 names were added and 21 were deleted as a result of the survey processing. We identified additions from a special frames update process and by comparing this mailing list with additional natural gas industry survey mailing lists. Deletions resulted from post office returns and other research that identified companies that were out of business, sold, or out of the scope of the survey. After all updates, the 2024 survey scope consisted of 2,144 active companies.

Following the original mailing, a second request mailing, and nonrespondent follow-up, there were 51 nonrespondents.

Summary of Form EIA-176 data validation

Pre-programmed edits verify the report year, state code, and arithmetic totals. We perform further tests to ensure that all necessary data elements are present and that the data are reasonable and internally consistent. To resolve problems, we contact respondents and require them to file amended forms with corrected data, where necessary.

Comparison of the Form EIA-176 with other data sources

Comparing Form 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 show significant differences, we require respondents to reconcile the data.

We check data on imports and exports of natural gas, as collected on Form EIA-176, by comparing responses with the monthly data from Form FE-746R, *Monthly Report of Natural Gas Imports and Exports,* collected by the Office of Fossil Energy and Carbon Management, U.S. Department of Energy. When we see discrepancies between the two data sets, respondents must file corrected reports.

Similarly, we compare data on the underground storage of natural gas with data from Form EIA-191, *Monthly Underground Gas Storage Report*. If we notice significant differences, we contact the companies and require them to reconcile the discrepancies.

We compare data on deliveries to residential, commercial, and industrial consumers with data submitted on Form EIA-857, *Monthly Report of Natural Gas Purchases and Deliveries to Consumers*. If we find discrepancies, respondents must file corrected reports, sometimes for both surveys. We also compare pipeline flows with publicly available information on throughput and capacity, such as via the Federal Energy Regulatory Commission (FERC). If needed, we contact suppliers to clarify any misunderstandings concerning the correct filing of data. Typical errors included electric power volumes combined with industrial volumes, sales for resale volumes reported as industrial consumption, and misinterpretation of general instructions.

Number of residential and commercial consumers

The number of residential and commercial consumers reported for the years presented in this report (2020 through 2024) may be double counted.

We collect data on the number of residential and commercial consumers through a survey of companies that deliver natural 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 natural gas purchased from others. Traditionally, residential and commercial customers obtained the natural 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 choose their provider. When customers elect to purchase natural

gas from a provider other than the LDC, the LDC continues to deliver the natural 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.

During the same year, a residential customer may first be classified as a traditional sales customer and then, after entering a 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 potential double counting affects the number of consumers shown in the *Natural Gas Annual*.

Tables 19-21 list the number of sales and transportation customers, for residential, commercial, and industrial consumers, respectively, as reported on Form EIA-176 for 2023 and 2024, and could be used to evaluate double counting. The number of residential customers is reported on Form EIA-176 for both sales (in Part 6, lines 10.1) and transportation (in Part 6, line 11.1). The number of commercial customers is reported on this form for both sales (in Part 6, line 10.2) and transportation (in Part 6, line 11.2). The number of industrial customers is reported on this form for both sales (in Part 6, line 10.3) and transportation (in Part 6, line 11.3).

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 website.

Production data sources

Form EIA-627 and Form EIA-895

The 1980 data year was the first year of natural gas production that we collected on Form EIA-627. Previously, we collected this data on an informal basis from appropriate state agencies. We designed this form 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, we redesigned and designated Form EIA-627 as the voluntary Form EIA-895, *Monthly and Annual Report of Natural and Supplemental Gas Supply and Disposition*. Form EIA-895 had both a monthly and an annual schedule for quantity and value of natural gas production. We discontinued the monthly schedule in 2008, and the annual schedule in 2010.

Starting in 2011, we obtained production data for all producing states directly from state agencies, state-sponsored public record databases, or commercial data vendors such as Enverus, PointLogic Energy, or Ventyx. Production data for the Federal Offshore Gulf of America region are provided by the U.S. Bureau of Safety and Environmental Enforcement (BSEE), formerly the Minerals Management Service (MMS). Federal Offshore Pacific production, currently allocated to California, is also collected from BSEE. For a few states where the state reported production may be incomplete in some months, we estimate the state data based on data collected on the EIA-914 report.

