



ATCO Gas and Pipelines Ltd.

2022 Unaccounted-For Gas Rider D and Rider P

September 19, 2022

Alberta Utilities Commission

Decision 27583-D01-2022

ATCO Gas and Pipelines Ltd.

2022 Unaccounted-For Gas Rider D and Rider P

Proceeding 27583

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1 Decision summary

1. For the reasons set out in this decision, the Alberta Utilities Commission approves ATCO Gas's, a division of ATCO Gas and Pipelines Ltd., unaccounted-for gas (UFG) rate Rider D of 1.271 per cent and Rider P of 1.270 percent, as filed, effective November 1, 2022.

2 Introduction and background

2. In the process of delivering natural gas to customers through the distribution system, some gas goes unaccounted for and a variance results between the amount of natural gas that goes into ATCO Gas's distribution system (from gas producers or gas transmission pipelines) and the deliveries actually received by customers (as measured at customers' meters). This difference is referred to as unaccounted-for gas or UFG.

3. There are a number of reasons why gas may be lost throughout the distribution system: these can be broadly categorized into (i) physical losses (such as pipeline leaks or pipeline damages caused by a third party); and (ii) measurement and accounting errors.¹ Although it is not possible to completely eliminate UFG, a utility should make efforts to keep it at reasonable levels to reduce costs to customers, ensure the safety of its distribution system and protect the environment.

4. In accordance with the currently approved regulatory framework, the cost of UFG is ultimately passed on to customers through retailers; gas producers using the distribution system also pay for their share of UFG. In ATCO Gas's case it is done by means of Rider D and Rider P.

5. Rider D recovers UFG in-kind from all retailers and default supply providers that use the ATCO Gas distribution system. For example, if the applied-for Rider D of 1.271 per cent is approved, retailers and default supply providers must buy an extra 1.271 per cent of natural gas than what is delivered to their customers to offset for UFG and zero balance the deliveries and receipts on the system.²

6. Rider P recovers UFG associated with producer accounts, specifically producers' volumes transacted off the ATCO Gas distribution system. Recently approved in Decision 26283-D01-2021,³ Rider P ensures that exporting producers account for their share of UFG, in-kind. For example, if the applied for Rider P is approved, producer accounts will have

¹ UFG is commonly referred to as "gas losses"; however, there are many other drivers of UFG. For example, metering and billing errors may result in a positive amount of UFG (i.e., gas "gains" rather than "losses").

² Exhibit 27583-X0003, Attachment 2.

³ Decision 26283-D01-2021: ATCO Gas and Pipelines Ltd., 2020 General Rate Application – Phase II Compliance Filing, Proceeding 26283, March 19, 2021.

1.270 per cent less gas delivered to a point of delivery than what they injected into the distribution system. Rider P allows for the collection of UFG from exporting producer accounts where otherwise it would go uncollected.

7. Both riders are similarly designed and follow the same Commission-approved methodology to calculate the amounts. Rider D is calculated annually using the most recent three-year average of ATCO Gas's annual UFG percentages, which are derived by dividing UFG (system receipts minus deliveries) by system deliveries. Rider P is similarly calculated using the most recent three-year average of annual UFG percentages, but uses system receipts as the denominator to calculate the annual UFG recovery requirement.⁴

8. On August 16, 2022, ATCO Gas filed an application with the Commission requesting approval of its 2022-2023 UFG Rider D and Rider P, effective November 1, 2022. ATCO Gas calculated Rider D to increase from the currently approved value of 1.176 per cent to 1.271 per cent, and Rider P to increase from 1.162 per cent to 1.270 per cent.

9. In past UFG decisions,⁵ the Commission directed ATCO Gas to continue to file Rider D and Rider P applications jointly. The Commission also directed ATCO Gas to provide reasons for UFG increases or decreases, information on practices that ATCO Gas has employed to reduce UFG, details with respect to all measurement adjustments, the net results of the adjustments to UFG and a table showing the monthly line heater fuel usage, the associated carbon levy dollars and the difference from the previous year.

