COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

ELECTRONIC PURCHASED GAS ADJUSTMENT FILING	)	CASE NO.
OF KENTUCKY FRONTIER GAS, LLC	)	2022-00434

MEMORANDUM IN SUPPORT OF
REVISED PURCHASED GAS COST ADJUSTMENT

Comes now Kentucky Frontier Gas, LLC ("Kentucky Frontier") by and through the undersigned counsel, and requests the Kentucky Public Service Commission ("Commission") to approve the methodology Kentucky Frontier has used in this quarterly Purchased Gas Cost Adjustment ("PGA") filing. Kentucky Frontier has also filed a tariff filing for approval of the revised methodology through the Commission's electronic tariff filing system today. As grounds for the change in methodology and for its Memorandum in Support of Revised Purchased Gas Cost Adjustment and respectfully states as follows:

<u>GAS BALANCING ACCOUNT</u>

In its review of gas cost under-recovery, Kentucky Frontier found that its PGA procedure has never kept nor presented the actual balance of the Gas Balancing Account ("GBA"). The calculation forms that Kentucky Frontier has been using for many years, were spreadsheets given to Kentucky Frontier by Commission Staff at the outset of Kentucky Frontier's acquisition of several small gas utilities in Kentucky. Every calculation, rate and adjustment surcharge is stated in terms of $ per MCF or other sales unit, with no cumulative running total of actual gas cost recovery. The GBA is somewhat like a gas cost bank account, for which the long-term balance should average near zero. In its review of gas cost under-recovery, Kentucky Frontier found that its PGA procedure, used in Kentucky, has never kept nor presented the *actual* balance of the GBA.

1. For the recent analysis, Kentucky Frontier developed a GBA spreadsheet to track the monthly gas costs and recoveries. This GBA spreadsheet is attached to the PGA filing as Schedule II. The new procedure was introduced in the tariff filing on November 30, 2022 and filed in Case No. 2022-00327 and explained in the Gas Cost Reconciliation Adjustment Justification with its tariff filing. The GBA analysis is updated with this case, with data beginning January 2018, the first month of the combined Kentucky Frontier and Public Gas rates after the 2017 consolidating general rate case. The GBA includes actual results through October 2022.
2. Public Gas no longer exists and its customers are now branded Kentucky Frontier. However, the former Public Gas customers are tracked separately in this analysis, to show the stark reality of excessive Jefferson/EKM charges. Since the large rate increase effective November 2020, former Public Gas customers have paid back $1.1 million **less than** Kentucky Frontier paid for the gas to supply the former Public Gas customers. This deficit was (partially) subsidized by all remaining Kentucky Frontier customers, although Kentucky Frontier has inadvertently funded much of this through the GBA deficit.
3. In November 2018 (as discussed below), the Commission ordered Kentucky Frontier to limit gas cost recovery to 5% gas losses. Kentucky Frontier followed the original PGA spreadsheets provided by Commission Staff for each quarterly PGA filing. The limited gas losses pre-penalized Frontier for future L&U on future gas purchases. This handicap slowed the response to rising gas index prices, and added to the negative GBA. In both November 2021 and February 2022, each the first month of new PGA rates, Kentucky Frontier under-recovered $150-160k in a single month. This is a huge

deficit. Kentucky Frontier is a relatively small utility with annual sales under 400k MCF. In each of these months, Kentucky Frontier lost about $0.40 per MCF on an entire ***year*** of sales.

4. Since the imposition of the 5 percent loss limit starting November 2018, the total calculated value of "Excess L&U" was substantial, but only a component of the total GBA under-recovery.

This GBA analysis shows Kentucky Frontier has under-recovered gas costs by as much as $700,000. This deficit is significantly more than the return on investment allowed by the Commission. In several quarters with an already-high GBA balance, the present PGA calculations imposed a negative AA surcharge, which made this under recovery issue worse.

NEW PGA PROCEDURE

With this poor recent history of recovery of gas costs, either fully or on a timely basis, Kentucky Frontier is compelled to revise its traditional PGA mechanism. As described in the tariff filing that is being filed today via the Commission's electronic tariff filing system, the new PGA procedure is described in the logical order of developing rates:

1. Schedule III, GBA, as described above to track the running balance of the GBA.
2. Schedule II, Expected Gas Costs or EGC. This sheet is largely the same as Kentucky Frontier has used since 2010. Kentucky Frontier has about fifteen (15) gas suppliers to its more than thirty (30) unconnected gas utility systems. Each supplier has its own contract and terms for supplying gas. Most suppliers charge for gas based on the "TCO Appalachian Index" that prevails for gas sales in Eastern Kentucky. This schedule shows the relative supply volume and total cost for each supplier.