Gross withdrawals from oil wells, natural gas wells, coalbeds, and shale formations

Before 2012, gross withdrawals from natural gas wells and gross withdrawals from oil wells were published according to state agency natural gas well and oil well definitions. In 2012, we defined natural gas wells and oil wells using natural gas-to-oil ratios (GOR) of monthly well production. Before calculation, natural gas production volumes are standardized to the federal pressure base, 14.73 pounds per square inch absolute (psia). Wells with a GOR of 6,000 cubic feet per barrel (cf/bbl) or less are defined as oil wells. Wells with a GOR greater than 6,000 cf/bbl are defined as natural gas wells. We used the Enverus database to calculate natural gas-to-oil ratios,

determine the percentage of production from each well type, and then apply these percentages to the total gross withdrawals for each state. In addition, oil wells included in this calculation are limited to only oil wells that produce associated natural gas along with oil. The only exception to EIA's GOR methodology is Alaska. For Alaska, we continue to use oil and natural gas well definitions as determined by the Alaska Oil and Gas Conservation Commission (AOGCC).

The recovery of natural gas from shale formations and coalbeds contributes significantly to total natural gas production in many states. In addition to natural gas production from both oil and natural gas wells, the *Natural Gas Annual* also provides shale gas and coalbed methane production data (see Tables 1, 3, and applicable state summary tables). From 2013 through 2015 data, we primarily sourced coalbed and shale production volumes from PointLogic Energy. From 2016 to 2017, we sourced coalbed data and shale production volumes from PointLogic Energy and derived shale production volumes from state administrative data collected by Enverus. Shale production volumes are EIA estimates based on well-level data from Enverus. From 2018 forward, we used the Enverus database to calculate natural gas-to-oil ratios, but instead of identifying only natural gas wells and oil wells (as done in previous years), we refined the process to identify natural gas wells, oil wells, shale gas wells, shale or tight oil wells, and coalbed gas wells.

Given these new categories, a natural gas well now refers to a well with a GOR greater than 6,000 cf/bbl that is not producing from a shale, tight, or coalbed formation. A shale gas well refers to a well with a GOR greater than 6,000 cf/bbl that is producing from a shale or tight formation. A coalbed gas well refers to a well that is producing methane from a coalbed formation. We determine the percentage of production from each of these well types and apply these percentages to the total gross withdrawals for each state. Gross withdrawals from shale gas wells and gross withdrawals from shale or tight oil wells are accounted for in the from *shale gas wells* category under the Production section in each state table. Gross withdrawals from coalbed methane wells are accounted for in the from *coalbed wells* category under Production. The broadening of well type categories means that production from wells previously considered natural gas wells or oil wells may now be considered production from shale gas wells, shale or tight oil wells, and coalbed gas wells, and as a result, a change in a state's production category volumes from 2017 to 2018 may be seen. Producing reservoirs may not be consistently classified in some areas; different interpretations of how to classify shale and non-shale formations are possible.

Non-marketed natural gas disposition

Non-marketed natural gas disposition includes nonhydrocarbon gases removed, natural gas vented and flared, and natural gas reinjected into reservoirs for repressuring, cycling, or other purposes.

Before 2010, non-marketed natural gas disposition data were sourced from the now-discontinued Form EIA-895. Some, but not all, states provided these data. After the discontinuation of Form EIA-895, when these data were not available for a state that historically provided these data to EIA, volumes were either estimated, gathered via good-faith outreach attempts with state agencies, or gathered from publicly available data on state agency websites. We called or emailed state agencies to gain insight on information obtained from their websites, and to correct potential errors. When necessary, estimates of these data are based on the average ratio of natural gas volumes in the missing category to total gross withdrawals in states with values in that category. We apply this average ratio to the volume of total gross withdrawals obtained to calculate the volume for the missing items. When data availability prevents us from determining reasonable estimates for these categories of non-marketed natural gas disposition, the tables include an 'NA' (not available) instead of an estimate. We treat data items listed as *NA* as zero in calculating dry natural gas totals.