3 Analysis of issues

3.1 UFG calculations and Rider D and Rider P amounts

10. In the application ATCO Gas did not propose any changes to the approved methodology to calculate Rider D and Rider P. The most recent three-year averages are reproduced below.⁶

Table 1. Annual UFG rates as a percentage of deliveries and the proposed 2022 Rider D

	UFG percentage
2019 delivery UFG	1.266
2020 delivery UFG	1.042
2021 delivery UFG	1.504
Three-year average (Rider D)	1.271

Source: Exhibit 27583-X0001, application, Table 1.

⁴ Unlike for other services on the distribution system, where measurement is undertaken at the point of delivery, measurement for producer transportation service is undertaken at the point of receipt. Due to this, UFG for producer accounts must be calculated on measured receipt quantities and requires a separate rider that is calculated as a percentage of receipts.

⁵ Most recently in Decision 26776-D01-2021: ATCO Gas and Pipelines Ltd., 2021 Unaccounted-For Gas Rider D and Rider P, Proceeding 26776, September 22, 2021.

⁶ Exhibit 27583-X0001, application, paragraphs 6 and 8.

Table 2. Annual UFG rates as a percentage of receipts and the proposed 2022 Rider P

	UFG percentage
2019 receipt UFG	1.250
2020 receipt UFG	1.031
2021 receipt UFG	1.527
Three-year average (Rider P)	1.270

Source: Exhibit 27583-X0001, application, Table 2.

11. The Commission compiled Table 3 below showing the last five years of approved Rider D values. As Rider P was only approved in 2021, there is insufficient data to compile a similar table for Rider P at this time.

Table 3. Historical approved UFG Rider D⁷

Year	Commission approved Rider D percentage
2017	0.888
2018	0.766
2019	0.864
2020	1.102
2021	1.176
Proposed 2022	1.271

12. In the application, ATCO Gas identified a number of sources that could contribute to an increase or decrease in UFG, as set out in Table 4 below:

Table 4. Sources of UFG⁸

Source	Issue/Concern
Seasonal operating plans	The timing of when the seasonal operating plan can be implemented is dependent on the weather. In the shoulder months of spring and fall, temperatures can vary significantly and may affect UFG due to timing of the implementation of the seasonal operating plan.
Equipment failure	Event in which any part of the equipment does not perform according to its operational specifications.
Construction	Mixing of heat areas during construction. Purging and filling of pipelines.
Pipeline leaks	Gas lost to atmosphere.
Hit lines	Gas lost to atmosphere.
Unauthorized use	Gas lost to theft.
Line heater fuel	Gas used during distribution system delivery.

13. The Commission is satisfied that ATCO Gas's calculation of the UFG Rider D and Rider P are accurate and consistent with the approved methodology.

⁷ Compiled using the approved Rider D from Decision 26776-D01-2021; Decision 25798-D01-2020: ATCO Gas and Pipeline Ltd., 2020 Unaccounted-For Gas Rider D, Proceeding 25798, October 23, 2020; Decision 24815-D01-2019: ATCO Gas and Pipeline Ltd., 2019 Unaccounted-For Gas Rider D, Proceeding 24815, October 24, 2019; Decision 23838-D01-2018: ATCO Gas and Pipeline Ltd., 2018 Unaccounted-For Gas Rider D, Proceeding 23838, October 25, 2018; Decision 22889-D01-2017: ATCO Gas and Pipeline Ltd., 2017-2018 Unaccounted-For Gas Rider D, Proceeding 22889, October 13, 2017.

⁸ Exhibit 27583-X0001, application, Table 4, PDF page 8.