3. Kentucky Frontier has four large suppliers for about eighty-seven percent (87%) of annual volume. The other ten are quite smaller, mostly small producers delivering their gathered gas in the middle of a Kentucky Frontier system. This schedule shows each supplier's volume delivered to Kentucky Frontier over the past twelve months.
4. Gas cost from each supplier varies by contract. Kentucky Frontier supplies two of its systems with gas from Columbia Gas of Kentucky, Inc. ("Columbia") at the published retail commercial rate. One contract is a fixed price for very small volumes. Most suppliers use as a basis the First of Month ("FOM") TCO index that applies to Eastern Kentucky. The TCO index doesn't have an established market for trading gas futures. Instead, the New York Mercantile Exchange or NYMEX futures price can be used, with the historical average differential to forecast the TCO index.
5. This schedule shows the deviation from basis used by each supplier; some use straight TCO, some are at eighty percent (80%) of TCO, some with pipeline demand and commodity charges, some with a fixed percentage for Lost and un-accounted-for gas ("L&U") and fuel, and several with added marketing fees. The NYMEX futures price for the next quarter are modified by the TCO differential, from which each supplier's charges can be estimated.
6. Schedule I, Rate Determination uses data from Schedules II and III:
    a. EGC for the next quarter is carried from Schedule II.
    b. GBA Balance is carried from Schedule III;

c. Balance Adjustment is calculated to amortize the GBA balance over the expected Sales volume for the next 12 months. This BA figure is a surcharge, either positive or negative, added to the EGC to determine the total gas cost recovery or GCR rate.

d. Resulting rates are calculated for the two large classes of customers contained in Kentucky Frontier's tariff. These are carried to the sample rate tariff.

e. The effects of this proposed rate change on an average residential customer are shown. Kentucky Frontier's average small consumer uses about 50 MCF per year, and the effect is calculated by month for the typical seasonal usage.

LIMITS ON GAS LOSSES

The Commission imposed limits against Frontier passing on the full cost of purchased gas when gas losses are deemed excessive. Lost and unaccounted-for gas or L&U can be an indicator of the condition of a gas system. Kentucky Frontier acknowledges the logic of limiting the effect on consumers, but submits that the limit should be higher, due to the particular nature of the Kentucky Frontier systems.

1. Kentucky Frontier is a conglomeration since 2008 of a dozen tiny gas utilities in Eastern Kentucky, now with about 5500 customers. Kentucky Frontier acquired several gas systems of dubious operation and shaky financial condition, although most had oversight by the Commission. Every system had gas losses over 10 percent (10%). One utility was found to have falsified Federal records on gas losses for 20 years or more, when this system often had losses of 30-50 percent. Several had

corroded steel pipe or off-spec PE pipe and bad fusion joints. All systems have benefited from Kentucky Frontier's expertise and consistent, uniform operating practices and plans for improvement.

2. In Case No. 2011-00443, *Application of Kentucky Frontier Gas, LLC for Approval of Consolidation of and Adjustment of Rates, Approval of AMR Equipment and a Certificate of Convenience and Necessity for Installation of AMR, Pipeline Replacement Program, Revision of Non-Recurring Fees and Revision of Tariffs*, the general rates of the first acquired utilities were consolidated into a single Kentucky Frontier rate structure. In that case, Kentucky Frontier established its Pipeline Replacement Program (PRP) and Automated Meter Program (AMR) to improve systems and reduce gas losses. When the case was finalized in May 2013, Frontier immediately started to replace and upgrade gas measurement, make more extensive leak surveys and replace the leakiest segments of pipeline. In Case No. 2017-00263*, Electronic Application of Kentucky Frontier Gas, LLC for Alternative Rate Adjustment*, the customers of Public Gas were consolidated into Kentucky Frontier general rates and the PRP surcharge was increased, beginning January 2018. Public Gas added more targets to the metering and pipeline replacement projects.

3. Through quarterly PGAs, approved by the Commission, Kentucky Frontier passed through the entire cost of purchased gas for about nine years. In PGA Case 2017-00401 for rates effective November 1, 2017, the Commission imposed a new limit on future PGAs, reducing purchased gas cost pass-through to 10% over Sales volume.

4. One year later, in Case No. 2018-00334, *Purchased Gas Adjustment Filing of Kentucky Frontier Gas, LLC,* for rates effective November 1, 2018, the Commission further

limited Kentucky Frontier's gas cost recovery by reducing the limit on gas losses to 5 percent over sales volume. The Commission's October 30, 2018 Order stated that "Frontier's amended application for rates effective November 1, 2018 returned to using the *standard* 5 percent L&U limit in the calculation of its EGC rate".

5. This change was not voluntary. Kentucky Frontier's PGA tariff has no such language for a 5 percent limit. This decision was not supported by any actual L&U history or by Kentucky Frontier achieving a new threshold. Moreover, there is no statute or Commission rule that limits gas cost recovery or that defines a "standard" limit to losses of 5 percent, or any such parameter.