Wyoming gross withdrawals previously included some volume of cycled CO_2; however, starting with 2017 data, this series began excluding those volumes because they were out of the scope of EIA's updated definition of gross withdrawals.

Marketed natural gas production

We calculate marketed production of natural gas as the remaining portion of gross withdrawals after we remove non-marketed natural gas disposition. We do not remove fuel used in lease or plant operations from gross withdrawals and therefore consider this fuel as a component of marketed production.

Marketed natural gas production is listed in Tables 1-3, B1, and B2, as well as on each individual state page.

Production data quality assurance

We manually check production data for reasonableness and mathematical accuracy. We convert volumes, as necessary, to a standard 14.73 pounds per square inch absolute pressure base. We compare the data with the previous year's data and other commercial sources for reasonableness.

Our gross withdrawal numbers may differ from those sourced from state websites. The largest discrepancies exist as a result of accounting differences of non-hydrocarbon gases. Some states receive production reports from operators that include volumes of nonhydrocarbon gases that were injected into the producing reservoir from an external source (for example, a CO_2 pipeline or N_2 from nitrogen rejection units). We do not consider these volumes to be gross withdrawals, and we make extensive efforts to identify and remove these volumes from gross withdrawals. Other discrepancies typically are a result of amended reports being received by state agencies that include data that were not available when the *Natural Gas Annual* was published.

In addition, we compare annual production data with other data sources to ensure accuracy and reasonableness. These sources include monthly production data from Form EIA-914, annual production data from Form EIA-23L, as well as third party data providers such as Enverus, PointLogic Energy, IHS Markit, and Platts S&P Global.

Form EIA-910

Survey design

Form EIA-910, *Monthly Natural Gas Marketer Survey*, collects information on natural gas sales from marketers in selected states and districts that have active customer choice programs. Up to 2010, these states and districts were Florida, Georgia, Illinois, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, West Virginia, Virginia, and the District of Columbia. Beginning in 2011, we collect Form EIA-910 only in Georgia, New York, and Ohio. We selected these states based on the percentage of natural gas sold by marketers in the residential and commercial end-use sectors. The survey collects monthly price and volume data on natural gas sold by all marketers in the selected states. A natural gas marketer is a company that competes with other companies to sell natural gas, but it relies on regulated LDCs to deliver the natural gas. We integrate the data collected on Form EIA-910 with residential and commercial price data from Form EIA-176 and Form EIA-857 for the states and sectors where Form EIA-910 data are published.

Response statistics

Response to Form EIA-910 is mandatory and the collected data are confidential. Approximately 170 natural gas marketers reported to the survey in 2024. Final monthly survey response rates are approximately 100%.

Responses are filed with EIA in Washington, DC, on or before the 30th day after the end of the report month.

Routine Form EIA-910 edit checks

We manually check each filing of Form EIA-910 for reasonableness and mathematical accuracy. We compare state-level price and volume data to data collected on Form EIA-857 on a monthly basis and Form EIA-176 on an annual basis. We expect the residential and commercial volume data collected from marketers on Form EIA-910 to match residential and commercial transportation volume data collected monthly on the Form EIA-857 and annually on Form EIA-176. When we notice discrepancies, respondents on one or all of the surveys are required to submit corrected reports.

Other data sources

Natural gas processed and natural gas plant liquid production, natural gas equivalent volume

The natural gas plant liquids production, natural gas equivalent volume, is the reduction in volume of natural gas available for disposition resulting from the removal of natural gas plant liquids constituents such as ethane, propane, butane, isobutane, and pentanes plus. It represents that portion of the raw natural gas stream transferred from the natural gas supply chain to the petroleum and natural gas liquids supply chain. The natural gas equivalent volume of natural gas plant liquid production does not include the reduced volume resulting from the removal of nonhydrocarbon constituents, or natural gas used as fuel, vented, flared, or otherwise disposed of within natural gas processing plants. The extraction of natural gas plant liquids also results in a reduced total heat (British thermal unit) content of the natural gas stream proportionate to the heat content of the liquid fuels extracted.