14. In prior decisions, the Commission recognized that UFG is an expected element of operating a natural gas distribution system. The Commission also recognized that, due to the many factors that impact UFG, the UFG amount will fluctuate over time.⁹

15. While the proposed Rider D is higher than the recent historical range of UFG percentages, the Commission accepts ATCO Gas's explanation that the increase is due to normal year-to-year fluctuations in UFG. In the application, ATCO Gas listed the potential causes of UFG and provided further analysis of its UFG as detailed in Section 3.2 of this decision that follows. Based on this information, the Commission finds that variances in UFG levels, such as those observed in the tables above, can be expected from normal operation of the gas distribution system. For the purposes of this decision, the Commission is satisfied that the reported variances in ATCO Gas's UFG are not a cause of concern.

16. For these reasons, the Commission approves ATCO Gas's rate Rider D of 1.271 per cent and Rider P of 1.270 per cent, both effective November 1, 2022.

3.2 Compliance with previous Commission directions

17. In addition to identifying the most significant causes of UFG, ATCO Gas provided the following information in compliance with the direction in Decision 26776-D01-2021:¹⁰

- Explanations of seasonal UFG differences, measurement corrections and reasons for increases or decreases.
- Information on practices and procedures it has employed to reduce UFG.
- Details with respect to all measurement adjustments showing the reconciliation of prior years' data.
- Net results of the adjustments to UFG, both in terms of energy and as a percentage of receipts.
- A table showing the monthly line heater fuel usage, the associated carbon levy dollars and the difference from the previous year.

18. ATCO Gas provided the following explanation of the seasonal differences in UFG:

11. ATCO Gas has over 1.2 million delivery points of which the vast majority are read on monthly cycles. Cycle billing is the most efficient method for billing large numbers of customers. The DFSS [Daily Forecasting and Settlement System] allocates monthly meter readings to daily flow using daily average temperature as well as other factors such as season and day of week. As a result, the calendarized monthly deliveries reported are calculated estimates and affect the accuracy of UFG on a month-to-month basis in the shoulder and summer months. ATCO Gas maintains that the accuracy of UFG is more appropriately reviewed over a longer period of time, such as a year, to reduce the timing effect of the DFSS estimates.

12. ATCO Gas designs and builds the distribution system for peak operating conditions. During the shoulder and summer months, the operation of the distribution system needs to be adjusted to ensure accurate measurement during low-flow conditions. The

⁹ Decision 26776-D01-2022, paragraph 24.

¹⁰ Decision 26776-D01-2021, paragraph 27.

appropriate timing of these adjustments is weather dependent since local temperature fluctuations are unpredictable. For example, there may be a week of unseasonably warm weather early in the spring, but due to the expected return to normal temperatures immediately following, the seasonal operating plan would not be implemented, and meters may be under-measuring during this period.¹¹

19. ATCO Gas also provided details of the aggregated 47 terajoules (TJ) of measurement adjustments processed in 2021, explaining that there were five measurement equipment problems and five occurrences of reallocation of measurement.¹²

20. In response to the Commission's direction, ATCO Gas stated that it has taken continuous steps to reduce UFG, including meter sizing procedures, seasonal operating plans, an annual leak detection and repair program and collaboration with ATCO Pipelines. ATCO Gas monitors and reviews that all current measurement equipment are of the correct size and replaces equipment where warranted.¹³ Under low-flow conditions where gas may not be measured accurately, regulating stations are turned down to divert flow through other meters, and consequently raises the measurement accuracy during periods of low demand.¹⁴ The annual leak detection management and repair program performs annual leak detections based on predetermined areas for the year. If a leak is detected, it is ranked based on significance and repaired through the program or sent to the Steel Mains Replacement or Plastic Mains Replacement engineering groups to complete.¹⁵ Finally, ATCO Gas and ATCO Pipelines work together to identify and address UFG issues through upgrades in measurement equipment, data monitoring, verification of measurement data, seasonal operation adjustments and adjusting sample points and heat areas.¹⁶

21. With respect to the direction around measurement adjustments, ATCO Gas compared 2019 data from the 2021 UFG application to the 2019 data used in this application and found that there was no receipt or delivery deviations.¹⁷ Similarly, ATCO Gas compared 2020 data used in the 2021 application with the 2020 data in this application and found a 13 TJ receipt deviation (0.005 per cent) due to a measurement adjustment at one location and an 11 TJ delivery deviation (0.004 per cent).¹⁸