6. Kentucky Frontier is a tiny gas utility in customer count, compared with the five large local distribution companies ("LDC") in Kentucky. However, Kentucky Frontier has about 5500 customers and is larger than most municipal gas utilities. As compared with most other gas utilities in Kentucky, Kentucky Frontier serves extremely rural customers. By far, the largest community is Jackson, Kentucky, with about 500 meters. Most Kentucky Frontier customers are located in small rural, unincorporated communities, crossroads and clusters.

7. Frontier operates about 360 miles of pipeline to serve 4900 utility customers (the rest are farm taps). Customer density is about 15 meters per mile of pipe. The five large LDCs and others that serve primarily urban-suburban communities will typically serve 50-60 meters per mile of pipe. With similar vintages and conditions of pipe, with only 25-30% customer density, losses on Kentucky Frontier pipelines should be statistically 3-4 times higher than systems in towns, with far higher sales volume per mile.

8. Kentucky Frontier has no large industrial users to dilute the effects of gas losses. The two largest customers are a regional hospital and a prison, each of which has the load of one typical urban school. There is no significant user of process or industrial heat, so nearly the entire Kentucky Frontier load is heat-sensitive. The summer load gets down near 200 Mcf per day. Any gas loss/leakage/theft of even small volumes, can cause 20-30 percent L&U in summer months. When Kentucky Frontier started, the former Belfry Gas was leaking 30-50 Mcf per day. Kentucky Frontier has replaced pipe in the former Belfry Gas system and with other maintenance has largely reduced the amount of L&U in that system.
9. Kentucky Frontier to date has collected and spent about $500,000 in its AMR program, to refurbish-test-replace meters and add electronic automated meter reading. This program will be close to completion in 2023. The PRP surcharge has raised and invested $1.6M to replace miles of marginal pipeline, to positively odorize all systems to find leaks, and effect several improved technologies to find & fix leaks and un-locatable pipelines. Nearly all Kentucky Frontier pipelines are mapped in the Geographical Information System ("GIS") database along with many DOT records, to keep better track of operating history. Kentucky Frontier has made steady progress in finding and reducing gas leaks and losses. However, the systems Kentucky Frontier acquired and combined to make the current Kentucky Frontier system were in subpar shape and more work is needed to get the system to a point where Kentucky Frontier could have less than 5 percent L&U.
10. The old PGA procedure pre-penalized gas costs for high L&U, which led to rates lagging behind rising prices. Instead, the revised Kentucky Frontier PGA method will

analyze L&U after the fact, and only annually, not monthly or quarterly. This removes the futures handicap, the large seasonal variations in customers and usage patterns, and almost negates the small gap between the meter reading period and the monthly supplier invoice.

11. The GBA analysis shows an annual L&U calculation for each period ending October 31. This is sometimes known as a Gas Year, starting with the upcoming heating season. Each annual analysis calculates the Excess L&U limit as defined by the Commission; then the Purchase volume that exceeded this limit; and the value of that excess volume, at the average purchase price per Mcf.

12. The calculation of Excess L&U is differentiated between former Public Gas and other Frontier systems. The former Public Gas system has lower L&U of 2 percent, where the other Kentucky Frontier systems are higher at 9.7 percent since November of 2018. Because of excessive gas cost on Jefferson-EKM, the average gas cost is inflated for all of Kentucky Frontier. Since the high L&U losses are on non-Public-EKM systems, any excess L&U is valued at the much lower non-Public-EKM gas cost.

13. For comparison with the Commission's *standard* 5 percent loss limit: Kentucky Frontier currently has two pipeline suppliers that add 14-15 percent L&U to the cost of their system deliveries to Kentucky Frontier. These charges are neither negotiable by Kentucky Frontier nor subject to the jurisdiction of the Commission.

14. Frontier recognizes the intent to protect consumers against wanton gas losses by irresponsible gas utilities. But despite nine years of work and over $2M investment, several Kentucky Frontier systems still have gas losses in excess of 5 percent L&U. The shortfall in gas cost recovery is a material burden on the utility. Until that

trend eases with further work, Frontier proposes to limit gas losses in its PGA calculation to 7.5 percent of Sales.

CONCLUSION

From the recent history, it is painfully apparent the present PGA procedure is not working for Kentucky Frontier's system. Kentucky Frontier proposes changes to the PGA process in this case and has filed a corresponding tariff revision through the Commission's electronic tariff filing system simultaneously with this filing. These changes will help plug the large hole that developed in the GBA over the last two years. With each subsequent regular quarterly PGA filing, Kentucky Frontier and the Commission can review the effectiveness of these changes.

WHEREFORE, based on the foregoing, Kentucky Frontier respectfully submits its Memorandum in Support of Revised Purchased Gas Cost Adjustment and the pending tariff filings currently under review.

Dated this 30th of December, 2022.

Respectfully submitted,

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CERTIFICATE OF SERVICE

This is to certify that foregoing electronic filing was transmitted to the Commission on December 30, 2022; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that pursuant to the Commission's July 22, 2021 Order in Case No. 2020-00085, no paper copies of the filing will be made.

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