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 plant liquids produced, and the resulting shrinkage (defined as *natural gas plant liquids production, natural gas equivalent volume*, in this report) from all natural gas processing operators. The quantity of natural gas received and liquid fuels produced are reported by the point of origin of the natural gas. Plant operators calculate and report shrinkage volumes based upon the chemical composition of the liquid fuels extracted using standard conversion factors specified in the form instructions. Beginning in 2012, natural gas plant liquid (NGPL) production, gaseous equivalent, was geographically broken down further to show both the state where the processed natural gas originated and the state where it was processed. Prior to 2012, NGPL production (gaseous equivalent) was shown to be produced in the state where the processing plant was located—except for the Gulf of America, where processing was shown to occur in bordering states.

NGPL production by product has been reported on the Form EIA-64A since 2019. Before 2019, we used data reported on the Form EIA-816, *Monthly Natural Gas Liquids Report*, to determine the individual products contained in the total liquid fuels reported on Form EIA-64A. A description of the Form EIA-816 survey is presented in the EIA publication, *Petroleum Supply Annual*.

Form EIA-816 captures information on the quantity of individual natural gas plant liquids components (that is, ethane, propane, normal butane, isobutane, and pentanes plus) produced at natural gas processing plants as determined by chemical analysis. The volumetric ratios of the individual components to the total liquid fuels, as calculated from the 12 monthly Form EIA-816 reports for each state, are applied to the annual total liquid fuels production, as reported on Form EIA- 64A, to estimate the quantities of individual components removed at natural gas processing plants.

We estimate the heat (Btu) content of natural gas plant liquids production 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, are ethane, 3.082; propane, 3.836; normal butane, 4.326; isobutane, 3.974; and pentanes plus, 4.620.

Imports and exports

Volumes and prices of natural gas imports and exports are reported to the U.S. Department of Energy's Office of Fossil Energy and Carbon Management and published in its *Natural Gas Imports and Exports Monthly* publication. These volume data and aggregate price data are nonproprietary, and each individual or organization that has authority to import and export natural gas reports this data each year.

Lease and plant fuel

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

We collect lease fuel data from state agencies and other sources, as described in the Production Data Sources section. If we don't have reporting quantities through those sources, we use an average of the state's historical ratio of lease fuel to gross withdrawals to estimate lease fuel quantities.

We obtain natural gas plant fuel data from Form EIA-64A.

Electric power generation data

Starting in 2007, all electric power sector data previously derived from Form EIA-860, *Annual Electric Generator Report,* Form EIA-906, *Power Plant Report,* Form EIA-920, *Combined Heat and Power Plant Report,* FERC Form 423, *Monthly Report of Cost and Quality of Fuels for Electric Plants,* and Form EIA-423, *Monthly Report of Costs and Quality of Fuels for Electric Plants Report,* are now derived from Form EIA-923, *Power Plant Operations Report*.

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. We changed reported volumes from *electric utilities* to *electric power sector* in the *Natural Gas Annual 2001* to maintain consistency among EIA publications.

Natural gas consumed as vehicle fuel

To estimate the volumes of natural gas consumed as vehicle fuel in the *Natural Gas Annual 2024*, we used data on the Form EIA-176 to represent the total U.S. vehicle fuel consumption. Prior to 2018, data on Form EIA-886, *Annual Survey of Alternative Fueled Vehicles*, were used to determine the allocation between the states; since Form EIA-886 was suspended after the 2017 report year, Form EIA-176 data have been used to determine states' allocations.

Vehicle fuel estimates include volumes sent directly to fueling stations and end users, as well as company fleets owned or fueled by natural gas distributors. In instances where industrial or commercial end users fuel their own natural gas-powered fleets, those volumes are most likely categorized as industrial or commercial, respectively.

Coverage of consumer prices

Coverage for prices varies by consumer sector. We compute all average prices by dividing the reported revenue by its associated sales volume. We calculate prices for deliveries of natural gas to residential, commercial, and industrial consumers from reports to Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*, for most states and sectors.