22. As shown in Table 4, line heater fuel is one of the sources of UFG. This is because the fuel used to operate the line heaters is unmetered, and all costs associated with line heater fuel are collected through UFG riders as gas in-kind. As well, ATCO Gas is required to pay the Government of Canada's carbon levy on fuel that is combusted during the delivery of natural gas, including line heater fuel. Even though ATCO Gas recovers the carbon levy through the load balancing deferral account (LBDA), the Commission directed ATCO Gas to provide a table showing monthly line heater fuel usage, the associated carbon levy charge and the difference from the previous year in its annual UFG rider applications. To comply with this direction, ATCO Gas provided the following table:

¹¹ Exhibit 27583-X0001, application, paragraphs 11-12.

¹² Exhibit 27583-X0001, application, paragraph 13.

¹³ Exhibit 27583-X0001, application, paragraph 17.

¹⁴ Exhibit 27583-X0001, application, paragraph 18.

¹⁵ Exhibit 27583-X0001, application, paragraph 19.

¹⁶ Exhibit 27583-X0001, application, paragraph 20.

¹⁷ Exhibit 27583-X0001, application, Table 5, PDF page 10.

¹⁸ Exhibit 27583-X0001, application, paragraph 22.

Table 5. 2020 and 2021 line heater usage and carbon levy costs

2020													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
GJ	66,181	38,175	43,597	22,886	9,865	8,550	11,960	11,692	7,745	24,014	32,851	35,739	313,255
\$	69,487	40,084	45,777	36,068	15,548	13,474	18,849	18,427	12,206	37,846	51,774	56,324	415,864
2021													
GJ	44,566	70,850	23,874	16,768	11,240	11,823	14,020	11,519	7,868	16,052	26,732	77,315	332,627
\$	70,236	111,660	37,625	35,263	23,638	24,864	29,484	24,224	16,546	33,757	56,217	162,593	626,107
Difference between 2020 and 2021													
GJ	(21,615)	32,675	(19,723)	(6,118)	1,375	3,273	2,060	(173)	123	(7,962)	(6,119)	41,576	19,372
\$	749	71,576	(8,152)	(805)	8,090	11,390	10,635	5,797	4,340	(4,089)	4,443	106,269	210,243

Source: Exhibit 27583-X0001, application, Table 7.

23. ATCO Gas indicated that the primary difference between 2020 and 2021 carbon levy costs is that the carbon levy rate increased in April 2021 to \$2.103/GJ.

24. The Commission is cognizant of the unpredictable nature of UFG and the need to have a sound monitoring and mitigation program to control it. In the application ATCO Gas explained various measurement adjustments, the seasonal differences in UFG, and the reasons for changes in UFG. As well, ATCO Gas enumerated its efforts to reduce UFG. ATCO Gas also provided the monthly linear heater fuel usage and associated carbon levy dollars. The Commission finds that ATCO Gas has provided adequate information on UFG and has complied with the directions set out by the Commission in Decision 26776-D01-2021.

25. The Commission expects that ATCO Gas will improve its ability to identify and quantify the causes of UFG at various points on its system, which will help it identify and pursue the most cost-effective solutions for minimizing UFG fluctuations and overall UFG amounts. Accordingly, the Commission directs ATCO Gas, in its next UFG application, to continue to provide:

- Explanations of seasonal UFG differences, measurement corrections and reasons for increases or decreases.
- Information on practices and procedures it has employed to reduce UFG.
- Details with respect to all measurement adjustments showing the reconciliation of prior years' data.
- Net results of the adjustments to UFG, both in terms of energy and as a percentage of receipts.

26. In the current and past UFG applications, ATCO Gas identified various causes that may result in fluctuations in UFG (as reproduced in Table 4 above). The Commission directs ATCO Gas in future UFG applications to start ranking the most significant causes of UFG in the order of estimated contributions to overall UFG on its system.