As a result of the unbundling of services in the natural gas industry, pipeline and LDCs provide transportation service for end-user customers to whom they do not sell the natural gas. In this report, those volumes are described as deliveries of natural gas for another company.

When companies that deliver natural gas are the sellers of that natural gas, they are able to report the associated revenue to EIA. Those volumes are called onsystem sales. When the firm that physically delivers natural gas to the end user acts as a transportation agent, it does not know the sales price of the natural gas. Respondents, therefore, do not report a revenue amount associated with deliveries for other companies in their submissions of Form EIA-176.

In some states, a large share of natural gas is sold to residential and commercial customers not by an LDC but by a third-party marketer. To more accurately capture residential and commercial end-use prices in states with a heavy marketer presence, EIA uses Form EIA-910, *Monthly Natural Gas Marketer Survey.* Beginning with 2002 data for Georgia, Maryland, New York, Ohio, and Pennsylvania, the residential and commercial sector prices have included natural gas sold to customers by energy marketers on Form EIA-910. Beginning in 2005, EIA-910 coverage was included to capture residential prices in Florida, New Jersey, and Virginia, and commercial prices in Florida, Michigan, Virginia, and the District of Columbia. However, in 2011 EIA reduced the number of states surveyed on Form EIA-910 to cover only Georgia, New York, and Ohio. For states surveyed by Form EIA-910, we calculate prices in the residential and commercial sectors by combining data from Form EIA-176, Form EIA-857, and Form EIA-910.

We calculate citygate prices from reports to Form EIA-857, *Monthly Report of Natural Gas Purchases and Deliveries to Consumers*. Companies that deliver natural gas to end-use consumers may complete both Form EIA-176 and Form EIA-857, but marketers or companies that sell but do not deliver natural gas to end-use consumers only complete Form EIA-910.

Price definitions

Citygate: Citygate prices represent the total cost paid by natural gas distribution companies for gas natural received at the point where the natural 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 the natural gas as well as other charges associated with the LDCs obtaining the gas for sale natural to consumers.

Prices for natural gas delivered to the citygate represent all of the volumes of natural gas purchased by LDCs for subsequent sale and delivery to consumers in their service area. Because companies report these prices on a monthly form, we calculate the annual average citygate price by summing the monthly revenues reported and dividing that figure by the sum of the monthly reported volumes.

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

Natural gas prices reported for commercial and industrial consumers represent only those purchases from LDCs except for in Georgia, New York, and Ohio, where commercial prices include data from natural gas marketers who sell natural gas transported to end-use commercial customers by LDCs. Except for in those states, natural gas prices for commercial and industrial customers exclude volumes transported, but not sold, by the LDC or pipeline company.

Electric power: From 2003 to 2006, two separate surveys collected prices for natural gas: FERC Form 423, which is completed by regulated utilities, and Form EIA-423, *Monthly Report of Cost and Quality of Fuels for Electric Plants Report*, which is completed by nonregulated power producers. We began using Form EIA-423 in January 2002, and the form collects information from the nonutility portion of the electric power sector. Data in this report for 2003 forward cover the regulated (steam-electric and combined-cycle units) and unregulated (regardless of unit type) generating plants whose total facility fossil-fueled nameplate generating capacity is 50 megawatts or greater. Beginning in 2007, data previously collected on Form EIA-423 and FERC Form 423 are now collected on Form EIA-923, *Power Plant Operations Report*.

Electric utilities: Prior to 2007, prices for natural gas were also reported to EIA on the FERC Form 423, *Monthly Report of Cost and Quality of Fuels for Electric Plants*. The respondents are regulated electric utilities that report receipts and prices of fuels and represent most of the volumes delivered to electric utilities. We also publish these prices in several other EIA reports: *Electric Power Monthly, Electric Power Annual*, and *Cost and Quality of Fuels for Electric Plants*. Starting in 2007, we derive electric utility data from Form EIA-923, *Power Plant Operations Report*. Prices to electric utilities cover natural gas purchased by regulated electric generating plants whose total steam turbine electric generating capacity, combined-cycle (natural gas turbine with associated steam turbine), or both are 50 or more megawatts. The *Natural Gas Annual* reports natural gas prices for electric utilities through 2001 and for the electric power sector thereafter.

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

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. We calculate the natural gas balancing item 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 natural gas plant liquids production, 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 natural 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
- Misclassification of end-use data, such as in the electric power sector or volumes delivered to other pipelines or LDCs
- Missing or incomplete data, such as for state non-marketed production components.

The balancing items in individual states may also reflect the underreporting on Form EIA-176 of natural gas transported across state borders for other companies by some interstate pipelines.

Table A1. Natural gas losses and unaccounted for volumes by state, 2024

State or district	Losses[a] (million cubic feet)	Unaccounted for[b] (million cubic feet)	Total consumption (million cubic feet)	Losses and unaccounted for volumes as a percentage of total consumption
Alabama	690	-4,221	773,724	-0.5
Alaska	24	6,679	459,212	1.5
Arizona	933	-805	538,671	<
Arkansas	2,118	-4,615	380,168	-0.7
California	9,496	274,520	1,938,982	14.6
Colorado	1,082	10,719	503,348	2.3
Connecticut	1,467	1,041	305,314	0.8
Delaware	618	374	78,670	1.3
District of Columbia	1,432	0	26,268	5.5
Florida	2,131	-2,338	1,694,240	<
Georgia	989	2,940	759,705	0.5
Hawaii	0	-138	2,994	-4.6
Idaho	262	-158	156,422	0.1
Illinois	4,933	11,929	1,039,519	1.6
Indiana	2,235	-7,941	913,801	-0.6
Iowa	1,680	-334	433,450	0.3
Kansas	877	9,691	303,502	3.5
Kentucky	2,112	8,283	383,395	2.7
Louisiana	13,164	9,289	2,025,412	1.1
Maine	440	-1,252	78,912	-1.0
Maryland	4,255	12,589	291,171	5.8
Massachusetts	5,945	-9,535	387,518	-0.9
Michigan	1,549	2	1,031,235	0.2
Minnesota	1,835	2,465	496,871	0.9
Mississippi	1,303	-2,437	661,595	-0.2
Missouri	859	6,600	302,107	2.5
Montana	483	-931	89,235	-0.5
Nebraska	1,836	1,060	193,776	1.5
Nevada	202	2,053	283,186	0.8
New Hampshire	105	576	57,678	1.2
New Jersey	3,005	5,540	655,438	1.3
New Mexico	288	1,639	311,685	0.6
New York	26,497	-4,873	1,324,883	1.6
North Carolina	1,615	-13,663	689,748	-1.7
North Dakota	349	501	203,972	0.4
Ohio	11,118	12,627	1,400,367	1.7
Oklahoma	1,257	7,815	835,969	1.1
Oregon	877	-729	313,947	<
Pennsylvania	5,286	17,788	1,919,419	1.2
Rhode Island	1,605	1,329	104,533	2.8
South Carolina	201	2,142	333,758	0.7
South Dakota	191	928	95,165	1.2
Tennessee	1,341	485	421,649	0.4
Texas	16,793	-33,561	5,348,651	-0.3
Utah	3,144	-2,751	276,500	0.1
Vermont	*	160	12,481	1.3
Virginia	5,196	-1,767	703,217	0.5
Washington	2,412	35,865	362,162	10.6
West Virginia	2,832	7,758	298,884	3.5
Wisconsin	1,530	-1,308	563,773	<
Wyoming	781	785	210,846	0.7
Total	**151,371**	**362,816**	**33,055,901**	**1.6**

[a] Losses are known volumes of lost natural gas that were the result of leaks, damage, accidents, migration, and/or blow down within the state where the natural gas was lost .
[b] 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.
* Volume is less than 500,000 cubic feet.
< Percentage is less than 0.05%.
Source: U.S. Energy Information Administration (EIA), Form EIA-176, *Annual Report of Natural and Supplemental Gas Supply and Disposition*.
Note: Totals may not equal sum of components because of independent rounding.