27. With regard to the table showing the monthly line heater fuel usage, the associated carbon levy dollars and the difference from the previous year, the Commission directs ATCO

Gas, in its next UFG rider application or an LBDA rider application (whichever comes sooner) to discuss whether this table better belongs in the LBDA rider application dealing with the recovery of the carbon levy amounts.

4 Order

28. It is hereby ordered that:

- (1) ATCO Gas and Pipelines Ltd.'s Rider D is approved as filed, effective November 1, 2022, as set out in [Appendix 3](#) of this decision.
- (2) ATCO Gas and Pipelines Ltd.'s Rider P is approved as filed, effective November 1, 2022, as set out in [Appendix 4](#) of this decision.

Dated on September 19, 2022.

Alberta Utilities Commission

(original signed by)

Olexandr Vasetsky
Director, Electric and Gas Distribution, Rates
On behalf of the Alberta Utilities Commission

Appendix 1 – Proceeding participants

Name of organization (abbreviation) Company name of counsel or representative
ATCO Gas and Pipelines Ltd. (ATCO Gas)

Alberta Utilities Commission
Delegated authority O. Vasetsky, Director, Electric and Gas Distribution, Rates
Commission staff M. Logan B. Edwards

Appendix 2 – Summary of Commission directions

This section is provided for the convenience of readers. In the event of any difference between the directions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

1. The Commission expects that ATCO Gas will improve its ability to identify and quantify the causes of UFG at various points on its system, which will help it identify and pursue the most cost-effective solutions for minimizing UFG fluctuations and overall UFG amounts. Accordingly, the Commission directs ATCO Gas, in its next UFG application, to continue to provide:
 - Explanations of seasonal UFG differences, measurement corrections and reasons for increases or decreases.
 - Information on practices and procedures it has employed to reduce UFG.
 - Details with respect to all measurement adjustments showing the reconciliation of prior years' data.
 - Net results of the adjustments to UFG, both in terms of energy and as a percentage of receipts. paragraph 25
2. In the current and past UFG applications, ATCO Gas identified various causes that may result in fluctuations in UFG (as reproduced in Table 4 above). The Commission directs ATCO Gas in future UFG applications to start ranking the most significant causes of UFG in the order of estimated contributions to overall UFG on its system. ... paragraph 26
3. With regard to the table showing the monthly line heater fuel usage, the associated carbon levy dollars and the difference from the previous year, the Commission directs ATCO Gas, in its next UFG rider application or an LBDA rider application (whichever comes sooner) to discuss whether this table better belongs in the LBDA rider application dealing with the recovery of the carbon levy amounts. paragraph 27

Appendix 3 – ATCO Gas Rate Rider D

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Appendix 3 - ATCO
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Appendix 4 – ATCO Gas Rate Rider P

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Appendix 4 - ATCO
Gas Rate Rider P
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Effective November 1, 2022 by Decision 27583-D01-2022
This Replaces Rider "D"
Previously Effective November 1, 2021

ATCO GAS AND PIPELINES LTD.
ATCO GAS RIDER "D" TO DISTRIBUTION ACCESS SERVICE CUSTOMERS
FOR THE RECOVERY OF UNACCOUNTED FOR GAS (UFG)

All Retailer and Default Supply Provider Customers utilizing Distribution Access Service for delivering gas off the ATCO Gas distribution system will be assessed a distribution UFG charge of 1.271% at the Point of Delivery. The UFG assessment will be made up "In-Kind" from each Customer Account.

Effective November 1, 2022 by Decision 27583-D01-2022
This Replaces Rider "P"
Previously Effective November 1, 2021

**ATCO GAS AND PIPELINES LTD.
ATCO GAS RIDER "P" TO PRODUCERS
FOR THE RECOVERY OF UNACCOUNTED FOR GAS (UFG)**

All Producers utilizing Distribution Access Service for exporting gas off the ATCO Gas distribution system will be assessed a distribution UFG charge of 1.270% at the Point of Export. The UFG assessment will be made up "In-Kind" from each Producer Account.